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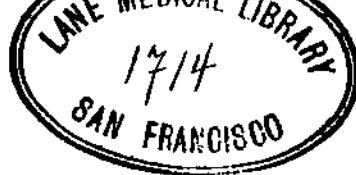












## TABLE OF CONTENTS.

VOL. XXXIX. *M. lacks title*  
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### ORIGINAL ARTICLES.

Hypodermic Medications. Parkin-son.....	1
Transplantation of Teeth. Younger.....	17
Abdominal Pregnancy. Cushing.....	27
Amputations bel. Fractures. Graves.....	32
Passage of Open Knife. Hutchings.....	35
Tubage of the Larynx. Arnold.....	65
Pelvic Abscess. Imlach.....	73
Dystocia. Seymour.....	82
A Plea for the Children. Pardee.....	129
Malpractice. Giberson.....	134
Leprosy. Saxe.....	141
Physician's Notes, Japan. Cushing.....	143
Dystocia. Seymour.....	147
Transfusion in Typhoid Fever. Whitwell.....	193
Tracheotomy in Diphtheria. Anderson.....	198
Aneurism of the Aortic Arch. Taylor.....	205
Aneurism of the Arch of the Aorta. Donnelly.....	209
Removal of a Tumor of Brain. Hirschfelder.....	210
Lactaeal Secretion in Infant. Dozier.....	216
Germicides in Med. and Surg. Briggs.....	257
Typho-Malaria Fever. Gibson.....	263
Malformation of the Anus. Price.....	269
A few words on Glaucoma. Pardee.....	273
Notes on a German Society. Sarah I. Shuey.....	279
Chronic Metritis. Von Hoffman.....	321
President's Address. Gibbons.....	330
Report on Prac. Medicine. Agard.....	338
Report on Surgery. Simmons.....	385
Things Old and New. Lane.....	397
Commitments of Insane. Fenn.....	402
Medical Legislation. Oatman.....	405
Malformations of the Liver. McNutt.....	405
Sup. Report on Prac. Medicine. Davis.....	449
A New Instrument in Litholapaxy. Chlamore.....	463
Report of Com. on Obstetrics. The Third Stage of Labor. Pratt.....	471
Sup. Report on Obstetrics. LeTourneux.....	473
Report on Med. Topography. Trembly.....	486
Memorial Wreath. Lane.....	501
Report on Public Health. Kerr.....	521
Report on Histology. Wythe.....	533
Report on Mental Disease. Mays.....	537
Report on Medical Education. Hirschfelder.....	544
Report of Com. on Publication.....	546
Report on Gynecology. Todd.....	550
Sup. Report on Indig. Botany and Adulteration of Drugs. Chipman.....	585
Report on Ophthalmology. Southard.....	590
Report on Necrology. Ayer.....	612

Report on Diseases of Women and Children. Buckel.....	619
Report on Graduating Exercises. Jewell.....	622
Laryngeal Phthisis. Arnold.....	626
Motions in the Etiology of Sea Sick-ness. Partsch.....	649
Comparative Anatomy. Robertson.....	663
Malpractice. Giberson.....	683
Encephalocele; fibrocystic tumor of the occiput. Pond.....	691
Abscess of the Liver. Belinge.....	713
Chronic Pleuritic Effusion. Dawson.....	716
Calendula. Reynolds.....	720
Ophthalmoscope in General Medi-cine. Pardee.....	723
Anesthesia by Ether. Parkinson.....	734
Small versus Large Doses. France.....	751
In Memoriam Dr. Austin Flint.....	753
Report of Treas. of State Soc.....	754
Report of Board of Examiners.....	755

### PROCEEDINGS OF SOCIETIES.

S. F. Co. Med. Society.....	36, 85, 152, 223,
	297, 365, 556, 636, 694, 768
Sacramento Society for Medical Im-provement.....	40, 158, 230, 301, 363, 408,
	567, 638, 697, 774
Alumni Assn. Cooper Medical Coll. 40	
Licentiates of State Board.....	96, 168, 305,
	400, 561, 648, 702, 782
Members of State Society.....	188, 240
Memorial of A. M. Wilder, M. D.....	218
Sixteenth Annual Session State Soc.....	235
Alumni Assn. Univ. Med. Dept.....	302
San Diego Co. Medical Society.....	561
In Memoriam Wm. H. Bruner, M. D.....	641
Commencement Cooper Med. Col.....	777

### EDITORIAL.

Winters v. Graves.....	48
Enforcement of the Medical Law.....	53
Asymmetry in the Human Body.....	91
Medical Education in California.....	94
Obituary, Dr. A. M. Wilder.....	95
Shall a Physician be Governor of California?.....	163
Medical Advertising.....	165
State Medical Society.....	235
Publication of Transactions.....	237
State Society Contract.....	259
State Med. Society.....	305
Am. Medical Association.....	370
Dr. Arning's Report upon Leprosy.....	372
Medical Licenses.....	417
Winter v. Graves.....	419
Physicians' Prescriptions.....	508
Medical Education.....	563
Hospital for Women and Children.....	584
New Medical Register.....	587
Board of Examiners.....	633
Castration in Nervous Disease.....	698
San Francisco Co. Med. Soc.....	760
Report State Board of Health.....	763

## HEALTH REPORTS.

State Board of Health.....	159, 232, 375, 411,
.....	512, 567, 644, 704, 778
S. F. Health Report.....	161, 381, 415, 515,
.....	647, 707, 781

## CORRESPONDENCE.

George Ivancoylo, M. D.....	47
Instructions of the Court, Winter.....	571
Graves.....	571
Rush Monument Committee.....	576
Illinois State Board of Health.....	577
Appointment of Dr. Potter. Lane.....	635
Poisonous Canned Fruit. Barber.....	708

## NOTICES OF BOOKS, ETC.

General Therapeutics, Von Ziemssen.....	55, 312
Microscopical Technology. Friedlander.....	56
The Use of Microscope. Friedlander.....	56
Psychiatry. Meyner.....	57
Prescription Writing. Mann.....	58
Therapeutics. Wood.....	99
Medical Chemistry. Bartley.....	100
Diseases of Children. Vogel.....	100
Medical Physics. Draper.....	100
The Southern Cal. Practitioner.....	101
Practical Anatomy. Weisse.....	169
Stylographic Note Book. Abrams.....	169
Chart of Uri. Analysis. Abrams.....	169
How we Treat Wounds To-day.....	242
Morris.....	242
Post Mortem Examinations. Virchow.....	242
Examination of Urine. Tyson.....	242
Operative Surg. of Brain. Roberts.....	243
Fractures and Dislocations. Pick.....	243
Bacteriological Investig'n. Hueppe.....	244
Practice of Medicine. Fagge.....	244, 383
Diseases of women. May.....	245
Transactions of Acad. of Med. in Ireland.....	246
Materia Medica and Therapeutics. Simpson.....	246
Town's Manual of Chemistry.....	246
Diseases of Infancy and Childhood. Smith.....	247
Diseases of the Ear. Pomeroy.....	247
Diseases of Nervous System. Ross.....	308
Ophthalmoscopy. Loring.....	308
Atlas of Clinical Microscopy. Peyer.....	309
Handbook of Therapeutics. Ringer.....	310
Materia Medica and Therapeutics. Biddle.....	310
Cancer. Parker.....	311
Electricity in Medicine. Ranney.....	311
Disorders of Menstruation. Upshur.....	312
Practical Surgery. Mears.....	332
Prac. Clin. Lessons in Syphilis. Otis.....	332
Examination of Urine. Tyson.....	332
Auscultation and Percussion. Flint.....	333
How to Care for Insane. Granger.....	334
Reference Handbook, Vol. 2. Buck.....	334
Practice of Surgery. Hamilton.....	422
Milk Analysis and Infant Feeding. Meigs.....	422

A Manual of Surgery. Treves.....	423
Acne. Bulkley.....	423
Wood's Library.....	516
The Year Book Treatment, 1885.....	516
A System of Practical Medicine. Vol. V.....	578
Practical Therapeutics. Waring.....	578
Dietetics and Dyspepsia. Roberts.....	579
The Physicians' Leisure Library.....	579, 709
Handbook of Materia Med. Potter.....	710
Practice of Medicine. Flint.....	711
California Health Report.....	785
Illinois Health Report.....	785
Pennsylvania Health Report.....	785
Med. and Surg. Directory of U. S.....	785
Obstetrics. King.....	785
Dis. of Dig. Organs in Infancy. Starr.....	786
Practice of Medicine. Bartholow.....	786
Courier Review Call Book.....	786
Med. News Visiting List for 1887.....	787
Jour. Comp. Med. and Surg.....	787

## EXTRACTS.

Hemorrhoids by Dilatation. Center.....	59
Third Stage of Labor. Hart.....	60
John McCullough, Autopsy.....	62
Treatment of Acute Intussusception.....	102
Intra Pulmonary Injections.....	105
Malpractice in New England.....	115
The Treatment of Hemorrhoids.....	116
Cerebral Excitability.....	117
Etiology of Acute Lobar Pneumonia.....	118
Studies in Heart Disease.....	123
Croup.....	170
Empyema. Marshal.....	175
Iodopathic Headache. Reynolds.....	179
Bronchial Asthma. Baber.....	183
Laceration of Perineum. Temple.....	186
Gonorrheal Rheumatism.....	187
Reinfusion of Blood. Duncan.....	249
Perman. of Potas. in Amenorrhea. Barker.....	254
Corrosive Sublimate in Obstet.....	313
Antipyrin and Thallin.....	317
Removing Calculi from Male Children.....	319
Medical College Graduates.....	407
Hydrophobia in Austria.....	410
Ozoniferous Essences as Antiseptics.....	416
Dr. Aruing's Report upon Leprosy.....	425
Albuminuria Treatment.....	444
Medical Education.....	446
Const. of the Pathol. of Leprosy.....	447
Public Health.....	448
Medical Education in America.....	518
Notes Surgical Congress in Berlin.....	581
Sal Alembroth.....	583
Brain of Gambetta.....	784
Hysterical Closure of the Eyelids.....	788
Empyema of Antrum of Highmore.....	789
Analgetic Action of Carbolic Acid.....	790
Comb. of Iodoform and Nitrate Silver as Caustic.....	791
Tuberculous Disease of Knee Joint.....	791
Ice Cream Poisoning.....	792

PACIFIC  
MEDICAL AND SURGICAL JOURNAL  
AND  
WESTERN LANCET.

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VOL. XXIX.

JANUARY, 1886.

No. 1.

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Original Articles.

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**SOME HINTS ON HYPODERMATIC MEDICATION.**

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By JAMES H. PARKINSON, L. R. C. S. I., Sacramento, Cal.

It is not my purpose in this paper to traverse the ground already so admirably covered by Professor Bartholow in his "Hypodermatic Medication," but merely to point out some facts, the result of practical experience not usually found in the text books, and, for the benefit of those whom time will not permit to peruse the standard authorities, to indicate the advantages to be derived and the best means of attaining them.

The advantages of hypodermatic medication are perhaps best realized and appreciated, when we compare the number of practitioners now using the syringe with that of some 20 years ago. Since its introduction in 1839, and extension by means of improved apparatus and pharmaceutical preparations, the method has grown steadily in favor, both with the profession and the public, and very few who use it constantly, but will remember how impotent they have felt when in an emergency the well tried ally was not at hand.

The rapidity of action which drugs administered subcutaneously exhibit, the certainty of the effects that will be produced, the power of applying the agent directly to the seat of pain, and all these independent of the condition of the stomach, are the great points of superiority the method possesses. The amount of the drug required is another factor. Most authorities lay down the proportion in effect as one-third, but this is certainly too large, one-quarter of any drug administered subcutaneously will about

equal a unit of the same given by the stomach. In cases of poisoning, where the toxic action is so far advanced as to render absorption by the ordinary channels uncertain, the introduction of a remedial agent, as it were directly into the circulation, will often have the happiest effect. This is most marked when the antagonistic drug or physiological antidote is available. The change is rapid and quite perceptible, while the doses can be gauged with far greater accuracy than is possible in internal medication.

The disadvantages or drawbacks to the use of the syringe are few. It can be contended that its use three times daily for any extended period, would soon become practically impossible for want of fresh tissue in which to insert the injection, and this, granting that no untoward result had superceded. Yet it is often used morning and evening for many weeks, without permanent disadvantage. Putting aside the question of constitutional effect, any local mischief which ensues may, with rare exception, be set down to want of care or knowledge in selection of site and mode of operating. Imperfect or dirty instruments, and solutions in a chemically unfit state to come in contact with healthy tissues, are fertile causes of after trouble. Whilst the announcement of his intention by the medical attendant to use the syringe may be objected to by a nervous patient, this objection is really due to apprehension of an unknown sensation and never arises from actual experience. The pain in penetration of a sharp fine needle properly inserted is trivial, and, with the exception of the injection of irritants, the presence of the ordinary solutions in use ceases to be felt about one minute after insertion; the sensation during that interval is a slight stinging or burning pain, and will be produced just as acutely by pure water, from which fact the latter harmless agent is sometimes employed to produce a moral effect. No patient who has once experienced the relief afforded by morphia hypodermically administered will object to its subsequent use, the great difficulty indeed is usually to reduce the dose and limit the frequency of application in those who remember its benefits. Some subjects possess a peculiar idiosyncrasy for morphia salts, a very small dose producing unpleasant symptoms, nausea, malaise and often sleeplessness. This holds good in gastric as well as hypodermatic medication, but in the latter, whilst the onset of the symptoms is more rapid, owing to the smaller quantity of the

drug present, the effect is not so lasting. The question often asked, whether this method of administration is more likely to produce the opium habit than any other, must be answered in the negative. Few patients possess the skill necessary to perform the operation, and those cases on record are almost exclusively composed of physicians or students, whose special training enabled them to effect their own ruin. It ought to be a rule broken by the rarest exceptions, that the medical attendant only should use the syringe. Apart from the danger of engendering a condition of the system most difficult to control, the operation itself is not so absolutely simple or wholly devoid of danger as to be entrusted to the hands of any layman.

The cases in which hypodermic injection is most suitable may be divided into those in which the stomach from irritability will not retain anything; where in extreme prostration with collapse the intestinal canal will absorb the medical agent so slowly, or imperfectly, as to render the effect extremely uncertain; in insensibility or coma from toxic or pathological cause; when pain is so intense and severe that instant relief is imperative; and where the local effects of the drug are required before its constitutional influence. It is a disputed point, whether any such thing as a local effect can be produced. In using the term "local effect," I presume that a distinction is drawn between an action affecting parts and tissues with limitation and a therapeutic effect produced by the vital fluid in the general circulation charged with a medicinal agent. Without entering deeply into this question, repeated practical experience has demonstrated that an effect more rapid, and frequently more permanent, is obtained where the referred seat of the lesion is attacked. S. Weir Mitchell, Keene and Morehouse, as the result of numerous experiments, state that morphia exerts its anodyne effect more powerfully the nearer it is to the seat of pain. Speaking of liniments, Hilton says: "Of this, I feel assured, that if the profession will act upon the cutaneous distribution of the nerves with determination and definite ideas for the purpose of conveying a calming influence to the associated deep seated muscular and articular or internal nerves, they will find the treatment very successful." The rationale of which evidently is that the anæsthetic condition of the cutaneous nerve filaments is propagated along the trunks to influence them in turn. It thus seems reasonable to suppose that where a drug in a ready form for ab-

sorption can be brought into close proximity with vessels supplying a part, they will take it up and produce an effect in their process of supply.

The contra-indications to the use of the syringe are included in what would guide the administration of the same substances by the mouth, bearing in mind that we are dealing with intensified action. With this in view, we may consider the syringe as inadmissible in very early or advanced life. In the first instance we deal with the system at a period when it exhibits, in the case of morphia, a remarkable susceptibility, and in the next with an organism where the processes of regeneration have ceased and changes in vital organs taken place which often give no evidence of their existence. The rapid and certain effect of a drug introduced almost directly into the general circulation places it not only at once beyond our control, but enables it at the same time to obtain a considerable start of any counteractive measures. In early life, taking morphia as an example, and assuming the relative effect by the two methods of administration as 1 to 4, the dose hypodermically for a child of five or seven years, would be about  $\frac{1}{4}$  grain, accurate estimation of which, unless with a special disc or solutions, is an extreme nicety. It is difficult to arrive at even an approximate limitation, but we may be safe in saying that the syringe should not be used on children under 10 years, and that in early or advanced life, except in poisoning or pain and shock from surgical causes, the risk must be considered to more than counterbalance the expected gain. The substances used for hypodermic injection are becoming daily more numerous. As a rule, the alkaloids are chosen, from their strength permitting the introduction of the smallest quantity of foreign matter necessary to produce the effect of the drug, as well as the fact that irritant principles have been removed in their preparation. Of these, the commonest are morphia, atropia and strychnia, and next in frequency the drugs ether, ergot and chloroform. In any solution injected, it is important that the fluid should be optically clear and free from any sediment. Deposits indicate imperfect solution, organic or chemical decomposition, all of which are to be feared from the element of uncertainty which they introduce, and also from their proneness to cause local irritation with unpleasant results. Experience has shown that, properly used, and with due precautions, very irritating agents can be introduced into the tissues, provided a

frequent and contiguous repetition is not called for, so that the range of drugs is not limited by this restriction. As I have said, the alkaloid is, under all circumstances, to be preferred to the crude drug; its preparation by solution can be better discussed hereafter.

The medicinal agents used can be carried in two forms, dry or in solution. With the exception of such drugs as exist for purposes of injection in a fluid form, it is far preferable to carry the alkaloid in its dry state. Pure water is the best menstruum, but an aqueous solution of a vegetable principle will not remain good for any length of time. A penicilium forms, and once present, all certainty of the strength of the solution is gone, while the fact is added of a dangerous element in the presence of a decomposing fluid in the tissues and general circulation. Solutions made with distilled cherry, laurel or eucalyptus water according to Bartholow will keep good for many weeks. The same authority recommends the addition of carbolic acid in the proportion of m.i. to ʒi. of the solution, this causes a mere momentary increase of pain on the injection of the fluid. Salicylic, boracic, and benzoic acid all have the same power, but are more irritating than carbolic acid. Again, as I will hereafter have occasion to allude to, the introduction of the smallest quantity of fluid within certain limitations is eminently desirable, but solutions even of the most soluble alkaloids, when concentrated, are apt soon to lose strength by deposition. The common morphia solution in use "Magendie's" (gr.ii. to ʒi.) is much too bulky, and one of gr.iv. to ʒi. is preferable, but this except when freshly made is unreliable, hence, unless in hospital practice, we are compelled to fall back upon the clumsier preparation. Assuming that the practitioner employs "Magendie's" solution, he carries ʒii. of it, that being the standard size of most pocket hypodermic case vials. Now, should he require to inject gr.i., he will be compelled to employ the enormous quantity of 30 minims, a syringe full and a half, to obtain the dose. These disadvantages may seem sufficient to warrant our preference for any means which would lessen them, did not another and stronger aspect of the case present itself. It is often desirable to combine atropia with morphia, and there the solution presents insurmountable difficulties. When morphia and atropia are used in combination, it is not so much to obtain the cumulative therapeutic effect, but that by their direct physio-



logical antagonism, they may so react on each other as to produce the most favorable results. How marked this antagonism is, can best be realized by those who have seen a case of opium poisoning, treated by the subcutaneous injection of atropia. The rapid change in the condition of the victim, the accelerated respiration, warming surface and coloring face being most perceptible. In many cases, morphia, when injected alone in doses sufficient to merely allay pain, will produce most disagreeable symptoms, to an extent almost to debar its future use. In a brother professional I have seen emesis follow 70 seconds after the introduction of  $\frac{1}{8}$  gr. morphia, whereas, with the  $\frac{1}{150}$  of atropia added merely a feeling of temporary discomfort supervened. This practical experience, which is supported by Bartholow, directly controverts the results obtained by S. Weir Mitchell, Keene and Morehouse, who assert that the nausea of morphia is not prevented or removed by atropia. Headache followed by profound prostration is, particularly in the female, a frequent sequela which the addition of atropia will lessen to a minimum of inconvenience.

The effect of a combined morphia and atropia injection, owing to the greater permanence of the atropia, is also more energetic and more lasting than when morphia is used alone, and the certainty of action is materially increased. Finally, in those cases which we occasionally encounter, where a small dose of morphia may produce dangerous or even fatal symptoms, the combination with atropia ensures a modifying influence for good at the time, and by retarding their onset allows the danger to be preceded by timely warning. Just as in the administration of chloroform we come across cases in which, by no enquiry or examination are we able to forewarn ourselves, so in the use of morphia, the contingency may also arise, and the discovery be made too late to be of service. From the foregoing reasons, it will be seen, that unless when strongly contra-indicated, atropia should always be combined with morphia previous to injection.

Too much stress cannot be laid upon the importance of this fact, and where modern appliances have enabled it to be accomplished without inconvenience, its neglect is inexcusable. To effect such a combination with solutions requires one of each alkaloid, and the calculation and measurement of a minute dose of atropia is a very uncertain and difficult matter. The most important point to bear in mind in this connection, is that the

proportion of the alkaloids is not arbitrary, but in a fixed ratio which has been laid down by Bartholow as the result of numerous experiments, varying from  $\frac{1}{100}$  in  $\frac{1}{2}$  gr. morphia to  $\frac{1}{200}$   $\frac{1}{2}$  gr. This, it will be seen, adds materially to the difficulty in managing the solutions, for in addition to other details the ratio of each alkaloid must be borne in mind. The foregoing reasons led Bartholow to adopt powders readily soluble in water as the most appropriate means. He says "My conclusion is that it is far better to make extemporaneous solutions than to rely on any formula, how well adapted soever it may appear to be to the purpose in view." These have the merit of being absolutely accurate, but the liability to loss in transport, chemical changes if kept in papers for any length of time, and above all their extreme unwieldiness demanded a substantial improvement. This has been given to the profession by Wyeth of Philadelphia, whose compressed tablets leave nothing further to be desired. Dr. H. Augustus Wilson, who first called attention to their use in a paper read before the Philadelphia County Medical Society, Oct. 27, 1880, says:

"I claim that the advantages of this method over any other known are:

- "1st. The convenient size of the pellets.
- "2d. That they may be used by the mouth if desirable.
- "3d. Their certainty of contents and dose.
- "4th. Their certainty and rapidity of action."

And in a subsequent note:

"The employment of the pellets \* \* \* during the past nine months has convinced me that their careful use will tend still further to banish from our armamentarium the bulky changeable solutions and the equally inconvenient powders."

They are compact, portable, readily soluble, absolutely accurate, and stable for an indefinite period. The standard proportions of alkaloids combined is closely followed, and a large scale of doses gives considerable latitude to the physician. The basis of the tablets with the majority of alkaloids is sulphate of sodium, which, from physiological reasons, is much preferable to the gelatine discs in use elsewhere. Gelatine is less soluble, more irritant to the tissues and does not stand transport and change of atmospheric conditions with the sodium tablets. All the alkaloids used in hypodermic medication are

found in Wyeth's list, and such combinations as experience has proved to be most desirable.

With the exception of individual idiosyncrasy, by which is meant extreme susceptibility to any drug, there are none which cannot be avoided by some care and discretion. We have seen that the idiosyncrasy in the case of morphia can be almost completely counteracted by the combination of atropia, so that errors in the manner of injecting remain the sole cause. Of these the entrance of the needle point into a vein and the introduction of the fluid at once into the general circulation, is the gravest. The symptoms of this accident most nearly resemble those of canalization and the treatment at first will be similar to that in any case of shock followed, if demanded, by general or physiological measures.

The local troubles likely to ensue are inflammations following irritation at the seat of injection. Constitutional predisposition will have considerable influence in determining the amount of such inflammations. Their causes are carelessness in the performance of the operation, the state of the fluid employed, and the condition of the instrument as regards repair and cleanliness. I shall discuss elsewhere the method of injecting, and the errors which arise at this stage can then be best detailed. Solutions of the vegetable alkaloids are frequently in a state of incipient decomposition, rendering them highly irritant, and inflammation leading to abscess may result from their use. It may be supposed that the cleanliness of a surgical instrument is a matter of first attention, but many practitioners are, most unfortunately, careless in this respect. An improperly constructed syringe admits at once a source of danger. In spite of any ordinary care, it will become foul from chemical causes, and its construction forbids an efficient cleansing. Coarseness in finish is also an objection. The pain on introduction is greatly aggravated by a large needle improperly pointed, and in delicate hyperæsthetic subjects the irritation will sometimes lead to unpleasant consequences. When a syringe has not been used for some weeks, the whole apparatus should be thoroughly cleaned preparatory to operation. Its employment on the persons of those the subjects of specific disease renders this a matter of particular attention; in fact, if circumstances will permit, the same needle should not be used on an uncontaminated subject. In a recent article in the *New York Medical Journal*,

August 9, 1884, describing the contents of a pocket-case, the author mentions that his hypodermic syringe can be used as an "aspirator," if carefully cleansed subsequent to the operation. It is exceedingly doubtful whether any process would so effectually remove all traces of a morbid fluid as to render the apparatus innocuous; the experiment is certainly an unsafe one, and it will be admitted that the risk of septic injection would be considerable. There is no operation in surgery where a good instrument is so essential, or none where a little extra expense will not be well repaid by a subsequent return in success and comfort. I will discuss the subject of hypodermic cases later, but first will take the contents in order. Great perfection has now been attained in this department, and the difficulty is not to find, but to decide between, many excellent articles offered for sale. Syringes are made of different materials—glass and metal, metal only, and hard rubber. A good instrument can be obtained in either of the above classes, and individual taste may, perhaps, have much to do in deciding the preferable form which it shall take. The essentials are a syringe of m.xx. capacity, with a barrel of uniform caliber, containing a practically air-tight piston, the rod of which is graduated and marked in ms., and some arrangement provided to permit of the whole or any portion of the full capacity being injected. The first essential, a barrel of uniform caliber, involves some consideration of the materials used in construction. Bartholow objects to the glass barrel from the fact that, being blown, not bored, the caliber is liable to vary. This is an error that with some care in the selection of the cylinder will only exist theoretically, the elasticity of a good piston compensating for any trivial irregularities. I prefer glass to metal, as the advantage of seeing the contents of the syringe is more real than imaginary. You can readily detect whether the piston is drawing, and, again, ascertain if the syringe is full without ejecting any fluid as a test. The small leather washers, required under the cylinder caps at each end to render the syringe air-tight, demand no attention at the hands of the physician, and will last quite as long as the piston, with which they can be renewed. Hard rubber, whilst carrying with it the objections urged against metal, has the additional disadvantage of being a perishable article. A very good piston is one constructed on the same type as that in Dieulafoy's aspirator, and made of leather. It is practically

a double piston, and any fluid passing the first collecting in the constriction separating them helps to tighten both. Other materials are used, but leather, in addition to being very serviceable, can, in an emergency, be renewed by any competent mechanic. The graduation of the piston-rod is a most important detail in cheap syringes; the scale is cut on the barrel. This, in addition to its obvious inaccuracy, compels the operator to watch closely lest he inject more than the required quantity. With the scale on the piston-rod, the small nut which traverses a thread cut thereon can be set to half a minim, and, being so, he has no further care in the matter, as the nut arrests the piston at any point in its travel for which it has been set. It is of very great importance that the metal used throughout in the construction of the instrument should not be acted on by any fluid that it may be required to contain; and, for this reason, copper, no matter how well plated, should not be employed. Silver, german silver, or aluminum, are the best; and silver gilt, for effectiveness, appearance and economy, surpasses any. The pattern I prefer consists of a metallic frame in three pieces, two side bars or guards which connect a ring, to which screw the caps of the instrument; these side bars each cover one-quarter of the circumference of the barrel. This, which is of glass, carefully selected as to caliber, beds at the distal end of the syringe on a small leather washer; a similar washer fits under the proximal cap which should never be able to be screwed home; when this can be done, the washers need to be renewed. The piston is of leather and double, the rod of the same material as the frame, graded in minims and tapped to carry the small nut which regulates the cut off. The button at the end which takes the thumb is concave, and the nozzle on which the needle fits is ground to an accurate fit; a method for simplicity, effectiveness and cleanliness far surpassing the screw and washer arrangement, which is quite common. Both ends of the syringe should be secured with caps, so as to render it air-tight. The cap covering the nozzle, suggested by Dr. Whittaker of Cincinnati, is a very valuable addition, and that covering the proximal end, added by Freeman & Co., renders the syringe perfectly effective after six months' disuse. The remaining portion of the apparatus, the needles, requires a short description. They are made of various materials, the choice of which, if fulfilling the requisites demanded, is unimportant. The needles should be as

fine as possible, sharply pointed, the point cut off very obliquely, offering as little resistance as possible when entering the tissues. For these reasons steel, either plain or nickel-plated, is the best material, and those cold-drawn are to be preferred to the welded canulæ, being less liable to leak and more durable. When the needles are unplated steel, they require a good deal of care and attention to keep them in working order. After injecting the fluid, while the needle is still attached, fill and empty the syringe a couple of times with clean water; then remove the needle; put the air-caps on the syringe; take the needle and blow through it, to drive out the fluid remaining in the bore; hold it, point uppermost, over the flame of a lamp, candle or match, till it is quite warm; blow through a second time; dry over the flame and pass the wire stilette from the point inwards. The bore of the canula is so small that oil of any kind will very quickly clog and render it impervious. In the manner above described, an unplated steel needle can be kept in good order for an indefinite time.

Hypodermic cases vary in construction, as they are intended to carry solutions, solids, or the more modern compressed tablets. The case should contain a syringe, needles of the type I have specified, wires used in cleaning same and maintaining integrity of canula, a quantity of a medicinal agent or agents in some form readily available for injection. The ordinary hypodermic case contains a phial holding  $\text{ʒii.}$  of some morphia solution with a syringe, needles, etc. The form of the case may be varied, also the material, but the principle is the same, a small quantity of solution. Bartholow's case contains in addition to the phial, a minim glass in which he measures the exact quantity he intends to use previous to its entering the syringe. His instrument is silver, which may render such a precaution necessary, but where the glass barrel is employed, and the nut on the piston rod permits of accurate and fine adjustment, such a procedure is quite unnecessary. White of Philadelphia, first appeared in print with a case to carry the compressed tablets; the idea is good but the materials used in construction are not calculated for endurance. The discs are contained in the tubes as supplied by the trade. Only eight varieties are figured, which, considering the bulk of the case, is a very limited range to compensate for the inconvenience of carrying it. Wyeth makes a case after the same pattern proportionally increased in bulk to accomo-

date the addition. Like White's, the materials are such as render it unfit for rough usage, while the size is too cumbersome to carry with convenience. Compactness and durability, when efficiency is maintained, are the desiderata in any pocket case, and, while efficiency is present, the remaining conditions are certainly not attained in either White's or Wyeth's apparatus. In July last, I had the honor of bringing under the notice of this society (*Pacific Medical and Surgical Journal*, August number, page 49) a hypodermic case which seems to fulfill the requirements demanded. The syringe and needles are of the most approved type, while the arrangement for carrying the discs, gives a range of nine varieties, sufficiently extensive for many combinations. It equals in compactness any model, and the materials ensure its integrity under very rough usage. My experience of it at that date was of several months standing, and the interval which has since elapsed serves to confirm the opinion then expressed as to its merits.

Assuming that the operator is provided with a first class instrument and using the discs wishes to prepare one of them for injection. Within certain limits the smaller the amount of fluid used at the time, the less likelihood is there of after trouble. If the fluid before injection holds in solution a given quantity of the drug it cannot be too concentrated for ready absorption. As it diffuses in the tissues its further dilution is ensured by contact with the vital fluids. Taking the discs when in good order, the following may be regarded as the approximate quantity of water required to produce perfect solution:  $\frac{1}{2}$  gr. 8 minims,  $\frac{1}{3}$  gr. 6 ms.,  $\frac{1}{4}$  gr.,  $\frac{1}{5}$  gr. and  $\frac{1}{6}$  gr. 4 ms., no practical advantage being gained by a further reduction. The addition of atropia makes no appreciable difference in the solubility; for other alkaloids, as strychnia  $\frac{1}{10}$  gr., pilocarpine  $\frac{1}{20}$  or  $\frac{1}{10}$ , 4 ms. will be found sufficient. The objection to a large quantity of fluid, being inserted at the same place and time, is the amount of disturbance to parts which it creates. When the fluid has been injected deeply, this is of little moment, but such a course may not be possible and may even be undesirable, under which circumstances the quantity becomes an important element. The injection should never be used cold, but warmed to a temperature of 98° or 100° except in the case of ether, alcohol, etc., where it is obviously not required. This promotes absorption by preventing that contracture of the

capillaries which contact with the cold fluid produces, and also lessens the pain. Cold water injected into the tissues causes a smarting, burning pain, which is almost unnoticed when warm water is employed. The discs dissolve easily in cold water, but, as the warmer fluid is preferable, solution can be aided by the heat required to raise the temperature. Having attached the needle, fill the syringe with water and eject the required amount into an ordinary teaspoon, such as can be found in any house, in which the disc has been previously placed; hold the spoon over the flame of a gas jet, candle or match; if the disc does not immediately break down, a pin or knife blade may be called into requisition; raise the temperature of the water to something like  $120^{\circ}$  or  $130^{\circ}$  agitating the fluid at the same time. In this manner perfect solution will as a rule be effected in less than one minute. When sufficiently cooled draw the fluid slowly into the syringe, keeping the orifice of the canula downwards, by this means the spoon will be perfectly emptied. Immediately before injecting hold the syringe vertically, point uppermost, and force the piston gently upwards till the fluid appears at the point of the needle, ensuring the absence of air. With regard to the manner of performing the operation there are a few details, the observance of which are very necessary. I have discussed elsewhere the question of injection at the seat of pain and whether any additional benefit was to be derived from such action, it now only remains to consider the best manner of performing the operation. The fluid may be injected under the skin into the loose areolar tissue or else sent well down into the muscular structures beneath. In the majority of cases the latter is much preferable and should be employed unless contra-indicated by some local condition. When irritant fluids as ether or alcohol are used, and even with ergot, there should be no exception, and I believe that many of the unpleasant results reported are due to neglect of this rule. It may be difficult to explain why the deep injection is so much safer. The lower organization of the areolar tissue, the extra sensitiveness of the cutaneous nerve filaments and the possibility of the entrance of air into the sac formed by the injected fluid, over which the skin is tensely stretched, are probably factors in the case. As regards the relative power of absorption in the two situations it has always seemed to me that the deeper structures must possess that function to a far greater degree, from the larger number of



vessels, and the more intimate capillary interchange. That the possibility of the needle entering a blood vessel or penetrating a nerve trunk is greater when inserted deeply into the tissues, than if merely introduced beneath the skin, I do not attempt to deny. It is, however, an unlikely possibility, and as the position of the larger vessels and nerves can be determined with approximate accuracy the occurrence of such an untoward result may not be regarded as contra-indicating such a preferable procedure.

Having prepared the syringe as directed and determined the site of the operation, grasp the skin and subcutaneous tissues firmly between the thumb and index finger of the left hand. This fulfills the double purpose of lessening the pain of introduction and facilitating it by presenting a firm and unyielding surface to the needle's point. Hold the syringe in the right hand very much as one holds a pen, except that the thumb crosses the barrel at a right angle. This position will give ample power to penetrate any integument. The second finger, resting on the nozzle of the syringe, prevents it descending, while the thumb and index finger, by opposing pressure, fix it above. The piston-rod, occupying the position of the pen-handle, is secure from any force till it is desired to apply it. If possible, see that your position is such as to avoid any transverse strain being brought to bear on the needle by sudden movement of the patient; this bends the needle and renders it unreliable in future use. Touching the skin with the needle point, introduce it slowly and steadily for about  $\frac{1}{16}$  inch; from its fineness the pain is not severer than a mosquito bite. When entrance has been effected, rapidly push the needle in for the required distance. This course is preferable to the usual method of introduction by stabbing. If the skin is at all tough and the needle fine, the point almost certainly will give way, and a temporary arrest, by deviating the force, may bend it considerably from a right line. If the injection is to be subcutaneous, run the needle for about half its length under the surface, not deeper than  $\frac{1}{4}$  of an inch. Still holding the tissues, place the thumb on the end of the piston-rod, and, partially withdrawing the needle, quickly inject the fluid. Relax the parts, and, with the left index finger over the point of entrance, withdraw the needle; then with two fingers of the left hand gently press and knead the part, so as to distribute the fluid evenly amongst the tissues. I am perfectly

aware that such a course is directly opposed to very high authority, but it has the support of extended practical experience, before which any theory must give way. To leave a collection of fluid—say 15 or 20 minims in an extreme case—in the subcutaneous areolar tissue, forming a circumscribed tumor, is certainly not good practice. The objections to the plan I advocate are, that it breaks up the capillaries of the part and hinders absorption; but the mere mechanical distension must already have ruptured some small vessels, and the wider diffusion of the fluid, while not adding considerably to the damage, offers much greater opportunities for absorption. When the method of non-interference has been adopted, I have seen hard nodules persisting for some time at the seat of operation, and where the fluid has been dispersed, I have not observed any perceptible thickening or palpation. When making the deep injection, the same rules are to be observed, except that when the needle has entered the tissues for one-fourth of its length, they may be relaxed so as to allow the terminal point to be as deep as possible. The kneading process will also have to be more energetic.

The foregoing rules may seem superfluous and unnecessary from their very obviousness, as well as cumbersome in details, but the success attending an operation of frequent performance is sufficient warrant for their adoption. Any one who has seen cases of sores and sloughing, or has been deprived of the assistance of his syringe from the unconquerable prejudice of a patient, due to the ill fortune of a brother practitioner, will agree that a right method and its observance is of no slight value.

There are certain obvious precautions which it may seem unnecessary to dwell on, such as avoiding penetration of a cavity or joint, and more particularly a nerve, trunk or blood vessel, especially a vein. The superficial veins are easily avoided in the extremities, momentary pressure on the cardiac side will render them tense and plainly visible. With some attention to anatomical distribution, blood vessels of importance, deeply situated, need not be injured. Apart from these accidents there are certain situations where it is undesirable to allow collections of fluid to rest. Injections, if possible, are to be avoided where the tissues covering bones or cavities are thin; where there is great mobility of parts; where parts are exposed to pressure and friction, into muscular interspaces in the immediate neighbor-

hood of dense fasciæ; unless specially desired; when the fluid will rest in close proximity to large vessels or nerve trunks. The face and neck anteriorly are places to be avoided. The extensive nervous supply, and the exalted sensibility of the fifth pair, make the operation more than usually painful, and the mobility of the parts with the attendant loose areolar tissue, renders inflammation here a very possible consequence. The persistence of marks subsequently, is also an element of importance. The most carefully performed injection will leave visible traces for several days, which are unsightly and disfiguring, apart from the consideration of after trouble. The scalp is another region of undesirable selection. The thinness of the covering and the dense fasciæ, separated by lax areolar tissue, present elements of danger on every hand. Admitting that where the relief of pain is concerned, an intimately local injection may act more rapidly and effectively, this observation, not absolutely determined, cannot outweigh grave considerations. The trapezius muscle on the posterior part of the neck, from the third to the seventh cervical vertebra, offers a locus which will reach any cranial or facial neuralgia. Exceptions to this rule are permissible where strychnia is used for its physiological effect, but if the solution is not, or cannot be, introduced directly into the muscular substance of that one, or member of a group, to be acted on, no advantage can be claimed over the safer situation. Where the general effect of the medicinal agent is to be obtained, and more particularly when irritants as ether, alcohol and chloral are used, or when large quantities of a drug are required, the following are situations by preference in that order: The gluteal region at a point posterior and slightly superior to the sciatic notch. The depth of muscular tissue, free vascular anastomosis, and security from pressure or friction render it primarily the best situation; indeed it is debatable whether the agents above named should be elsewhere injected. The posterior portion of the thigh at the junction of middle and upper thirds offers in the biceps a favorable site. The calf of the leg on either side of the mesial line, and the anterior portion of the thigh with the limb passively extended, embrace the points of selection in the lower extremities. Turning to the trunk and upper limbs the erector spinæ muscles in the center of the back come first, then the scapular muscles, deltoid, and lastly the anterior and posterior aspects of the forearm.

As the result of experience based on the foregoing conditions, these will be found to combine safety with efficiency, and will stand practical testing more surely than any others. The objection may be raised that unnecessary exposure of the patient, which is so repugnant to the female sex will be required, but where the prompt relief of severe pain is called for, their considerations will not be found insuperable. To this, and this alone, can be ascribed the very general selection of the forearm as the seat of operation.

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### TRANSPLANTATION OF TEETH INTO ARTIFICIAL SOCKETS.

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By W. J. YOUNGER, M. D.

Transplantation of teeth from one mouth to another is not, by any means, a new operation, as it was done many years ago for the noble and the opulent of the old world. It is not only mentioned in some of the very old works on surgery, but even by writers of fiction. Not only did the poor mar their mouths to sell their teeth, but even the freshly dead were disfigured for this purpose. Victor Hugo, himself, utilizes a knowledge of this operation in "Les Miserables," and makes one of his heroines, Fanchon, sell two of her front teeth in order to procure food for her starving child. But so many disastrous consequences occurred, so many painful effects followed, and so many failures happened, that the operation fell into disrepute and was abandoned as soon as artificial substitutes were invented that approached, in some measure, a natural appearance and in some degree served the purpose of mastication.

Not until I was in Paris in 1877, however, did I learn how the operation of transplantation was effected, and in learning that, I acquired an insight into the causes of the many disastrous, painful and futile results.

I will let Dr. Thomas P. Evans, the famous dentist of the Empire, and intimate friend of Napoleon III, explain, in his own language—during a conversation on professional topics—as nearly as I can recollect it, the *modus operandi* of transplantation, and the reason of his abandonment of it, as it was the narration of this incident in his practice that revealed to me the method pursued in transplanting teeth, and awoke the sugges-

tions in my mind, that has made this operation, in my hands, the reverse of what it has been. But I wish it to be distinctly understood, that in whatever strictures I may make on the operation as illustrated in the case related by Dr. Evans, that I do not, in the least, intend to reflect on him, for I have the highest esteem and respect for the professional skill and attainments, erudition and private worth of this distinguished gentleman, that have gained for him a social position that has contributed immensely in elevating the status of dental professional life abroad. Dr. Evans simply followed the beaten path, and was therefore not responsible for it. But to return to the subject.

"The last operation of this kind that I ever attempted," said he, "was that on a certain Marquise, who shall be nameless in consequence of the unfortunate results that followed the operation. She was a young, rich and lovely woman, but whose beauty was marred by the presence of four dead, black, badly decayed front teeth, which were a constant source of mortification to her. She had such an aversion to wearing false teeth that she would not consent to an artificial substitute; so the operation of transplantation was decided on. One of her maids was thereupon commissioned to search among her friends and acquaintances for a woman whose teeth would in size, contour and color suit the requirements of the case. At last one was found whose teeth seemed in every way suitable, and the consideration for them agreed upon. As it was not desirable that the parties should know or afterwards recognize one another, the utmost secrecy had been preserved, and was carried out to the end, in this wise: Two chairs were placed back to back. The Marquise, heavily veiled, was seated in one, and the woman, also heavily veiled, was then brought in and placed in the other. The lady's teeth were then drawn and laid aside, and then the woman's, which were immediately fitted into the gaping sockets of the Marquise's, and tied in by ligatures to the adjoining teeth. The woman was then led out, paid, and all further interest in her, I supposed, ended. Not so, however, for, as it afterwards transpired, this woman had been leading an immoral life, had contracted a loathsome disease, which was, unfortunately, communicated to the Marquise, and produced in her great anguish of mind and body, and the subsequent loss of the teeth. I came in for a share in the blame, for not having sufficiently examined the woman as to her health and moral status. I then determined

never to perform the operation of transplantation again; it was fraught with too much danger."

This then was the method practiced in transplantation. The subjects were brought together, the fresh, blood covered teeth of one, with whatever of tartar and filth had accumulated on them, were immediately transferred, into the raw, bleeding and clotted sockets of the other; each tooth having in its body a mass of soft tissue, known as the pulp, whose life was extinguished as soon as rupture of its tissues occurred at the apex of the root; and which, being deprived of vitality, was bound to decompose with all the attendant phenomena of putrefaction, formation of gases, pus, etc. The only wonder, to me, is, that the operation was ever successful, with such a dirty, bungling, unscientific style of procedure.

In the first place, the danger of communicating hereditary or acquired disease, when the blood of one person is placed in contact with a raw surface of another must be evident to all.

Secondly. No thought seems to have been given as to how the tooth attached itself. It seems to have been put in in a haphazard sort of way, with an indefinite idea that it would grow into the gum. Now, it is due to the pericementum of the tooth, which is the analogue of the periosteum of the bones, that attachment to the walls of the socket is possible. And it is readily seen, that some of the clot into which the tooth is thrust, must remain between the root and the socket, preventing that intimate contact between the pericementum and the alveolar wall so requisite for union, to say nothing of the septic dangers attendant upon a decomposing, confined clot. But, supposing this difficulty and danger to be overcome, and sufficient union effected, we come to

Thirdly. The pulp or nerve, as it is called by the laity, is the substance, the death of which, produces that frightful torture attendant on the formation of what is known as alveolar abscess. The pulp then in these transplanted teeth,—being devitalized by the solution of continuity effected in extraction and being unlike the pericementum in its power to retain vitality,—dies, and in its death, unless the tooth is secured by ligatures or otherwise, and the gases evolved are not sufficient, consequently, to expel it, all the painful train of phenomena attendant on the formation of alveolar abscess are sure to follow.

Fourthly. If, in spite of all these deterring causes, the tooth should become fixed in its new habitation, the decomposed pulp

is partly absorbed by the tubuli of the dentine and the tooth becomes blackened and unsightly.

With the operation performed in *this* manner, we cannot but agree with other writers on the subject, that transplantation of teeth is accompanied with great danger and is bound to be a failure.

*But transplantation can be made a success and void of all danger and unpleasant consequences, if only common sense, and cleanliness, ordinary skill and care are taken.*

It is to prove this and unprejudice the scientific mind, and, through it, the public, and to do away with the abomination of false teeth, that I here present to the profession the results of my experiments and experience in this direction.

I gained courage to try the operation by reflecting on the experiment of John Hunter, who, to test the vitality of the pericementum, planted a tooth in a cock's comb. This tooth attached itself firmly to the crest, and a few months afterwards the cock was killed and a microscopical examination showed that a living union had taken place, the blood vessels of the comb and pericementum having established free communications.

I also tried the experiment upon a cock's comb, to further and personally assure myself of the truth of this statement, and confirmed, as far as attachment was concerned, the experiment of the great surgeon. But, in my experiment, I took the precaution of removing the pulp and filling the pulp chamber and root canal with a preparation of gutta percha, known as "Hill's stopping," much used by dentists for temporary fillings. This was in order to avoid any trouble from a decomposing pulp. The tooth was then well cleansed with warm water and dipped in a disinfecting solution. The success of this experiment satisfied me that the pericementum would attach itself to any vascular body, and that, if properly planted in a fresh socket, it would attach itself and form a living union with the surrounding tissues, without the production of afterpains or other evil consequences.

My first experiment January 24th, 1881, was on a Mrs. H., a lady of about 36, who had nursed a badly diseased root of a left superior lateral incisor for fifteen years, in order to maintain the contour of the gum, while wearing a plate with an artificial crown resting on it. Whilst waiting for a lateral, I cured the diseased root, but kept its shattered parts together, in order to

preserve the socket intact. There had been so much disease in this socket that the gum was covered with cicatrices, the sequelæ of different discharges. At last I procured the tooth needed from a lady of about forty, and prepared it in the manner already described for the cock's comb. Before doing so, I extracted the root, in order to allow the patulous vessels to close of their own accord. When the tooth was ready, I carefully wiped out the clots, rinsed the socket with a disinfecting solution and put in the tooth. Finding the root a little too long, I cut off the excessive portion of the apex, cleansed the socket again, pressed the tooth into position and held it in place by delicate silk ligatures. No pain ensued, no swelling, and no unpleasant symptoms, of any kind whatever, developed. Four days after, the ligatures were removed and I was gratified to find the tooth well attached and resisting gentle traction made with the fingers. The ligatures were again replaced, in order to hold the tooth firmly in position until the attachments had acquired sufficient strength. In four weeks they were removed. The tooth has now been in its new home, nearly five years and is now as firm in its place, and light in color, as any tooth in the delighted lady's mouth.

I have now had between thirty and forty cases of transplantation into sockets already formed, and have to report but two failures. One due to the patient's own neglect, in leaving for foreign parts too soon after the operation, and not allowing me to place the ligatures necessary to retain the tooth in a fixed position, until sufficiently strong attachments could take place, and the other, to my own inexperience. In the latter case, there was a diseased root of fourteen years standing. The attachments all around the root had been destroyed and the tooth hung by a pedicle at the apex. I had not had time to cure the root, and so I drilled through the crown of the new tooth into the pulp chamber, forming a canal through to the end, for drainage, and to treat the diseased socket. Unfortunately, I did not scrape away sufficiently the healed walls of the socket, and, therefore, attachment did not take place along the sides of the root. The tooth, not tightening, became a nuisance to the lady, who was of a highly nervous temperament and three months after its insertion it was removed.

One case, where I had but little hope of success, turned out a decided one. At the time, I was surprised, but since I have



discovered the wonderful grip a little pericementum has, I am no longer surprised at anything this remarkable membrane will do. As there was a little sentiment, besides cold science, connected with this case, I take a special pleasure in narrating it. Two young girls of sixteen, merry, laughing, loving little friends, came to me, one had an upper bicuspid that was overcrowding her otherwise lovely mouth; the other a badly formed, worse decayed and painful lower one in hers, and they asked me if I would not please take the one out and insert the other in its place. But as the root of the upper was considerably wider than the lower and would necessitate, to fit the tooth properly, the reduction of the diameter of the root and thereby involve the destruction of considerable pericementum, I did not consider it practicable. Nevertheless, as they seemed to have set their hearts upon it, evidently believing that this transfer of tooth, would, in some subtle manner, unite them more closely, and the one declaring her willingness to suffer any pain, even with the slight chance of success promised, to have her wish consummated, I yielded. In this operation I had to grind away the labio-lingual aspects of the root, thus denuding the whole of these surfaces of pericementum and leaving but two strips of this membrane, one anteriorly and the other posteriorly, to form attachments with. Nevertheless, it did so, and it is now one of the best and firmest teeth the young lady has in her head. This operation was done Feb. 21st, 1881, but a month latter than the one previously reported.

The great and only difficulty I had to contend with, was the procurement of teeth at the time they were needed. At last a way suggested itself. I applied to my dental friends for whatever good teeth or roots the exigencies of cases required them to extract. The experiment of Hunter and my own experience had taught me that teeth could be kept alive, indefinitely, in cocks' combs. But could they be transferred to the human mouth again and made to grow there? I concluded they would, and my first experiment verified my conclusion.

On November 28th, 1882, a bicuspid that had been in a cock's comb for ten days, was transferred to the mouth of a gentleman, where it fastened itself, as if there had been no gallinaceous period in its existence.

Where I have not been able to procure a suitable tooth I have taken a root, and mounted an artificial crown on it. Sometimes

I use the natural crown of a tooth that has been irretrievably loosened by incrustation of tartar on its root. In this case I simply saw off the bad root and attach a good one to the crown by means of one or more gold screws and cement. In these cases the patient simply changes roots. I have also discovered that the pericementum can be kept alive for, certainly, two days, in warm water, temperature 100° to 110° Fahrenheit. I have in two cases transplanted teeth successfully that had been so kept for fifty hours.

My former practice when I found a root was too long or too wide for a socket, was to cut off from the apical extremity or shave off from the surface of the root the necessary quantity to insure a fit, but so often the best portion of the pericementum was in that way removed, that I tried deepening or widening the cavity as the case required, often cutting freely into the bone in order to save all possible of this valuable tissue. I found that adhesion took place in this portion as perfectly as in the unbroached. The consideration of this led me to the grand conclusion, that *artificial sockets could be drilled into the bone itself and teeth planted therein as successfully as into the natural cavities.* And again was I right.

My first operation of this nature was reported to the California State Dental Association in August last, and its success witnessed by them seven weeks after its performance. But as the transactions of this society for this year, will not be published for some time, I will incorporate said report in this article.

#### REPORT.

On the 17th of June last, Miss Ward, a young lady of 24, presented herself. She had lost the left superior lateral incisor, root and all, four years previously, and had been wearing, as a substitute, an artificial tooth on a rubber plate. The collapse of the gum, consequent on the absorption of the alveolus, was so great, and the exposure of gum so much, in conversation, and especially in smiling, that the falsity of the denture was immediately recognized, and was an object of great distress to her. As it was impossible, for the reasons just given, to produce an artificial substitute that would look natural, I determined upon the following operation,—one that I had for a long time contemplated, and which, though satisfied in my mind, in consequence of certain observations and experiments, would be successful,

seemed so opposed to scientific thought and the established rules of surgery, that I had not before screwed up my courage sufficiently to attempt it. I took a corresponding lateral from a young man, which, from its awkward position, was disfiguring his mouth, and prepared it as I do all teeth I use in transplantation, viz.: removed the pulp, filled the pulp chamber and root canal with Hill's stopping, and finished the apex with gold. The tooth was then placed in water of the temperature 100° to 110° Fahrenheit, to cleanse it of all blood and impurities, and allowed to remain for about one hour. It was then placed in a bath of bi-chloride of mercury, 2 parts to 1,000 water, for about fifteen minutes, to disinfect it. The tooth being now ready, I turned my attention to the patient. I cut a hole in the gum a little less than the diameter of the root to be inserted. I then took an ordinary flat, angular-edged drill, and drilled into the bone in the line of direction the tooth was to occupy. When fully deep enough, I widened the cavity and formed the socket with a cone-shaped burr. When I found by trial that the cavity would receive the tooth perfectly, I carefully washed and sponged it out, in order to remove every particle of bone, first with warm water, then with cold, and lastly with the bi-chloride solution already referred to, and when the bleeding had ceased, I introduced the tooth, and kept it in position by delicate silk ligatures attached to the central incisor on the right and to the canine on the left. There resulted a little swelling over the root, which remained a few days and then gradually disappeared.

An accident to the gum occurred during the development of its socket. Just as the drill touched the surface of the bone the young lady jerked her head back, which caused the instrument to slip forward and through the gum, making a triangular shaped gash of fully an eighth of an inch in length. Before the tooth was inserted the edge of this cut was brought carefully together and retained in contact by delicate silk sutures. On the fourth day the sutures were removed and no mark was apparent to tell of the lesion that had existed. In twelve days I removed the ligatures from the tooth and found it well attached. I then removed the threads to fix the tooth while the callus formed round the root. About three weeks afterwards, the gum being free from every sign of irritation and the tooth comparatively firm, and desiring to improve the position of the right superior central and lateral, I had to pass the ligatures around

the new tooth. This, unfortunately, set up a slight inflammatory action, and an epulis formed a few days after, and a little discharge of matter took place. I thereupon removed the ligatures and treated with injections of iodine. When last seen the epulis had nearly disappeared, the surrounding gum had resumed its normal look, the tooth become firm in its position and performing its functions in common with its fellow teeth as though it had never been a stranger in the mouth.

This case was examined by several physicians, and by the members of the California State Dental Association, who, with the exception of two, pronounced the operation a great success. These two gentlemen were not thoroughly satisfied with its stability because, only, of the epulis that had formed.

#### CASE TWO.

On the 15th of August and the 5th of September, similar operations were performed on Mrs. C., *æt.* 35. In Mrs. C.'s case, however, the teeth (superior bicuspids) had been absent for twenty years, and during this time she had worn an artificial plate.

On the first date mentioned, a socket was drilled out immediately on the right of the right superior canine and a bicuspid inserted. It was held in position by a silk thread attached to the canine and lateral in front, and a molar a little distance in the rear, the thread simply passing over the crown between the cusps like a tight-rope.

On the 5th of September, Mrs. C., being satisfied of the success of the operation, had two bicuspids inserted in the left side in a similar manner. In this case, however, there was no molar to attach a thread to and so a little loose, diseased root of a second molar had to be brought in requisition. Into this root a fine gold wire was inserted to which the distal end of the string was attached, the string brought taut over the crowns and between the cusps and fastened to the canine and lateral in front. After the insertion of these teeth the face swelled slightly, there was no tendency to expel the teeth, nor was there any pain connected with them. The face was washed with the ordinary solution of muriate of ammonia in water and alcohol, and the gum painted with iodine. In four days the swelling subsided. The gums have now been for over two months without the slightest mark of irritation. The teeth have become quite firm, and the

lady is now using them in mastication, There are three more teeth yet to be inserted,—one right bicuspid and two left superior molars,—which will be done as soon as the proper teeth are procured.

Among the many medical and dental gentlemen who have critically examined this case, and expressed themselves fully satisfied with the success and utility of this operation, are:

Prof. R. Beverly Cole, A. M., M. D., M. R. C. S., Medical Department, University of California.

Prof. F. H. Terrill, M. D., Medical Department, University of California.

Wm. S. Whitwell, A. M., M. D., Editor *Pacific Medical and Surgical Journal*.

Wm. T. Garwood, M. D., former Resident Physician City and County Hospital.

A. F. Sawyer, A. M., M. D.

C. M. Richter, M. D., late Surgeon of the German Hospital.

S. E. Knowles, M. D., D. D. S.

Wm. A. Knowles, M. D., D. D. S.

Alex. Warner, D. D. S., late President California State Dental Association.

J. A. W. Lundborg, President California State Dental Association.

So perfectly natural is the appearance of these teeth in the mouth, so firm and so normal the surrounding gum, that the great majority of these, as well as of other gentlemen who have seen the case, were unable, when put to the test, to distinguish the transplanted teeth from those that were "native and to the manor born." Many mistook some of the old teeth for the new, and the three or four who did point out the right teeth acknowledged that they merely guessed them, in consequence of their being handsomer and better than the other teeth.

Mrs. C. herself says: "When I think that for twenty long years I have had to wear a nasty, old plate, and now I have instead natural teeth growing in my mouth, I feel so happy that I cannot express myself."

In a later paper I hope and expect to discuss and prove to you my theory in regard to the method of attachment of the teeth in their natural as well as in the artificial socket, for I am confident that the views expressed in the books and taught on this subject

are erroneous, and thus prove theoretically, as well as I have practically, that teeth can be transplanted into artificial as well as natural sockets, and made to grow there, and be as perfect in appearance and utility as if they were the development of the very jaw itself, and that this can be a rule and not an exception.

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### **A CASE OF ABDOMINAL PREGNANCY.**

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Reported by DR. CLINTON CUSHING.

On July 27th, 1885, I was asked by Dr. A. S. Weber, to see with him a patient whom he believed to be suffering from an extra-uterine pregnancy.

I found the patient in bed, with a pale and anxious face, pulse rapid and extremely feeble, and complaints of severe pain in region of uterus and ovaries.

The tongue was clean and moist; temperature, 100°; troublesome nausea; no appetite; sleeps but little, except under the influence of narcotics; had been confined to bed for about a week on account of pain upon making exertion.

Her previous history was as follows: Age, 34; native of Switzerland; had given birth to one child fifteen years ago; no miscarriages; general health had been good, and menstruation regular until twelve months ago, when the menstruation ceased, and at once there supervened all the symptoms of pregnancy; morning sickness, enlargement of the breasts and abdomen, and in due time the movement of the child.

From the beginning, however, she suffered from frequent attacks of pain in the region of the uterus and ovaries. At about the beginning of the eighth month she applied to a reputable accoucheur of this city, who examined her and assured her that she was pregnant, but diagnosed a probable extra-uterine pregnancy. Shortly after this the movements of the foetus ceased and the abdomen began to decrease in size, the enlarged breasts also became flabby and the general health began to fail.

One week before I saw her, Dr. Weber was called in to attend her, and it is with his permission I am allowed to report this case. Upon making an examination, I found the abdomen about the size usually seen in a woman seven months pregnant. The tumor was symmetrical, but developed considerably to the left of

the median line; it was sensitive to pressure, elastic, and tympanitic over nearly its entire surface; the cervix uteri was small, firm, and not patulous.

Douglass cul de sac was filled with a firmly adherent, slightly elastic mass which crowded the cervix well forward towards the pubis. She was then turned upon her left side, a Sims speculum introduced and a sound passed with slight difficulty into the uterine cavity for four inches and a half.

The case being an obscure one, Dr. Levi C. Lane was asked to see the case on the following day, and after an examination and consultation, it was decided that the diagnosis lay between a fibrocyst of the uterus and an extra-uterine pregnancy, Dr. Lane and myself favoring the former, and Dr. Weber the latter theory.

The reasons for believing the case to be one of fibrocyst of the uterus were first, that the statements of non-professional persons, and particularly women, who believe themselves to be pregnant, regarding their symptoms and history, are notoriously faulty and exaggerated, and should be received *cum grano salis*. Next, that the tumor was quite firm and elastic and no outline or prominence of a foetus could be made out, and lastly, that the tympanitic condition of the whole lower part of the abdomen, except a small space in the right iliac region, was probably due to some previous attack of peritonitis which had fixed the small intestines in front of the tumor and had been the cause of the pain.

It was finally decided to postpone any active procedures, and endeavor to improve the general state and await developments that would verify the diagnosis or disprove it.

At the end of a week, as her general condition was steadily failing, it was decided to make an exploratory incision through the linea alba and ascertain the true condition and then determine upon the advisability of further operation.

Assisted by Drs. Weber and Harry M. Sherman, I opened the abdomen and at once exposed a dark-red tumor with enlarged veins coursing over it beneath the peritoneum; no intestines came into the field of the incision. Two fingers were now introduced through the opening to examine the tumor, when there suddenly escaped from a small opening in the tumor near the upper angle of the incision a quantity of gas and a thin yellowish fluid containing small curd-like particles.

This opening was immediately enlarged with a pair of strong scissors, the fingers introduced into the cavity, and the presence of a fully developed child verified.

It was the work of but a few moments to enlarge the incision in the abdominal wall and in the sac, and remove the child, which was fully developed, and about the average size of children born at full term. The child was a female, and the surface was macerated to a degree that the skin slipped off on handling.

The placenta was attached to the upper and left side of the sac very loosely; it was macerated and of a yellowish brown color, and was removed without causing any bleeding. The opening in the sac was now drawn well up to the abdominal opening and very thoroughly washed out.

The peritoneal cavity was also carefully washed out and sponged, and an examination made of all the parts.

The sac containing the child was about a quarter of an inch thick, and was developed on the left side of the uterus.

The uterus was quite small and in the right iliac region.

The opening in the sac was now united to the edge of the abdominal wound with silk sutures, a compress of absorbent cotton placed over the opening, and a bandage applied.

There was apparently no shock from the operation, for the pulse was better when she came out from under the influence of the ether than when we began.

At the end of twenty-four hours, the temperature was  $100^{\circ}$ , pulse fair, as to quality, but the nausea, which had been persistent for several days before the operation, continued, pain controlled by McMunn's elixir of opium in 40 drop doses *pro re nata*.

She died from exhaustion sixty hours after the operation.

The fact that the sac containing the foetus was distended with gas explained the difficulty of diagnosing the body of the child within, and also the tympanitic resonance across the lower abdomen.

There was very little odor from the contents of the sac.

Probably not more than two ounces of blood were lost during the operation.

The sponges and instruments were placed in a  $2\frac{1}{2}$  per cent solution of carbolic acid. All the water used in the operation was well boiled the evening before.



The foetus, which I here show you, can be examined at any time in the museum of the Cooper Medical College by those who are interested.

No post mortem examination was made.

It would be interesting to determine the exact relations of the sac to the surrounding structures, but the interests of the patient forbade any extended examination, and any such investigation would have been attended with great risk, on account of the extensive adhesions between the outer side of the sac and the adjacent parts.

So far as could be judged, however, from the sensation to the hand in the sac, it was membranous and contained no muscular tissue, as there was not the slightest effort at contraction, but felt like a bag made of a heavy piece of wet chamois skin.

The woman was in a most unfavorable condition for operation, but as death was imminent, and the fatal result certain, unless relief was extended, she was given the only chance left. Had the operation been done two months earlier, while the general state was still good, her chances for recovery would have been many fold greater.

It has been denied that a foetus can be developed in the peritoneal cavity, but the number of well authenticated cases that are now on record, prove conclusively that the impregnated ovum may attach itself to the peritoneum, and develop until the eighth month, as in the case of Lecluyse, reported at the Academy of Medicine of Belgium, where, owing to a fistulous opening existing between the cavity of the uterus, and that of the peritoneum, through which either the impregnated ovum escaped into the peritoneal cavity, or the spermatozoa passed through this opening impregnating the ovum in the abdominal cavity, with the result that the child continued to develop for seven or eight months, the placenta being attached to the anterior surface of the small intestine, and having no connection with the uterus.

From Marion Sims' observation, we learn that the spermatozoa travel at the rate of three and a half inches in four hours, and while we do not know how long they retain their vitality and motion in the cavity of the body of the female, we know that they have been found in motion on the surface of the ovary seven days after sexual connection. From recent observations made by Lawson Tait in opening the abdomen of

women during ovulation, it has been found that while the funnel-shaped outer extremity of the Fallopian tube was applied closely to the surface of the ovary, it was not always applied to that particular part of the ovary from which the egg was escaping. As a consequence, the ovum when extruded falls into the peritoneal cavity instead of passing into the Fallopian tube, and thus an abdominal pregnancy might result.

Parry in his excellent work on extra-uterine pregnancy calls attention to one symptom which is invariably present in addition to the various other symptoms of pregnancy, and which was a marked symptom of this case, and that is, attacks of severe pain in the region of the uterus and ovaries.

No treatment has proved so successful in the early months of extra-uterine pregnancy as the destruction of the life of the foetus by passing a Faradic current of electricity through the sac for fifteen minutes every third day, until the cessation of nausea, the lessening of the size of the breasts and of the tumor, give reason to believe that the foetal life is destroyed. The sac then contracts, its contents become encysted and absorbed, and no further trouble ensues. The circuit is made by placing one sponge electrode in the roof of the vagina, the other on the surface of the abdomen.

If the child be fully developed, as in this case, the abdomen should be opened, the child removed, the placenta left in situ until it has been loosened by suppuration, and the cut edges of the sac stitched to the abdominal wound. Either this must be done or the chances taken between a mumification of the foetus in its sac, and its escape piecemeal through the abdominal wall, the vagina, the bladder, or the intestines.

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The Executive Committee of the Ninth International Medical Congress, to be held in the City of Washington, D. C., commencing on the first Monday in September, 1887, having accepted, under Rule 10 of the Committee on Preliminary Organization, the charge of the business of the Congress, hereby give notice to the members of the medical profession that they have been actively engaged upon, and have now nearly completed the arrangements for this meeting; and they anticipate the hearty co-operation of the profession everywhere in developing this great scientific and humanitarian assembly.

By order of the Executive Committee.

Chicago, Nov. 24, 1885.

**SUCCESSFUL AMPUTATIONS BELOW FRACTURES  
OF THE FEMUR.**

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By DR. G. W. GRAVES, Petaluma.

On the 9th of January, 1877, I was called early in the night to go eight miles in the country to visit Tom, a well civilized Indian of about twenty years of age, who had been raised by a white family near Petaluma. He was driving a wagon loaded with eight tons of paving stones, and riding one of the wheel horses, when, as he was descending a steep hill in a narrow road cut through soft rock, the horse stumbled, throwing him off, and before he could get out of the way, the wheel of the wagon passed over his left leg in an oblique manner, crushing the bones almost to powder, and leaving the ankle and foot hanging by the bruised tendons. In some manner never fully explained, he had also received a compound comminuted fracture of the femur just below the trochanter major. The late Dr. Christie was with me in consultation, and we decided to amputate as near the lower wound as possible, when he sufficiently recovered from the shock. We gave him small doses of brandy every five minutes for two hours before we could venture to operate, and then he was so feeble we had doubts whether he would survive the operation. Dr. Christie administered chloroform, and while I was operating, he warned me to hurry up as he feared the patient would die on the table. I performed the flap operation just below the head of the tibia, obtaining a very good flap from the posterior muscles which were not crushed as high up as was the tibia.

After dressing the stump, I took out of the upper wound a piece of the femur four inches long, which had split and broken off, comprising half of the thickness of the bone for that distance; there were no other loose fragments, and the half thickness of the lower end was brought in contact with upper fragments. Both wounds were dressed, the patient put to bed, and cooling lotions applied. Directions were given to meet such contingencies as might arise, but we expected from the unfavorable symptoms, that he would not live until morning. I visited him every day for eleven days, when he was moved, at his own request, to the County Hospital at Santa Rosa, as he was not able to pay his board or employ a nurse. I had him

very carefully moved on a bed in a spring wagon, and wrote the county physician (Dr. Gorden) a full description of the case.

Dr. Gorden wrote in reply that he should amputate near the hip joint, believing it impossible that he could get well as he was; but I persuaded the Doctor from doing so, telling him that while I had not seen just such a case, I had in army surgery seen quite bad wounds heal below compound fractures. In a few months, under Dr. Gorden's careful treatment, he was well, and for four years after he attended to a stable of five or six horses, and did general work around the house, walking on a common wooden leg. I then lost sight of him. I believe he would have died if I had amputated the thigh, and he certainly would not have been able to use an artificial limb had he gotten well.

The second case is that of Roland Hanna, a little boy only five years and a half old, who was playing on some flat wood cars standing on a switch, in Petaluma, when an engine was attached to the other end of the train. Getting frightened, he fell between the cars, and it was supposed he was hurt by the brake-beam. This was on the 11th of May, 1884. Finding that the wound was a serious one, I called Dr. Patty in consultation. We found a comminuted fracture near the lesser trochanter, and, from some injury to the femoral artery near the fracture, the circulation in that vessel was very much obstructed. The limb was laid out on the bed, with just traction enough to keep the limb in a proper line, and loose dressings were applied. I used sand bags in place of splints, and tried, by stimulating applications and the use of internal stimulants, to improve the circulation, but in a few days the foot showed unmistakable signs of approaching gangrene, which rapidly extended to the lower border of the patella, where the line of demarcation was formed.

In consultation with Drs. Patty and Crane, we determined to save the thigh if possible, and amputated, on the 25th of May, just above the knee by the circular operation, carrying the knife over the upper border of the patella to get tissue to cover the bone.

We thought it doubtful if he could stand amputation there or near the hip either, while, if he got well from this operation, he would be able to use an artificial limb.

The wound healed nicely in due time, with the exception of a sinus that continued to discharge pus.

Several abscesses were opened which formed near the seat of fracture during the first four months. The whole thigh continued to be painful when moved, and though the child spent much of his time propped in a rocking chair, and felt comparatively easy, the drain of pus was so great that he was fast losing strength.

On the 4th of March, 1885, nearly ten months after the accident, with the assistance of Drs. Patty and Crane, I opened the end of the stump and found that about two-thirds of the bone had been thrown off with the pus, while about one-third remained as a sequestrum. The periosteum had formed an involucrum about three lines thick well around the sequestrum. I took out all the dead bone, it coming out in strips nearly the whole length of the lower fragment; put in a drainage tube and brought the flaps loosely together with adhesive plaster. They were easily held in position. From this time on he rapidly improved, and after several weeks the wound stopped discharging, and the leg soon became fleshy and stout.

He now goes to school on his crutches and walks all over the town, and will be able, after a short time, to walk well with an artificial leg.

I have not given the details of the treatment in either of the above cases, which was simple and on such general principles as any surgeon might use.

On account of a mistake, Dr. Blake had no chance to correct the proof of the latter part of his paper on the "Relation between Chemical Constitution and Physiological Action," that appeared in the last number of the JOURNAL, and some rather important errors have been made, which we now correct.

At page 672, line 8 from bottom, "The animal being at liberty," should form part of the preceding paragraph, with a full stop before "as."

Page 673, line 1, "gastrocnemius" for "gastronemius."

Page 675, line 1, "baggages du passé" for "baggage du passe."

Same page, line 10, for "terms," read "as."

Page 676, line 3 from bottom, insert "I" before "shall."

**PASSAGE OF OPEN PEN KNIFE ALONG THE  
INTESTINAL CANAL.**

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By C. B. HUTCHINGS, M. D.

On the afternoon of Thursday, November 19th, a young man 20 years of age, while fooling with some boys and girls, swallowed an open penknife, handle first. On telephoning the neighboring doctor, he was ordered to drink or eat nothing but milk, and take a dose of castor oil. Fortunately, this advice was not followed, and he came immediately to the city, where he arrived at 7:30 p. m. The castor oil was not given, but, instead, he was instructed to eat a hearty meal of mush and buckwheat cakes, and on going to bed directed to lie on his right side to facilitate the passage of the knife into the duodenum. The next day he was directed to spend most of the day on his right side, with the hips elevated, and to eat freely of any food he desired, but particularly of buckwheat cakes. He claimed that he felt the passage of the knife through the ilio-cæcal valve, from the very considerable pain which it caused. The bowels moved on Friday. On Saturday and Sunday the same food was prescribed, but on neither day did the bowels move.

He claimed, however, that he felt the knife in the transverse colon, and on Monday, in the sigmoid flexure, and late Monday, that he felt it pricking him in the neighborhood of the anus. The bowels did not move on Monday, but on Tuesday morning about 11 o'clock, there was an immense movement which brought away the knife, point first.

Had there been a diarrhoea present, I would have undoubtedly given opiates for the purpose of quieting the peristaltic action of the bowels.

In all cases where a rough or sharp instrument has been swallowed, I believe that bulky non concentrative food should be given for the purpose of filling and distending the bowels, thus preventing the object from catching in any of the numerous folds of the intestines.

The knife, with the blade, measured  $3\frac{1}{2}$  inches. The point was quite sharp, and the rivets in the handle projected a sixteenth of an inch, owing to the worn condition of the handle.

## **Proceedings of Societies.**

### **San Francisco County Medical Society.**

SAN FRANCISCO, November 3, 1885.

The meeting having been called to order by the President, Dr. Jewell, it was moved by Dr. Plummer that the Society should adjourn until the fourth Tuesday in November, as this was a special meeting, and the election of office-bearers could not legally take place. The motion was lost.

It was then shown that, according to the motion carried at the previous meeting, clause one of the first article in the by-laws was suspended, and the next stated meeting appointed to be held upon the first, instead of the second, Tuesday, in November. This same clause had on a former occasion been suspended for nearly three years, and, therefore, the meeting was a stated and not a special meeting.

Dr. Kenyon moved that the Society proceed with the regular order of business. This was seconded by Dr. Ayer, and carried by vote of the Society.

The Committee on Admissions reported favorably on the credentials of Dr. J. M. Eaton, who was forthwith elected a member of the Society by ballot.

Dr. Kenyon, as Curator of the Library, reported that an additional bookcase was necessary. The Executive Committee were requested to see to this, and limit the expenditure to \$30.

The election of officers was then proceeded with.

Dr. Simpson declined the nomination for President, as he had not time to attend to the duties.

Dr. Plummer declined the nomination as a member of the Committee on Medical Ethics, and requested to have the name of Dr. G. W. Davis substituted, which was done.

The following officers were then elected:

President—W. E. Taylor, M. D.

First Vice-President—J. D. Arnold, M. D.

Second Vice-President—T. J. Le Tourneux, M. D.

Recording Secretary—Wm. Watt Kerr, M. D.

Assistant Recording Secretary—A. P. Whittell, M. D.

Corresponding Secretary—M. M. Chipman, M. D.

Treasurer—H. S. Baldwin, M. D.

Librarian—C. G. Kenyon, M. D.

DIRECTORS.

Jas. Simpson, M. D.,                      Henry Gibbons, M. D.,  
W. F. McNutt, M. D.

COMMITTEE ON ADMISSIONS.

H. H. Hart, M. D.,                      G. J. Fitzgibbon, M. D.,  
A. Abrams, M. D.,                      C. E. Blake, M. D.,  
A. P. Whittell, M. D.

COMMITTEE ON MEDICAL ETHICS.

W. S. Whitwell, M. D.,                      C. G. Kenyon, M. D.,  
G. W. Davis, M. D.,                      M. A. Cachot, M. D.,  
A. P. Whittell, M. D.

FINANCE COMMITTEE.

A. G. Soule, M. D.,                      W. S. Whitwell, M. D.,  
J. O. Hirschfelder, M. D.

COMMITTEE ON LIBRARY AND PUBLICATION.

Henry Gibbons, M. D.,                      W. S. Whitwell, M. D.,  
Wm. Watt Kerr, M. D.

EXECUTIVE COMMITTEE.

Wm. Watt Kerr, M. D.,                      E. V. Lonigo, M. D.,  
Basil Norris, M. D.

CURATOR OF LIBRARY.

Mr. William S. Duncombe.

Dr. Plummer moved that the Secretary be requested to obtain a copy of the resolution empowering the Directors to draw the money of the Society from the Odd Fellows' Bank. The motion was carried.

Dr. Ferrer was requested to give the Society some account of his visit to Europe. This he promised to do at the next meeting.

There being no further business, the Society adjourned.

WM. WATT KERR, Rec. Sec'y.

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SAN FRANCISCO, November 24, 1885.

The meeting was called to order by the retiring President, Dr. Jewell, who introduced Dr. W. E. Taylor, the President for the ensuing year.

Dr. Taylor, in taking the Chair, said that he believed the San Francisco County Medical Society to be the place in which the yeoman service of the profession on this coast should be done.



It was the largest in this state, and should be the voice of the profession, and not of any one part of it; for his own part, he would endeavor to harmonize any differences should he be unfortunate enough to find them existing. He hoped for a large increase in the membership, especially from the young men just entering the profession, who would find the intercourse with the veterans in the service of immense value to them in the daily practice of their profession. He not only wished for a larger membership, but trusted that every member would do his duty by taking part in the discussions, by reporting cases from their daily experience, instead of waiting until some exceptional case came under their notice.

The minutes of the meeting Nov. 3, were read with the exception of the list of office bearers, which was in the hands of the printers, and had not been returned in time for the meeting, the Secretary was, therefore, requested to incorporate these names, as they should form a part of the recorded proceedings.

The following names were submitted for membership:

A. L. Lengfeld, M. D., University of California.

F. H. Terrill, M. D.

R. Innis Bromley, M. D., University of California.

C. J. Paton, M. D.

These were proposed by Dr. W. E. Taylor and Dr. Jewell.

G. Ollino, M. D., University of Turin, proposed by Drs. P. DeVecchi and Wm. Watt Kerr.

J. G. Day, M. D., proposed by Dr. Levitt and Dr. W. E. Bates.

Mary W. Moody, M. D., proposed by Dr. R. H. Plummer and Dr. F. B. Kane.

A. L. Lovelace, M. D., proposed by Dr. J. F. Morse and Dr. Wm. Watt Kerr.

The Secretary reported that he had ordered a new book-case, a duplicate of the present one, to cost forty dollars, and stated that he had over-stepped the limit set by the Society, under authority of the trustees, when it was found that a cheaper case would be so small as to be inadequate for the demands of the library. This extra expenditure was approved by the Society. He next reported that in order to draw the dividends from the Odd Fellows' Bank, it was necessary to file the names of the Trustees with a resolution empowering them to draw this money with the Secretary of the Bank. He was requested to draw up the necessary form.

The Library Committee then submitted the following books for the approval of the Society:

1. The International Encyclopedia of Surgery.
2. Pepper's System of Medicine.
3. Clouston on Mental Diseases.

The selection was approved and their purchase ordered.

Dr. Jewell as Chairman of the Committee on Prosecutions reported that the sum of \$75 had been expended in trying the case of the so-called Dr. Fish, and moved that the society refund the money to the member who had expended it. This motion was carried.

Dr. H. Ferrer then gave a demonstration of the modern bacilli, and at the same time exhibited the various cultures of Koch and described the methods of culture.

Dr. W. E. Gibbons did not think that sufficient evidence had been adduced to prove them to be the origin of cholera, but no doubt that some good would follow the investigations. He thought that the present almost exclusive study of bacilli was very liable to draw attention away from the grosser pathological lesions. So far nothing of importance in treatment had been contributed within the last thirty years.

Dr. Ferrer replied that proof of the identity of Koch's germ with the cholera poison has been given within the last few months, as its injection has produced the disease in dogs. So far our researches were very imperfect because the microscope was still an imperfect instrument, and it was only with the aid of many adjuncts that these investigations could be attempted.

The President expressed the thanks of the Society to Dr. Ferrer for his communication.

The Secretary produced a programme of the Wigwam Beer Garden, containing an advertisement from Max Axelrood, M. D., who is a member of this society. On the motion of Dr. J. D. Arnold the matter was referred to the Committee on Medical Ethics.

Dr. Arnold said that at a recent meeting of the Society some members appeared to doubt the frequency of bifid tonsils. Since that time he had witnessed two examples of the mal-formation.

There being no further business the Society adjourned until the second Tuesday in December.

WM. WATT KERR, Rec. Sec'y.

**Sacramento Society for Medical Improvement.**

SACRAMENTO, Nov. 17, 1885.

The Society met in regular session, Dr. H. L. Nichols, President, in the Chair.

The Secretary reported that he had received subscriptions to the amount of \$150.00 from members of the regular profession in Sacramento and vicinity, towards the Graves Defense Fund.

On motion, it was ordered that Dr. Graves be informed that the money was at his disposal for the purpose of defraying the expenses in connection with a new trial.

Dr. G. G. Tyrrell read a paper on the subject of "Sanitary Science the Index of Civilization."

The author briefly reviewed the progress which sanitation had made from early times, giving notable instances where its agency had been of service in preventing or arresting epidemics.

Members present having commented on the paper, the Society adjourned to meet on the third Tuesday in December.

JAMES H. PARKINSON, Sec'y.

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**Alumni Association of Cooper Medical College.**

SAN FRANCISCO, Nov. 13, 1885.

The second annual meeting of the Alumni Association of Cooper Medical College, was held at Cooper Medical College at 3:30 o'clock P. M., Dr. John F. Morse, presiding.

The President opened the meeting with the annual address, in which he dwelt upon the past Medical College of the Pacific, acknowledging with regret its demise; and consequently, also, the death of the Alumni Association of that college.

He stated, on the other hand, that it was the duty of the members of the new Alumni Association of Cooper Medical College, to work with zeal in its behalf, so as to make it an ornament to the institution that gave those present the right to practice medicine, and an honor to the great surgeon E. S. Cooper, to whom all were indebted for having established medical education in this state.

He also recommended the offering of an annual prize of fifty dollars to the graduate, who presented the most perfect article on some medical topic, concluding his paper with an appeal to all those graduates who had not joined the organization, to come forward and sign the roll of membership.

The Secretary then proceeded to call the roll and to read the minutes of the previous meeting. The following members responded to their names: Drs. A. Abrams, A. Barkan, J. De S. Bettencourt, C. E. Blake, M. M. Chipman, C. E. Farnum, G. J. Fitzgibbon, E. G. Frisbie, W. E. Gibbons, W. H. Hammond, H. H. Hart, C. G. Kenyon, T. J. Le Tourneau, P. Maas, W. D. McCarthy, J. F. Morse, E. R. C. Sargent, C. H. Steele and W. G. Winter.

The minutes on motion were approved.

The following new members were then proposed and were unanimously elected to membership: Drs. C. B. Bishop, W. A. Long, R. F. Verrinder, A. E. Verrinder, C. E. Camp, B. Joy, M. F. Patten, A. M. Evans, W. F. Jones, A. E. Gresham, H. E. Sanderson, E. F. Card, Nettie M. Burnett, Edna R. Field, W. H. McLaughlin, Frank Rattan, D. Smith, J. C. S. Ackerly, Jose C. Gasteazoro, C. E. Smith, H. Voeller and M. W. Knox.

The Secretary read his annual report, stating that there were ninety-one members, some of whom had not received their diplomas of Cooper Medical College, but had applied for them; those who had not would be dropped from the list of membership. He also referred to the death of Professor Henry Gibbons.

This was followed by his report as Treasurer, stating that there was \$116.50 in the treasury, which was received from the Alumni Association of the Medical College of the Pacific. No dues were collected during the present year, in accordance with a resolution passed the year previous.

The expenses were \$85.70, leaving a balance of \$30.80 in the treasury. The reports were, on motion, approved and ordered to be placed on file.

The President then appointed an auditing committee of three, Drs. Kenyon, Bishop and Bettencourt, to examine the accounts of the Treasurer.

The committee reported that the accounts were correct. The committee was then discharged with thanks of the association.

Dr. Kenyon stated that it would appear to many of the members that there was a considerable outlay of money, but the books and seal were of the best quality, and would last many years, and would reflect credit on the association in the future. He heartily approved of buying everything of the best quality.

Dr. Chipman remarked that he favored the suggestion in the President's address, that the association should give a prize for the best original medical essay.

Dr. Le Tourneux wished to know whether the expense would be borne by the treasury of the association.

Dr. Chipman thought that it should be defrayed by voluntary contribution from each member.

Professor Barkan said that he would be happy to encourage the proposition of an annual prize, and moved then an annual prize be given to any member, who should write the best history of twelve original cases in practice, attended to by himself, the same to be submitted to an appointed committee.

The motion was seconded and carried. Dr. Barkan then offered fifty dollars to be given at the next annual meeting, to the successful competitor.

Dr. Kenyon moved that Professor Barkan's generous offer be accepted, and a rising vote of thanks of the association be tendered. The motion was seconded and unanimously carried.

Dr. Chipman then moved that the President appoint a committee of three, to propose a plan for awarding the prize to the successful candidate. The motion was seconded and carried.

Drs. Chipman, Kenyon and Steele were appointed and made the following report. "Resolved, This association shall at its next annual meeting offer a prize of fifty dollars (contributed by Professor A. Barkan) for the best essay, which shall consist of a statement or description of twelve cases, with deductions.

"This prize to be delivered to the successful aspirant at the commencement exercises, by the President of the association.

"Competitors must hand in their papers to the Secretary on or before October 1st. There shall be three judges, Dr. C. H. Steele, Dr. C. E. Blake and Dr. John F. Morse."

On motion duly seconded the report was accepted, and the committee discharged with thanks of the association.

Dr. Kenyon moved that a Banquet Committee be appointed, to make arrangements for an annual dinner, which would be an inducement for the country members to attend the meetings, and thus increase the sociability and good feeling between the members of the association.

The motion was seconded and carried. The President appointing Drs. Winter, Bettencourt and Maas on said committee.

Dr. Hart then moved that the Executive Committee should provide a suitable certificate of membership of the association, to be delivered to every member in good standing, and that the retiring President, Dr. Morse, should sign fifty of the certifi-

cates, in honor of his being the first President of the association.

The motion was seconded and carried.

Dr. Fitzgibbon stated that Dr. George Ivancovich, of Petaluma, a member of this organization, was the cause of the institution of a charge of malpractice against a reputable physician, Dr. Graves, of that town, and that he was also guilty of a breach of a professional secret, by exhibiting a letter in court received from Professor Lane, requesting him not to appear as a witness against the physician.

He, therefore, moved that Dr. Ivancovich be expelled from this association. Dr. Hart made an amendment to the motion, that a committee of three be appointed to investigate the charges, and report upon the same at the next meeting, and if the charges were as stated, then the association should expel him. The amended motion was seconded and carried.

The President appointed on the committee Drs. Hart, Fitzgibbon and Bishop.

Dr. Farnum moved that the Secretary make an abstract of this meeting, and tender it to the *Pacific Medical and Surgical Journal* for publication. The motion was seconded and carried.

The election of officers being in order, Dr. Hart was nominated as President.

Dr. Chipman said that the services of Dr. Hart, in reorganizing the association, had been invaluable; that he had put his whole heart and soul into the work; that he had been in hopes that the association would receive the benefit of a continuance of Dr. Hart's services as Secretary; and that he would object to his removal from that position unless there was some other active member present who would agree to accept the secretaryship, and devote the necessary time and attention to the performance of its duties.

Dr. Kenyon stated that Dr. Fitzgibbon had agreed to accept the secretaryship.

The following officers were then elected for the ensuing year: President—Dr. Henry H. Hart, San Francisco, Cal.

First Vice-President—Dr. Charles E. Farnum, San Francisco, Cal.

Second Vice-President—Dr. Wm. D. McCarthy, San Francisco, Cal.

Recording Secretary—Dr. Gerald J. Fitzgibbon, San Francisco, Cal.

Corresponding Secretary—Dr. Elizabeth R. C. Sargent, San Francisco, Cal.

On motion, duly seconded and carried, Drs. Bishop and Kenyon were requested to escort the newly elected President to the chair. Dr. Hart, in a few brief remarks, thanked the members for the honor bestowed upon him, by electing him to the Presidency, and hoped that the next meeting would be equally as successful as the present one.

No further business coming before the association, a motion to adjourn prevailed.

HENRY H. HART, M. D., Secretary.

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**Annual Address of the Alumni Association of Cooper  
Medical College.**

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By President JOHN F. MORSE, M. D.

ALUMNI: You have met at six annual meetings of the Alumni Association of the Medical College of the Pacific; you are convened to-day to start on its journey, the Alumni Association of the Cooper Medical College.

The former exists no longer. The pleasant memories, the delightful recollections of old college days, charmingly illuminating the dark, sombre background of dreadful hours lived in expectation of examination day, and finally the remembrance of the supreme satisfaction felt and enjoyed at graduation, without a thought of the plunge that must be made into the raging, seething vortex of practice, in which many, many sink never to rise, is all that remains to us of the Medical College of the Pacific.

It is impossible to stand at the bier of a departed friend without anguish. It would be unnatural, were we to witness the demise of our dearest friend without experiencing the deepest regret.

To refuse, on the other hand, the offer of friendship and protection extended to us by the young giant, rising pure and mighty, would be worse than folly.

The Alumni Association of the Medical College of the Pacific is dead; God save the Alumni Association of Cooper Medical College !

Let us also keep in view the obligation we owe to the founder of the old school, whose name we now bear, who by his knowledge and foresight furnished us the means of acquiring our medical education, and obtaining that most glorious of all titles, "Doctor of Medicine." Every man entering into and acting up to the tenets of the medical profession, is elevated inestimably above the rest of mankind, because it not only affords the opportunity of doing good, which is nothing in comparison to the other virtue it permits us to acquire if we possess it not, namely, the ability to suffer the grossest ingratitude from man and the vilest slander from garrulous woman and be resigned. How few of us would ever have been able to possess this immense privilege, if there had existed no one to found a Medical College at the time Prof. E. S. Cooper conceived the idea of undertaking the immense task, which he brought to so successful an issue.

Without pausing longer on this subject, I will at once proceed to draw your attention to the fact that, although our association has been called into life, it holds to existence by the most feeble of grasps, because it has, as yet, no object in view.

The very first thing to be done is, the projection of some plan which shall furnish it, or at least put us on, the right track. It is not enough that we send postal cards to all the graduates asking them to put in an appearance at a stated time, that a meeting is called to order, an address read, and the whole affair wound up with a grand feast. Far more effectual work than all this must be accomplished, if it is desirable on the part of the members to see this organization occupy, as it should, a leading position in the medical organizations of the State.

A glance over the last page of the annual announcement of the Alumni Association of the College of Physicians and Surgeons in the city of New York will reveal to the most casual observer the following significant facts:

First.—There is an Alumni Prize Fund, which affords a biennial prize of \$500.

Second.—A Cartwright Fund, which admits of the offering of a prize of \$500 biennially, in alternation with the Alumni Prize Fund.

Third.—A Physiological and Pathological Laboratory Fund. The amount accruing from this is \$1,200, which is yearly paid to the laboratory.



In conclusion, the funds of the association amount to over \$40,000, and it is free from all debts.

Of course, we do not begin to have the membership of the Alumni Association of the College of Physicians and Surgeons of New York, and it is impossible for us to offer any such rewards; yet we never shall be able to do anything, if we do not make a beginning, and the only way to do so, to arrive at any definite result, is by interesting the graduates in the organization. We should lay aside all feeling in the matter, and keep constantly before our thoughts the grand end to be attained—a full membership. That once accomplished, we shall be in a position to inaugurate a programme of action, but, in the mean time, it is certainly within our power to offer a prize of \$50 annually to a successful competitor. If this, or any other similar suggestion, be adopted, the association will be brought prominently before the faculty and the students, and we will at once command their attention. Our existence will then be of some value; it will be practically demonstrated that we have something besides a name.

Aside from all this, it seems as if every graduate should feel a keen desire to join an association, which will bring him in contact with his fellow graduates and promote good feeling, and, what is sadly needed in the profession on this coast, an *esprit de corps* among its members. By that term, I mean it in its fullest significance, as it may be found in professions and callings other than our own.

Medical societies are all well enough in their way, but they often fail utterly in this respect. They are far too often the battle ground where jealous rivals mount their hobby horses and prance before the admiring gaze of their adherents. Miserable professional envy repeatedly shows itself in its most disgusting form, under the hypocritical guise of just criticism.

Isolated as the medical man is from all the world, and most of the world's pleasure; all laid open to his criticism, as are the so-called grand institutions of civilization; misunderstood, unappreciated and frequently maligned, he must often feel tempted to repeat the pessimistic words of Byron:

“I have not loved the world, nor the world me;  
I have not flattered its rank breath, nor bow'd  
To its idolatries a patient knee,—  
Nor coin'd my cheek to smiles,—nor cried aloud

In worship of an echo; in the crowd  
They could not deem me one of such; I stood  
Among them, but not of them; in a shroud  
Of thoughts which were not their thoughts, and still  
could,  
Had I not fixed my mind, which thus itself subdued."

"I have not loved the world, nor the world me,—  
But let us part fair foes; I do believe,  
Though I have found them not, that there may be  
Words which are things,—hopes which will not deceive,  
And virtues which are merciful, nor weave  
Snares for the failing. I would also deem  
O'er others' griefs, that some sincerely grieve;  
That two, or one, are almost what they seem,—  
That goodness is no name, and happiness no dream."

And what remains for him, if it be not brotherly intercourse with these of his own calling?

In our Alumni Association we all may enjoy it, for do we not meet as fellow graduates, as brothers?

In conclusion, I would appeal to all those, who are entitled and have not yet joined our ranks, to sign the roll and assist us in our endeavors to make of the Alumni Association of Cooper Medical College, a useful adjunct and an elegant ornament to the institution that gave us the right to practice medicine.

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During the month of November, in San Francisco, there were, from all causes, 421 deaths. Of these, 9 were due to croup, 21 to diphtheria, 17 to cancer, 52 to phthisis, 13 to bronchitis, 31 to pneumonia, 32 to heart disease, 17 to infantile convulsions, and 11 to accident. There were 6 suicides and 1 homicide.

From the Meteorological Report, we find that the thermometer never rose above 70° nor did it fall below 50° while the average temperature was 57.3°. Also, that during the month the rainfall was 11.78 inches.

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The thirteenth annual meeting of the Public Health Association was held at Washington on Dec. 8th, 9th, 10th and 11th.

## PACIFIC MEDICAL AND SURGICAL JOURNAL

AND

## WESTERN LANCET.

WILLIAM S. WHITWELL, A. M., M. D., EDITOR.

WM. WATT KERR, M. B., C. M., ASSISTANT EDITOR.

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*SAN FRANCISCO, JANUARY, 1886.*

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**Editorial.****Winters v. Graves.**

We have received the following communication from Dr. Wells, Petaluma, with reference to the above case:

*To the Editors of the Pacific Medical and Surgical Journal.*

GENTLEMEN—Allow me to correct, in your journal, a few of the misstatements into which you have been led in regard to the suit of *Winters v. Graves*.

*First*—It was proven, and admitted by Dr. G. at the trial, that he *had* been paid for his services, partly in cash, the balance in work.

*Second*—It was also proven that Dr. G. saw the patient about fifteen minutes after the accident, before any swelling had occurred.

*Third*—Neither Dr. Ivancovich nor myself ever advised bringing a suit. On the contrary, I strongly dissuaded them, and predicted failure.

*Fourth*—On my cross-examination I was asked what surgical works I had recently read, and, in reply, named several authors, Stimson among the rest.

Even if I had read few surgical works, with my long experience, large practice, and the continuous reading of your excellent journal (with other publications), during all the time it was under the editorial management of your predecessors, I could not fail to acquire some measure of professional knowledge.

I may add that I do not think your predecessors would have published an article so unjustly reflecting on any one.

Having graduated at "Old Harvard," having practiced medicine and surgery for over fifty years, even within the past year very actively and laboriously, although "nearly eighty years of age" (72), and in that time having performed some important operations, several operations having been in this town—having treated many fractures with uniform success—and considering that the human system in that time has not materially changed, I began to imagine myself some authority in surgery, although I have never had a sprain merge into even a partial fracture, however poor the patient or however long gratuitously treated. In a case as simple and plain as this, I cannot see how a *very* extensive reading should be required, as even the jury (who, I must say, were uncommonly intelligent) had no difficulty in comprehending the nature of the injury; and even the array of professional "men of national reputation and long experience in teaching, failed to convince them of their error." That I used (when handed me) a carpenter's rule and measured the leg of the patient (as she sat in her chair) as directed by her counsel, I cannot admit to be conclusive evidence of incapacity; but must confess myself "so ignorant, superannuated and incapable" as to suppose that the fact of the deformity was of more consequence than the kind of implement by which it was shown.

I heard but little of the testimony, none of the defense (except Dr. Lane), and none of the argument, and was much surprised at the result, so contrary to my predictions and repugnant to all my sympathies, which would naturally be with the Doctor, between whom and myself there have existed, for fifteen years, the most cordial relations.

In regard to the nature of the injury, I feel confident that my diagnosis will be verified, should the patient's limb ever be subjected to a *post mortem* examination.

Yours respectfully,

WM. R. WELLS, A. M., M. D.

Petaluma, November 3, 1885.

It is not our intention to prejudice the profession with regard to this case, and we therefore give Dr. Wells the space he desires, all the more willingly because we certainly expressed some very grave doubts regarding his medical capabilities which he

now seeks to dispel. In our own defense, however, we should state that our information was drawn from the account of the trial and correspondence printed in the *Courier* for the 7th of October, a newspaper published in Petaluma, of which town Dr. Wells is a resident, and we expected that had they been untrue he would have contradicted them. So far as we can discover, the above letter is the first public refutation he has made and we are glad that he has done so, because the public newspaper represented him as admitting that "he had not read works on surgery for nearly thirty years," and, in fact, as being every thing but the educated physician and surgeon he claims to be, so that many others to whom, like ourselves, he was personally unknown, have apparently misjudged him.

With regard to some of Dr. Wells' statements we should say that Dr. Graves maintained that all the remuneration he ever received from the "Winters" family, both in form of labor and cash, did not amount to over a few dollars; also, that when he first saw the case there was sufficient swelling to obscure the diagnosis.

Dr. Wells has not been accused by us of advising the suit, but the Winters family certainly let it be understood that Dr. Ivancovich had either directly or indirectly suggested such a course.

We quite agree with Dr. Wells in his statement that "the fact of the deformity was of more consequence than the kind of implement by which it was shown," in fact we have a great respect for a surgeon who can accommodate himself to circumstances, and perform a good operation without having an instrument maker's store at his side, but occasionally an instrument or its mode of application is totally unfitted for the use to which it is put, and may mislead either by failing to show deformity, or by representing a deformity which does not exist. We are inclined to believe that Dr. Wells has been misled in this instance, for we cannot understand how a fracture of the internal malleolus would produce shortening of the entire

limb by one inch, as was represented to be the deformity in Mrs. Winters' case, while the fibula remained intact.

It was not our intention to open our columns to any correspondence upon this subject from the parties interested in it while the case was pending, but as we had been misled in some of our statements regarding Dr. Wells, we deemed it only justice to correct them.

There are some features in the professional evidence on both sides, and its relation to the verdict, that must be apparent to every one who has read the accounts of the case.

The expert witnesses for the defense included five specialists in surgery, each of them holding a position as an hospital surgeon; the expert testimony for the prosecution was furnished entirely by two general practitioners, very possibly not altogether ignorant of surgery, as a certain amount of this must fall to the lot of every medical man engaged in the practice of his profession, but hitherto unknown by their fellow-practitioners as possessing either the wide range of experience or peculiar training which would entitle them to pre-eminence in this branch of the healing art. The specialists testified that the deformity was slight, of a very trivial nature, and not attributable to lack of skill or improper treatment. The general practitioners, not misled by ignorance of what constitutes a good result, but moved by a deep conviction of the universal supremacy of science over the powers of nature, expressed their belief that the deformity was considerable and of serious importance. In the opinion of nine jurymen the testimony of two general practitioners, in a country town with four thousand inhabitants, was of much greater value than that of double the number of specialists in a city with a population of more than two hundred and fifty thousand. Most assuredly it was of much more value to the plaintiff.

We have already stated that from the description of the injury received, we cannot see how shortening of the limb was possible, and we now repeat our statement that the measure-

ment of the patient's limb by means of a carpenter's rule, while she was seated on a chair in open court, was a mere farce, utterly incapable of yielding correct results, and only done to give the appearance of scientific accuracy to a miserable burlesque. It is proverbially difficult to obtain correct measurements under any circumstances from the want of fixed points, and since Dr. Wells has quoted Stimson on Fractures as one of the authorities that contributed to the surgical knowledge which qualified him to act as a witness in this case, we would refer him to page 101 of the 1883 edition, where that author states that "absolute accuracy in measuring the distance is impossible." If such be the case, when every precaution is taken to eliminate error, need we be at all surprised at the measurements obtained in the court-room at Santa Rosa, when the very first essentials, which consist in proper position and a suitable instrument, were neglected?

It is unfortunate that the defense did not call attention to the fact that asymmetry in the length of the limbs is the rule, not the exception. This was known as early as 1862, and is referred to by all standard authorities on fractures and dislocations, such as Hamilton and Stimson. Moreover every dress-maker and tailor state, as the result of their experience, that it is exceptional to find a customer with both hips or both shoulders the same height. In seventy skeletons examined by Dr. J. G. Garson of London, the limbs were equal in 10 per cent, the left leg was longer than the right in 54.3 per cent. This asymmetry may vary all the way from one-eighth of an inch to one and five-eighths inches, without either the person or his friends being aware of its existence. This should not have been forgotten in the case of *Winters v. Graves*, especially as the right leg, which was the limb injured, from the above statistics appears to be normally shorter than the left.

The most curious feature of this whole case, is that it never was shown wherein Dr. Graves' treatment of the injury was at fault it was exactly the method advised by Hamilton, whom all America, with the exception of Petaluma, recognizes as the

standard authority on fractures and dislocations. A new trial has been granted and we trust that on this occasion the prosecution will be required to prove not only the existence of deformity, but also to demonstrate how this can be justly attributed to Dr. Graves' management of the case.

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#### **Successful Enforcement of the Medical Law.**

With the morning of a new year comes the dawn of better days for the medical men in California. Within the last few months several irregular practitioners have been arrested and brought to justice.

Hitherto our zeal in this good cause has been dampened by the apathy of the general public and the indifference of the prosecuting attorneys, and we almost felt that we were laboring in vain, but now the people are beginning to wake up to the realization of the dangers to which they are exposed. The State is more thickly settled, and the majority of the population regard it as their home, whereas, formerly, most men cherished the hope of returning to the home of their youth or the land of their birth, and were content to endure disadvantages and discomfort so long as they were able to provide for the exigencies of the day. But now we have among us the children of those men, the native sons of the Golden West, who are as jealous of the reputation of their State as the honor of their daughters, and to these men we shall not look in vain for the assistance we desire.

The following arrests for practicing without a license have been made within the last three months: In September, a Chinaman was arrested at Redding and sentenced to a fine of \$75 or seventy-five days imprisonment. During the same month A. J. Halley was awarded the same punishment in Santa Clara county, and, after spending nearly thirty days in jail, departed a sadder, but, let us hope, a wiser man. This same county shows still stronger proofs that it means business by two other arrests.



One of these was a Chinaman who was held under bonds to appear before the superior court, and his associate in misfortune was the well known Louisa Hagenow who was tried and held for future trial before the superior court. Before her trial she offered to pay the Santa Clara County Medical Society \$100 if they would drop the prosecution. At San Bernardino, M. D. Kellogg was convicted and allowed to choose between paying \$300 to the county or becoming its guest for three hundred days; and the San Francisco authorities extended a similar munificent offer to G. P. Fish; the terms in his case being reduced to \$250, or two hundred and fifty days, in consideration of the fact that this event would celebrate his retirement from the practice of his profession. The latest culprit appears in the person of B. Meier who was arrested at Fresno and held to appear before the superior court, but, fretting under the restraint of the law, he jumped his bonds and fled.

The reproach that the present medical law is ineffective, is no longer true, and it merely requires united action to greatly reduce the number of quacks upon our list. The former prosecutions were chiefly confined to the larger cities, and the result was that the irregulars took alarm at the first arrest, and fled to the provincial towns where they remained until the storm had blown over; but now we have medical societies organized for this purpose all over the state, so that a united action on the part of these bodies must result in the expulsion of these charlatans from California.

The present medical law does not in any way conflict with raising the standard of medical education, and nothing would be more gratifying to the "Board of Examiners" than some additional legislation which would put another bolt upon the door of the temple of Æsculapius.

## Notices of Books, Pamphlets, etc.

VON ZIEMSSSEN'S HANDBOOK OF GENERAL THERAPEUTICS. In seven volumes. Vol. I, Dietary of the Sick. Vol. II, Methods of Treatment. Vol. III, Respiratory Therapeutics. New York: William Wood & Co., 1885. San Francisco: W. S. Duncombe, 211 Post street.

Volume I contains an introduction by Professor Ziemssen, which he calls the keystone to the double work, *i. e.*, the present one and that of Pathology and Special Therapeutics. He discusses the question whether or no any exception can be taken to this handbook of General Therapeutics either theoretically or practically.

He calls to mind the great strides which have been taken in our knowledge of the science of medicine within the last forty years, and believes that it cannot be denied that we should every now and then take a general review of what has been accomplished, and learn, if possible, what really we can consider the property of science. This cannot be performed by any one man, so vast have been the addition to our knowledge in different directions, hence the necessity of co-operation. Although there are certain drawbacks to this method, its advantages by far outweigh the disadvantages. While a work thus written is more unevenly developed than that which emanates from a single source, still by constant revision this fault will, in time, be eliminated.

Professor Ziemssen then speaks of the great advantage which has accrued since organic chemistry turned its attention to questions affecting practical medicine, the result being that many invaluable drugs have been given to the profession with which it would now be difficult to dispense.

The study of Physical Therapeutics has also proved productive and given to us, hydrotherapy, electrotherapy, etc. A scientific method of inquiry has taken the place of the empirical and in consequence a great advance has been made, and practical medicine has been freed in a measure from therapeutic scepticism. In the laboratory rather than at the desk let the work in the future be done.

Volume I of this series, written by Prof. Bauer, treats of the value of the several food stuffs, stimulants and condiments, and then of the preparation and cooking of foods; also of special dietetics for the sick; the diet of convalescence and diet in

diseases of the digestive system, later of diet in anomalous states of the general nutrition, as scurvy, scrofula, gout and diabetes mellitus, finally of special methods of treatment as the Dry Cure, the Grape Cure and the Milk and Whey Cure.

The appendix is by Dr. Stange upon the Koumiss Cure. The volume is in fact a complete text book upon dietetics, and will prove of great value to the physician.

Volume II comprises antipyretic methods of treatment by Professor Jurgensen, epidermic, endermic and hypodermic administration of medicines by Professor Edenberg. Among the subjects which are the most fully treated are those of Blood-letting and Transfusion.

Volume III, the longest one of the series, is devoted to respiratory Therapeutics and treats of the use of inhalations and pneumatic methods. It is from the pen of Professor Oertel of Munich.

From the three volumes already published, it will be seen that this series is a most valuable one treating of subjects which heretofore have never been systematically discussed, and moreover they are such as are of interest to every practitioner.

**A MANUAL OF MICROSCOPICAL TECHNOLOGY FOR USE IN THE INVESTIGATION OF MEDICINE AND PATHOLOGICAL ANATOMY.** By CARL FRIEDLANDER, Lecturer on Pathological Anatomy in the University of Berlin. Translated, with express permission of the author, from the second enlarged and corrected edition, by STEPHEN YATES HOWELL, M. A., M. D. Buffalo, N. Y., New York and London: G. P. Putnam's Sons, 1885. San Francisco: A. L. Bancroft & Co.

**THE USE OF THE MICROSCOPE.** By DR. CARL FRIEDLANDER. Translated, with the permission of the author, by HENRY C. COE. New York: D. Appleton & Co. 1885.

Two translations of this book have appeared at about the same time, and we can hardly say that there is much to choose between them; the former, Dr. Howell's translation, is, perhaps, more elaborate, numerous foot notes having been added throughout the book, for the purpose of clearly rendering the views of the author. On the other hand, Dr. Coe's translation, which we believe to be quite a literal one, contains not only a table of contents, but also a very full index, both of which are wanting from Dr. Howell's. We all know what a great convenience an index is, even in a small book, and, therefore, should be inclined to give the preference to the edition which contained one, even if there were a few points omitted, which were present in the other.

The work is a useful handbook on the use of the microscope, and, after a description of this instrument and of its accessories, treats of the reagents employed in the art, then of the observation of living tissues, the examination of fluids, of Koch's method of straining dried preparations, while the first chapter treats of the examination of solid structures of the cadaver, extirpated tumors, etc. Either translation is to be highly recommended to the student in microscopy.

**PSYCHIATRY. A CLINICAL TREATISE ON DISEASES OF THE FORE BRAIN, BASED UPON A STUDY OF ITS STRUCTURES, FUNCTIONS, AND NUTRITION.** By THEODOR MEYNERT, M. D., Professor of Nervous Diseases and Chief of the Psychiatric Clinic in Vienna. Translated (under authority of the author) by B. SACHS, M. D., Instructor in Diseases of the Mind and Nervous System in the New York Polyclinic. Part I: The Anatomy, Physiology, and Chemistry of the Brain. New York and London: G. P. Putnam's Sons, 1885. San Francisco: A. L. Bancroft & Co.

Professor Meynert has long been known to the profession as the authority on any subject which related to the anatomy of the brain. His great industry, his careful research, and during the past ten years, more especially, his almost unlimited opportunities for observation have entitled him to the appellation of "the great brain anatomist." Up to the present time the result of his labors has been accessible to but few, but now, thanks to Dr. Sachs, the book at which he has labored for the past ten years, is translated and laid before English readers.

Part I, which is soon to be followed by Part II, treats of the "Structure and Architecture of the Brain," of the "Minute Anatomy of the Brain," of "Anatomical Corollaries and Physiology of Cerebral Architecture" and of the "Nutrition of the Brain." There is also an appendix on the Mechanism of Expression.

The most interesting chapter to the general reader, is that on "Anatomical Corollaries," in which the author discusses the relation of the cortex to the outer world; the proofs of cortical localization; also the explanation of conscious movements and the methods of thought and of conscious associations. These are subjects in which many are interested and may be read understandingly, even by the layman. Do not then be frightened off by the title, but buy, read, and enjoy parts, at least, of the work of the eminent author, Theodor Meynert.

**A MANUAL OF PRESCRIPTION WRITING.** By MATTHEW D. MANN, A. M., M. D. Fourth Edition. G. P. Putnam's Sons. 1885. Pp. 175.

This excellent manual is too well known to require any elaborate attention. Its chapters are devoted to the Parts of a Prescription, Weights and Measures, Preparations, Grammatical Construction, Abbreviations, Extemporaneous Prescriptions, Doses and Table of Doses and uses of all the officinal preparations of the U. S. P. of 1880, The Metric System, Medical Combinations, and Incompatibility. The work is complete, though brief, and well adapted to the requirements of the profession. In a work of this kind, a multiplicity of tables and rules are objectionable, and, judging from the great quantity of incorrect and carelessly written prescriptions daily presented to the leading city drug stores, something beyond the comprehension of the average medical intellect. For this and other reasons, we would consider Dr. Mann's the most satisfactory of the few good manuals of the kind in the market.

#### THE MEDICAL NEWS VISITING LIST.

This is a complete pocket-book of useful memoranda for physicians and surgeons, with blanks suitable for keeping the professional and business records of a practice aggregating thirty patients per day. Wallet form, handsome red seal binding, tucks, pocket, pencil and rubber, \$1.00; with patent thumb-letter index for rapid use, 25 cents additional. It is one of the handsomest as well as one of the most convenient which are issued. Lea Brothers & Co., 706 Sansom street, Philadelphia.

#### BOOKS RECEIVED.

**THE THERAPEUTICS OF HIGH TEMPERATURE IN CHILDREN.** By WILLIAM P. WATSON, A. M., M. D.

**IRITIS; ITS RELATION TO THE RHEUMATIC DIATHESIS AND ITS TREATMENT.** By CHARLES J. LUNDY, A. M., M. D.

**NOTE ON A FORM OF POST-NEURALGIC (ENCEPHALATROPHIC OR CEREBRASTHENIC) INSANITY.** By C. H. HUGHES, M. D.

**THE SURGICAL TREATMENT OF CYSTS OF THE PANCREAS.** By N. SENN, M. D.

**THE INDUCTION OF PREMATURE LABOR IN CERTAIN CASES.** By WALTER COLES, M. D.

**HEREDITARY OR DEGENERATIVE ATAXIA; Six cases in one family; death in one case and autopsy.** By W. EVERETT SMITH, M. D.

**TRANSACTIONS OF THE AMERICAN OTOLOGICAL SOCIETY.** Eighteenth Annual Meeting. Vol. III. Part 4.

**THE PHYSIOLOGICAL AND PATHOLOGICAL EFFECTS OF THE USE OF TOBACCO.** By HOBART A. HARE, M. D., B. Sc. Philadelphia: P. Blakiston, Son & Co. 1885.

## Miscellaneous.

CENTER. "Treatment of hæmorrhoids by dilatation of the sphincters." *St. Louis Courier of Medicine*, June, 1885.

The author divides hæmorrhoids into three distinct classes—(1) internal venous, (2) internal arterial, (3) external venous. He excludes Allingham's "capillary" variety as only a stage in the history of the others. The first class always occurs alone. The other two may exist together. External and internal hæmorrhoids are strictly separated anatomically by the white line which unites skin and mucous membrane, and which marks the lower edge of the internal sphincter. After an anatomical description of the parts concerned, he describes the pathology of the three species:—"The arterial internal always depends upon obstruction of the downward flow of blood through the hæmorrhoidal arteries, by a lessening of the rectal lumen at the sphincter internus. The internal venous has no necessary connection with the contractile condition of the internal sphincter; in fact, this is generally relaxed, and readily permits the dilated veins to protrude. These veins have no valves, hence the obstruction must be above the internal sphincter, and is located in the liver, the uterus, impacted fæces, internal tumors, &c., hindering of the blood passing into the general, through the portal venous, system. The external venous are found to be originally varices of the inferior hæmorrhoidal veins, which are being compressed by the lower border of the internal sphincter ani. The patient does not respond at the proper intervals when his rectum should be evacuated. The result is that the upper part of the rectum becomes enlarged. The large hard masses which lodge there bruise and abrade the mucous membrane as they pass through the internal sphincter. This being largely supplied with branches of the sympathetic and pudic nerves, they suffer from exposure and excite contractions of the internal sphincter; this contraction causes the venules to become engorged: they add fresh irritation and cause more vigorous contraction. By this means the venules become enlarged into varicose blood vessels; these vessels dilate so rapidly that their walls become very thin; then the stomata in these walls permit the plasma and leucocytes to exude. They become organized into tissue external to the veins. \* \* \*

The process when once begun goes on, until the somewhat thin internal sphincter becomes hypertrophied into quite a thick fibrous band. The kind of hæmorrhoid formed will be either arterial or venous, depending wholly upon which way there is the greater obstruction to the blood current. If this is greater from within, the pile will be arterial, and form above the internal sphincter; if the greater obstruction is from without inwards, they will be venous and external to the internal sphincter." He objects entirely to the usual methods of treatment by ligature, scissors, injection, clamp, or knife, but dilates the internal sphincter in the first and third varieties by means of a special parallel-bladed dilator, and avoids all operative treatment in the second variety, trusting entirely to medicinal means, as Hunyadi Janos water, to free catharsis, with astringent injections or suppositories. In the use of the dilator, which expands to six and a half inches, he lays stress upon its use in the line of the muscular fibres, and deprecates transverse stretching, as done by the use of the thumbs, as risking avulsion of one of the muscular insertions. He claims to have used this method in 82 cases, without a single failure.

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At the last meeting of the British Medical Association, Dr. D. Berry Hart, lecturer on midwifery at the Edinburgh School of Medicine read an elaborate paper on "The Mechanism and Management of the Third Stage of Labor." This paper has just been published with illustrations in the *Brit. Med. Journal*.

From a study of the anatomy of the uterus during and at the end of pregnancy, Dr. Hart thinks that the uterine glands play an important part in the separation of the placenta and membranes; these glands, which are simply pits lined with epithelium in the mucous membrane of the uterus, run in all directions and so honey comb that portion of the decidua where they are situated as to form a distinct character from the rest of the decidua. To this the author gives the name of the spongy layer of the decidua, and he believes that it is in this layer that separation of the placenta and membranes takes place; the contraction of the uterus following the birth of the child throws the decidua into wavy folds, which strain and finally snap the trabeculæ of which the spongy layer is composed.

With regard to the management of the third stage, Dr. Hart writes as follows:

"In the management of a normal third stage, the patient should, therefore, occupy the dorsal posture, and the accoucheur should grasp the uterus with his left hand to ascertain its tone. When this is good, he retains his grasp merely to note if the uterus relaxes. When good pains come on, I do not consider it necessary that these should be helped by the practice of expression, or what is known as Crede's method. In a normal case, the risk is that the placenta, bulky as compared with the membranes, may be squeezed out too soon, and parts of the membranes left behind.

"When, however, the placenta remains in the uterus half an hour after the delivery of the child, expression should be tried, but only with the left hand. After some practice, one can tell whether the placenta can be expressed, or whether adhesions are present. In the former case, the accoucheur feels the uterus diminishing in bulk as the placenta is expressed; whereas, in the latter case, no impression is made on it by moderate pressure.

"In those cases where uterine action is feeble, expression is of the very greatest value. It then imitates the natural process, and places such a case on a level with the normal. The uterus should be grasped with the left hand as fully as possible, the thumb being in front and the fingers behind. It is then squeezed firmly in the direction of the line joining the finger and the thumb, without any downward pressure.

"When morbid adhesions exist, the accoucheur must separate them manually, using all antiseptic precautions. The hands must be thoroughly cleansed with corrosive sublimate solution (1-2000), and a vulvar and vaginal douche of 1-4000 given. After the separation, the douche of 1-4000 must be repeated, the amount of introduction of the tube depending on the extent of the internal manipulation. In this, as well as in a natural case, it is well to have the diapers used in the puerperium dipped in corrosive sublimate (1-2000), and dried, or the discharge received into sublimated wood-wool wadding."

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The "Hæmorrhage Trick," so called, has been practiced upon a number of good people, in various suburbs of Boston within a few weeks past. A poor man is found lying on the ground with much bright blood upon his lips and his attire. A good Samaritan comes that way to whom the afflicted man explains



that he has accomplished most of the distance from Jerusalem to Jericho on foot in search of work and could easily have finished the journey had he not had this bleeding from the lungs. The good Samaritan, moved with pity for the man's sad condition, does not exactly set him upon his own beast and take him to an inn, but after the changed conditions of the nineteenth century, renders an equivalent service. He gives the sufferer a bank note and advises him to take the first train for a hospital. Such a one recently met a fellow Samaritan who had a similar experience the previous day upon the same road, and the two compared notes. Investigation has showed that there is in Jerusalem a store house from which "hæmorrhage material" is supplied to whoever of the brotherhood of the wayfarers requires it. Meantime the priest and the Levite are disposed to rejoice over the Samaritan and are confirmed in their policy of passing by on the other side.

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Owing to the prominence given by the daily press to the case of Mr. John McCullough, the public has been kept fully acquainted with the history and progress of his malady, up to the time of his death in Philadelphia on November 9th. Desiring to avoid further publicity the family decided at first not to have an autopsy, and the body was placed in a receiving vault at the Monument Cemetery. Subsequently, they requested that the brain alone should be examined. On November 18th, therefore, nine days after death, the post-mortem examination was made by Dr. Hugo Engel, who had been the attending physician, Dr. Chas. K. Mills, Dr. Frank Woodbury, Dr. J. Hendrie Lloyd, Dr. J. M. Barton, and other medical gentlemen, who had been invited by the relatives to be present. The body showed no signs of decomposition; the globes of the eyes were shrunken, and the nose thin. The air of the vault was dry and pure.

The head only was examined. The aponeurosis of the occipito-frontalis muscle instead of being loosely connected with the pericranium was rather adherent. Nothing abnormal was detected (neither scar, depression, or marked irregularity of contour) upon the outer and inner surface of the calvaria, to which the dura mater strongly adhered. Upon the upper surface of the dura mater, along the lateral borders of the superior longitudinal sinus, and most marked at the vertex, were observed granular bodies or small pearly masses without corresponding

depressions in the bone. No marked abnormality was observed in the dura: no discoloration, thickening, or evident inflammatory change.

It was noted, however, that some of the vessels of the dura mater, notably in the left temporal region, had rigid, almost cartilaginous walls, without being obviously enlarged. Upon removing the brain the absence of the usual amount of cerebrospinal fluid was noted. (It had probably been imbibed by the tissues in the long interval which had elapsed since death.) The large venous branches in the pia mater were prominent, and contained dark blood, their walls were thickened, and in some places cord-like. The pia mater showed milky opacities, most marked over the fissures, notably the Sylvian and Rolandic, and along the course of the vessel. The same condition of the pia as to opacity and vasularity, was observed to extend to the cerebellum. The brain structure was remarkably well preserved, but the large ganglia and corpus callosum were quite soft and were torn in manipulating the brain during its removal from the skull. At the point of greatest opacity of the pia, over the convexity of the left hemisphere, the cortical layer of brain tissue came away in several places when the pia was torn away; this was not noticed in others. Deep in the fissure of Sylvius, adhesions were found between the adjoining lobes..

The basilar artery, both middle cerebral arteries and their branches, showed marked degenerative changes in their walls. White deposits were seen and felt, and some of the smaller arteries had their lumen almost, if not totally, occluded by such deposits. (These vessels named were secured for microscopic examination.) Sections of the hemispheres and of the large ganglia, did not reveal any gross lesions beyond those already quoted.

A more careful and detailed report of the autopsy, it is understood will be prepared. The euphemism of "blood poisoning," so frequently repeated in the daily papers, is well understood by the profession, fully accords with the revelations of the autopsy, but is not in any way inconsistent with the previous diagnosis of general paresis.

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Not a soldier in the Prussian army has died of small-pox since 1875; this immunity is undoubtedly due to the strictness with which vaccination is enforced.

Dr. George M. Sternberg, U. S. A., has been reappointed delegate from this country to the International Sanitary Conference, which reconvenes at Rome in December. He has also been recently elected honorary member of the Royal Academy of Medicine in Rome.

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A Treatise on Diphtheria, historically and practically considered, including croup and tracheotomy, is in press, and will soon be issued by J. H. Chambers & Co., of St. Louis. It is by Dr. A. Sauné, of Paris, and is translated by Dr. Henry Z. Gill, of Cleveland, Ohio. It will contain in all about 500 pages.

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Readers of George Eliot will remember that she has one of her characters assert that childbearing is done by women in "a poor, miserable, makeshift sort of a way, and that it would have been better if they had left it to the men." But to this judgment of a misogynist Scotch bachelor, few men would joyfully respond amen.

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Faith doctor to patient, with whom he has just had a seance: "Now, sir, you are better. Tell me just how you feel." "Well, sir," replied the victim, "I feel like a — fool. How much is your bill?"

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#### **A Private Hospital.**

A private hospital will be opened and ready for the reception of patients, at the former residence of the late John Parrott, Esq., 620 Folsom St., February 1st, 1886. For particulars, apply to Dr. W. S. Whitwell, 1030 Bush St.

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#### **Notice to Oculists and Publishers on Oculistic Matters.**

Having taken charge of reporting for the "*Revue Générale d'Ophthalmologie*," edited by Dr. E. Meyer of Paris and Dr. Dor of Lyons, on the progress of ophthalmology in our country, I beg leave to request all authors and publishers of ophthalmic works and papers to send me copies or reprints of their respective publications, in order to enable me to give the most complete review of the current ophthalmic literature of our country in a periodical of the largest circulation among our profession. Medical papers please copy.

DR. M. LANDESBURG.

40 West Thirty-fourth street, New York.

PACIFIC  
MEDICAL AND SURGICAL JOURNAL  
AND  
WESTERN LANCET.

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VOL. XXIX.

FEBRUARY, 1886.

No. 2.

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Original Articles.

**TUBAGE OF THE LARYNX.**

By J. D. ARNOLD, A. M., M. D., San Francisco.

*Mr. Chairman and Members of the San Francisco County Medical Society:*

When informed that I had been chosen to deliver the annual address before this society, I was filled with a sense of deep appreciation of the honor conferred upon me, mixed with not a little fear that I might fail to justify the wisdom of your choice. This latter feeling was not diminished when I began to put hand to the work and came to understand that it would be very difficult to find a suitable theme. As was natural, it first occurred to me, that a discourse upon an occasion like the present should have for its subject some retrospect of general medicine,—a résumé of the newest additions to the stock of medical knowledge,—as an account of some recent discovery, experiment, or procedure in one of the sciences which subserve the healing art; and intending to follow this time honored method, I had collected materials for a paper, which was to present a concise review of the most recent and valuable additions to therapeutics. Upon further consideration, however, it appeared that, in view of the fact that all medical periodicals, quarterly, monthly and weekly, are so full of reviews of this and kindred subjects, it would be a work of supererogation on my part to add to this surfeit. In fact, all our journals now devote a large space to thorough résumés of the improvements and discoveries made in the several branches of medicine,—and “he that runs may read.”

Having decided, therefore, that I would depart somewhat from the usual practice, perhaps I need make no apology for taking as my subject a surgical procedure that was proposed many years ago, and abandoned because of insufficient trial and bad results, but which has of late again come into use with brilliant promise.

The idea of introducing catheters into the larynx and wind-pipe is said to be as old as Hippocrates; it was, however, Bouchut, a French surgeon, who, in the year 1856, first carried the idea into practice for the purpose of relieving dyspnoea in croup and diphtheria. He devised for this purpose a short cylindrical tube, and employed it in seven cases of croup, in not one of which, unfortunately, was it able to save the patient's life. Trousseau, in an address before the French Academy of Medicine, thus comments upon the matter: "It is not impossible that tubage may be of some use in certain forms of acute and chronic diseases of the larynx; nevertheless, the results of Bouchut's experiments do not as yet prove its value in croup." It will be remembered that Trousseau was at this time a strong advocate of tracheotomy, and the weight of his authority in condemnation was enough to banish tubage from surgery for many years.

After the introduction of the laryngoscope, and when experiment had demonstrated how tolerant the air passages were of instrumentation, tubage was again attempted by several surgeons for the relief of various forms of stenosis of the larynx. Shroetter, whilst engaged in perfecting a method of dilating the glottis, after laryngotomy, with the view of permanently removing the canula, conceived that it might be possible by the use of specially designed dilators, to prevent stricture without recourse to section. Such a method would have not only the great advantage that it obviates the necessity of laryngotomy, an operation which is itself accompanied with a certain danger to life; but it allows treatment of the stenosis at an early stage, when the occluding tissues are most capable of dilatation. Moreover, even the best results which he had obtained from his ingenious plan of dilating with tin bougies, after opening the wind-pipe, show that although he was able in every instance to enlarge the glottis to almost normal limits, only in a few cases was the real object attained, that is, permanent removal of the canula.

It is probable that the condition first described by Gerhardt, and called by him *corditis-inferior-hypertrophica*, is a more frequent cause of stenosis than even syphilis. Chronic blennorrhœa produces in the lower portion of the larynx a condition exactly similar to the *corditis-hypertrophica* of Gerhardt, and is in all probability its cause. This disease commences in the nares as a chronic specific *ozena*, and slowly travels downwards into the pharynx and larynx, presenting in these structures precisely the same class of morbid phenomena as above,—hyperæmia of the mucous membrane, infiltration of the submucosa, ulceration with fetid purulent discharge, and finally cicatrization. Especially pronounced are these changes upon the anterior surface of the arytenoids, the ventricular bands, and the inferior surface of the true cords. Small and circumscribed ulcerations quickly make their appearance on many portions of the diseased structures, but, as if by preference for these localities, they are broader, deeper and more confluent on the vocal bands. In many cases when the process has reached this point, it seems to have exhausted itself, and is not often continued down into the trachea; possibly because the mucous covering is so closely adherent to the cricoid cartilage that in this region it resists infiltration, and thus offers a bar to the progress of the disease. In one case that came under my observation, the blennorrhœa extended deep into the wind-pipe and there resulted extensive cicatricial stricture of this passage in the neighborhood of the bifurcation. Usually, the deepest portion of the larynx, just below the cords, seems to bear the brunt of the pathological change, and no course of treatment as yet proposed appears to check its passage from the nares to the trachea. After it has attained this point a period of spontaneous repair generally sets in, the structures that were first attacked healing first; and it happens not infrequently that the *ozena* and purulent pharyngitis have disappeared before the blennorrhœa has completed its course in the larynx.

The atrophy of the turbinated bodies and confluent cicatrices in the pharynx, which mark the passage of the ulcerative process through these regions, can evidently entail but slight future inconvenience upon the patient. Not so, however, with the cicatrices which form in the larynx, and especially those on the site of the ulcers on the surface of and below the cords. These present the appearance of a firm, white, glistening membrane,

often completely encircling the lower larynx, and reducing, to a greater or less extent, the size of the glottis. The tendency of this membrane is to undergo progressive contraction. Aphonia supervenes, and soon the more distressing symptom of dyspnoea makes tracheotomy necessary, unless the stricture be overcome.

Syphilis, although beyond doubt more frequently the cause of ulcerative disease of the air passages, is not so often a source of stenosis as the process just described. But stricture of the larynx does sometimes ensue upon the healing of specific ulceration, and, as Cohen observes, "such pathological changes often eventuate in permanent contraction of the laryngeal orifice, and sometimes, even though the glottis is not directly implicated, necessitate the operation of tracheotomy, with almost always the permanent use of the canula."

Perichondritis, from whatever cause, affecting the arytenoids, the thyroid, or the cricoid cartilages, singly or together, is not rarely the origin of extreme stenosis of the larynx; and the bursting of a perichondrial abscess in the immediate vicinity of the attachments of the cords is nearly always followed either by their agglutination or by the formation of a membranous stricture with aphonia and dyspnoea.

The tubes which are specially designed for dilating the above class of strictures, are made after Shroetter's pattern. They are of hard rubber, about 24 c.m. long, with the same curvature as the ordinary laryngeal sound. The laryngeal portion of the tubes has the shape of the rima-glottidis, that is, somewhat triangular, with rounded edges, and supplied with an opening at the end and two oval fenestra, like those on urethral catheters, through which the patient may breathe and expel the secretions. The series is graduated and 12 in number, increasing in thickness according to the following scale: No. I is 8 m.m. thick from before backward, and 6 m.m. transversely; No. XII is 20 m.m. from before backward, and 16 m.m. across; so that the tubes increase in thickness with each number 1 m.m. antero-posteriorly, and not quite 1 m.m. transversely. Each tube diminishes slightly in both diameters at its tip, and is thus rendered somewhat wedged in form.

In stenosis of a high grade, and when the lumen of the passage will not permit the passage of No. I, the dilatation is commenced with the ordinary English flexible catheters. It is, perhaps, better, in all cases, to use such catheters until the patient

becomes somewhat accustomed to the introduction of an instrument into the larynx; because flexible instruments are borne much better by this organ than those constructed of an unyielding material. Ordinarily the larynx reacts very strongly upon the first introduction of a catheter, but it quickly learns to tolerate them. The tube, which is best put in under the guidance of the mirror, is firmly grasped by the middle and index fingers above, and thumb below, and passed into the larynx so as to press with its tip upon the vocal cords. Here the operator rests until the cords open during inspiration, when the tube is pushed through the stenosis into the trachea to such a depth that all of its fenestra shall be beyond the constricted portion. Except in cases where dyspnoea is a very urgent symptom, the mere passage of the stricture is all that should be attempted at the first sitting; the period of retention is to be prolonged gradually.

So far as the operator is concerned, no one who is accustomed to the use of the simplest instrument in the larynx, such, for instance, as the brush, sound or insufflator can find any difficulty in this manœuvre. The thick, strongly-depressed epiglottis, which is so often a troublesome obstacle to the use of other instruments, offers no decided hindrance to the passage of the catheter, since the tube itself can be used as an elevator for the epiglottis. As an objection to the retention of instruments in the larynx, the statement has been made that so great a degree of salivation is occasioned thereby as often to cause loosening of the teeth. I have had considerable experience with these catheters, and have never observed such difficulty. It sometimes happens that the cicatrix is so dense, that it yields very slowly to stretching by the catheter alone. In such cases, Whistler's concealed knife is of great service. After the membrane has been slit with this instrument, the catheter is at once introduced and retained for at least a half-hour.

Still another source of difficulty are small papillary hyperplasms, which often sprout out at the margins of the stricture when the cicatrices are of syphilitic origin. They are best destroyed by the galvano-cautery.

Diminished caliber of the trachea is, fortunately, a rarer occurrence than stenosis of other portions of the air-channel, and in the great majority of cases is due to compression by growths, aneurisms and enlarged glands in the contiguous parts. Still, stricture of this organ sometimes occurs from disease of its own



proper walls and mucous investment. Although, for very obvious reasons, the dilatation of tracheal stricture is attended with peculiar difficulties, it is always practicable when of a membranous character, and when situated in the upper third of the passage. Here the hard rubber tubes are employed, but they must be given a double curvature, so that they present the appearance of the letter *S* that has been drawn out.

Besides the brilliant results obtained with these tubes in chronic stenosis, they are invaluable in the treatment of that oedema of the larynx which so often develops after traumatism of this organ. In such cases the tubes supply a channel for respiration until the oedema can be reduced by scarification and the ice bag, without opening the wind-pipe. In the acute membranous diseases they have also been employed for the removal of the pseudo-membranes, when the glottis becomes completely occluded; but here they are only a make-shift; and the fact that they can only be retained for 20 or 30 minutes at a time, is an insuperable objection to their beneficial use. It is in this sphere that the experiments of Dr. O'Dwyer, of New York, promise the most excellent results. It seems that the Doctor, without being acquainted with the efforts of Bouchut in the same direction, has devised a somewhat similar instrument for the relief of dyspnoea in croup and diphtheria.

It is only two months since O'Dwyer published a description of his instruments, and an account of their use in a few cases. Since the appearance of his article in the *New York Medical Journal*, I have made several efforts to obtain the apparatus from his instrument maker, but as yet without success. Having, therefore, no personal experience with his method, I can add nothing to the following extract from the inventor's article:

"In attempting to construct a tube for the larynx, the first serious difficulty encountered has been to make it selfretaining. I could think of nothing more likely to accomplish this result than having it arranged in the form of a bivalve, similar to the bivalve speculum, but elliptical in shape, with a narrow transverse diameter, and having a shoulder to prevent its slipping into the trachea. The canula was so constructed, that while being introduced the blades were approximated and opened as soon as detached from the introducing instrument."

These and similar tubes he found were well retained, and gave transitory relief to the dyspnoea, but often the mucous membrane

would intrude itself between the blades and, by its swelling, bring back the occlusion; they were, therefore, abandoned.

“My next trial was with a plain tube, also elliptical in shape, about one inch long. My first experience with these was in an infant, aged 2 months and 24 days, in the suffocation stage of croup. Immediate relief to the dyspnoea, which was extreme, and a refreshing sleep, followed the introduction of the tube. During the succeeding 17 hours that it lived, most of which time was passed in sleep, the child took its milk freely, and death took place without any appearance of suffering.”

In his second case, also, there was prompt relief to a distressing dyspnoea. The tube was retained for 4 days, then withdrawn and at the end of 5 hours replaced. On the 7th day it was expelled by an attack of coughing; but it was not found necessary to use it again. This patient made a rapid and complete recovery. Whilst the tube was in her larynx, she was able to speak in a whisper, and swallowed solids with comparative ease, but fluids not so well. In the next case the tubes were not well retained, and the author was led to believe that in order to prevent the occlusion of their distal end with false membrane, it would be necessary to have them made longer. After passing through various other modifications, the instruments, as now used by O'Dwyer, are from 2 to 3 inches in length. The writer says: “The device adopted for preventing their expulsion consists in increasing the narrow transverse diameter about the center without changing the caliber, so as to make the tube at this point almost cylindrical.”

He believes that, as thus made, there is little room for further improvement, except, possibly, to increase still more their length. His plan of introducing the tubes is as follows. No anæsthetic is given. “The child is held upright in the arms of an assistant and a gag inserted in the left angle of the mouth, well back between the teeth, and opened widely; a second assistant holds the head, whilst the operator inserts the index finger of the left hand to elevate the epiglottis and direct the tube into the larynx. As soon as the obturator is removed, the thread, which is attached for the purpose of removal, should it be found to have passed into the œsophagus, is withdrawn.” It is just this matter of the thread left protruding from the mouth of the patient that is somewhat confusing in the above account; for in the illustrations accompanying the article a special instru-

ment is pictured for extracting the tube. Besides, Dr. O'Dwyer believes that one of the chief objections to Bouchut's method was that the tube could not be retained long because of the excessive salivation produced by the thread. In this he is certainly mistaken, for I know, from experience, that threads attached to laryngeal plugs can be left in position for weeks and months without such result.

Certainly it is impossible to prophesy, as yet, how useful this mode of tubing will be found on a more extended trial. It is doubtful if much is to be expected from it in diphtheria, for in this dread disease the occlusion of the air passage is only one of the dangerous symptoms of a malignant systemic disease. But much is to be hoped from it in simple croup, in which the formation of the pseudo-membrane is the disease itself, and in which death always results from apnoea. Should it fulfill its promise in this formidable malady alone, tubage of the larynx will at once take its place as one of the most beneficent of all surgical procedures.

It is surely the most perfect and innocent surrogate for tracheotomy that has ever been suggested, and should it prove of sufficient value to come into general use, with how much more confidence will the practitioner meet these terrible membranous diseases, than heretofore. He will no longer feel that his only alternative in the last stage of such maladies is section of the wind-pipe, an operation fearful alike to patient and physician, because of its seldom success, but he will be able to advance in its stead a bloodless substitute that offers all of its advantages and none of its dangers.

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### **GRADUATION IN DENTISTRY.**

The fourth Annual Commencement Exercises of the College of Dentistry of the University of California were held in connection with those of the Medical Department, at the Grand Opera House, San Francisco, Tuesday November 10th, 1885, at 2 o'clock, P. M. The number of matriculates for the session was thirty-seven and there were nineteen graduates. [The above communication has just reached us, hence its appearance so late after the graduation ceremonial. —*Ed.*]

**ON PELVIC ABSCESS.**

By FRANCIS IMLACH, M. D.

(Honorary Surgeon to the Liverpool Hospital for Women.)

Pelvic abscess, almost more than any other, should be opened, emptied and drained. That is the doctrine to which both men and books are gradually approaching. Elsewhere an abscess soon opens itself, but in the pelvis it burrows round and distorts the viscera, bursts into cellular spaces and floods them with blood and pus, and, in search of an outlet, may fatally perforate the peritoneum. And if it opens into the bladder, vagina, or rectum, a cure is seldom attained. From pockets, sinuses and fistulæ there flows a chronic purulent discharge which defies the ingenuity of the surgeon. The production of an ounce of pus is often more exhausting than the loss of a pint of blood, and when putrefaction occurs in deep recesses thorough disinfection is practically impossible. Even normal excretions, diverted into wrong channels, induce mucous catarrh. Urine and fœces, flowing over the vagina through a fistula, cause vaginitis, and the vaginal secretions, leaking into the bladder or rectum, cause cystitis and proctitis. Pus is foreign to all these channels and the consequent catarrh, by its infective character, prevents closure of the abscess cavity. Irrigation with chlorinated soda, or other disinfecting solution, may cure this catarrh, and the abscess cavity may shrink; but spontaneous discharge of a pelvic abscess by bladder, vagina or rectum, is an untoward event, and to prevent it is good practice.

Neither as to the pathology nor the treatment of pelvic abscess is there, as yet, complete agreement among gynæcologists. There is now, however, a wholesome tendency to neglect past general principles for present particulars, and the philosophical composure with which the "natural history of disease" used to be studied is maintained in few hospitals. The haste to interfere, to shorten the process, rather than to inquire into its essential nature, is extending, while the laggard and timorous treatment, which consists in waiting patiently for the end, is already in disrepute.

To cure a pelvic abscess, however, it is not always necessary to drain. Though gynæcologists are indebted, perhaps, more than other surgeons, to Chassaignac for his recognition of the

importance of drainage, it must not be forgotten that it is possible to cure even a large and foetid abscess by aspiration. Here are two illustrative cases, both from the records of the Hospital for Women, in which pelvic abscess was exposed by laparotomy and aspirated.

Case 1. A woman aged 31, three children, the youngest two years old, menstruation regular but painful, a chill thirteen months before admission, a bedridden invalid for four months, uterus pushed to the left by a mass which rose into the right hypogastrium. January 27, 1885, abdominal section in the median line, ovary and tube lost in the immensely distended left broad ligament, seven and a half ounces of very foetid pus aspirated, a glass drainage tube inserted *not* into the abscess cavity, but, for precaution, into the peritoneal cavity, tube removed next day (no discharge), temperature before operation  $103^{\circ}$  pulse 125, highest temperature after operation  $99^{\circ}.8$ , during a few hours on the second day, but generally under  $99^{\circ}$  pulse rose to  $130^{\circ}$ , but subsided with the temperature. February 20, patient left hospital feeling and looking well; the uterus was then somewhat fixed, but it is now mobile, and she remains in good health.

Case 2. A woman sent in by Dr. O'Hagan, Garston, in February, with a history of inflammation of the bowels during the previous summer, and with a large inflammatory tumor in the right side of the abdomen since Christmas. As she seemed in the last stage of prostration, a precisely similar operation was performed on February 19, 1884, and thirty ounces of pus, so foetid that the theater became intolerable, were aspirated. Two days later, there being no discharge, the drainage tube was removed from the peritoneal cavity, and the patient left hospital on March 10, 1884, with her health perfectly restored.

This ready method would certainly have failed if I had not completely emptied the cavities, or if there had been dead bone, diseased gland or sloughing tissue to maintain suppuration. It may be suggested that after aspiration I should have made a free opening into the sac and drained. I have tried this once with success, but would not care to repeat it. It has been suggested that the proper plan is to open the sac, stitch its wall to the peritoneum, and insert a drainage tube. But in both instances the cure was not only immediate but also permanent; and, besides, after aspiration, the sac shrunk and sank, so far out of reach, that to stitch it to the abdominal wall would have been impossible.

When drainage of the abscess is intended, the peritoneal cavity ought not to be opened. It is quite safe, in suitable cases, to open up the inguinal canal and pass a probe carefully along the swollen round ligament into the abscess, and, by inserting a glass or rubber tube, it is possible to drain a large cavity without fear of peritonitis. Sometimes an abscess seems to point in the inguinal region. If left alone it does not burst, but extends towards the anterior iliac spine, and not even constant poulticing will make it open. But if the operation above described is performed, though little pus may exude at first, it soon flows plentifully and the swelling slowly subsides. Often there is no abscess, but only diffusely suppurating tissues.

Case 3. A married woman, aged 26, with a child three months old, tried to stab herself in the left groin with a knife. In the inguinal region there was a prominent swelling which extended into the iliac fossa, and could be felt to the left of the uterus. A much larger inflammatory swelling may be painless, but her agony seemed to be unendurable. On January 20, 1884, under ether, the pillars of the left ring were exposed and a probe was passed two or three inches along the round ligament, but only a few drops of pus exuded. A wire drainage tube was inserted and the wound fomented with flannels wrung out of hot carbolic lotion. In a few hours the dressing became soaked with odorless pus, and the patient was free from pain. But, though the tissues remained aseptic, the discharge continued for several weeks, and complete recovery was comparatively slow.

Cases 4 and 5 were young women, aged 18 and 24. In both of them pelvic suppuration, subsequent to child-birth, was treated in the early months of 1884, by opening up the inguinal canal and draining, and within a month, though in one the abscess was slightly foetid, there was complete recovery. In a fourth case a counteropening had to be made an inch above the outer half of Poupart's ligament four days after the first incision, but after that the swelling quickly subsided. In a fifth this incision was made after unsuccessful aspiration *per vaginam*, and the result was satisfactory. A few other somewhat similar cases might be added, but these suffice for illustration of the method. Though I do not attempt a statistical record, I may add that in all cases of pelvic abscess in which I have employed surgical measures at an early period, recovery has taken place.

When a pelvic abscess occupies a large area of subperitoneal

tissue and reaches nearly to the ribs, or when it is subaponeurotic, and the symptoms are those of psoitis, an incision above the anterior superior spine of the ilium materially shortens the suppurative process. According to circumstances, the incision may either be extended inwards, above Poupart's ligament, or outwards above the iliac crest. This oblique incision, variously modified, is used for many purposes. By it the common iliac artery is tied, and perityphlitic and psoas abscesses are drained. By it a child can be extracted from the pregnant uterus without injury to the peritoneum or uterus, and, when extended upwards and outwards, an enlarged kidney could be removed. With only a small incision a large area can be thoroughly drained. When the abscess is subaponeurotic the iliac fascia can be freely laid open with the bistoury, and a glass drainage tube, suitably lodged, will soon insure the subsidence of acute diffuse suppuration.

Case 6. A married woman, aged 24, with four children, her illness dating from the birth of the youngest, seven weeks previously, a history of several distinct rigors, an inflammatory tumor on the right side of the uterus, extending high above the right iliac crest, with a brawny swelling occupying the right hypogastrium. February 15, 1885, an incision one inch and a half long was made parallel with the outer half of Poupart's ligament and two inches above it. By the cautious use of a glass drainage tube as a probe a few drachms of foetid pus, mixed with shreds of dark clotted blood, were drained away, but no distinct abscess cavity was opened. For three weeks there was a constant flow of pus, which at length became sweet, and then ceased. The tube was removed ten days after the operation. March 17th, patient left hospital, walking freely, and without pain; there was no longer any mass, but the uterus was still fixed.

Case 7. A pale, unhealthy young woman, aged 28, never well since confinement, ten months previously, abscess, with all the characters and symptoms of left psoas abscess, and intra-pelvic origin doubtful, treated April 9th, 1884, by free incision over Poupart's ligament, the iliac fascia being opened with a bistoury and a drainage tube inserted; nearly well in two months; condition five months later still fairly satisfactory—abscess quite healed, but the patient pale and thin.

Case 8. A patient with a brawny swelling in her right hypogastrium, which seemed to point an inch within the anterior superior iliac spine. Her second child was five months old, and

she had never risen since her confinement, which had lasted twenty hours. It was opened in May, 1885, and drained of much pus and clotted blood. A fortnight later the swelling increased, but a poultice caused an increased discharge, and in six weeks she was walking about.

A favorite method of treatment, on account of its simplicity, is aspiration *per vaginam*. A pint, or more, of pus may be drawn off in this way. It is a common practice, and, though I have several times successfully adopted this treatment, examples are needless. As it is said that pelvic abscess more frequently bursts into the rectum, I have once or twice punctured through that viscus, but only when the abscess was very prominent.

Case 9. November 28, 1884, pelvic abscess aspirated *per rectum* in a woman aged 40, and about half a pint of pus withdrawn. December 9th, patient worse and laparotomy was performed; tubes filled but not distended with muco-pus, pus encysted in Douglas' space. As it was found impossible to remove the tubes, their contents were squeezed out on to sponges, the peritoneum was thoroughly sponged, iodoform was sprinkled in Douglas' space and a drainage tube inserted. The patient's recovery was slow; it was incomplete when she left hospital on January 7th, but she has continued to improve since she returned to her home. The abscess was evidently intra-peritoneal, and not within the cellular tissue. When a large mass bulges down behind the uterus and cannot be felt in either hypogastrium, it may be certainly affirmed that it is not a case of abscess within the cellular tissue. It may be pus within the peritoneum, but far more frequently it is the distended fallopian tubes that are felt. And while in these cases aspiration can only do harm, laparotomy with removal of the diseased structures insures an easy cure. Minute directions have been given for the selection of the right time to aspirate. If the abscess is not "ripe" no pus will flow or, though it does, the abscess refills. If, on the other hand burrowing has commenced, aspiration will not prevent its extension. I will not pretend to offer an opinion on this question. Bimanual examination will not always tell whether pus is present, nor where it is chiefly located; the temperature is no sure guide for, except during the initial rigor where it is probably always elevated, it may be high, normal or even subnormal; and complaint of pain is uncertain, for while a drachm of pus will keep one woman in bed almost unrelieved of



her agony by the hottest fomentations and large doses of opium, another will do a hard days work, and at night have sudden and copious gush of pus from the vagina. My plan, when I mean to aspirate, is to try it at once. And no matter how favorable the conditions may appear, one must always be ready for eventualities. Instead of kindly subsidence of inflammation, swelling and pain may increase, and though a second tapping may be successful, it is safer to make a free opening. Although I have only a limited confidence in the use of the aspirator, there can be little doubt that in some cases where harm has resulted from it, an absurd and unfortunate attempt has been made to aspirate ovarian or tubal abscess,—a procedure of infinite risk and never ultimately successful.

A free vaginal incision over the most prominent part of the tumors with (or without) insertion of the finger and breaking up of adhesions, has been recommended. I must confess I prefer almost any other method. The tumors which, by their vaginal prominence without abdominal swelling, suggest this treatment, are either pelvic hæmatoceles or other tubal disease, and to make a free opening into them through the vagina is to court fatal peritonitis.

There is yet another treatment, if such it may be termed, to be considered. Pelvic abscess is so various in its conditions and so uncertain in its rate of progress, it is scarcely to be wondered that many writers have held out the hope that the inflamed mass or phlegmon, if left alone, might disappear without suppuration. It was Nonat who said that in the space of a few hours a swelling or phlegmon of the cellular tissue about the uterus might attain to the size of a hen's egg. In describing the various sites in which phlegmon might arise, he appears to have depended less upon his large hospital experience than upon the logical exercise of his anatomical knowledge. Phlegmon might arise on either side of the uterus, in front, or behind it. When it was close to the right or left of the uterus, he termed it lateral phlegmon; when further out, it was phlegmon of the broad ligament; when it was between the rectum and uterus, it was retro-uterine phlegmon; and ante-uterine when it was between the bladder and uterus. It might even form a girdle around the uterus and extend outwards to the iliac fossa, upwards to the lumbar vertebræ, or forwards to the navel, and then it might all disappear. Controversy is the life of science. Bernutz had

made a great advance in pelvic pathology by discovering how frequently, when pelvic abscess had been diagnosed during life, the disease was found after death, not in the cellular tissue at all, but in the tubes and ovaries. Of late years, not only have his observations been largely confirmed by the living autopsy, but at the same time a thoroughly satisfactory treatment has been effected. In the early enthusiasm for the new pathology, the observations of Dupuytren, showing the frequent relation of abscess in the right iliac fossa with disease of the cæcum and vermiform appendix were forgotten, though they are recalled to our memory by Dr. Fenwick's cases recently recorded in the *Lancet*, and the labors of Marchal, Velpeau, Grisolle and Dance were ignored. In his invaluable memoir upon inflammatory diseases of the ovaries and fallopian tubes, to which he gave the unfortunate title "pelvi-peritonitis," Bernutz casts ridicule upon Nonat. He even casts ridicule upon pelvic cellulitis. But the old pathology is as true as the new. It is not necessary to go abroad to discover that. In the north of England practitioners have been familiar with this disease since Mr. Wainwright, Surgeon to the Liverpool Northern Hospital, communicated a series of seven cases of abscess forming within the pelvis after labor to the Transactions of the Provincial Association in 1841; and Mr. Jennette, Surgeon to the Birkenhead Borough Hospital, sent his article in 1850 to the *London Gazette*; Doherty and Churchill's papers in the *Dublin Journal* of 1843; Lever and Bennet's articles in *Guy's Hospital Reports* for 1844 and the *Lancet* of 1848; Simpson's articles on Pelvic Cellulitis in 1859, and, ten years later, Matthews Duncan's analytical work on Perimetritis and Parametritis, are stocked with clinical cases of pelvic abscess and cellulitis, in which disease of the ovaries, tubes and uterus obviously form no part, or at least not the whole. It has been fully established, Bernutz notwithstanding, that phlegmon may rapidly arise in the fibro-cellular tissue in which the cervix uteri is imbedded and that, sooner or later, suppuration generally ensues. The pus, as it forms burrows in the subperitoneal fat and loose connective tissue, distends the broad ligament, follows the round ligament to the inguinal canal, occupies the iliac fossa generally between the peritoneum and aponeurosis but occasionally also between the aponeurosis and the psoas and iliacus muscles, or follows the water to the kidney sometimes causing suppression of urine. In each cellular space the pre-

sence of pus probably sets up suppuration afresh, and pints may collect before there is any discharge. If left to its natural history, the abscess will burst above or below Poupart's ligament, into some or all of the pelvic viscera, into the ilio-rectal fossa, along the pyriform muscle and through the sacro-sciatic-foramen into the gluteal region, or above the pubes, or into the peritoneum. I have been the unwilling witness of almost all of these methods of termination of enclosed pelvic abscess, and for each of them there is better authority than mine. But it is not so well established that the phlegmon may abort and become a mere chronic pelvic induration without suppuration, and the etiology of the rise and course of the disease, after half a century of discussion, is still an open question. Vaginitis, metritis, salpingitis, ovaritis—and pelvic cellulitis; that is the somewhat round about origin of the disease according to one school. Inflammation of the lacerated edges of the cervix extending into the cellular tissue; that is the more direct route adopted by another. Against the first theory there is the objection that it is not in accord with facts. Pelvic abscess, suppuration in the cellular tissue, is not associated with the various forms of salpingitis and ovaritis recognized by surgical gynaecologists. Twice only, besides the case above narrated, in the course of laparotomy, have I seen pyosalpinx with pelvic abscess, and amongst the risks of the operation for removal of the uterine appendages for inflammatory disease, the likelihood of co-existent inflammation of the cellular tissue does not enter. Certainly the tubes, buried in the distended broad ligament, look congested, but since I have had a practical acquaintance with pelvic pathology, this congestion has never appeared to me to have any causal import, and I reject Aran's dictum that "the causes of periuterine inflammation are those of inflammation of the tube and ovary which is almost constantly its starting point." In favor of the theory of extension of inflammation from a lacerated cervix is the fact that both pelvic abscess and laceration of the cervix are common to the primiparous state. But this theory would serve better as an explanation of the occurrence of angio-leucitis, of adenitis and of phlebitis; it is adequate to the pathology of white leg, but it scarcely accounts for the localized abscess and not at all for the frequency with which old clotted blood is found mixed with the blood. The terms thrombus, cellular hæmatocele, suppurating hæmatocele, sometimes applied to post partum pelvic

abscess, all show the frequency of this mixture. Sometimes the abscess is foetid, which would be in accordance with this theory, but sometimes it is not and that militates against it. Again, if this origin were the common one, spontaneous discharge of the abscess would take place almost invariably *per vaginam*, but, in fact, this seldom occurs. We seem driven, therefore, to the belief that there must have been bruising and laceration of the tissues proper to the abscess. As vaginocoele is only explicable by the hypothesis that the support of the muscles and fascia of the pelvic diaphragm is lost, so is their rupture during confinement, with consequent extravasation of blood, a reasonable explanation of post partum abscess.

I have not had many opportunities of studying this disease in the dead. Patients with chronic pelvic abscess of the late and incurable order gradually drift off into almshouses, and if they ever appear again in the light of science it is rather in illustration of waxy liver and of phthisical lung than of pelvic abscess. Three times I have examined old pelvic abscess after death without results of much etiological value, general putridity, sloughing tissues and bare bone are the sum of the investigation. Once I found, in 1876, abscess in the lumbo-sacral joint, separation of the right sacro-iliac synchondrosis, and sloughing of the levator ani and pelvic fascia; once I found, in 1879, with similar sloughing on the left side and separation of the left synchondrosis, excavation in the lumbar region also—the abscess having laid bare the left transverse processes of the two lower lumbar vertebræ though the discs were not destroyed; and lastly, while present in 1881 at the autopsy of a woman, aged 37, who appeared to have succumbed at an earlier period of the disease, I saw that the pelvic fascia and muscles on both sides were dense, cartilaginous and undistinguishable, and that the cavity of the abscess (which had opened in the left groin) extended widely in the subperitoneal tissues of the left iliac fossa. Until, however, opportunity is afforded for examination of more recent pelvic abscess the theory of its origin, when the disease is post partum, in lacerated muscle and fascia must remain an hypothesis. It would be absurd to deny that, in a healthy constitution, bruised tissues may heal without abscess and swelling, disappear or become indurated; but in practice of the expectant treatment, which dispenses both with the knife and the aspirator, the patient's health is apt to become permanently injured, as the

phlegmon slowly but surely manifests itself as an indubitable pelvic abscess. The expectant treatment lives not on its own successes but on the occasional failure of surgery in tuberculous subjects. By early opening of the abscess caseation of the lumbar lymphatic glands may probably be prevented. When opening is long delayed nothing will save the life of a tuberculous patient.

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### AN UNUSUAL CAUSE OF DYSTOCIA, NECESSITATING EMBRYOTOMY.

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By F. A SEYMOUR, A. M., M. D., Los Angeles, Cal.

Mrs. A—, primipara, was seized with labor at term, on the afternoon of December 30, 1884. Her attendant, Dr. F. T. Bicknell, was summoned at 8 P. M., at which time uterine contractions of average normal vigor and duration recurred at intervals of five minutes.

Digital exploration revealed a healthy and natural condition of the soft parts. Dilatation of the external os was well advanced, and through the membranes a vertex presentation was easily discernible. At 10 P. M. spontaneous rupture of the amniotic membranes occurred. Complete dilatation followed, and the vertex engaged in the superior strait. The pains proving persistent and exhausting, several five-grain doses of chloral hydrate were given by mouth at half-hour intervals, but without effect. At 2:30 A. M. morphinæ sulph. gr.  $\frac{1}{4}$  was administered, and from three o'clock A. M. until six the patient slept. Soon after awaking the pains resumed their frequency and force, but examination detected no foetal advance.

There seemed to be absolutely no obstruction; the pelvic space was ample, and the presenting head not unusually large. At 7 A. M. Dr. B. applied the forceps, making gentle traction and rotation, purposing thereby to stimulate an apparently misdirected *vis a tergo* to an expenditure of energy in the proper pelvic axis. But the attempt proved unavailing. As the morning wore away there was no change in the character of the uterine pains, nor in the foetal position. About 10 o'clock A. M. the patient's circulation showed signs of involvement, the pulse becoming rapid and compressible. Dr. Bicknell then requested counsel, and a messenger was sent for the writer. On examina-

tion, the condition proved as above described. The liquor amnii had evidently wholly escaped. The uterine walls were firmly contracted upon their contents, and the cervical lips retracted over the head, and beyond the reach of the exploring fingers. There was no apparent reason why the case should not progress without interference; and further delay would probably have been advised, except for the persistence and increase of the circulatory disturbance. The possibility of version was excluded. Ether was administered, and I applied the forceps without any difficulty. But the foetus could not be moved. Repeated efforts proved wholly futile. On further consultation, embryotomy was determined upon. After evacuating the contents of the cranium and crushing in its walls, extraction was effected only after tedious delay and the repeated application of great force.

Singularly enough, after the slightest advance had been secured in the direction of extrusion, but little additional force was requisite to complete the delivery. The sensation imparted to the manipulating hand was similar to that of slipping suddenly past an obstacle. The foetus weighed but eight pounds, and the pelvic conjugates were normal; hence the source of resistance was enigmatical, until, on introducing my hand into the uterine cavity to effect the removal of the placenta, the cause was discovered.

On the right side of the uterus, at a line about midway between the external os and the fundus, the entire thickness of the powerful muscular wall projected inward with great firmness, constituting a shelf or semi-circular ridge. This had evidently grasped the foetus, the knees resting above it, and thus delivery had been impeded. In a careful study of this unique experience, light has been thrown upon very many cases in my note-book, of dystocia associated with premature rupture of the membranes, and for which, until now, I have found no satisfactory explanation.

"A dry labor is sure to be tedious," is a popular aphorism so frequently true, that it practically passes current with the profession as well. The tedium of these cases has hitherto been associated chiefly with (1) the removal of the protruding membranes as a distending agent, both for the uterine orifice and the vaginal passage; and, (2) with the impossibility, except in rare instances, of the presenting part making pressure directly

upon the os itself. But, every practitioner of large experience may readily recall numerous instances in which, despite the premature escape of liquor amnii, cervical dilatation progressed with normal rapidity, while the pelvic soft parts, moist, flexible and roomy, awaited for hours the slow foetal descent.

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THE most unlimited confidence in Pasteur's method of inoculation for hydrophobia seems to prevail everywhere. The four Newark children have received their last treatment and have started for home, believed to have been rendered proof against the terrible disease. A remarkable proof of the efficacy of Pasteur's treatment is furnished in the cases of three children of Tourcoing, near the Belgian frontier. All were bitten by the same dog, and there was great discussion among the townspeople whether to send the children to Pasteur or not. Finally a compromise was reached. The child that had been the most severely bitten was sent to Paris and the other two, who had been only slightly bitten, remained at home. The two died of rabies, although their wounds had been thoroughly cauterized, while the one which was treated by Pasteur is alive and well. The first steps toward the introduction into this country of Pasteur's methods were taken in New York. Papers necessary for the legal incorporation of the American institute of hydrophobia were sent to Albany. Arrangements have been made to inaugurate the system of cure and prevention, in St. Louis. Seven dogs, which showed slight symptoms of rabies, were tied up last week. If mad, virus from their brains will be transmitted to rabbits, and thus cultivated until it can safely be used in human beings. Surely, no greater boon has fallen to the lot of man than this latest discovery in sanitary science.—*Sanitary News*.

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Boys and girls may be had—particularly boys—for service at wages, for indenture, or for legal adoption, by applying with recommendations to E. T. Dooley, Sup't Boys and Girls Aid Society, 68 Clementina St., San Francisco.

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The proprietors of *The Chemist and Druggist*, (London) have opened a branch office at 41 Temple Court, Beekman St., New York, where the business of that journal with the United States will hereafter be conducted.

## **Proceedings of Societies.**

### **San Francisco County Medical Society.**

SAN FRANCISCO, December 8, 1885.

The meeting having been called to order by the President, Dr. W. E. Taylor, the minutes of the two former meetings were read and approved.

The name of Abbie E. Beasom, M. D., graduate of the Woman's Medical College, Chicago, 1884, was submitted for membership by Dr. L. M. F. Wanzer and Dr. Wm. Watt Kerr, and referred to the Committee on Admissions.

The Committee on Admissions reported favorably on the credentials of A. L. Lengfeld, M. D., University of the Pacific, 1871, and Cooper Medical College, 1881; A. S. Lovelace, M. D., Medical College of the Pacific, 1878; G. Ollino, M. D., University of Turin, 1872; Chas. A. Paton, M. D., University of California, 1883; Mary W. Moody, M. D., University of California, 1882; all of whom were ballotted for and admitted to membership.

The Committee on Medical Ethics handed in the following report upon the case of Dr. Max Axelrood to the members of the San Francisco County Medical Society.

"The Committee on Medical Ethics met to-day, 8 December, 1885, and summoned Dr. Max Axelrood. Dr. Axelrood admitted that he had advertised and furthermore said he should continue to do so.

"The Committee, after careful consideration of the advertisement contained in the Wigwam Programme, considered that the spirit, if not the letter, of the law had been violated, and would now recommend instead of summary expulsion, that Dr. Axelrood be simply dropped from the roll of the Society."

The report was signed by Doctors Whitwell, C. G. Kenyon, G. W. Davis and A. P. Whittell.

Dr. Whitwell, chairman of the committee, said that Dr. Axelrood intended to be present during the evening and that the committee had promised him to request the Society to refrain from taking any action until 9:30 P. M.

Dr. W. Watt Kerr moved that the Society postpone the consideration of the report received from the Committee on Medical



Ethics until after 9:30 P. M. The motion was seconded by Dr. Plummer and carried by the votes of the members.

Dr. W. W. Kerr then opened the discussion upon Hysteria by reporting three different types of the disease.

The first was the case of a woman ten years married, but without children, who feigned pregnancy by padding her clothing, and at the end of nine months feigned labor. The only cause of this masquerade was to be found in a strong desire to have children, as she and her husband were in very poor circumstances with hardly enough money to supply their own wants.

The second was a case of motor paralysis of the right arm which he had seen in an hospital patient in the practice of another physician and had been able to watch for about three years. The patient was a healthy young woman well nourished, strong and willing to work. All kinds of nervine tonics were used, including both constant and interrupted currents, cold douche to her spine, ether spray, etc., with no effect. Finally, the sound arm was put in a splint, so as to prevent all movement and thus leave the patient helpless. The result was that one day she unthinkingly stretched out the paralysed limb and after this, regaining confidence in her own powers, made an excellent recovery.

The third was a case simulating phthisis. The patient had been subjected to a very severe mental shock, and sometime afterwards, whenever she was exerted or over-worked, she would have severe pulmonary hemorrhage followed by unconsciousness, during which there would occur violent convulsions. In spite of blisters to the back of the neck and abdomen, stimulating and evacuant enemata, administration of valerian and chloroform inhalations, these continued for more than two days, and were finally relieved by hypodermic injection of Majendie's solution. Within three days after this the patient was able to resume her duties as a teacher of music and church singer. Physical examination only revealed dulness over the right apex, but on examinations during subsequent attacks, this even seemed to vary and latterly was hardly discernable. Under tonic treatment she has remained free from these attacks, having had seven in three years, and each one less severe. They only occur when the patient has had some extra excitement, or is over-worked, and can be avoided by rest and attention to the general health. In the interval she

has always enjoyed exceptionally good health and worked hard at her profession. Similiar cases have been reported by Dr. Fabre in the *Centralblatt für Gynäkologie*, Sept. 8, 1883; and also by Debove in *L'Union Médicale* for the same year.

Dr. Kenyon said that all diseases were simulated in Hysteria and very often several of them appeared in the same patient. He had a patient who first came under his notice as a cataleptic but she changed from this and became an apparent sufferer from hip-disease from which she also recovered. Two years after this she came to his office coughing, with dulness over the lungs and moist rales, so that to all appearances she would die from consumption in two or three months, but instead of this all signs of phthisis disappeared and she remained healthy. He had also met with a case of imaginary labor in a woman who had borne three children and might therefore have been expected to know real from false labor.

Dr. Baldwin had also met with three cases of false labor, one of them occurring twice in the same lady. In this case abdominal movement was present which might have deceived his patient. He had met with vicarious menstruation from the lungs. Dr. Kerr said that in the last case referred to by him menstruation was normal.

Dr. J. D. Arnold thought that a more definite line of demarcation should be drawn between Hysteria which was now recognized as a distinct neurosis and false or vulgar Hysteria when the disease is feigned from a morbid craving for sympathy. He had a case of this latter class where a boy was supposed by his parents and friends not to have passed water for nearly four months; but examination did not show any distension of the bladder, neither did the patient appear to suffer in health. At the recommendation of Dr. Arnold he was put under espionage and the father found that the boy was in the habit of passing urine during the night and drinking it.

In contrast to this he mentioned a case of aphonia occurring in a girl after diphtheria. She remained aphonic for four years, and the vocal cords were believed to be paralyzed, but examination with the laryngeal mirror showed that they moved naturally during respiration, while on attempting to phonate they remained rigid. Upon introducing a funnel into the larynx, it was proved that the cords met, and after the use of the astringents, merely as mechanical irritants, together with exercises in elocution, the patient made a good recovery. Sometime afterward

she fell from a sleigh, and had a relapse, but under the former treatment recovered in about three weeks.

Dr. A. W. Perry remarked that in those cases where there was fainting and spasmodic affections, such as hiccup, he had received more benefit from cold sponging followed by vigorous rubbing than from any other form of treatment. He believed that such forms of hysteria were due to vaso-motor disturbance, which was relieved by the above action upon the peripheral nerves and vessels.

Dr. Davis thought that in hysterical females the probability of some existing ovarian irritation should not be overlooked, as the fact that it was most frequently associated with the appearance of puberty was more than a mere coincidence. Where the disease simulated a pulmonary affection, he thought that the rales were due to mucus effused on account of vasomotor irritation. In treatment, the physical condition of the patient should always receive attention. The use of opiates was always hazardous, and when they were necessary Hoffman's anodyne and bromide of sodium in large doses were to be preferred. Majendie's solution should only be used where there is neuralgia. As regarded general treatment, the rectum should be emptied by copious injections, because fecal accumulation often pressed upon the nerves and produced reflex irritation. Mustard poultices or blisters to the nape of the neck and cold water douches were excellent adjuvants in many cases.

Dr. Kenyon referred to the use of assafoetida.

Dr. Arnold said that great benefit might be obtained from the careful use of both alcohol and morphia in true hysteria, but that assafoetida was rather indicated in the treatment of the more vulgar form of the disease.

Dr. W. W. Kerr also expressed his belief that the benefit from assafoetida lay more in the mental impression produced by the disgusting taste and odor than from any direct physiological action.

Dr. Kenyon said that good results were obtained from the administration of assafoetida even when the taste and odor were concealed by giving it in capsules. He, together with Dr. Plummer, had seen a case of pronounced symptoms of hip disease which yielded to two or three doses of assafoetida, so administered that the patient could perceive neither taste nor smell. He, therefore, believed that the drug did not only act by producing mental impressions.

Dr. Whitwell said that much good could be done in emotional hysteria by producing some sudden shock, as by throwing water in the face, and related some cases relieved in this manner.

Dr. Plummer then moved that the consideration of Dr. Axelrood's case should be taken up, as the time fixed for that purpose had arrived.

After some discussion, it was decided that suspension from membership, for non-payment of dues, was impossible, as the member needed to be six dollars in arrears before such action could be taken, and Dr. Axelrood was not so much behind in payments when his last bill was rendered by the Secretary.

Dr. Plummer moved that the matter should be laid on the table for one month, or until the second Tuesday in January, 1886.

This motion was seconded by Dr. Kenyon and carried by the Society.

#### NEW BUSINESS.

Dr. Plummer congratulated the Society upon the increased attendance at its meetings, and at the same time asked permission to call attention to the small membership of the State Society, which consisted of only 200 out of 1,300 regular practitioners of medicine in California. He then spoke of the benefit of belonging to the State Society, and urged all present to become members themselves, and to induce others to do likewise.

There being no further business, the Society adjourned until the fourth Tuesday in December.

WM. WATT KERR, M. D.,  
Recording Secretary.

SAN FRANCISCO, December 22d, 1885.

The meeting was called to order by the President, Dr. Taylor, and the minutes of the former meeting read and approved. H. W. Dodge, M. D., graduate of the University of California, 1883, was proposed for membership by Drs. Plummer and Kerr, and referred to the Committee on Admissions. The Committee on Admissions reported favorably upon the credentials of Abbie E. Beasom, M. D., graduate of the Woman's Medical College, Chicago, Ill., April, 1884, who was forthwith elected to membership by the vote of the society.

Dr. W. W. Kerr tendered his resignation from the Committee on Prosecutions as he had not time to perform the duties. The resignation was accepted, and Dr. Winslow Anderson appointed by the President to fill the vacancy.

Dr. Abrams read a paper upon "Phosphorus Intoxication," but as it referred to "Bowers" case which is at present occupying the attention of the Court, the Society requested that it should not be published until after the trial.

Dr. McNutt remarked that he believed it to be the opinion of most pathologists that phosphorus did not produce interstitial hepatitis, but Dr. Abrams had informed him that several German pathologists held a contrary belief. This was interesting both pathologically and therapeutically, as many cases which had been attributed to drinking gin might be due to the excessive use of hypophosphites.

In reply to the question asked by Dr. Le Tourneux, Dr. Abrams said that in the case of Mrs. Bowers there was not any discoloration of the skin and all signs of decomposition were absent.

Dr. F. Z. Bazan then showed an ossified larynx, with ulceration of the lining membrane, which he had taken from the body of a patient who had died from slow asphyxia. The patient was fifty-five years of age and admitted that he had at one time contracted from syphilis. When he came under Dr. Bazan's notice he suffered from marked hoarseness and dyspnoea but would not submit to tracheotomy and consequently died a few days after admission into the hospital. An examination of the larynx showed the cartilaginous rings and arytenoid cartilages to be completely ossified, while the lining mucus membrane was thickened and infiltrated.

The Secretary then read a letter from Dr. Clinton Cushing descriptive of native life and hospitals in Japan, for which the Society awarded a vote of thanks to the writer.

Dr. W. W. Kerr then moved that Dr. Max Axelrood be allowed to address the Society relative to his connection with the advertisements in the Wigwam Programme. The motion was seconded by Dr. C. G. Kenyon and carried by the Society.

Dr. Axelrood then stated that he was the author of the advertisements, that he did not believe them to be in violation of the Code of Ethics, and that in issuing them he had only followed the example of other regular graduates in medicine.

There being no further business the Society adjourned until the second Tuesday in January, 1886.

WM. WATT KERR, M. D.,  
Recording Secretary.

PACIFIC MEDICAL AND SURGICAL JOURNAL  
AND  
WESTERN LANCET.

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WILLIAM S. WHITWELL, A. M., M. D., EDITOR.  
WM. WATT KERR, M. B., C. M., ASSISTANT EDITOR.

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SAN FRANCISCO, FEBRUARY, 1886.

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Editorial.

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**Asymmetry in the Human Body.**

In our editorial comments upon the case of Winters v. Graves attention was called to the fact that in many people one lower extremity is longer than the other, and, in fact, that this is so common an occurrence as to warrant the conclusion that it is the normal condition of affairs. These remarks have proved of so much interest to some of our readers that we comply with their request to furnish them with the *data* upon which they were founded.

Attention was first called to this subject in 1862 by Prof. Corydon La Ford, who showed that a difference in the length of the lower limbs occasionally existed, and the matter was afterwards more fully studied by several surgeons and anatomists, among whom may be mentioned Dr. Cox and Dr. Hunt, of Philadelphia, Dr. Wight, of Brooklyn, Dr. Hamilton, of New York, and Dr. Garson, of London.

The most complete account of measurements of the lower limbs is that recorded by Garson in the *Journal of Anatomy and Physiology* for July, 1879. He there shows that in seventy skeletons the lower limbs were equal in only seven instances, or ten per cent of the skeletons measured; that in only two of these seven cases, in which the entire opposite limbs were equal, did

the femur and tibia of the one side correspond respectively to those of the other, while the equality in the remaining five cases was produced by a compensatory shortening or lengthening of either bone, the tibia being shorter when the femur was longer, and *vice versa*. An analysis of his measurements show that in 54.3 per cent the left limb was longer than the right; in 58.5 per cent the left femur was longer than the right; while the bones were equal in 12.8 per cent. The right tibia was longer than the left in 41.4 per cent of the cases, and the two were equal in 10 per cent.

Another point brought out by these investigations was, that not only was the left limb more frequently longer than the right, but the discrepancy was more marked under these circumstances than when the right limb was the longer.

As was stated in our last number, this asymmetry may vary all the way from one-eighth of an inch to one and five-eighth inches without either the person or his friends being aware of its existence.

This asymmetry is not confined to the lower limbs. Thus, everyone is familiar with the inequality that frequently exists between the two sides of the chest, and Dr. Dwight says that the clavicles were only found to be equal in six out of twenty-two cases examined by him, and that usually the left clavicle was the longer. Sir James Paget has recently written an interesting article upon "Imperfect Symmetry," in which he states that "Just as between parents and offsprings, the likeness is general and constant, but never perfect, so is it between the halves of each individual. Invariably nature varies." He then accumulates an amount of evidence to show that symmetry between the corresponding parts of the body is the exception and not the rule. Reference is made to the fact, so well known to artists, that even the halves of the same face are very rarely alike, and a distinguished member of that profession is quoted as saying that he had not seen such exact likeness in more than one face in a thousand, while another declares that he had only seen it in "some

stupid beauties." Another fact noted by this eminent pathologist is of so much importance in diagnosis that we do not apologize for quoting it in full: "Many examples of suspected slight curvatures of the spine are only examples of the adjustment due to the inequality of the lower limbs, and in every case they should be measured and compared; for the remedy may be supplied by boot soles of different thickness better than by spinal instruments. And I think that anyone accustomed to estimate horizontal lines and lines drawn at right angles, will make the necessary measures best if, while the body is upright, or as nearly so as it can be, he will observe, while behind the patient, whether his hands resting on the upper borders of the iliac crests are in an exactly horizontal plane. If they are, a well formed spine will stand at a right angle on that plane."

Dr. Garson has within the last few years extended his measurements to the upper extremities and found that in ninety-six per cent the arms were of different lengths, the right being longer than the left in a proportion of three cases to one. The fact that he had found the left leg to be usually longer led him to inquire whether there was any relation between the length of the upper and lower limbs, and he discovered that the left leg and right arm were longer than the right leg and left arm in forty-six per cent of the cases examined; the right leg and left arm were the longer in twelve per cent of the cases; the two limbs of the right were longer than those of the left in twenty-six per cent of the cases, while an opposite condition of affairs existed in eight per cent of the cases. In the remaining four of the fifty skeletons examined the legs were of equal length in two cases, but the right arm was longer than the left, while in the other two the arms were equal, but the left leg was longer in one and the right leg in the other.

This difference in the length of the lower limbs has been shown to be one of the causes of that unconscious bias in walking whereby men lost in a fog or on the plains without some visible object to guide them will wander round in a circle. It



must be very evident that when the left limb is the longer the step taken with it will be longer than when the right foot is thrown forward, and thus give a bias towards the right side, which is only corrected by using some visible object as a guide. The subject of unconscious bias was very fully discussed in *Nature* in the early months of 1884, and to that journal we would refer our readers for many interesting facts regarding asymmetry that were brought forward during the discussion.

The subject of asymmetry in the human body is one that at present is only in its infancy and it is highly probable that a closer study will reveal many interesting facts both in natural development and disease.

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#### Medical Education in California.

A recent number of the *Medical Record* contains an extract from the *News Letter* of this city reflecting upon the condition of medical education upon this coast. When the original article appeared we did not consider it necessary to make any comment, because the profession in California are fully aware that the statements therein contained cannot apply either to the Medical Department of the University of California nor to the Cooper Medical College, the only two "regular" medical schools in San Francisco; but when it is quoted by our Eastern contemporaries as an index to the condition of medical education in this State, we hasten to show some of the heads upon which the cap does not fit.

In the above named institutions it is necessary for each student to pass a scholastic examination before the Dean of the Faculty prior to matriculating, and in both of them the three years' system has been in vogue for some time. Too much credit cannot be given to the University school for the stand it has taken in this matter, because not only was it one of the first colleges in the United States to adopt the three years' curriculum, but it is one of the few that has extended each *annus medicus* to nine months' attendance upon lectures. The Cooper school divides its year into a regular course of six months and an intermediate

course of nearly four months, and ordains that every candidate for a diploma shall furnish evidence of attendance on three complete regular courses, and at least one intermediate course, before he is admitted to the examination for degrees.

The students of the different colleges visit the City and County Hospital (450 beds) twice every week, upon alternate days, and, in addition to this, each school has its dispensary where clinics are held daily. It is almost superfluous to say that attendance at these clinics is compulsory. For further information regarding the subjects prescribed for study, we must refer our readers to the college circulars at the end of this journal.

It is true that the chairs are not sufficiently endowed to enable their occupants to devote their whole time to scientific pursuits, but the teachers in these schools are, without exception, *practitioners of medicine*, who are not slow to discern or utilize the practical deductions from the theories and observations of their more scientific brethren, and are, therefore, eminently qualified to train those who wish to become, not medical scientists, but medical practitioners. The fact that positions on the various committees of the approaching International Medical Congress were offered to six teachers of medicine in San Francisco, is assuredly some recognition of their fitness to fill the chairs they occupy. A new medical school has been opened at Los Angeles, in Southern California, where the requirements for graduation are similar to those prescribed in the State University, and we sincerely hope that the result of this increasing competition will be to raise the standard of medical education still higher, and that the choice of the Californian student will not be based upon the ease with which a permit to practice may be obtained, but upon the intrinsic merit of the different diplomas.

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#### Obituary.

We regret to announce the death of Dr. A. M. Wilder, the well known oculist in this city, and faithful teacher in the Medical Department of the University of California.

A more extended notice will appear in our next number.

**Licentiates of the California State Board of Examiners.**

SAN FRANCISCO, January 6, 1886.

At the regular meeting of the Board of Examiners, held Jan. 6, 1886, the following physicians, having complied with all the requirements of the law and this Board, were unanimously granted certificates to practice medicine and surgery in this State:

- J. W. ASHFORD, Crescent City; Med. Coll. of the Pacific, Cal., Nov. 5, 1878.  
 FOSTER L. ATKINSON, Sacramento; Rush Med. Coll., Ill., Feb. 17, 1885.  
 NETTIE M. BENNETT, San Bernardino; Cooper Med. Coll., Cal., Nov. 11, 1885.  
 WARREN H. BLOOD, Chico; Cooper Med. Coll., Cal., Nov. 11, 1885.  
 FOSTER BODLE, Oakland; Charity Hosp. Med. Coll., O., Feb. 23, 1865.  
 EGERTON F. CARD, San Francisco; Cooper Med. Coll., Cal., Nov. 11, 1885.  
 ADDISON C. COLLINS, Davisville; Med. Dep. Univ. Cal., Cal., Nov. 10, 1885.  
 PHINEAS K. DOW, San Jose; St. Louis Med. Coll., Mo., March 5, 1880.  
 EDWIN L. HENNESSEY, Napa; Med. Coll. of Indiana, Ind., Feb. 28, 1884.  
 JOSEPH S. HERNDON, San Francisco; Med. Dep. Willamette Univ., Or., March 4, 1874.  
 KATHERINE I. HOWARD, San Francisco; Med. Dep. Univ. Cal., Cal., Nov. 10, 1885.  
 SAMUEL N. LAIRD, Soledad; Albany Med. Coll., N. Y., Dec. 25, 1865.  
 GEORGE A. LATHROP, Gridley; Vermont Med. Coll., Vt., June —, 1847.  
 J. A. McDONALD, San Diego; Med. Dep. State Univ. Iowa, Ia., Feb. 19, 1867.  
 THOMAS H. MATHERS, Guerneville, Med. Coll. of Ohio, O., March 8, 1883.  
 EDWARD R. MERRILL, Sacramento; Harvard Med. Coll., Mass., June 24, 1885.  
 SIMEON M. METCALF, Los Angeles; Harvard Med. Coll., Mass., June 29, 1881.  
 EDWIN E. MOORE, Pomona; Chicago Med. Coll., Ill., March 5, 1878.  
 CHAS. A. PETERSON, Los Gatos; Coll. of Phys. and Surg. of the City of New York, N. Y., May 13, 1884.  
 FRANK RATTAN, San Francisco; Cooper Med. Coll., Cal., Nov. 11, 1885.  
 THOMAS SLATER, Alameda; The Faculty of Phys. and Surg., Glasgow, Scotland, Sep. 7, 1860, and The Royal Coll. of Physicians, Edinburg, Scotland, May 17, 1866.  
 MILES E. VAN METER, Red Bluff; St. Joseph Hosp. Med. Coll., Mo., Feb. 28, 1879.  
 FRANKLIN J. WHITE, San Rafael; Med. Dep. Univ. City of New York, N. Y., March 4, 1861.  
 WILBUR J. WILCOX, East Oakland; Med. Dep. Univ. California, Cal., Nov. 10, 1885.  
 HENRY N. WINTON, Haywards; Med. Dep. Univ. California, Cal., Nov. 10, 1885.

The application of Arthur Dumilieu of Colfax for a certificate was refused, on the ground of insufficient credentials.

R. H. PLUMMER, Sec'y.

## Correspondence.

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PETALUMA, Jan. 11th, 1886.

*To the Editors of the Pacific and Surgical Journal:*

Since I have been most falsely and unjustly accused, in your journal, of urging or inducing Mrs. Winters to sue Dr. Graves of this town, I feel it my right to demand, in the name of truth and justice, that you publish this card from me; more especially as you seemed disposed to do Dr. Wells justice, in some measure, by publishing his communication, and I cannot but feel that in this case, I have been treated with the greatest injustice.

I hereby most emphatically deny that I ever, at any time or in any way, urged or influenced Mrs. Winters to sue Dr. Graves, and so far from "the Winters family allowing it to be believed that Dr. Ivancovich either directly or indirectly urged such a course," I have Mrs. Winters' *affidavit* denying that I ever so urged or influenced her, and declaring that she took the step of *her own free will*.

When Mrs. Winters came to see me I gave her my honest opinion, which opinion I certainly had a right to, and the correctness of which I will not here enter upon. Right or wrong I have as much right to my opinion as the most noted surgeon in the land, and I certainly feel bound when called upon by a patient to tell him or her honestly and candidly what I think of the case.

But neither at that time nor at any other did I criticize Dr. Graves in any unkindly spirit, saying at the time "we are not here to criticize Dr. Graves, but to see what could be done for the case."

When I was told that Mrs. Winters intended bringing suit I expressed regret and like Dr. Wells predicted failure, and said I hoped that it would fail. But when called to give in a Court of Justice my opinion under oath, I told, as any honest and honorable man must, the *truth*, to the best of my knowledge and belief; not from any hard feeling toward Dr. Graves, nor any desire to see him or any member of the profession injured, nor any desire to act contrary to the wishes of Dr. Lane, or any of my friends, but simply because, having told the woman what I thought of her case and still holding the same opinion, I held my

honor as a man and as a physician, too dear to *perjure myself*, a thing I never have done and never will do.

Most right and *just* indeed was the motion of Dr. Hart at the late meeting of the Alumni Association of Cooper Medical College, to appoint a committee to *investigate* the charges against me before taking action! By all means, let them investigate, and see that they bring in a decision in accordance with the truth. To judge and condemn a man without a hearing and without even notifying him of the charges against him is not *justice* and such a course will never meet with the approval of honorable men.

The first charge is absolutely false. As to Dr. Lane's letter, it was put in evidence by the attorney for the plaintiff, it is true, but without my knowledge or consent, having been handed to him by me in a private manner for him to read. I fail to see how that constitutes a "breach of professional confidence."

Yours respectfully,

GEORGE IVANOVICH, M. D.

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A YOUNG woman in Paris, having a medical education, has been appointed a medical inspector of girls in the Parisian schools. Her duties are to see that the girls are not overworked and that they perform their tasks under the best sanitary conditions possible. This is a good step forward in practical school sanitation. Since, in most localities, attendance upon school is enforced for certain periods, it seems to follow, as a logical conclusion, that the state should, at least, turn out the children in as healthy a condition as they are received. That this cannot be done in the ordinary American school, under the conditions generally prevalent, will be readily conceded by nearly every one at all conversant with school life. It has been often argued that each board of education should have a medical officer, and it is a good sign to be able to record the appointment of one with specified duties.—*Sanitary News*.

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DR. DROUINEAU of La Rochelle, recommends the aspiration of the bladder in all cases where catheterization is impossible or even difficult of performance, and urges that it should not be a means of last resort, but one which should be frequently and commonly used whenever indicated.

## Notices of Books, Pamphlets, etc.

**A TREATISE ON THERAPEUTICS:** Comprising Materia Medica and Toxicology. By H. C. Wood, M. D., L. L. D., etc. Sixth Edition. Published by J. B. Lippincott Company, Philadelphia. For sale by Wm. S. Duncombe & Co.

Among the English speaking authorities and writers upon the subject of Therapeutics, there is no one more generally known or more highly respected than Prof. H. C. Wood of Philadelphia.

There is no exaggeration in the statement that Therapeutics has, during the past few years, made more marked and reliable advancement than any other branch of medicine. The constant additions to the physiological action of medicines, coming from every quarter of the globe and enunciated in every language, render it impossible for the practitioner to keep pace with the established improvements in that which is the only object of medicine, the treatment of disease, without resorting to frequent editions of works of this character. The author states in the preface that "comparatively few persons have a full conception of the rapid advancement of therapeutic science, or the amount of labor involved in keeping up with such advance. Although only two years have elapsed since the last edition of this treatise, yet, nearly four hundred papers have been studied in preparing the present one." The new articles upon Cocaine, Antipyrine and Hyoscine are as complete as the present investigations allow; the subject of disinfection has been modernized, and throughout the whole work additions to physiological action have been introduced wherever appropriate, and advice regarding the therapeutic uses of drugs amended in accordance with the latest views of clinical teachers. One great advantage in this work is, that should the reader at any time doubt the correctness of the deductions and opinions of the author, he will find upon every debatable point reference to authoritative publications, even including the page, sufficiently complete for verification. Prof. Wood deals with facts, lucidly expressed, completely detailed and fully authenticated, and not with plausible but unproven individual opinions. For this reason his work occupies the chief place among the text-books in our colleges, and is well adapted to the wants of the practitioner who desires, but has not the opportunity, to refresh his knowledge or become acquainted with the latest teachings at the various centers of medical education.

**MEDICAL CHEMISTRY.** By ELIAS H. BARTLEY, M. D., Adjunct Prof. of Chemistry and Lecturer on Diseases of Children in Long Island College Hospital. 12 mo., pp. 375. Philadelphia: P. Blakiston, Son & Co., 1885. Price, \$2 50. For sale by Wm. S. Duncombe & Co.

The author designed this book especially for medical students, but hopes that it will be of some use to the general practitioner. The first part is devoted to the consideration of medical physics, including such subjects as electricity, the use of thermometers and spectroscopes, all of which should be learned in the studies preliminary to medical education, but, unfortunately, are not. The remaining three parts contain a brief account of chemical theories, the inorganic substances and compounds, with their physiological and toxicological bearings, and the chief organic substances. Prof. Bartley is a teacher of much experience, with a full knowledge of the wants of students, and we have no doubt that his book will serve the purpose for which it was written.

**DISEASES OF CHILDREN.** Third American, translated from the eighth German edition. By ALFRED VOGEL, M. D., Professor of Clinical Medicine in the University of Dorpat, Russia. Translated by H. Raphael, M. D., Physician to the Eastern Dispensary for the Diseases of Children, etc. Pp. 640. New York: Appleton & Co., 1885.

Although this year has been exceptionally prolific in good works upon this subject, no one can regret the appearance of Dr. Vogel's book, which has always been a favorite with the profession. With the exception of some important additions to the chapters on nutrition, dentition and nervous diseases, the author has given us little that was not in former editions. The changes that have been made are important, and include a discussion of the possibility of phthisical infection through milk from diseased cows, the introduction of the more recent remedies, into the treatment of disease, such as salicylic acid and apo-morphine, and the rearrangement of the section upon Infectious Diseases.

The translator has done his work well, and has added many foot notes, including an article on cerebro-spinal meningitis, which subject has been omitted by the author.

This edition merits the reception and rapid sale with which its predecessors were met.

**MEDICAL PHYSICS.** By JOHN DRAPER, M. D., LL.D., Prof. of Chemistry and Physics in the University of New York, author of "A Text-Book on Anatomy, Physiology and Hygiene," etc. Pp. 733. Philadelphia: Lea Bros. & Co., 1885. For sale by Wm. S. Duncombe & Co.

Dr. Draper's name on the cover of a book is sufficient to obtain for it a favorable impression.

The present work was called forth by a recognition of the fact

that a knowledge of physics is necessary to the complete understanding of modern medicine, and is the embodiment of the author's lectures on this subject delivered in the University of the City of New York.

The work is a good one of its kind, and some parts of it deserve unqualified praise, but others are too much condensed. We cannot help regretting that Dr. Draper lent his influence towards increasing a class of books which can only be regarded as side doors to knowledge, and must be incomplete in their teaching. There is an endeavor at present to obtain knowledge by any but the only real way of honest hard work, which must result in a superficiality that is only too often apparent in the writings of many authors. The best and only way by which the student can obtain a thorough knowledge of medical physics is by making himself thoroughly familiar with some standard work, such as Daniell's "Text-Book of Physics," followed by an equally careful study of Foster's Physiology; after this he will find that he really knows something about the subject.

#### **A New Medical Journal.**

*The Southern California Practitioner* is the title of the latest addition to the medical literature of this coast. No doubt, many will question the wisdom of this step taken by the profession in the lower part of this State, but, when we consider the vast area of California, its conflicting interests, and the difficulty with which we have been able to keep ourselves informed of the doings of the medical brethren in the South, we readily confess that there is plenty room for another journal in California.

A medical journal should not only diffuse the knowledge of progress in science, for it has another duty to perform, almost as important. This consists in making known to adjoining practitioners, those local topics that are not eligible for the public prints, nor of sufficient importance to attract the attention of the profession at large, but which constitute those bonds that unite in sympathy and harmony, those to whom they are a subject of common interest.

We congratulate our neighbors upon the appearance and quality of their first number, and wish for them that encouragement and appreciation of their work which they deserve.



## **Extracts.**

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### **Treatment of Acute Intussusception.**

In his recent paper before the British Medical Association, on "The Operative Treatment of Intestinal Obstruction," Mr. Frederick Treves thus treats of acute intussusception:

The chief point of interest in connection with this form of obstruction is concerned in the question of the frequency of spontaneous relief, and the matter that presents itself most prominently to the surgeon's notice relates to the reliance that is to be placed upon the prospect of such relief. This form of obstruction is quite common, and forms, indeed, no less than one-third of all known varieties of the affection, excluding hernia and obstructions due to congenital defects. The acute cases are those that—if they follow an uninterrupted course—end in death within seven days. These cases form about fifty per cent of the whole number of invagination cases. It is well, also, to bear in mind that the enteric and ileo-colic forms are not usually acute, and that fifty per cent of all the examples of the disease are met with in patients under ten years of age. Spontaneous cure may be met with under two circumstances. In the first place, the invagination may reduce itself before the period has been reached when from structural changes it has become irreducible; and, secondly, spontaneous cure may occur after the invagination has become irreducible, either by the formation of fecal fistula above the obstruction—a form of relief that is very rare—or by the elimination of the grangrenous intussusception. The method of relief named in the first category is certainly not infrequent. Most surgeons must have met with instances of acute invagination that have become cured without elimination of the intussusception, and with no more elaborate treatment than that comprised by rest, starvation, and the use of opium or belladonna. It is to be regretted that statistics are not forthcoming to show with what frequency this termination of the case may be expected. To enter at once into the treatment of acute invagination, I imagine that general approval will sanction the immediate use of opium or belladonna, together with practical starvation and perfect rest. By these measures, the peristaltic movements are stilled, the irregular muscular action in the bowel that has pro-

voked the malady is arrested, and the prospect of spontaneous reduction is greatly favored. Presuming that no benefit attends this mode of treatment at the end of twelve hours, it will be expedient to attempt reduction by means of insufflation or forcible enemata. Considerable success has attended these measures. By far the best instrument for the purpose—no matter whether water or air is used—is the admirable insufflator invented by Mr. Lund. I think that in children under ten years of age the injection should be cautiously administered while the child is under the influence of an anæsthetic; but in patients above that age it is, perhaps, safer to carry out this treatment without chloroform. There is no doubt that in adults the best guide to the amount of force to be used is the patient's own sensation. In any instance the colon should be distended gradually. When the bowel is fully distended, the air or water should be retained for at least twenty minutes. The injection may be accompanied by gentle kneading of the intussusception tumor, when such exists. I think that it is a matter of primary importance that the bowel should have been rendered quite still by means of opium or belladonna before the attempt at reduction by injection is commenced. I cannot understand upon what mechanical principles the inversion or shaking of the patient is recommended in these cases. Before such a method were adopted the exact position and extent of the invagination would have to be most accurately diagnosed. It is obvious that these measures will have no effect when once the invagination has become irreducible. It is to be regretted that at present little is known of the precise circumstances under which such irreducibility takes place. It is known that the invagination may become fixed within a few hours of its formation, and it is needless to remark that adhesions play comparatively a small part in causing an *acute* invagination to become irreducible. Should the measures so far advocated fail after a patient trial, I would strongly urge that a laparotomy be at once performed. If enemata fail early in the case, they are not likely to succeed at a later period, and every hour that elapses renders the prospect of gangrene more immediate.

Against laparotomy in these cases many objections have been urged. In the first place it is pointed out that an acute attack may become a chronic one. This is true, but the occurrence is very rare. By far the greater number of the patients do not

live long enough to enter upon the chronic stage. Moreover, chronic invagination is exceedingly fatal, and out of fifty-nine recorded cases, taken without any selection, I find that there were no less than fifty-one deaths. A far more important objection, however, depends upon the frequent occurrence of spontaneous cure at a period when the patient is *in extremis* and the case desperate. Temporizing is constantly being urged upon this ground. One case of spontaneous cure is an argument against a score of proposed operations. An examination of the matter shows that little dependence is to be placed upon this mode of ending. "Elimination of the gut by gangrene occurs in about forty-two per cent of all cases; but when it has occurred, it by no means follows that the patient recovers. In fact, no less than forty per cent of the cases of spontaneous elimination die of the immediate results of the process of separation. Moreover, during the first year of life, spontaneous elimination occurs in only two per cent of the cases, and between the ages of two and five in only six per cent; and when it is remembered that more than fifty per cent of the total number of examples of intussusception occur in children under ten, it will be seen that elimination by gangrene offers no very extensive prospects of spontaneous relief. It is true that the older the patient the more chance has he of recovery by this means; but it unfortunately happens that the older the patient the higher is the mortality after the occurrence of the elimination, so that the chance of cure becomes remarkably slight." ("Intestinal Obstruction.") In favor of the operation, it must be pointed out that the affection is very acute, that the general mortality of the disease is seventy per cent, and that eighty per cent of the patients die before the seventh day. I would venture to urge that in these acute cases laparotomy should be performed at least within the first forty-eight hours, and, if possible, within the first twenty-four hours, provided, of course, that all other measures have failed. When the abdomen has been opened, the invagination should be reduced, if possible. The reduction is best effected by squeezing the intussusception with one hand, while gentle traction is brought to bear upon the gut entering the invagination with the other. Should the mass be found to be irreducible, or in a condition that threatens gangrene, the whole of the involved bowel should be resected and a temporary artificial anus established. It appears to me that there is little to recommend the operation

of enterotomy for this class of cases. This measure is certainly readily performed, but it is of the nature of a cut in the dark. It will relieve the obstructive symptoms, it is true, but it will leave the invagination untouched, and leave it possibly to pass on into a state of gangrene or a condition that may lead to diffuse peritonitis.—*Gaillard's Med. Jour.*

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### **Intra Pulmonary Injections.**

By R. SHINGLETON SMITH, M. D. (London.)

The following five cases are the only ones in which I have carried out the practice of injecting a solution of iodoform into the substance of consolidated or disintegrating lung. The injections have been performed after the manner practised by Pepper, of Pennsylvania, and advocated by Beverley Robinson, of New York, in the *New York Medical Record* for January 10th, 1885. An ordinary hypodermic syringe has been the instrument employed, and the fluid used has been, in all the cases except one, an ethereal solution of iodoform, five minims containing one grain. The quantity injected has been five to ten minims, and the injections have been repeated daily or at longer intervals.

The injections have been given forty-two times in five independent cases. On the first four occasions the iodoform was dissolved in olive oil; but, in order to avoid any little risk of fat embolism which might arise from the injection of oil into a large bloodvessel, the solution in ether was afterwards employed.

I have been unwilling to use any other substance for injection. The bichloride of mercury, although a more powerful germicide, is so irritating when injected subcutaneously, that its use is not likely to be devoid of danger when injected into the lung texture. Treatment by iodoform has already given encouraging results in the hands of Dreschfeld and others. In a series of cases published in the *Transactions of the International Medical Congress*, of 1884, I found that 29 of the 46 cases showed an absolute gain in body weight, amounting in one case to 32 pounds in 99 days, in another case to 33 pounds in 110 days; of the remaining 17 cases the loss of weight was small, and in many of them the wasting, which had previously been rapid, was more or less completely arrested. It may fairly be expected that if the drug can be brought into contact with the diseased tissue in a more concentrated form than when diffused throughout the

blood, more decided results may yet be gained than have hitherto been possible from the administration by mouth. It has been estimated by Sternberg that the quantity of iodine required to prevent the development of a septic micrococcus in the blood of an adult man would be thirty-five grains. Now I have in one case administered thirty grains of iodoform daily, and no toxic symptoms were witnessed till after one month's continuous administration. It follows that, inasmuch as iodoform contains 96 per cent of nascent iodine, the amount given approaches that which Sternberg's estimate shows to be necessary for complete disinfection of the blood. Treatment by injection into the focus of the disease in the lung appears to give us a means by which local developments may be reached by local treatment; and so complete local disinfection may be obtained, and the risk from the toxic action of the drug on the nerve centers may be avoided. It remains to be seen whether actual experience of the method will justify the expectations which theoretical considerations afford.

The first case is one of gangrene of the lung:

Simon T., 44, single, laborer in market garden. Had been out of work for six weeks, and suffering from exposure and want of food; in the habit of taking beer freely. Previous good health, with the exception of a dry cough for several winters. Was admitted to the Bristol Royal Infirmary on January 21st, 1885, complaining of shortness of breath and cough, but had been walking about till the day of admission.

*Pres. Cond.*—A well-nourished, prematurely aged man, cyanosed, breathing rapidly, with frequent short hacking cough. Expectoration frothy, blood-stained, and very foetid. Chest barrel-shaped, with little movement, and very resonant percussion note; crepitation at both bases. Heart sounds weak; no murmur. Urine normal. No œdema of legs.

Ordered mist. cinchonæ, ammoniæ, c. ethere, quartis horis.

On 23d, fœtor of breath very decided. Ordered creosote inhalations, and iodoform gr. ii., in pill, every four hours.

30th.—Patient very prostrate; marked hectic; expectoration profuse; fœtor constant, intensified on coughing; marked dullness on percussion below angle of left scapula; bronchical breathing, bronchophony, and coarse crepitation. Solution of iodoform in oil injected into the substance of the lung in the center of the dull area at the left base; fifteen minims of olive oil, con-

taining about one grain of iodoform, were injected with the hypodermic syringe. The injection appeared to have no immediate effect on the patient; it did not give rise to coughing, and there was no appearance of pain or other discomfort.

Feb. 1st.—Expectoration amounts to over a pint daily, and foetor continues. Dulness at left base increasing; amphoric breath sounds and bronchophony, with much coarse crepitation. Injection repeated daily; it gave rise to no coughing or pain, and there was no hæmoptysis. On one occasion patient stated that he noticed the taste of the medicine in his mouth some hours after the injection. Was ordered one grain of quinine every four hours, and to continue the iodoform pill; brandy, 6 ounces.

Feb. 2nd.—Pulse very weak and small; great prostration. Some dulness and crepitation at the right base.

3rd.—Pulse better; patient less cyanosed. No dulness at the right base, but abundant coarse crepitation. Loud bronchial breathing at left base more extensive. Sputum examined for bacilli and for lung tissue; putrefactive bacteria abundant, but no tuberculous bacilli and no elastic tissue found. Solution of iodoform in ether was injected into the left lower lobe, ten minims containing two grains. Slight cough ensued immediately.

Feb. 6th.—Ethereal injections had been continued daily; patient made no complaint respecting them. He appears much improved, thinks he is better, sits up in bed, feeds himself, and looks brighter. The foetor of breath is much diminished; now only perceived on deep coughing; does not pervade the air around. Cough is less harassing, and expectoration less in quantity. At left base bronchial breathing from angle of scapula downwards, and from spine to posterior axillary line. Percussion note close to spine high pitched, amphoric. Coarse gurgling on coughing. Bronchophony. At right base coarse crepitation, but no dulness. Vocal fremitus at left base diminished.

10th.—Injections continued daily. Patient improving in strength, sleeps better, has less cough, and expectorates about half a pint of frothy yellow muco-pus, slightly foetid. Still has characteristic foetor on deep coughing. Urine contains a trace of iodine.

13th.—Some complaint of giddiness, and therefore the iodoform pill was discontinued.

15th.—Patient looks brighter, is more active mentally, and seems stronger; takes food fairly. P., 124. Sputum a little foetid; a few streaks of blood after the injection.

16th.—Seems weaker, more flushed. Ordered quinine, two grains, every four hours, and the iodoform injection was discontinued.

17th.—Slight delirium in the night. The fœtor a little increased on coughing.

18th.—Fœtor much increased.

19th.—More dyspnoea. Patient is very prostrate; face blue. Pulse, 130; resp., 46. Death took place in the evening.

*Post-mortem*.—Marked emphysema of both lungs. Left lower lobe firmly adherent and consolidated; tissue brittle, tearing on removal, and disclosing a cavity in posterior part near the spine; the lung axis about three inches, and about two inches transversely, traversed by ribs of firm tissue, lined by a pseudo-mucous membrane; lung tissue around the cavity in state of grey hepatisation and friable; upper part of left lower lobe soft and cedematous, pitting on pressure; no fluid or slough in cavity, and no trace of the injected iodoform either in or around it. Right lower lobe congested and cedematous.

*Spleen*.—Numerous minute emboli dotted over the surface looking like tubercles, but found to be triangular, with base on the surface.

Heart, kidneys, liver, normal.

In this case injections were given seventeen times at various parts of the lower lobe of the left lung into the consolidated and disintegrating area: four of these were solutions in oil, the remaining thirteen in ether. The effect was apparently beneficial, inasmuch as the temperature fell to normal, the expectoration diminished in quantity to about one-half and became much less offensive to the patient and his neighbors, and there was less cough.

The injections were discontinued in consequence of increasing weakness, which it was thought might be toxic. On the second day afterwards the fœtor of the breath had much increased, and so had the dyspnoea and prostration.

The diminution of the fœtor may fairly be attributed to the injections. The patient was at first a great annoyance to his neighbors, and became so again after the discontinuance of the injections.

The next case was one of chronic pneumonia:

William S. D., æt. 40, of good family history, but of intemperate habits, came under observation in December, 1884, and

gave an account of failing health since the previous January. There had been two attacks of blood spitting, and profuse expectoration amounting to half a pint or more of pure pus daily, which did not contain tubercle bacilli or lung tissue. There was flattening at the right apex and contraction at the right base; the left supra-spinous fossa was dull on percussion, and there was coarse bubbling crepitation at both bases. Liver dullness was normal. There was no albumen. Pulse, 96; small and weak. On January 23rd, 1885, a large patch of dullness and cavernous sounds were found at the base of the right lung; there was also coarse crepitation over the left lower lobe; the sputum amounted to one pint daily of pure pus, with no tubercle bacilli. The cavity in the right lower lobe was aspirated by Mr. Greig Smith; and on January 25th a drainage tube was introduced, but without giving exit to more than a few drops of pus, although air passed in and out freely. The tube was removed after four days, and the wound closed quickly.

Feb. 4th.—An ethereal solution of iodoform (gr. ii. in m. x.) was injected into the cavity through a hypodermic needle. The injection immediately set up violent coughing, and the patient tasted the ether, but the sputum did not become blood-tinged.

Feb. 19th.—Injections had been repeated five times in fifteen days. The taste of the ether had been again mentioned, but little cough was usually excited. On two occasions there had been momentary faintness immediately after injection. The sputum had diminished to half a pint, and no toxic symptoms were observed. The patient felt better, and went away to the seaside; the injections were therefore discontinued. They did not, however, effect any permanent improvement. The patient was of opinion that they diminished the expectoration, but this was only for a time: the progress of disintegration of lung steadily progressed, and ultimately there were the usual signs of cavities on both sides, from the spine of the scapula on the right side and the angle of scapula on the left side downwards to the bases of the lungs. There was, however, no evidence of disease at either apex: at both infra-clavicular regions the breathing was puerile, and at no time were there moist sounds over the upper lobes in front. The sputum was examined on numerous occasions, but neither tubercle bacilli nor shreds of lung tissue could be found. There was usually a little fœtor, but not that of gangrene.



This patient died in June, whilst away from home, and I did not learn the details of his later history, but regret that the doubt as to the nature of his disease was not cleared up by *post mortem* investigation.

The third case was one of chronic tubercular pleurisy. Nine injections were given into the dull area at the base of the right lung on nine successive days. The injections gave rise to no pain or cough, and there was no hæmoptysis. There was steady gain in weight whilst under treatment, the temperature became normal, cough and expectoration ceased, the dulness of right lung had much diminished, and the patient considered herself to be quite well.

Nellie S., 22, single, dressmaker. Admitted to Ward II., January 20th, 1885, for vomiting after food. Healthy till three months ago, when she was laid up with right pleurisy; has had cough ever since, and has been losing flesh steadily. Three days before admission vomiting commenced, and had continued daily. Catamenia had been regular. There had been no hæmoptysis. No history of consumption in the family; father and mother both living.

Dulness, crepitation, feeble breath sounds at right base from fifth dorsal vertebra downwards; breathing of bronchial character in axillary and scapular regions; diminished vocal fremitus below angle of scapula; dulness at right supraspinous and right infra-clavicular regions. Heart sounds good. Temp. 101°. Urine, sp. gr. 1030; no albumen.

Jan. 28th.—Sickness subsiding. Patient can take milk freely. Patient has a cough, and expectorates a little muco-pus, which contains numerous tubercle bacilli. Temperature varies from 101° to 99°. Weight, 8st. 2lb. To take iodoform and quinine, of each one grain, every four hours. Right base continues dull, with faint breath sounds and diminished fremitus.

Feb. 4th.—Sickness has ceased. Patient is gaining weight, 12 pounds in seven days; now 9 stone. Temp. varies from 98.4° to 100°

Feb. 6th.—Dulness at right base as before; crepitation at right supraspinous fossa; breath sounds weak over whole of right lung. To take two grains of iodoform, in pill, every four hours. Hypodermic needle disclosed the presence of clear serous fluid in the right pleura; the aspirator needle was introduced

at the posterior axillary line in eighth intercostal space, but only a few drops of bloody fluid escaped.

Feb. 11th.—Weight, 9st. 2lb.

“ 13th.—To have iodoform, gr. iii., every four hours.

“ 17th.—Dulness at right base less decided. Little cough and expectoration. Patient not complaining of sickness or diarrhoea; less sweating at night. Temp. still rises at night to 100° to 101°. Iodoform, gr. i., dissolved in five minims of ether, was injected with hypodermic syringe below the angle of right scapula into the dull area. Patient made no complaint of the injection; it did not give rise to cough, but patient said she could smell something afterwards.

18th.—Ten minims of ether containing two grains of iodoform were injected, and this was repeated daily. The injection gave no pain or cough, no complaint was made concerning it, and there was no hæmoptysis. Weight, 9st. 2lb.

March 5th.—Weight, 9st. 4lb. Patient is much better. Temperature is normal; no evening rise; no sweating. There is no cough or expectoration. Breath is rather short. To discontinue the injections and the pills, and to take cod-liver oil containing one grain of iodoform three times daily.

March 10th.—Weight 9st. 6lb. Steady improvement. Made out-patient.

31st.—Weight, 10 stone. A little cough; no spitting whatever.

The fourth case was one of advanced tubercular phthisis of twelve months' duration, with much anæmia, cedema of legs, and albuminuria, with sub-normal temperature. Injections were made into the left upper lobe, at the infra-clavicular and superior axillary regions, on six occasions in nine days. There was no cough or hæmoptysis, but some complaint of pain round the left chest was made after the later injections. There was no change in the physical signs, and the weight remained stationary. She did not think it necessary to remain longer under treatment.

Ann G., 25, single, works at cotton factory. Father and mother died of consumption at about 50. Two brothers and one sister are healthy. Was quite well till a year ago; has since then been getting thin, has had bad cough for some months, and has been short of breath, but has never spat blood. Two months ago first noticed swelling of feet, and this has continued.

March 20th.—Anæmic. Weight, 7st. 11lb. Hæmic murmurs at base and in neck. Catamenia regular. Dulness and crepitation at left apex, front and back. Liver dulness in excess. Splenic dulness down to edge of rib. Some œdema of feet. Urine 80 oz., 1009; neutral, pale, with one-fourth albumen. Ordered iodoform, gr. i., in pill, every four hours.

March 24th.—œdema of legs subsided; little cough, no sputum. Temperature varying from 96.6 to 99.6.

March 31st.—Patient feels better. Weight, 7 stone. Taking iodoform, gr. ii., every four hours.

April 2nd. No œdema. Temperature sub-normal. A little sputum was obtained, and was found to contain tubercle bacilli. Two grains of iodoform, dissolved in ten minims of ether, injected into the apex of left lung below the clavicle; it did not give rise to cough, nor did the patient taste the ether.

April 3rd, 5th, 7th, 9th, 10th.—Injections of iodoform repeated. The patient complained of pain round the left chest; accordingly the injection was discontinued. It did not give rise to cough or hæmoptysis.

April 12th.—Patient remains stationary in weight—7 stone.

16th.—Ordered iodoform, dissolved in cod-liver oil with creosote.

25th.—Gained one pound in weight.

28th.—Is much improved. Physical signs unchanged. Dull at left suprascapular fossa, and down to angle of scapula; in front, dull down to third rib. Dulness also below right clavicle and above it. No œdema. Not much cough; no expectoration. Urine varying from 1008 to 1010; albumen as before. Temperature, sub-normal. Made out-patient.

The fifth case was one of chronic tubercular phthisis, which had been under treatment for eighteen months as an out-patient, and had taken iodoform in pill or dissolved in cod-liver oil during nearly the whole of this period. The weight had increased from 8st. 21lb. in December, 1883, to 8st. 9lb. in September, 1884, after which time it remained stationary till May, 1885, when he began to lose weight, partly in consequence of sore throat, which gave rise to some dysphonia, although it did not result in laryngeal ulceration. Five injections were made from July 12th to the 22nd. The fluid was injected into the consolidated upper lobe of the left lung, at the supra scapular and

infra-clavicular and superior axillary regions. The first injection of ten minims of the ethereal solution gave rise to a cough, with momentary faintness and pallor. The following injections were limited to five minims, and no faintness ensued. Some pain and a localized pleuritic friction followed the third. The fifth was followed by neuralgic pain in the shoulder and up the neck. The temperature continued to be sub-normal, and the weight stationary.

Abraham L., æt. 31, married, shop assistant. Admitted July 11th, 1885.

Patient, previous to admission, had been under treatment as an out-patient for eighteen months. Treatment began on the 27th December, 1883, and has been continued up to the present date. When patient first came under notice he had been suffering from phthisical symptoms for eighteen months. During that time had a constant cough, with yellow nummular but scanty expectoration, which, on examination, was found to contain numerous bacilli. He complained also of general weakness. Never had any hæmoptysis or diarrhoea, and night sweats were only slight. Had not noticed any marked wasting, but said that he was not so stout as he was formerly. Voice husky at times. Patient's father died of phthisis.

Complexion of patient pale, but with no marked hectic flush. Fairly well nourished, and muscular tone good. Tendency to clubbed nails, but condition not absolutely typical. Pulse good. Heart normal. Abdominal organs healthy. Urine: Sp. gr. 1022; alk., no alb. Chest: Left side, dulness in front in infra-clavicular region for first three intercostal spaces, with some dulness also in supraspinous fossa behind. Loud bronchial breathing over area of dulness, with, at times, fine crepitation, best heard after coughing. Expiratory sounds were prolonged, and there was bronchophony, but no pectoriloquy. Vocal resonance and fremitus increased on left side. No evidence of existence of any cavity. No perceptible flattening of chest wall. Temperature normal.

*Treatment.*—Whilst an out-patient, from December 27th, 1883, to July 12th, 1885, patient was treated mainly with the pil. iodoform; maximum dose, gr. ii. t.d.s. and cod-liver oil, sometimes alone and sometimes in combination with iodoform or creosote. Also had the Syr. Ferri. Hypophosph. Co. and tonics, with syrup to allay cough.

On December 1st, 1884, he had some symptoms of the toxic effects of iodoform, and iodine was found in considerable quantities in urine. Iodoform was discontinued for about six weeks.

July 12.—On day after admission m. x. of the ethereal solution, containing gr. ii. of iodoform, were injected into the lung. The point of injection was just below the anterior fold of axilla, in the fifth intercostal space. During the injection patient began to cough, and soon felt faint and turned pale. No coughing after injection, and no spitting. Felt a little pain down the left side and left arm afterwards, and said that he could taste the iodoform.

13th.—Passed a good night. Very little cough and no spitting. Injection repeated, m. v. (gr. i.) in supraspinous fossa. No cough or spitting, but felt a little faint. Patient did not, on this occasion, taste the injection; and it is doubtful whether it reached the lung, owing to the thickness of muscle.

14th.—Injection repeated below clavicle, second space, m. v. (gr. i.).

15th.—Injection, m. v., in axilla.

16th.—Complained of a good deal of pain in left side of seat of injection, and on auscultation House Physician detected a pleuritic friction rub. Injection was, therefore, not repeated to-day.

18th.—Injection, m. v.

22nd.       “       “

23rd.—Good deal of pain in chest, causing sleeplessness. No temperature and no signs of pleurisy. Expectoration very scanty, and cough slight; both diminished since admission. Weight, 8st. 5lb.

This series of cases is too small to enable one to draw any general conclusions; the results have not been decided, excepting from the negative point of view. They support the experience of Pepper, Fraenkel, Robinson and others, that injections into the lung substance are not dangerous. They also show that in many cases we may expect to relieve symptoms; and, further, they encourage the hope that the method will become a familiar, an efficient, and a useful addition to our methods of treatment directed to the cure of chronic tubercular and other diseases of the lungs.—*Bristol Med.-Chir. Jour.*

**Malpractice in New England.**

The following letter appeared in the columns of the *North Western Lancet*:

"Your editorial remarks under date November 15, regarding the uncertainty of result in malpractice suits in some of the states where one would be justified in expecting adequate laws and equitable interpretation of them, have an unpleasantly truthful application as to Massachusetts. It seems to be the case that laxity in legislative control of medical practice goes hand in hand with injustice in determining malpractice suits; that when there is least protection of the public against charlatanry there is least protection of the honest medical practitioner against knavery. Your remarks suggest a somewhat striking case which occurred not long ago in a New England city, the circumstances of which are in substance as follows:

"Dr. A., a reputable practitioner, attended Mr. B. for a fractured thigh. The case did well and the patient recovered without deformity. No measurements were recorded by the attending surgeon, but he was able to swear that the result was to him perfectly satisfactory. A year or two later the patient entered suit against Dr. A. for malpractice and exhibited a leg considerably shortened and deformed. A jury at once found a verdict for the plaintiff and awarded damages in some \$6,000 or \$7,000, a sum which seriously crippled the physician. He devoted his energies thereafter to discovering what he believed to be a fraud and finally obtained evidence that B. had, subsequently to his recovery under A.'s attendance, again fractured the same thigh while in the Adirondack wilderness, and had on that occasion had no surgical attendance whatever. The physician was able to recover his money, but was at the expense of his detectives' and lawyers' fees, to say nothing of years of anxiety and of damage to his professional reputation.

"A suit is just now in progress against a prominent gynecologist of this city, connected with a free hospital for women. The plaintiff charges that she was entered into the hospital under invitation of the physician who "met her somewhere," and told her he could cure her if she would come into the hospital. She did so, she says, not dreaming of an operation, until one day she overheard the nurses talking in a way which excited her suspicion. She was told that no operation was contemplated and was reassured. But one day she came to her consciousness from

ether to find herself being sewed up !! She further deposed to having been discharged from the hospital onto the sidewalk upon a winter's night when she had no place to go, an usual fashion of eleemosynary institutions. She claims from the physician who gave his time and skill, and the hospital which gave its bed, board and nursing, all without expense to herself, \$10,000 apiece.

"I am also reminded of a case two or three years ago, in which a gentleman in charge of an outpatient clinic for women was sued for malpractice in having amputated a widow's clitoris, thereby abridging her of certain of the inalienable rights and privileges of her sex. The physician's assistant, who fortunately was present at the time of the alleged operation, was able to testify that nothing of the sort occurred. The woman utterly refused any examination which might settle the question whether or not she possessed a clitoris and rested her claim upon her testimony together with that of a female friend (as I remember), who had examined her and determined the absence of the member in question, and also upon certain "expert" witnesses who testified to the sad results entailed by the loss of the organ. But this case proved too weak to deceive even the malpractice juror, and the physician escaped with the mere penalty of legal fees and the kind of advertising attaching to a free use of one's name in the *Police Gazette* and the smuttier portion of the daily press.

C. F. W.

"Boston, November 21, 1885."

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#### The Treatment of Hemorrhoids.

In an article in the *New York Medical Journal*, Dr. Kelsey gives the following directions as to the strength of carbolic acid solutions for injection into hemorrhoids:

"The strength of the solution must be regulated by the nature of the case, and in my own practice varies from five per cent to pure crystallized acid. In a large, vascular, prolapsing tumor, which is well defined and somewhat pedunculated, five drops of pure acid may be used with the expectation of producing a circumscribed slough which will result in a radical cure. A thirty-three per cent solution under the same conditions will probably produce consolidation and shrinkage without a slough, but the injections will have to be repeated several times. A small tumor which protrudes but slightly, is not pedunculated, and can be

seen and felt as a mere prominence on the mucous membrane, may be cured by a single injection of a five per cent solution, which will cause it to become hard and decidedly reduce its size, while an injection of a fifty per cent solution might make considerable trouble, the remedy being too powerful for the disease. Guided by this principle, some experience will soon determine the choice of the solution. There is no arbitrary rule which can be applied to every case. As in any other surgical operation, some cases will be more satisfactory than others, and an occasional accident must be expected; but, on the whole, it seems to be the best method of treatment yet devised."

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### Cerebral Excitability.

At a meeting of the French Academy of Sciences, July 20, 1885, M. Vulpian presented a long and interesting communication on the "Duration of the excitability of the excito-motor regions of the brain after death."

With the adult dog this excitability lasts but a very short time after the circulation has ceased. Usually at the end of 45 seconds after the cessation of the crural pulse none of the above phenomena can be called into play. On those occasions when one believes to have found a survival of excitability longer than the above, the experimenter mistakes the results of the direct electrification of the nerves and muscles in more or less immediate relation with the brain as the effect of exciting the brain centers. The contractions produced by exciting one of the cerebral lobes some minutes after death, never occur in the extremities of the animal experimented upon; they always occur in the muscles of the neck or face. If the faradic current employed is not too excessive and intense, these contractions will invariably occur on and be limited to the side faradised.

Vulpian cited two experiments in illustration of the above:

1. A dog whose crural artery had ceased to beat for some minutes was deprived of his entire brain as rapidly as possible, and the brain placed on the experimenter's table for some few seconds; it was then carefully replaced on the base of the skull. A current of electricity was then made to pass through a lobe of the brain, and found to produce contractions of the temporal and also of the muscles of the neck on the same side as the cerebral lobe.



2. After having removed the brain, a moistened and slightly compressed sponge was placed on the base of cranium. If the faradic current was made to pass through this sponge by applying the poles of a battery in a corresponding manner to that of the previous experiment, contractions of the temporal and neck muscles of the same side followed.

Dumontpallier read a memoir proving that, under favorable circumstances, the vaso-motor system of hypnotised hysterical persons could become so modified at the will or suggestion of a second person as to produce a local elevation of a number of degrees centigrade temperature, *i. e.*, in regions governed by volition.

Mairet, Pilatte and Combemale, presented a paper on the "Action of antiseptics on the higher organisms." Phenic acid injected into the veins of dogs in the proportion of  $2\frac{1}{2}$  grains to two pounds of the weight [0.15 to each kilogramme] of the animal, caused death. The symptoms are the same as described by Bert and Jolyet. The phenic acid rapidly appeared in the saliva.—*Le Progres Medical*, translated by C. H. Rosenthal, M. D.

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### **Etiology of Acute Lobar Pneumonia.**

By ROB. MASSALONGO, of Verona.

There are very few diseases which have been the object of so much research in regard to its etiology and pathology, as acute fibronous pneumonia. This form of pneumonia has always, in the past, been attributed to the effects of cold, and, consequently, was always considered as a simple inflammation of the lungs caused by more or less sudden variations of temperature. If, on the contrary, we admit the infectious nature of the disease, it will not be possible for us to reproduce the same by any of the ordinary irritants at our command, whether chemical, mechanical, or thermic.

Without enumerating all the experiments made in this connection, we will say that it has been proven, beyond all doubt, that all irritating substances, no matter of what nature they may be, if brought in contact with the lungs, will only produce either lobular pneumonia or a broncho-pneumonia, and *never* the acute, fibronous, or lobar pneumonia.

Heidenhain [Virchow's Arch., Vol. LXX.] experimented on the dog and rabbit, and tried, in vain, to produce a fibronous pneu-

monia by means of cold. He inserted a canula into the bronchus of the animal (dog or rabbit), and and through it compelled the animal to breathe alternatively the ordinary atmosphere at a very high and at a very low temperature. He produced in this way trachitis, bronchitis, and also nodules of broncho-pneumonia, but never a lobar-pneumonia, neither with nor without pleuritis.

The methods employed by Heidenhain, in his experiments, seem to us to have been the best of the various methods adopted to date in order to reproduce pneumonia by climatic changes.

But, with this method, one must take into account the traumatic lesion produced by the introduction of the canula, as also by the alternative currents of hot and cold air. We believe we have overcome these objections to Heidenhain's methods in our experiments in Vulpian's laboratory under his instruction.

With the aim of reproducing, as near as possible, the same biological conditions which seem to be present at the beginning of an acute attack of fibronous pneumonia, we have produced a more or less rapid lowering of the temperature of the chest walls, of more or less degree of intensity and duration; this was brought about by the pulverization and evaporation of the chloride of methyl applied to the integument of the chest. This method appears to us to be better and more exact than that employed by Heidenhain. In reality, the world believes the effect produced by the action of cold on the integument to be the cause of pneumonia rather than the inspiration of cold air. For it is well known that no matter how cold the air may be, it becomes warmed on passing through the naso-pharyngo-laryngo-tracheal tract before it reaches the lungs proper. The entire thoracic integument was cooled in some cases, in others only one-half; from some the hair was removed, on others the hair was preserved intact. And, moreover, in order to satisfy those who believe that it is not the effect of cold in the thorax alone which produces pneumonia, but that this disease is produced by a change of temperature affecting the entire integument of the body, we, in some cases, subjected the entire integument of the animal to this freezing process, but only until decided anæmia of the same ensued.

In order to take up the objection that pneumonia is not only produced by the action of cold to the exterior, but that there must be a certain state of the entire system, or peculiar condi-

tion of the internal organs, as pyrexia, or vital depression, etc., we have taken care to carry out our experiments on animals under various, supposed to be favorable, conditions.

We have produced the feeling of exhaustion or lassitude by compelling the animals to run for hours, or a state of super-excitation by irritating them by various means before submitting them to the action of cold. We have also repeated our experiments on cachectic, lean, old, morose and sick animals; also on a bitch well advanced in pregnancy, and which gave birth to four in every respect normal pups the day following the experiment.

We shall not describe our experiments here; they can be found in the *Archives de Physiologie*; we shall simply confine ourselves to the results and conclusions obtained.

We have never been able to obtain even the slightest alteration in the lung tissue, if we except occasional and very slight parenchymatous hemorrhages situated underneath the pleura, which were due, we believe, to a vasomotor paralysis of the pulmonary blood vessels. The pleuræ never exhibited any inflammatory process. The frigidity obtained by the evaporation of the chloride of methyl never brought about any morbid effect, although the experiment was made on both sick and healthy animals, and involved in some the entire integument. We must not omit to state that in these cases the application of cold was but of short duration. But if the cooling process was carried on until the parts were actually congealed, then lesions corresponding to the severity of the process took place. First, under these circumstances, œdema of the integument was observed, followed by an eschar, succeeded later still by a suppuration of the same more or less profound. And yet these animals never exhibited either ante nor post mortem pathological changes in the pleuræ or lungs.

But a new era has opened for the etiology and pathology of acute lobar pneumonia, since Friedlander and Talamon's discovery of the real agent of this classic disease. We shall not speak of the experiments made by Friedlander, Talamon, Cornil and Afanassiew, as a full account will be found in the work of Cornil and Babes, "*Sur les bacteries pathogenes*." Nevertheless, it remains to be demonstrated that the microbe of Friedlander and Talamon is the sole agent in the etiology of the disease in question. Our conclusions, based on our experiments, are as follows:

1. Chemical or mechanical agents acting more or less profoundly on the lung tissue can only produce in this viscera broncho-pneumonia, and never acute fibronous lobar pneumonia.

2. The more or less sudden action of cold, as in the atmospheric changes (accepted by the laity as a cause for all pneumonias), if brought to bear on animals, under various so-called favorable and unfavorable conditions, does not produce the slightest inflammatory change in the pleuræ or lungs.

3. An organism exists which is capable of producing and reproducing this acute inflammation of the lungs and this organism is the pneumococcus, having the morphological characteristics described by Friedlander and Talamon. Nevertheless, the natural history of the pneumococcus is not yet complete, and we desire to state that we have found it in the broncho-pneumonia of infants and of the aged.

It is well known that in the broncho-pneumonia of children we can find bacteria of various kinds, as also various forms of the micrococcus. The last are either isolated or in groups of three or four, or in chains. But we invariably find, in cases of broncho-pneumonia, and sometimes to the exclusion of all other forms, micro-organisms identical with those found in the acute fibronous pneumonia of adults with the characteristics of the elliptical pneumococcus of Friedlander and the lancet-shaped coccus of Talamon. We have invariably found these organisms in every case of broncho-pneumonia occurring in infants, in which we have searched for the same, whether this affection followed diphtheria, scarlatina or measles. These same bacteria were described by Dr. Lombroso last year in his article on the broncho-pneumonia of measles. There still remains to prove and demonstrate which of these various forms of micro-organisms is the real cause of broncho-pneumonia in the infant or in the aged. Cornil and Babes, in their work, "*Sur les bacteries pathogenes*," express themselves on this subject as follows:

"To resume, it appears probable, that in measles, the round microbes previously described are in the relation of cause to effect; but these micro-organisms have not as yet been isolated and placed under culture, nor have they been inoculated in animals, in a manner leaving nothing to be desired. We are, therefore, so to speak, but little advanced in the study of the bacteria of this disease."

Nevertheless, on our part, we are still in doubt as to the relation of these pulmonary lesions with the bacteria found in these specific diseases.

The constant and undeniable presence of the micro-organisms of Friedlander and Talamon in the pneumonia under consideration should be a cause for serious thought and reflection on the part of the pathologist. If this pneumococcus, after undergoing a series of pure "culture," is able, under favorable circumstances, to invariably produce a fibronous alteration in the lungs, with all the symptoms of an acute lobar pneumonia, should its presence in broncho-pneumonia be considered as a causal element or as an accident?

The inconstant existence of other bacteria in the pneumonic lung cannot be said to exclude the possibility or probability of the influence of the pneumococcus in the causation of the disease.

The presence in the lung of bacteria belonging to various other diseases cannot be considered as the cause of a broncho-pneumonia, for we find these same micro-organisms in other organs and tissues of the body without the slightest sign of any inflammation.

We believe that the careful study of the pneumococcus, made with this object in view, and in this way, will, perhaps, establish the unity of the acute process in lobar pneumonia, at least from an etiological standpoint.

In the work on bacteria, by Cornil and Babes, we find that Balogh has found micro-organisms, bacteriæ, in the broncho-pneumonia produced experimentally in the laboratory. So far as we know, he is the only author who has made researches in this direction. But he does not state what kind of micro-organisms he found, nor does he describe their characteristics; for this reason we cannot admit that these organisms are anything else than those which accompany putrefaction, which often occurs in a few hours after death. To clear up this side of this interesting question, we have experimentally produced broncho-pneumonia in dogs and rabbits in Vulpian's laboratory.

With all due precautions, we have searched for bacilli, both in the fresh exudation as also in the specimens prepared after hardening. These researches were made in the laboratory of Cornil, and under his guidance.

We have produced broncho-pneumonia experimentally by in-

jecting the essence of turpentine into the trachea. Every one of these experiments gave a negative result, and proved conclusively that the broncho-pneumonia did not contain the pneumococcus of Friedlander and Talamon. The result was always the same, whether the lesion produced was a lobar or a lobular pneumonia, and whether the microscopic examination was made immediately after death or some hours later, viz.: there were no micro-organisms. When the examination was made several hours after the death of the animal, we found a few punctiform micrococci, isolated or united in groups, but having all the characteristics of the coccus of putrefaction; the results were the same, whether the exudation was examined or the inflamed lung tissue proper.

Consequently, the pneumococcus is always an accompaniment of the acute lobar pneumonia, its specific relation to the same has been well demonstrated; there remains now but to prove its influence in all forms of broncho-pneumonia.

The researches and observations that we have made have most certainly no absolute value, but they tend to prove that the pneumococcus is the essential cause of all cases of spontaneous broncho-pneumonia, and may in this way, we believe, help to establish the unity of the various processes of acute pneumonia.—*Le Progrès Medical*, translated by C. H. Rosenthal, M. D.

## Abstract.

### Studies in Heart Disease.

AUSTIN FLINT: "Mitral Cardiac Murmurs," Amer. Jour. Med. Sc., Jan., 1886.  
 W. H. BROADBENT: "Mitral Stenosis," Amer. Jour. Med. Sc., Jan. 1886.  
 OERTEL: "Handbook of General Therapeutics," Von Ziemssen's, Vol. iv. 1885.

The January number of the *American Journal of the Medical Sciences* contains two papers upon diseases of the mitral valves, which are of so much importance that we believe the following abstract will be of interest to such of our readers as have not the opportunity to peruse the original articles. One is by Dr. Austin Flint, and is entitled "The Mitral Cardiac Murmurs," the other confines itself to "Mitral Stenosis," and is from the pen of Dr. Broadbent, London.

Dr. Flint describes four murmurs produced in the mitral area, (1) the systolic regurgitant, (2) the systolic non-regurgitant or intraventricular, (3) the presystolic, (4) the diastolic. Any one or all of these may exist in the same case.

These are divided into two groups, (1) the mitral regurgitant and the mitral non-regurgitant or intraventricular murmur, (2) the mitral presystolic and the mitral diastolic.

The mitral regurgitant murmur is most intense in the mitral area, is propagated in a horizontal line to the left, and may be heard over the angle of the scapula. It is accompanied by increased area of cardiac dulness, diminished aortic but accentuated pulmonic sound, and is a sure indication of mitral incompetence.

The mitral non-regurgitant is also systolic in time, of maximum intensity over the apex, and heard over the præcordia, but is not propagated to the left nor accompanied by enlargement of the area of cardiac dulness. This murmur is not produced by any impaired action of the valves, and consequently very often disappears. Prof. Janeway demonstrated that in some cases it was due to a tindinous cord stretched across the ventricle, and Dr. Andrew H. Smith has suggested, as an occasional cause, friction of the opposed surfaces of the valves when they are stretched by the blood forced against them during contraction of the ventricle.

In addition to these, abnormal conditions of the blood, and deposits of fibrin on the ventricular surface of the valve, such as take place during rheumatic endocarditis, play an important part in the production of these intraventricular murmurs. A differential diagnosis between these two murmurs is important as regards prognosis, because the non-regurgitant murmur is not likely to shorten life, while the subject of a regurgitant murmur, although he may live for quarter of a century, is always liable to sudden death from the mitral lesion, or from intercurrent diseases rendered dangerous by the cardiac complications.

The presystolic murmur begins after the second sound and ends with the first. It is generally of a vibratory character, and is produced by the vibration of the curtains, caused by the direct current of blood forced through the constricted mitral orifice during the auricular contraction. Dr. Broadbent in his paper shows that this is much more common in females than in males. He ascribes this preference not so much to the greater prevalence of rheumatism among girls as to their special liability to anæmia at the time of puberty, and quotes, in support of this view, Dr. Goodhart's observation that anæmia produces valvular disease, and Dr. Sansom's statement, in the *Lettsomian Lectures* (1883), that mitral stenosis is brought about in slow and insidious forms of valvulitis rather than in the acute forms.

Both Flint and Broadbent call attention to the long tolerance of the form of mitral stenosis of which the characteristic presystolic murmur is the sign, and the former quotes a case in which, to his knowledge, a loud blubbering presystolic murmur has existed for fifteen years without causing inconvenience to the patient. Not unfrequently, up to the moment when, from some cause or other, serious symptoms have set in, and again after recovery from these, the patient is unconscious of embarrassment of the circulation, and is capable of ordinary work even when this necessitates going up and down stairs. On the other hand over-exertion, childbirth, or pulmonary diseases, such as bronchitis or pneumonia, may be fraught with the most serious results.

The intensity of the first sound following the presystolic murmur is ascribed by each writer to a different cause. Flint says that normally the mitral curtains are floated together during the filling of the ventricle, but that in stenosis they are united into a funnel, and their free margins are suddenly forced together by the ventricular systole. Their range of movement with the systole is, therefore, greater than in the normal condition.

Broadbent, on the other hand, believes that the abrupt first sound of mitral stenosis may be the result of the imperfect distension of the left ventricle, to which the valvular lesion gives rise; the muscular walls at the first moment of contraction meet with no resistance, and, acting rapidly, are suddenly brought up and made tense when resistance is encountered, and so produce the sharp first sound.

[Evidently the point Dr. Flint desires to bring out is that normally the approximation of the mitral curtains is a *gradual* one, taking place during the filling of the ventricle and completed by its systole; but in stenosis the blood pressure in the left auricle is raised by the increased resistance offered at the narrowed mitral orifice, the agglutinated mitral curtains, instead of approximating, are actually kept apart by the excessive amount of blood that must be forced between them during the auricular contraction after which they are suddenly closed, at the moment of the ventricular systole, by their own recoil and the force of the backward pressure.—Asst. Ed.]

The remarks of Dr. Broadbent upon the comparative absence of dropsy in uncomplicated cases of mitral stenosis are especially interesting. He claims that although the capillary circula-



tion may be retarded, the arterial pressure is diminished by the smaller amount of blood propelled from the left ventricle and therefore extravasation does not take place. "Given a retarded circulation through the capillaries produced by venous obstruction, the occurrence of dropsy will depend on the pressure of blood in the arteries, and in mitral stenosis the conditions are such as to forbid any augmentation of it."

The same writer divides mitral stenosis into three stages, each of which corresponds to a phase of the disease.

I. A vibratory murmur heard at the apex and followed by the first and second sounds; the pulmonic sound is accentuated and frequently the second is reduplicated. Both first and second sounds can be heard in the mitral area. In this stage serious symptoms are rarely developed even when other diseases are present.

II. The second sound disappears from the mitral area and the first sound is markedly accentuated. "The disappearance of the second sound at and outside the apex is probably explained as follows: The second sound heard here, in the normal state of the heart, is that of the aortic valves." "There are two reasons why, in an advanced stage of mitral stenosis, the second sound should not be heard at the apex; first, that as the left ventricle does not enlarge, it is overlapped by the right, which monopolizes the apex and displaces the left ventricle from all contact with the chest wall, thus preventing it from conducting to the surface the aortic second sound; next, that the aortic second sound is itself enfeebled in consequence of the diminished output of blood from the ventricle; the aorta is not distended to the normal degree, and the recoil to which the second sound is due is correspondingly weak."

III. The presystolic murmur disappears and "the sole remaining sign of the condition of the valve present at or near the apex, is the loud, short, sharp first sound, with or without a systolic tricuspid murmur." The disappearance of the murmur is probably due to the establishment of tricuspid regurgitation, followed by diminution of pressure in the pulmonary circulation and left auricle, so that there is not sufficient force in the amount of blood through the auriculo-ventricular openings to generate sonorous vibrations. This explains many of those cases where mitral stenosis is found at an autopsy although no indications of the lesion were present during life, and also of that

numerous class of cases where the patient has been suffering from some pulmonary or bronchial trouble, and during his convalescence developes a presystolic murmur. Dr. Flint quotes three interesting cases where a presystolic murmur was present during life, and yet at the autopsy the mitral valve was found to be normal. There was no possibility of there being propagated diastolic aortic murmurs as in each case a diastolic aortic could be heard quite distinct from the presystolic mitral murmur. Several explanations of this clinical fact have been offered, but none of them are satisfactory.

The next murmur is the mitral diastolic, which is spoken of by Broadbent as part of a presystolic murmur, occurring not only during the auricular systole, but during the whole cardiac diastole. It sometimes runs into a presystolic murmur, and at others is divided from it by a short interval. Flint attributes this murmur to gravitation and the *vis a tergo* incident to a distended left auricle generating sufficient current to produce vibrations when the blood is passing through the narrowed auriculo-ventricular opening prior to the auricular contraction; he at the same time is very doubtful whether the aspiratory power of the dilating ventricle plays any part in its production. Broadbent, on the other hand, maintains that it is chiefly due to the actively dilating ventricles sucking blood through the contracted mitral orifice. To show that this suction really takes place, he removes the auricles from the ventricles of a living heart, so as to leave the tricuspid and mitral valves intact, immerses the pulsating ventricles in water, and finds that the active dilatation draws in sufficient fluid to yield a copious jet through the aorta and pulmonary artery. [This experiment *per se* does not prove the aspiratory power of the cardiac ventricles, because a considerable quantity of water will naturally flow through the open valves when the ventricular muscle is *relaxed*. To establish this suction theory, it is only necessary to show that the systole is not merely followed by a simple *relaxation* of the cardiac muscle, but also by an *active dilatation*; for the tendency of such a dilatation is to form a vacuum, which is speedily filled by a rush of blood from the systemic and pulmonary circulations into the right and left sides of the heart. This active dilatation is accepted as a fact by most physiologists, for it has been repeatedly shown that a negative pressure is established in the left ventricle during diastole, and hence the heart is to be regarded both as a

force and suction pump. Ventricular suction is one of the factors normally engaged in promoting the circulation of the blood. It is highly probable that Dr. Broadbent lays too much stress upon the part that suction plays in the production of mitral diastolic murmurs; but we must confess ourselves totally incapable of appreciating Dr. Flint's remark that, in the event of the suction theory being true, these murmurs would be much more common than they are. The facility with which the murmur can be produced depends upon the degree of stenosis, together with the volume and rapidity of the current passing through the constricted orifice, and any power which contributes to the existence or force of the current at the moment of the production of the murmur, no matter whether it be a *vis a tergo* in the shape of an over-distended auricle, or a *vis a fronte* in the shape of negative pressure in the ventricle, is a factor in the production of that murmur.—Asst. Ed.]

Finally, we would refer to the treatment of heart disease by muscular exercise and regulated diet, a method which has been so warmly advocated by Oertel, in Ziemssen's "Handbook of General Therapeutics," Vol. IV. that it is popularly known as "Oertel's Treatment."

It is true that a similar method has been recommended by some prominent British writers, such as Corrigan, Stokes and Balfour, but it was carried out more in cases of functional disturbance, whereas Oertel adopts it not only for the relief of fatty accumulation and fatty heart, but also where there is valvular disease. The objects he seeks to attain are: First—Diminution of fluid in the body. Second—A decrease in the amount of fat and improvement in nutrition. Third—The removal of capillary and venous stasis and promotion of compensation. These ends he accomplishes by graduated mountain exercise, undertaken each day; by a large supply of albuminous food, with small quantities of fat and carbo-hydrates; and, lastly, limitation of the amount of fluids ingested, so far as the comfort of the patient will allow. From actual experiment, he finds that more fluid is excreted from the body during such exercise than by either steam baths or pilocarpine, and that at the same time the whole condition of the patient is improved.

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DR. M. VALUDE of Paris recommends washing out the anterior chamber of the eye with a solution of mercuric bichloride 1-25,000, in cases of hypopion, perforating ulcer, etc.

# MEDICAL AND SURGICAL JOURNAL

AND

## WESTERN LANCET.

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VOL. XXIX.

MARCH, 1886.

No. 3.

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### Original Articles.

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#### A PLEA FOR THE CHILDREN.

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By GEORGE C. PARDEE, Ph. B., A. M., M. D.

To one who has received his medical education in the scientific schools of to-day, when there is required a wherefore for everything and a logical reason for every assertion, it would seem almost impossible that the superstition concerning the danger of stilling an otorrhœa, especially in children, could survive even among the laity, much less among physicians. Yet such a superstition does exist among both classes, as the aurist has cause to know; though, thanks to modern scientific medicine, its adherents, both among the unprofessional and the professional, are rapidly decreasing in number. Still, the evil, like all other superstitions, is hard to eradicate, and the aurist is often called upon to repair the results of a neglected otorrhœa for which there can be hardly any excuse. The number of young people is great whose hearing has suffered almost irreparable damage, and whose lives have been in danger for years on account of the superstitious *noli me tangere* of old women and careless practitioners. Such persons are justly astonished when informed that they have suffered unnecessarily, and that their hearing has been damaged and their lives imperiled by what, to them, has seemed a trifling affection. The history of such a case is generally as follows: "After an attack of scarlet fever I had a discharge from the ear. I was too young to remember whether I had any pain in the ear. But my mother tells me that when she called the attention of our old family physician to the matter, he replied, 'Oh, that is nothing; the child will outgrow it, and his hearing

and health will be all the better for the clearing-out his system will get. Besides, it is rather dangerous to stop a discharge which nature is maintaining to get rid of the bad humors in the blood. But I never have outgrown it; and I have always been mortified at having to keep a piece of cotton in my ear to prevent my being offensive to those about me. Besides, my hearing is very bad in that ear."

Now, this would not be so bad coming from the "old family physicians," (and I do not use the term with the slightest disrespect toward those justly honored and honorable senior members of the profession); but when one finds, as I have, that there are those of the comparatively younger physicians who, for some inexplicable reason, hold these superstitious views, it is cause for great surprise.

No one but those who have given some especial attention to otology can know how difficult it sometimes is to still a chronic otorrhœa, nor how tired and almost desperate one can become after trying the "wet treatment," the "dry treatment," scraping, cauterizing and snaring granulations and polypi, searching the pharmacopœa for internal remedies, and, in spite of everything, is still confronted by a discharge. It is not strange that the patient, under such circumstances, loses faith in one's professional skill, and, in spite of previous warnings, begins to think that the old family physician was right, and that it is a dangerous thing to even attempt to stop a discharge from the ear.

On the other hand, a fresh case of otorrhœa, taken before the lining membrane of the tympanum and the antrum and mastoid cells have become the seat of a chronic inflammation, is generally a most thankful subject for medical interference. A very few applications will often stop such an acute discharge, give the membrana tympani an opportunity to heal and free the patient from the dangers and discomforts to which a neglected otitis media purulenta always exposes him. The dangers to which the treatment of an acute otorrhœa exposes the patient are wholly imaginary; just as those dangers which were formerly supposed to accompany the curing of an eczema—by metastasis to some internal organ—were proved by Hebra to be purely imaginary. True, once in a while, a patient dies from meningitis while undergoing treatment for an acute otorrhœa; but to assert that the introduction of antiseptics and mild astringents caused,

by stilling the discharge, a metastasis to the meninges is as fallacious as to claim that a patient dying of pneumonia soon after the curing of a skin disease was the victim of a metastasis caused by the treatment and cure of the cutaneous affection.

There is, it seems to me, another reason, besides that of superstition, which keeps the general practitioner from treating the ears of those of his little patients who suffer from acute otorrhoea. And this is the mistaken idea that he will be compelled to buy expensive and complicated instruments with the use of which he is unacquainted, as well as the equally erroneous notion that such treatment requires great manual dexterity and long practice. All that is needed in the way of instruments are an ordinary half-ounce rubber syringe, a light piece of wire, such as a straightened hairpin, and some absorbent cotton. Armed with these simple and inexpensive instruments, a few ounces of a one per cent solution of carbolic acid and a little finely powdered boracic acid, let the prejudiced practitioner throw aside his fears and boldly proceed as follows: Let him gently wash out the affected ear with the syringe and the carbolized water, using three or four syringefuls. Then let him have the nurse take the little patient to the window and allow the sunlight to fall directly into the affected ear, while he carefully and gently dries the canal with a bit of cotton wrapped around the roughened end of the hairpin probe, straightening the canal for this purpose by drawing the concha upward and backward. Then let him have the child placed on its side with the affected ear upward; and let him fill the canal nearly full of the powdered boracic acid, plugging the meatus finally with a bit of cotton. Let him repeat this process a few times at intervals of twenty-four hours, and he will be surprised to find how quickly a recent discharge will cease and the ear regain its healthy condition. If after a week or ten days' trial he finds, as he seldom will, that the discharge does not decrease in quantity, let him throw aside the "dry treatment" and try the "wet treatment," beginning with a weak solution of nitrate of silver—say five grains to the ounce—gradually increasing the strength if the discharge does not yield. In all cases and under all circumstances, however, he should not forget that here more than anywhere else "cleanliness is next to Godliness," and that frequent syringing with a warm antiseptic solution is the only way to keep

the stagnating and decomposing secretions from irritating the diseased mucous membrane and perpetuating the discharge.

True, many cases of otitis media purulenta acuta gradually recover without any interference. But as I know from experience, many, which, in all probability, would in the beginning readily have yielded to treatment, do not. At all events, such a treatment can do no injury, and in the vast majority of cases, will hasten a recovery and cut short the period during which the patient is in jeopardy.

I have in my mind a number of cases illustrating the almost magical effect of the "dry treatment." Two, however, will illustrate it sufficiently. A child of three years was brought to my office with the usual scarlet fever and "old family physician" history. The fever had disappeared about three weeks before and the otorrhœa had appeared about ten days before the visit to my office. The mother could not bring the child to the office for daily treatment, nor could I visit the patient at his home. So I treated the ear once at the office in order to show the mother how to do it, gave her a prescription for finely powdered boracic acid, a solution of carbolic acid and a syringe, and told her to return in two or three days. A week passed and I saw nothing of the child or its mother. I began to fear that I had lost my patient because I had not attended to the matter myself. About six weeks after the first visit, however, the mother reappeared with an elder son who had gone in swimming without protecting his ears with cotton, and, in consequence, had an acute otorrhœa in both ears. On my asking how the first patient was progressing and why he had not been brought in, the mother said that as the discharges had nearly ceased on the third and had entirely disappeared on the fifth day after her first visit, she had not thought it necessary to repeat the visit. Seeing that the mother had faith in the treatment, and was fully capable of carrying it out in the second case as well as she had in the first, I told her to repeat the process on the second son, and dismissed her with instructions to return in a week or ten days if the discharge had not then ceased. That was nearly three months ago, and I have seen neither mother nor son since.

It may not be out of place for me to give a short history of another case which shows how bad may be the results of a neglected otorrhœa. This case is also a scarlet fever and family

physician one. The child was left with an otorrhœa at the age of four years after an attack of scarlet fever. The matter was neglected on the advice of the family physician and went from bad to worse, until four years after the attack of fever, when the mastoid cells became involved and had to be chiseled into. Six years after the breaking out of the otorrhœa the ear was still discharging and the patient had begun to have epileptic attacks, which rapidly increased in frequency and severity until they came every day or two and the patient could not be trusted alone. His health was being rapidly undermined and his intelligence was suffering greatly. When he came under the charge of my father about a year ago, the ear was discharging a large quantity of a thick, fetid pus, the membrana tympani was perforated and covered with granulations. The father, who was under treatment for an affection of the eyes, scouted the idea of having his son's ear treated. He was rather of the opinion that the epilepsy was caused by the operation on the mastoid process. All he wanted was to have the epilepsy, which had been unavailingly treated by a number of physicians, attended to. Argument was of no avail; so the usual antiepileptic remedies were given with, as was expected, no result. Finally the father was brought to see the matter in the correct light, the ear was cured and the epilepsy began to yield to treatment. The intervals between the attacks became longer and the individual attacks less severe. At the present time, about nine months after the ear ceased to discharge, the attacks come about every six weeks, with a tendency toward a still longer interval, and are growing less severe, the patient is mentally brighter, his health is much better and fourteen years after his fateful attack of scarlet fever he has begun to learn a trade and can be trusted to go about alone. It is extremely probable that he would have been saved all this misery had his otorrhœa been treated and cured when it first presented itself.

If, by these crude sentences, I can succeed in changing the views of even one of those practitioners who still hold to the old superstition, or can awaken others, who, though theoretically aware of the importance of the matter, are careless of its practical value, I shall feel that my plea for the children has not been useless, and shall consider that I have done the rising generation a signal service.



**MALPRACTICE: HOW WE STOOD BY THE DEFENDANT.**

By N. S. GIBERSON, M. D., EUREKA, CAL.

The universal burst of indignation which greeted the announcement of the verdict of the jury in the "Petaluma" case, among the medical men of the State, has nowhere been taken up and echoed back more enthusiastically than in this county. Here, we are in the constant presence of a class of injuries which are always grave, and frequently horrible. The destruction to life and limb by the ponderous machinery in use both in mill and logging camp, despite every precaution, is frightful to contemplate. As a consequence, medical men here are constantly on the *qui vive* for a surprise in the shape of a malpractice suit.

Indeed, so great has been the necessity for caution, that every case of serious traumatism, and many whose prognosis was at all dubious, have, at some period in their course, been examined by one or more professional brethren of the attending surgeon, thus securing him, in great measure, from an action for damages.

Says Professor Hartshorne: "The proof of ordinary care and skill and judgment exercised in the treatment of a case is a sufficient defense in law against a claim for damages on account of alleged malpractice, but it is too apt to fail with the juries in this country, and will not protect the victim of a prosecution from its attendant expenses. Although our judges, in many instances, have done their best to secure just verdicts, the juries are notoriously stupid and unjust, so that the only real security to the attendant surgeon is an indemnity bond against all consequent prosecution to be previously assumed by the patient." (Taylor, Manual of Jurisprudence, eighth ed.) Thus concisely and severely does the Veteran of the University of Pennsylvania arraign at the bar of public opinion the much-extolled jury system, with reference to its average verdicts in cases of malpractice—verdicts in which ignorance and cupidity usually contend for the mastery. And, to still further complicate matters, the *abhorred criminal, the head and front of whose offending was an honest desire upon his part to alleviate a fellow-creature's woe*, is plunged into a labyrinth of complications from which there is apparently no loophole of escape; and this, it seems, by the very filing of a complaint against him for malpractice.

Should an enlightened and liberal minded judge be privileged

to charge an intelligent jury (an ominous combination), and clearly to expound and set forth the law applying to the case under consideration, showing that the weight of evidence was adduced by the defendant, we may reasonably conclude that a verdict of "acquittal," or at least a "hung" jury, will speedily be reached. But any rejoicing over even *this hypothetical state of affairs* would be woefully premature—the victory is a "Pyrrhic" victory, and will probably result in his own undoing, nearly or quite as much as if the verdict had been adverse to him. Attorney's fees and incidental court costs, will impoverish him (for when was an action for damages ever brought against an impecunious physician), and his reputation will be ruined by venomous and industrious rivals. With equal brevity, the doctor indicates the remedy; no longer is it safe for the practitioner to exert his most strenuous efforts in any of the departments of the healing art, particularly if the patient be a charity case, unless—and it makes one's blood tingle to contemplate the spectacle—he demands, in advance, an indemnity bond which shall cover every possible mischance.

The late Professor Samuel D. Gross used invariably in one or more of his annual lectures to admonish the students of the graduating class of the Jefferson College in substantially these words: "Gentlemen, it will occur to some of you in your future practice to meet with cases of fracture or dislocation, and should the case happen to be one which you are attending out of pure charity, do you not neglect it. Attend that case with the most sedulous care, and then the chances are, that he will respond to your practical benevolence by dragging you before a court of law—not justice—and you will be mulct in heavy damages." Rising from the "Apostolic Twelve," to the sacred precincts of the "Bench," Dr. Alfred S. Taylor (Med. Jurisprudence) cites a case wherein a medical gentleman was arraigned and heavily fined for alleged malpractice in vaccinating a woman, "*nearer to the elbow joint than usual*." The charge of the Judge—who, to our shame be it said, was an American—was altogether unique. He said: "In performing the operation of vaccination or inoculation, the physician is liable for all consequences, if he neglects the usual precautions, or fails to insert the virus in that part of the arm usually selected for the purpose, notwithstanding many other parts of the body might be proved to be equally proper and even more suitable locations."

“Saints and ministers of grace, defend us.”

These preliminary observations were elicited by a perusal of the case of “Winters vs. Graves;” and, as the iniquity of that verdict has called forth such wide-spread indignation, it was deemed advisable to illustrate the danger which impends over the men who practice surgery, and who are the luckless possessors of either genius or coin, by adducing the salient features of a malpractice suit, which transpired during the last year, in this city. The action was entitled “Miller vs. Schenck,” and the damages claimed amounted to the modest sum of \$5,000. No clearer case of black-mail, from a medical standpoint, could have been concocted. The central and objective point appearing to be that the Doctor was “well-fixed,” and that he could easily bear a heavy assessment. To “cinch” the old man (to use the vernacular), regardless of the plaintiff, seemed to have been the plan. But this was not all. This case was unquestionably the prelude to an epidemic of malpractice, which would have involved one-half of the physicians of this city. Four of such cases can be duly authenticated. But the scheme failed; that it did fail, was largely due to an early recognition by the fraternity here, that “Loot,” and not legitimate damages, was the aim of the suit. The *onus probandi* in this action, rested not upon the prosecution, but apparently upon a certain Professional Octopus, whose testimony was the promised keystone which closed the arch of evidence under which the defendant was to be overwhelmed. In open court, one of the prosecuting attorneys stated that had he not been assured by the practitioner in question (Dr. Thomas Graham) that his (Graham’s) testimony, was of itself ample to secure conviction, he would, under no circumstances, have assisted the prosecution. As elsewhere stated, this case gradually attracted the attention of the local physicians, and soon the conviction dawned upon them, that this action was a test case, which, if decided adversely to the defendant, would almost certainly be drawn into disastrous precedent. That this iniquitous scheme failed, was largely due to their united efforts. The following history of the case is substantially correct. The plaintiff, while driving a load of hay, fell from his wagon, and was run over by one of the wheels, sustaining an injury of the shoulder, which he brought to the defendant’s office for treatment. The Doctor examined the wound, but the swelling and tumefaction which

had supervened, were so great, that he found it impracticable to make anything like an accurate diagnosis, and suggested an anodyne lotion and a rest for a few hours, when he hoped to find his anatomical landmarks more clearly defined. With this understanding, the patient turned his face homeward. The following morning the Doctor called, and as there was no change perceptible in the swelling or tension of the injured member, he advocated still further delay; arguing that, free manipulation of the joint, when its position was a matter by no means satisfactorily determined, would act only as a powerful cause of irritation, and even in the event of it being practiced, would in all probability lead to negative results.

In his résumé of the difficulties attending a differential diagnosis of lesions involving the shoulder, Hamilton observes: "No place could be more appropriate than this to call attention to the difficulty of diagnosis in the case of accidents about the shoulder joint, a difficulty which surgeons have constantly recognized, and which has sometimes rendered diagnosis impossible."

This advice was so unpalatable to the patient that, entirely unknown to the defendant, Dr. Graham was called in. His advice to the patient was, that Schenck had made himself obnoxious to a suit for malpractice, and "to go for him." He pronounced Schenck's diagnosis of the traumatism a mistake, albeit he was cognizant of the fact that the latter had no opportunity for diagnosis at all; and proceeded to the treatment of the case after his own fashion. After months of agony, the last long deferred hope fled, the luckless victim of saw-buck surgery, sought and found relief in San Francisco, at the hands of the Professor of Surgery of the Cooper Medical College.

In the absence of reliable expert testimony, and denied all access to the patient, the defendant's line of defense was necessarily somewhat circumscribed. Wisely, therefore, he committed himself to the "Fabian" policy, and was content with formulating a general and specific denial of all the charges against him. The doctor, from one stand-point, may have been culpable in not taking more active measures of relief; but so long as the opinions of good authorities on the subject, differ widely, and no three can be found whose detail treatment would tally exactly, the defendant could assume with Professor Taylor that "when there is a difference of opinion among men of equal

experience respecting the necessity for an operation or the proper performance of it, a practitioner who is defendant, has a right to expect that a verdict will be returned in his favor; since it is not supposed that, in order to recover payment to a bill, or to answer a charge of unskillfulness, a man's practice should receive the unanimous approval of the whole of his professional brethren, especially in those cases where there is an acknowledged difference of opinion respecting the treatment. *All that appears to be expected is a reasonable accordance in treatment with received professional doctrines.*" I cannot resist quoting the line which follows, for its direct bearing on the Petaluma infamy. Of malpractice as applied to the cases of that stamp, he concludes that "from the evidence given on some of these occasions, it appears that an action of this kind is frequently resorted to as a very convenient way of settling a long account."

The day of trial came; but it had been anticipated. The attorney for the defense, a prominent member of the local bar, had been energetically "crammed" for the occasion, and evinced a familiarity with "Gray," and "Holden" and "Taylor," which boded ill for the prosecuting witness, unless he had conscientiously reviewed his "authorities," and had girded up his loins for a struggle

"Till the blade glimmered in the grasp of death."

But he had done nothing of the kind. Secure in the jealous seclusion by which he had prevented all access to the patient by the defendant or his attorney, he felt at liberty to give any version of the affair which he thought would most powerfully contribute to the ruin of the defendant.

His habitual smile was even more serene than usual, when he took his seat in the witness chair, prepared to "astonish the natives." And he did astonish the natives. But the most astonished individual was the man in the witness-box. Great was his dismay, when the attorney for the defense requested him to give the action of the "Y" ligament in dislocations of the femur, and to differentiate between a fracture of the anatomical neck of the humerus, and a dislocation of the same bone at the shoulder. The response to these queries came slowly, and soon ceased entirely. On the simple anatomy of the shoulder, he was completely and shamefully muddled; and when asked what opportunities he had enjoyed for the special knowledge which he laid claim to, he admitted that he had not availed himself of any such advantages; which was tantamount to the con-

fession that he had enjoyed no facilities whatever, to justify him in calling himself a surgeon (even under our elastic code). The witness broke down utterly, and solicited the forbearance of the attorney for the defense, but that functionary reminded him that the tables had now turned; that from being a willing witness for the prosecution, he was now apparently acting in the role of defendant; in the words of Portia he assured him

“As thou urgest justice, be assur’d

Thou shalt have justice, more than thou desirest.”

The testimony presented by the defendant, was all corroborative of his course of treatment, and the verdict was rendered a few moments after the clear and unbiased charge of the judge had been given.

In charging the jury in actions for malpractice there is one point not usually urged by the counsel for the defense, nor utilized by the courts on this coast, which might be of infinite service to the practitioner defendant, even were his surgical inability conceded at the outset. This is the plea in mitigation of his offense; that he could not be expected to have the skill necessary to treat the particular case in question. This aspect of the defendant's privilege, came from the lips of Lord Edenborough more than fifty years ago, and has passed into precedent. The noble Lord held that if a person acting in a medical capacity be guilty of gross ignorance or of equally gross inattention by which a patient dies, he is guilty of manslaughter. Faults, such as omissions or errors in judgment to which all are liable, are not visited with this amount of criminality. In the case of a midwife alleged to have caused the death of a woman on whom she had been called to attend, “The charge,” said the learned judge, “appeared to be that by want of skill or attention to her duties she caused the death of the woman upon whom she was attending. In order to constitute this offense it must be shown that the party was guilty of criminal misconduct either arising from gross ignorance or want of skill, or gross inattention. With respect to the degree of want of skill he must say that it was not to be expected that a midwife who was called in to attend a person in the humble class of deceased, a soldier's wife, should exhibit what a regular medical practitioner would call competent skill. It was enough if she applied that humble skill which in ordinary cases would lead to a safe delivery. She was not bound to have skill sufficient to meet peculiar and extraordinary exigencies, although in the case of a regular

medical man such skill might be required. The class of this humble practitioner was absolutely necessary for the poorer classes, and, although on the one hand it was fit the law should protect a patient by punishing a person for gross want of skill, yet he thought that there would be much to be lamented, if it was applied with such severity as to render a party not possessing skill of this kind liable to punishment for manslaughter."

When the Golden Gate became the *ne plus ultra* of that long procession which created an empire west of the Sierras, medical men trudged bravely in the van. Fortune hunters like their brethren, had one of their number been interrogated as to what had brought him away from home and friends, he could have replied like Alexander, when he crossed the "Granicus;" "my hopes." Unlike their comrades, they cast anchor in the settlements, while the crowd floated off with the tide. For obvious reasons, it requires no long experience as "a country doctor" to take the fine instinct from the skillful hand, or the rapid grasp of possibilities from the well trained eye, where the exercise of those faculties is the solitary event of a season. The experience which drove Mungo Park from a medical practice in the Scottish Highlands, to an explorer's wrestle with death in the heart of Africa, as a preferable occupation, has been duplicated for years on this coast, without a murmur, by brave men whose lives have been spent mostly in the saddle. Place in the hands of such a man, a case which requires all the advanced knowledge which is conferred only by years of hospital experience, and because he fails to come fully up to the latest dogma in surgical science, can he invoke no law to protect him from the ghouls who would rob him of a hard earned competence? If our statute books contain no such enactments, then let the profession as a whole rise and demand the protection of that law which extends its protecting ægis over every citizen, with the solitary exception of the practitioner of medicine or surgery. Let us no longer have the finger of scorn pointed at us for our inability to agree upon a matter so simple apparently, yet fraught with such momentous consequences to every man who holds a license from the State Medical Board. In these days of agitation, let us agitate, and every loyal disciple of Esculapius, will be a living, earnest expounder of the principle that, when an individual becomes a legal practitioner of the healing art, he, by that action, does not necessarily place himself beyond the pale or the protection of law.

**LEPROSY.**

By DR. A. W. SAXE, SANTA CLARA.

*The Pacific Medical and Surgical Journal* of October, 1885, containing a very valuable and suggestive communication on Hawaiian leprosy by Dr. G. L. Fitch. He refers incidentally to my second report on the subject which was published in the transactions of the California State Medical Society for 1883-84.

In regard to the historical data in my report, and the conclusions of the Hawaiian Government, and the action taken by the government in its efforts to arrest the alarming increase of the disease in the islands, it is sufficient to say that they were taken from the government records and the reports of the eminent physicians who examined and identified the disease; and who recommended and initiated the plan of segregation which has since been continued to the present time.

It seems hardly probable that any very important additions to our present stock of knowledge in regard to the disease can be furnished at a single step. It has been investigated by the most eminent medical minds of the civilized world for the last century. The theory of the syphilitic origin of the disease is not a new one, having been entertained, and its merits discussed, both in Europe and East Indies, but it has never fully satisfied pathological inquiry.

The fact of the disease being communicated from one human being to another, sometimes very slowly, and at others with wonderful rapidity, has fastened a conviction on many minds that it is contagious. It signifies very little whether it is called contagious, infectious or communicable, the fact remains that it is communicated. Among the British East Indian surgeons, a majority for many years rejected the theory of contagion. But later many changed their minds, having found satisfactory evidence that the disease is communicable.

As to the mode of communication there is no sufficient data on which to found an opinion. However, there are many natural phenomena sufficiently familiar to us, but the processes by which they are manifested are beyond our ken.

There are individuals of the vegetable kingdom that mature seeds only at the end of half a century, and of these seeds, only a few survive, and reproduce their kind. The conditions of successful germination and proper soil for growth, are not well



understood among the more familiar contagious and infectious exanthemata.

The experiments and observations of Dr. F. are valuable so far as they extend, but are chiefly negative in their results. He or others may hereafter be able to furnish a greater body of facts bearing on the etiology and mode of propagation of the disease, but at present the most eminent pathologists are reluctant to commit themselves to anything that will not bear the closest scrutiny.

The human mind, in its eager search among effects for their causes, is prone to jump to conclusions—construct theories and zealously mould facts to conformity—in which cases the facts are often sadly insulted.

We have a philosophical axiom, that “like causes produce like effects under like circumstances.” We naturally question the value of anything that contravenes this axiom. And we inquire why syphilis is only followed by leprosy in populations where leprosy is endemic. If it be a stage of syphilis it should appear in the train of syphilis in the great centres of commerce throughout the world. Every physician is familiar with the various stages and manifestations of syphilitic disease. And he may see many cases of hopeless destruction of vitality. But he never expects leprosy in the diseased parent nor in the tainted offspring.

It is conceded by all careful observers, and by Dr. F., that the disease may be inherited or transmitted from parent to offspring. It may be in order to inquire, if the disease is hereditary, whether it is inherited as syphilis or leprosy? If as syphilis, why should it always assume leprosy characteristics, and not any of the many forms of syphilitic disease? If as leprosy, where did it originate?

The discovery of a specific bacillus of leprosy, which has been identified by most of the eminent pathologists of our day, ought to be at least respectable testimony as to the specific character of the disease. And in view of the many difficulties in accepting the theory of the syphilitic origin of leprosy, it may be more prudent, for the present, to doubt its truth.

In conclusion, I would say that medical science and its innumerable votaries should be under the greatest obligation to Dr. F., or any other observer, who may add anything to our knowledge of the etiology of this most dreaded scourge.

**A PHYSICIAN'S NOTES IN JAPAN.**

By CLINTON CUSHING, M. D.

The ancient city of Kioto, formerly the seat of government of Japan, is one of the most picturesque in this interesting country. It is situated in a fertile valley, surrounded by high mountains, and well supplied with water by a large river that comes out of the adjacent mountains, like a torrent from our Sierra Nevadas.

This water is carried to nearly every part of the city by small canals which do duty as sewers, and into which the surface drains in the various streets empty, and while the odors in the streets are not always the sweetest, there is less to offend than one would suppose. Doubtless this is due to the practice universal throughout Japan of using earth closets, and carefully collecting their contents for fertilizing purposes. The excreta being mixed with water in vats and afterwards spread along the roots of the growing crops of rice and vegetables.

The streets are from ten to twenty feet in width and crooked, the houses low, from one to a story and a half in height. The dress of the laboring classes of men is frequently only a strip of cotton cloth a few inches wide around the loins, with a small piece passing between the legs covering the genitals. The better classes of man wear a garment similar to the old Roman toga. It is an extremely becoming garment and gives them an air of dignity entirely lacking in the European dress. All of both sexes and ages wear sandals, some of wood, and some of woven rice straw. The legs and feet with the exception of the sandals are bare in nearly all cases. Some wear a foot stocking of cotton cloth with a separate compartment for the great toe, this being rendered necessary on account of the sandal.

The women all wear a dress similar to the toga of the men, exposing the upper and middle portion of the chest. None of the women wear any head covering and the same is true of the larger number of men.

The floors of their small houses are covered several inches deep with a matting of rice straw, and the sandals are invariably left at the entrance and thus the floor coverings are kept clean and neat. There are no bedsteads, the inmates lying down to sleep upon the mat covered floors wrapped in a long cotton night dress quilted with cotton batting, this constituting

both mattress and bed clothing. The principal diet is rice and fish, a laboring man eating as much as four pounds of rice per day.

A small amount of meat is consumed in the shape of beef and chickens. No pork is used except occasionally a wild boar is killed in the mountains. Raw fish is frequently eaten, and some varieties are considered a delicacy.

The drink is tea, taken frequently during the day, in tiny cups without milk or sugar, and saki, an alcoholic drink somewhat like sherry wine but with a bitterish flavor, made from a fermented decoction of rice.

They use no bread, butter or cheese and very little milk, but an abundance of vegetables. There is well nigh a complete absence of furniture in the houses, no tables, chairs, or any ornamentation of the walls of the rooms. They sit cross legged upon the floor and eat from the dish, which is upon a little laquered tray, in front of them. All the habits of life are simple and inexpensive.

The fruits are of a poor quality. The pears are large and tasteless and are in shape like apples. The only apples I saw were those brought from San Francisco. There is a great abundance of persimmons, but their flavor is not enticing.

All arable land here is cultivated to the highest degree, and the system of irrigation seems most complete.

Water is taken from the rivers and mountain streams and led down from terrace to terrace through fields of rice, buckwheat, broom corn and vegetables, so that hillside and valley are one immense garden, attended with the greatest care.

The necessity for this is made apparent when it is remembered that the population is dense, that much of the area is mountainous and cannot be cultivated, and that good valley land is worth six hundred dollars an acre. As would be expected, so large a surface kept constantly irrigated, under the hot summer sun of the interior produces the condition known as malarious, and in the public hospital here I saw a number of cases of malarial and typo-malarial fever.

The city hospital here is a very creditable one, built on the pavilion plan, and containing one hundred and thirty beds, beside a ward for infectious patients, also a free clinic connected with the medical school attached to the hospital. The general appearance of the wards are European, bedsteads, mattresses, etc.

Most of the teachers speak German and the practice is modelled on the German plan. The bottles in the dispensary are all furnished with the usual Latin labels.

Four grades of patients are admitted, the first class pay fifty cents per day, the second thirty-five cents, the third twenty-five cents, and a few of the very poor are received free.

The diet in hospital is principally rice, fish and tea; meat, chicken, or eggs, being used as demanded. The Japanese, however, seem very partial to meat.

They have quite an extensive pathological museum, and I noticed a class of ten students busy with their microscopes examining pathological specimens.

The professor of anatomy, who was a fine looking man, and looked very impressive in his flowing native dress, was lecturing to a large class of students, when we entered the room, where anatomy was taught.

With the politeness so characteristic of this people, he dismissed his class and showed me at some length his dissections of the spinal cord, lymphatics of the lower extremity, and other parts of the body used in his demonstrations.

These preparations were kept in alcohol and represented many days of hard work.

He also showed me a papier maché model of the human body in its various parts imported from France, and afterwards showed me one made in Japan out of steel wire and paper that was exquisitely finished and colored, and far superior in every respect to the French. The demonstrations of the brain and its circulation, and of the heart, its valves and cavities were truly beautiful.

There are 170 students in the medical school, with a full corps of professors.

Four years attendance is required before graduation, much of the teaching being done at the bed side. Surely there is no reason why the men should not be competent physicians, even judging them from our own standpoint.

There is one point on which I think the Japanese are decidedly in advance of other parts of the world, and that is, the compulsory cremation of all persons dying of infectious or contagious diseases. While cremation is resorted to by over half of all the people here, it is compulsory as above stated. I went to the place in the country some distance from the city, (about a

mile and a half) to witness the process of cremation.

I found a substantial brick building with two tall chimneys leading from two rows of brick furnaces open at the front and rear.

This is owned by a stock company, and is a private enterprise.

The charge for cremating a body is from two to five dollars.

The method is very simple; the body is brought to the house in a box in a sitting posture, suspended from a pole borne upon the shoulders of men hired for the purpose. The furnace is opened in the rear, the box with the body put in, the door closed, and a fire of wood kindled, which is kept up until the box and its contents are reduced to ashes. The ashes are then given to the friends, who place them in an urn and bury them.

Everything is done decently and in order; the friends accompanying the body to the crematory, and a Buddhist priest repeating the formula of their religion when the body is placed in the oven.

The practice has much to commend it, and I would be pleased to see it adopted throughout the civilized world.

All the capital operations are done at the Kioto Hospital. I saw two cases of ovariectomy convalescing, and I was told that the success in abdominal surgery had been good.

In the ward devoted to women I saw upon the cards at the head of the beds that their inmates suffered much as their sisters in other lands, ovaritis, metritis, pelvic peritonitis, retroversion of uterus, pelvic abscess, etc., etc.

The surgeon in chief was out of the city during my visit, but his two assistants, Doctors Inoko and Saito, showed me every courtesy. The hospital staff and the teachers are all Japanese, and have never been out of the country.

At Tokio, the capital of Japan, I visited the Naval Hospital with Dr. Sanegocho, a recent graduate of the R. C. of Surgeons, England. It is beautifully located and well kept up.

I also went through the City Hospital in Tokio. It is much larger than the one in Kioto, and has connected with it a large medical school, there being 985 students attending medical instruction now.

They have two corps of professors, one German and one Japanese.

Two hundred and thirty-five of these students are studying

medicine in German and seven hundred and fifty in Japanese. Their new medical school building makes a fine appearance, and is of pressed brick and granite, reminding one of the Cooper Medical College in San Francisco.

I was informed by the resident physician that over one-half of the in-patients in the hospital were suffering from phthisis. No cause was ascribed. The mortality in their ovariectomy cases has been very great; 33 per cent. No explanation was given for this.

One of the pleasant features that impress strangers most favorably here is the universal politeness and courtesy together with the orderly conduct and personal cleanliness of even the lowest classes.

Surely we must think kindly of a religion, and a moral code, that is effectual in inculcating such principles.

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### **AN UNUSUAL CAUSE OF DYSTOCIA, NECESSITATING EMBRYOTOMY.**

By F. A. SEYMOUR, A. M., M. D., LOS ANGELES, CAL.

Mrs. A—, primipara. was seized with labor at term, on the afternoon of December 30th, 1884. Her attendant, Dr. F. T. Bicknell, was summoned at 8 P. M., at which time uterine contractions of average normal vigor and duration recurred at intervals of five minutes.

Digital exploration revealed a healthy and natural condition of the soft parts. Dilatation of the external os was well advanced, and through the membranes a vertex presentation was easily discernible.

At 10 P. M. spontaneous rupture of the amniotic membranes occurred, complete dilatation promptly followed, and the vertex engaged in the superior strait. The pains proving persistent and exhausting, several five grain doses of chloral hydrate were given by mouth at half hour intervals, but without effect.

At 2:30 A. M. morphinæ sulph. gr.  $\frac{1}{4}$  was administered, and from 3 o'clock A. M. until 6, the patient slept.

Soon after awaking, the pains resumed their frequency and force, but examination detected no fetal advance. There seemed to be absolutely no obstruction; the pelvic space was ample, and the presenting head not unusually large. At 7 A. M.

Dr. B. applied the forceps, making gentle traction and rotation, purposing thereby to stimulate an apparently misdirected *vis a tergo*, to an expenditure of energy in the proper pelvic axis. But the attempt proved unavailing. As the morning wore away there was no change in the character of the uterine pains, nor in the foetal position. About 10 o'clock A. M. the patient's circulation showed signs of involvement, the pulse becoming rapid and compressible. Dr. Bicknell then requested counsel, and a messenger was sent for the writer. On examination, the condition proved as above described. The liquor amnii had evidently wholly escaped. The uterine walls were firmly contracted upon their contents, and the cervical lips retracted over the head, and beyond the reach of the exploring finger. There was no apparent reason why the case should not progress without interference; and further delay would probably have been advised, except for the persistence and increase of the circulatory disturbance. The possibility of version was excluded. Ether was administered, and I applied the forceps without any difficulty. But the foetus could not be moved. Repeated efforts proved wholly futile. On further consultation, embryotomy was determined upon. After evacuating the contents of the cranium and crushing in its walls, extraction was effected only after tedious delay, and the repeated and prolonged application of great force.

Singularly enough, after the slightest advance had been secured in the direction of extrusion, but little additional force was requisite to complete the delivery. The sensation imparted to the manipulating hand was similar to that of slipping suddenly past an obstacle. The foetus weighed but eight pounds, and the pelvic conjugates were normal; hence the source of resistance was enigmatical, until, on introducing my hand into the uterine cavity to effect the removal of the placenta, the cause was discovered.

On the right side of the uterus, at a line about midway between the external os and the fundus, the entire thickness of the powerful muscular wall projected inward with great firmness, constituting a shelf or semi-circular ridge. This had evidently grasped the foetus, the knees resting above it, and thus delivery had been impeded. In a careful study of this unique experience, light has been thrown upon very many cases in my note-book of dystocia, associated with premature rupture of the

membranes, and for which, until now, I have found no satisfactory explanation.

"A dry labor is sure to be tedious," is a popular aphorism so frequently true, that it practically passes current with the profession as well. The tedium of these cases has hitherto been associated chiefly with (1) the removal of the protruding membranes as a distending agent, both for the uterine orifice and the vaginal passage; and, (2) with the impossibility, except in rare instances, of the presenting part making pressure directly upon the os itself. But, every practitioner of large experience may readily recall numerous instances in which, despite the premature escape of liquor amnii, cervical dilatation progressed with normal rapidity, while the pelvic soft parts, moist, flexible and roomy, awaited for hours the slow foetal descent.

A brief review of the muscular anatomy of the uterus at term, together with an acceptance of the correctness of the foetal position as above assumed, will afford a satisfactory solution of the difficulty.

The muscular coat of the uterus, with its external, middle and internal layers, constitutes essentially its substance. The two former are chiefly protective and auxiliary. The bulk of the uterus is made up of the internal or deep layer. To all intents and purposes this is a separate and distinct muscle, or pair of muscles, as described by Frederic Ruysch of Amsterdam nearly two hundred years ago. This muscle of Ruysch is practically a double hollow cone, composed of circular fibers, the apices corresponding with the uterine openings of the Fallopian tubes.

The fibers of the base intermingle down to the cervical portion of the uterus, at which line the transverse arrangement of the fibers constitutes really another muscle, the circular muscle of the neck.

The termination of the period of utero-gestation finds these three muscles enormously enlarged by the development of pre-existing, and new formed tissue. To the circular or inner cervical layer is entrusted the imprisonment and safe-keeping of the embryo until maturity. To the other two, which may be designated the right and left conical, is assigned the responsible task of assisting the mature foetus in its escape.

During the entire period of gestation, the normal condition of the cervical muscle is one of contraction; while that of the conical muscles is one of relaxation or passivity.



The time having arrived for the expulsion of the uterine contents, the contractility of the conical muscles is simultaneously stimulated, and together they combine forces against the cervical sphincter.

Regardless of the quantity of liquor amnii in any given case, conceive the foetal presentation to be a transverse vertex, with the face to the maternal right side. This, prior to rotation must necessitate the occupancy of the left cornu, or space beneath the left conical muscle, by the foetal dorsum; while the right cornu will contain the lower extremities, the knees being the most dependent portion.

Reverse the position, and the condition is similar, substituting right for left.

Prior to the contraction of the expulsive muscles, the normal ovoid shape of the uterus is maintained by the amniotic fluid, the walls coming in contact with the living contents only as change of maternal attitude, or automatic foetal motion, may so occasion. But, labor having begun, the conical muscles undergo permanent circular shortening, grasping with more or less firmness the subjacent solids. As a result the foetus ceases to float, and the fluid is driven downward to occupy the space over the foetal abdomen and chest. Filling these irregularities the ovoid shape essential to the steady progress of parturition is thus maintained.

The points of greatest longitudinal diameter of the circular fibers of the conical muscles correspond with the center of the fundus, and the line of junction with the circular muscle of the cervix laterally.

These points, with the foetus in the position assumed, will represent, on the left side, the foetal coccyx and dorsum as far as a line opposite the ensiform cartilage; on the right side, the foetal coccyx and knees.

The marginal fibers including these points, being the bases of the two double hollow conical muscles, have under contraction the same action as if they were sphincters endeavoring to close each its superjacent cavity.

So long as the membranes remain intact, the amniotic fluid offers sufficient resistance below the foetal knees to insure uniform contraction of the cones from base to apex.

If the membranes be fragile, and the cervical sphincter be resistant, even though the quantity of amniotic fluid be not

above the average, the powerful contraction of the conical muscles may occasion premature rupture of the membranes, leaving thus an irregular unoccupied space over the foetal abdomen and chest. If the amniotic fluid is in excess, although the cervix dilate, a similar result may follow.

By consequence, the basal circular fibers of the right conical muscle, as a sphincter, grasp the foetal lower extremities with knees and coccyx as opposite points, the contracted muscle even following the foetal thighs into the space vacated by the liquor amnii.

Hitherto the two muscles of Ruysh have co-operated. Henceforward they must necessarily antagonize each other, until some foetal movement shall permit the knees to slip from their imprisonment, or the temporary occurrence of spontaneous or induced general relaxation shall admit the timely interference of gravitation.

When uterine contractions are again resumed, one is often surprised—no apparent change having transpired—at the rapidity and ease with which the labor is terminated.

In exceptional cases, as in that which forms the text upon which our conclusions are based, the contraction becomes tonic, resulting in the death of the child, or threatening the maternal safety, necessitating thus forcible removal.

The condition is suggestive of appropriate therapeutics.

The important feature is a timely diagnosis.

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A CASE has recently been decided in a New York city court, which has proved very unsatisfactory to those persons who are rich enough to be landlords and have agents. The case was of a kind not often brought out in the courts of this country. In an apartment house, where the tenants occupied the flats on time leases, there was evidence that sewer-gas was finding its way into the rooms through faults in the plumbing. After satisfying themselves that such was the case, the tenants promptly left the house without further preliminaries. A demand was made by the landlord for the rent for the unexpired term of the leasehold, and payment was refused. The tenants were then brought into court. Evidence satisfactory to the court was introduced by the defendants to prove that sewer-gas really did invade the house and seriously affect the health of the occupants, and the judge ordered the landlord's claim to be dismissed.—*Sanitary News.*

## **Proceedings of Societies.**

### **San Francisco County Medical Society.**

SAN FRANCISCO, January 12th, 1886.

The meeting having been called to order by the President, Dr. Taylor, the minutes of the former meeting were read and approved. The following proposals for membership were read by the Secretary, and referred to the Committee on Admissions:

John A. Miller, M. D., University of California, 1875, proposed by Drs. Hart and Fitzgibbons.

Blanche Joy, M. D., Cooper Medical College, 1884, proposed by Dr. R. H. Plummer and Dr. Wm. Watt Kerr.

A. H. Voorhies, M. D., University of Pennsylvania, 1860, proposed by Dr. R. H. Plummer and Dr. Wm. Watt Kerr.

E. Parson, M. D., London University, Royal College Surgeons, and Royal College Physicians, 1861, 1863, 1866, proposed by Dr. R. H. Plummer and Dr. Wm. Watt Kerr.

Robert Armstrong, M. D., Jefferson Medical College, 1868, proposed by Dr. A. P. Whittell and Dr. Wm. Watt Kerr.

Francis Delmont, M. D., University of California, 1874, proposed by Dr. Jules Simon and Dr. A. P. Whittell.

The Secretary reported that three or four members of the Society had signed the constitution and paid dues for 1881 and 1883, but that their names did not appear in the cash books of the Society. He was requested to make a list of such names and communicate the same to the member who was Secretary of the Society during these years.

He then moved that a list of the active and honorary members should be printed. This was seconded and so ordered by the Society.

The Secretary, as a member of the Committee on the prosecution of illegal practitioners, moved that Mr. E. R. Taylor should be paid one hundred dollars for legal services rendered to the Society. This was seconded by Dr. Jewell and unanimously approved by the Society. It was also decided to continue the prosecutions.

Dr. Whitwell read a paper upon transfusion of blood after intestinal hemorrhage in typhoid fever.

Dr. A. P. Whittell said that the case demonstrated the beneficial results that could be obtained from transfusion under such

circumstances. The operation was done under the very worst circumstances, as the patient was reduced by prolonged and wasting illness, and would doubtless have succumbed, but for this timely interference. Yet, these very conditions seemed to justify a more frequent recourse to such treatment.

Dr. Le Fevre wished to know why it was originally intended to inject such a large quantity of saline solution as 60 oz., because it appeared to him that this was excessive, and might do harm by increasing the blood pressure.

Dr. Lonigo thought that great credit was due to Dr. Whitwell for the manner in which he had treated his patient, and was anxious to know whether transfusion was beneficial in typhoid fever without hemorrhage.

Dr. J. A. Anderson said that in regard to the amount of saline solution, he was aware that Dr. McIntosh, of Glasgow, frequently injected 50 and 60 ounces into the veins in the treatment of cholera, and he himself had seen 22 ounces of defibrinated blood injected in a case of hydrophobia. He thought that where there was exhaustion from diarrhoea in typhoid, transfusion might be of benefit.

Dr. H. S. Baldwin thought that transfusion was likely to renew the hemorrhage, that its arrest might have been due to the ergot administered, and that recovery followed as natural sequence.

Dr. W. Watt Kerr said that he had seen the case referred to, was present at the operation, and believed that the patient's recovery was due to it. It was held by some authorities that transfusion of entire blood arrested intestinal hemorrhage by assisting in the formation of a healthy clot. He also believed that saline injections were best when the hemorrhage was from traumatic causes, as after a surgical operation or an accident, as it stimulated the heart to contract, and kept the circulation full until the blood was regenerated by the hæmato-poietic organs. But in a wasting disease, where the regenerative functions were almost arrested, he thought that blood should be preferred. It could be done in any disease where there was profound anæmia.

Dr. Frisbie said that he believed the reason for injecting such a small quantity of blood was a dread of embarrassing the heart's action. He had seen a case of death from intestinal hemorrhage in which he believed transfusion would have saved the patient's life; but it happened during the night, when the necessary apparatus could not be obtained.

Dr. Lonigo believed that it might be good in general anæmia, but doubted its efficacy where there was a specific disease of the organs present, and feared that embolism might follow the use of undefibrinated blood.

Dr. Whitwell said that experience had shown 50 oz. of saline solution to be beneficial, and that blood should be used in small quantities. He did not advocate transfusion in a simple case of typhoid fever, but here the patient had a light attack followed by relapse, during which there were several small hemorrhages at various intervals, and then four copious ones in as many hours. The saline solution should be used when the hemorrhage can be controlled, but when it is still going on, blood is to be preferred, especially undefibrinated blood, which, as Dr. Kerr had already stated, controlled hemorrhage by assisting the formation of a healthy clot. There had been ten hemorrhages before the transfusion of blood, notwithstanding the use of ergot and all other hæmostatics, and none afterwards. At the time of the first transfusion the patient was in a state of collapse, his pulse was small, the body cold and moist, and there was marked dyspnœa. The moisture increased after the saline injection which probably transuded through the skin.

At the second injection six and seven-eighths ounces of blood were used and the pulse immediately improved, but the operation had to be discontinued on account of the dyspnœa.

The Secretary said that the Committee on Arrangements for the annual meeting of the State Society wished to know whether it was the intention of the County Society to tender the visiting guests a banquet.

Dr. Arnold moved that the Society should, according to its usual custom, give a banquet at this time. The motion was carried, and the following committee appointed, Dr. R. H. Plummer, Dr. Wm. Watt Kerr, Dr. C. G. Kenyon, Dr. H. H. Hart, Dr. G. J. Fitzgibbon. On the motion of the Secretary, the President was added to the committee and appointed its chairman.

Dr. Jewell moved that so long as the trial of Dr. Bowers was before the public the remarks of Dr. Abrams upon the case should be withheld from publication. This was seconded by Dr. Arnold, and carried by the Society.

Dr. Kenyon wished to bring the subject of opium smoking before this Society, as the vice was becoming very prevalent in

this city, and he therefore moved that the following resolution should be sent to the Board of Supervisors under the seal of the Society and the signature of its Secretary.

*“To the Mayor and Supervisors of the City of San Francisco :*

“WHEREAS, It is a well known, but lamentable fact that opium smoking is becoming fearfully prevalent among certain classes of young men and women of our city, which practice is ruinous to health, mind and morals; and whereas this evil is fostered and made easy by the prevalence of small opium stalls or dens, mostly kept by Chinese, where the drug is sold for illegitimate and unlawful purposes only,

*“Therefore be it Resolved,* That the San Francisco County Medical Society respectfully petition the honorable Board of Supervisors, through his honor the Mayor, to repeal the statute licensing the sale of opium by other than licensed druggists, and to enact a statute making it a misdemeanor, punishable by fine or imprisonment, or both, for any person except licensed druggists to keep or sell opium, and allowing it to be sold by said druggists only when prescribed by a physician for medicinal purposes.

*“San Francisco, January 12, 1886.”*

This was seconded by Dr. Whitwell and adopted by the Society.

Dr. Axelrood requested that his case should be postponed until next meeting. This was granted.

The Society then adjourned to meet on the 26th of January.

WM. WATT KERR, M. D.,

*Recording Secretary.*

SAN FRANCISCO, January 26th, 1886.

The meeting having been called to order by the President, the minutes of the former meeting were read and approved.

The following candidates were proposed for membership: Herman Partsch, M. D., University of California, 1884; Katherine J. Howard, M. D., University of California, 1885. They were referred to the Committee on Admissions.

The Committee on Admissions reported favorably upon the credentials of J. A. Miller, M. D., University of California, 1875; Blanche Joy, Cooper Medical College, 1884; Edward Parson, University London, 1863; F. H. Terrill, University

Virginia, 1874; F. Delmont, University California, 1874. These were elected to membership.

Dr. J. A. Anderson, read a paper entitled "Tracheotomy in Diphtheria and its After Treatment," together with a report of twelve cases. Dr. Arnold said that Dr. Anderson's report seemed to indicate a better than usual result for tracheotomy in diphtheria under his treatment, but the question still remained regarding its utility in this disease. He could not quite reconcile himself to the identity of diphtheria with membranous croup, and in hospitals where the two had been treated in separate wards, the latter had always terminated more favorably. As a rule, he preferred the lower operation, but the upper or laryngo-tracheal operation, which is a perforation of the crico-thyroid membrane, is good when the larynx alone is affected. Tubage is not suitable when the membrane is in the trachea.

Dr. G. W. Davis remarked that the question between late and early tracheotomy in diphtheria with their attendant dangers, was one of the burning topics in the medical literature of the day. His own experience was limited, as it was confined to three cases of membranous croup in all of which the operation was successful. In his own opinion, and he believed it to be the opinion of the bulk of the profession, that the first symptoms of suffocation from laryngeal stenosis were an indication for immediate operation. He liked the immediate thrust, and preferred the lower operation, especially when operating for a foreign body.

Dr. Donnelly did not like the immediate thrust, he preferred careful dissection in all forms of surgery, tracheotomy included.

Dr. Whittell said that tracheotomy is one of those operations which should be done before the vital powers are too low, and should not be left until the last moment. Dyspnoea might be relieved by the inhalation of oxygen, but this was rarely possible. It had been suggested that the dyspnoea following the operation might be relieved by letting the patient inhale air from a tube which had been warmed by circling it round the body.

In concluding the discussion, the President said that all his cases had died. He did not believe that this could be attributed to the operations, as all went well for the first forty hours, when the temperature began to rise, there was a recurrence of dyspnoea accompanied by bloody expectoration indicating

the existence of broncho-pneumonia which terminated fatally. As the operation has no control over the disease, the question would always be asked whether some of the recoveries might not have taken place without it; but as this never could be answered, it remained the duty of the surgeon to admit air to the lungs whenever life was in danger from dyspnœa, and this would only be done in the way. In medicinal treatment of diphtheria calomel had been given in five grain doses, repeated every hour, with very good results, the idea being to continue its administration until the stools assumed the green appearance of spawn upon a frog-pond. He made a limited trial of the method with encouraging results.

Dr. Anderson said that the object of his paper was to call attention to the after treatment rather than to advocate operations by means of the direct thrust, still he must confess that he was opposed to the four inch incision of Jacobi, as he believed that the parts should be as little disturbed as possible. He did not believe that any of his patients could have lived without the operation. Dyspnœa was not an indication for the operation so long as the patient could cough or phonate. He had tried the calomel treatment even to salivation, but without any good results.

Dr. Axelrood's case then came up for final consideration.

The Secretary stated that as Dr. Axelrood was more than one year in arrears, he was *ipso facto* suspended and that therefore before discussion the Society should first deal with this question. They had the power to remit his dues or to postpone payment.

On the motion of Dr. J. A. Anderson, it was unanimously resolved to prolong the time for payment until the second meeting in February.

Dr. Whittell, seconded by Dr. Anderson, then moved that Dr. Axelrood be heard.

Dr. Axelrood argued that his advertisements were not in violation of the national code of ethics nor of the constitution and by-laws of the Society and exhibited the cards of many regular practitioners.

After considerable discussion Dr. McMahon moved that the report of the Committee on Medical Ethics, in so far as it stated the advertisements to be in violation of the spirit of the law, be accepted. This motion was unanimously carried.

Dr. W. W. Kerr moved that Dr. Axelrood be informed that



his advertisements are distasteful to this Society as being inconsistent with the dignity of one of its members, and that he be requested to discontinue them in the future. This was seconded by Dr. Sherman and unanimously carried by the Society.

Dr. W. W. Kerr then gave notice that at the next meeting he would move the following amendment to article VIII of the constitution "any member of this Society who shall be guilty of conduct which the Committee on Medical Ethics shall consider unbecoming the dignity of a member of this Society, shall be considered guilty of violating the regulations of this Society, and shall be liable to punishment as set forth in the foregoing clauses of this article."

In accordance with article twenty of the by-laws, the President appointed the following committee to draw up resolutions to the memory of the late Dr. A. M. Wilder. Committee: Dr. Powers, Dr. Benj. Swan, Dr. A. L. Lengfeld, Dr. G. W. Davis.

There being no further business the Society adjourned until the second Tuesday in February.

WM. WATT KERR,  
*Recording Secretary.*

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#### **Sacramento Society for Medical Improvement.**

SACRAMENTO, January 19, 1886.

The Society met in regular session. In the absence of the President the chair was taken by Dr. A. B. Nixon.

Communications were read from the Secretaries of the San Francisco and Los Angeles County Medical Societies in relation to the Graves fund. Several letters from Dr. Graves were also read.

The Committee on Admissions having reported favorably on the credentials of G. C. Simmons, Medical Department Harvard University, June 30, 1885; G. R. Merrill, Medical Department Harvard University, June 24, 1885; and A. H. Snider, Bellevue Hospital Medical College, March, 1885, they were balloted on and elected.

Dr. G. A. White reported a case of ligation of the common carotid artery for traumatic aneurism.

There being no further business the Society adjourned to meet on the third Tuesday in February.

JAMES H. PARKINSON,  
*Secretary.*

## Health Reports.

### Report of the State Board of Health.

We are gratified in being able to record for January a continued absence of epidemic disease, and but a small increase in the bills of mortality. Seventeen localities report *no deaths*, viz.: Angel's Camp, Castroville, Amador City, Santa Clara, Davisville, Gonzales, Healdsburg, Monterey, Willits, Knight's Ferry, Newcastle, Shasta, Fort Bidwell, Forest Hill, Roseville, Crescent City, and Merced.

The greatest mortality occurred from diseases affecting the respiratory organs, as we find that the deaths from:

Consumption increased from one hundred and forty-five last month to one hundred and sixty-eight this month.

Pneumonia caused ninety-two deaths, a very marked increase from last report.

Bronchitis, likewise, exhibits an increased mortality, there being thirty-two decedents from this disease, an increase of ten from last month.

Congestion of the lungs was fatal in sixteen instances.

Croup is reported as causing twenty-one deaths; fifteen of which occurred in San Francisco.

Diphtheria was fatal in thirty-eight cases, an increase over last month. In San Francisco the mortality from this disease has decreased in a gratifying manner, there being only thirteen deaths recorded in that city this month. Berkeley reports five deaths, Marysville four, Oakland three, Santa Cruz three, Los Angeles two, Chico two, and one each in Hanford, Ophir, Plymouth, San Mateo, San Jose, and San Bernardino.

Whooping-cough caused but two deaths—one in San Francisco and one in Oakland.

Scarlet fever proved fatal in nine cases, a decrease of five from last month. Of these, three died in San Bernardino County, two in Los Angeles, two in Cedarville, one in Redding, and one in Colton.

Measles is credited with two deaths in Modoc County.

Erysipelas caused one death in Vallejo.

Diarrhoea and dysentery have decreased their death rate to nine, all of which occurred in San Francisco; no deaths from these diseases being recorded elsewhere.

Cholera infantum caused but six deaths.

Typhoid fever was fatal in fourteen instances, which is a remarkably small mortality for an endemic disease which is generally very prevalent at this season of the year.

Typho-malarial fever caused but one death, which occurred in Watsonville.

Remittent fever is credited with three deaths; one in Marysville, one in Stockton, and one in San Francisco.

Cerebro-spinal fever. To this disease eight deaths are attributable, occurring in different parts of the State.

Cancer caused twenty-nine deaths.

Alcoholism is credited with eleven deaths.

Heart disease was fatal in sixty-two instances.

#### PREVAILING DISEASES.

Reports have been received from nearly one hundred localities in different parts of the State, and in none of them does epidemic disease prevail to any dangerous extent. Among the diseases affecting the respiratory system, pneumonia and bronchitis are the most prevalent, which may be attributed to the great humidity that everywhere prevailed during the past month. That this rapid increase of the frequency of pneumonia is attributable to the hygrometric condition of the atmosphere, is in a great measure sustained by the reports received, as we find that in those counties where the rainfall was least the prevalence of pneumonia was not observed, strangely confirming the declaration made by Fleudt, before the International Medical Congress at Copenhagen (1884), that the frequency of the disease is directly proportional to the curve representing the rainfall. However, other factors enter into the causation of pneumonia which determine its presence, as frequently as the rainfall, and these are the sudden chilling of the body from change of temperature; the overcrowding of tenements by the poorer classes seeking shelter, and the constant exposure of this class of persons to the inclemency of the weather and their frequent deprivation of proper food, clothing, etc. The same remarks will apply to bronchitis, except that whereas pneumonia is more apt to attack the young and middle aged, bronchitis prevails more extensively among children and the aged. We notice that---

Pneumonia is sporadic in Sacramento, Oakland, San Francis-

co, Davisville, Vallejo, Santa Rosa, Livermore, Bakersfield, Mariposa, Millville, Wheatland, Truckee, Cottonwood, Red Bluff, Merced, and Calico.

Bronchitis likewise, prevails over the same region of country, being quite noticeable in Vallejo, Dixon, Downieville, Nicolaus, Etna Mills, Fort Bidwell, Truckee, Red Bluff, Johnsonville, Livermore, Bodie, Arbuckle, and Williams.

Influenza prevails extensively in several counties, and in some is epidemic. The type appears to be mild in form and not attended by any unusual mortality.

Whooping-cough is in Mariposa, Nicolaus, Pleasant Grove, Santa Ana, Castroville, Pomona, and Jolon.

Scarlet fever seems to prevail in a mild form in Alturas, Cedarville, San Bernardino, Colton, Redding, and Red Bluff.

Measles is also quite prevalent in Ukiah, Susanville, Cedarville, and Pomona.

Smallpox is reported to have arrived in San Francisco, one case being discovered on the steamer *Belgic*. Efficient precautions have been taken to prevent its spread. No other case is known in the State as far as heard from.

Diphtheria is happily abating in San Francisco, but has appeared in Marysville. Dr. Powell, however, writes that the disease is circumscribed, and owing to the precautions taken will probably be confined to its place of origin. In Pescadero and San Mateo the disease also prevails in a mild form; likewise in Santa Rosa, Anderson, Oakland, Berkeley, Modesto, Chico, Hanford, Santa Cruz, Los Angeles, Petaluma, and San Bernardino.

Croup prevails to a greater or less extent wherever diphtheria has made its appearance. Our reports mention it in Truckee, Millville, Anderson, Shasta, Hollister, Modesto, and Fort Bidwell.

Erysipelas—the prevalence of this disease has almost ceased. It is noticed in the reports from Truckee, Santa Ana, Calico, Modesto, Etna Mills, Shasta, and Vallejo.

Typhoid fever and typho-malarial fever prevail to a very moderate extent and are nowhere epidemic. The mortality from these diseases is quite limited.

GERRARD G. TYRRELL, M. D.,

*Permanent Secretary California State Board of Health.*

Sacramento, February 10, 1886.

**San Francisco Health Report.**

The number of deaths for January, 1885, was 438; this year the deaths for the same month reach 519, a large number, and undoubtedly due, in part, to the cold and windy weather we have experienced during the past December and January. Our Eastern friends might object to the expression "cold," when told that the lowest point reached by the thermometer during January was  $41^{\circ}$  while the average temperature was  $51^{\circ}$ . But, for all that, it was cold for San Francisco; and the number of deaths from phthisis and pneumonia show that it had its effect upon the weak and sickly. The weather promises better for February, and we hope that the death-rate will be lessened.

Among the zymotic diseases, 15 deaths were due to croup and 13 to diphtheria; constitutional cancer, 16, of which three were due to disease of the uterus; 91 deaths were caused by phthisis.

Local diseases—Apoplexy, 16; aneurism, 2; bronchitis, 25; heart disease, 31; pneumonia, 66.

Violent deaths—12 from accident; 5 from suicide; 3 from homicide.

There was then no special epidemic but a thinning out of those who were not able to stand the colder weather, and those were principally the sufferers who had weak hearts or lungs.

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**The Use of Cocaine in Whooping Cough.**

Dr. L. Barbillion, starting with the idea that the paroxysms of whooping cough are produced by irritation of the throat, and knowing, as we do, that cocaine is a very powerful anæsthetic for mucous membranes, has used the drug, with the following results: (1) A lessening of the number of attacks of coughing per diem. (2) Prevention of vomiting during the paroxysm, and of the debility produced thereby. (3) A greater power of resistance against the evil effects of a long and debilitating illness. No ill effects have been noted.

Seven cases are published *in extenso*, of which there were five cures; two cases were fatal, from broncho-pneumonia complicating the pertussis; one of these had measles also.

The drug was used in the form of a 5 per cent solution in water, and the posterior pharyngeal wall was painted two to four times daily.—*Bristol Med.-Chir. Journal*.

## PACIFIC MEDICAL AND SURGICAL JOURNAL

AND

## WESTERN LANCET.

WILLIAM S. WHITWELL, A. M., M. D., EDITOR.

WM. WATT KERR, M. B., C. M., ASSISTANT EDITOR.

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*SAN FRANCISCO, MARCH, 1886.*

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**Editorial.****Shall a Physician be Governor of California?**

“The political pot is already simmering for this year’s election. For Governor the Republicans have Chancellor Hartson, John F. Swift, W. W. Morrow, Charles F. Reed, N. D. Rideout, Thomas F. Bard, Irving M. Scott, Horace Davis and Dr. W. F. McNutt. Although the last named gentleman has not been associated with politics, still there is a strong current working in his favor. The medical fraternity is enthusiastic for him, and not excepting even the circuit rider of the Methodist pulpit, we know of no influence more potent in the country than that of the village doctor. Again, Dr. McNutt is of Scotch descent, and hence the sons of “auld Scotia,” together with a good reserve of Briton’s sons, would take great pride in voting for one of their own set. Altogether the doctor has many strong points of availability. Still there is no certainty that he would give up his large and remunerative practice for any political preferment. In the opinion of his best friends he would be very foolish to do so.”

The above paragraph was taken from the *Wasp*, one of the weekly newspapers published in San Francisco, but we do not wish our readers to understand that our intention in quoting it is to mingle in political strife or advocate the claims of any candidate for office, as that is entirely beyond the province of a medical journal. It always has been our opinion that a medical man should avoid politics as much as possible; in fact, that he should limit himself to recording his vote like a good citizen. Our reasons for this opinion are a belief that any marked

espousal of party cause must impair his usefulness and without doubt will destroy the feelings of unity of purpose which should exist between the patient and physician; and, in addition to this, the demands made upon his time must interfere with proper devotion to the duties of his profession. If he be tempted to engage in the political contest from a desire to benefit his fellow-men, we would remind him that he already enjoys opportunities for doing good such as no other man possesses, and that these must be neglected if he would engage in any other calling. The physician should be an enthusiast in his profession, but entirely free from all those feelings which divide society into cliques; in fact, we would recommend to him the role of the good clergyman who won the love and respect of his parishioners by never meddling with politics or religion.

Nevertheless, there are times when such precepts must be set aside, when even the man of peace, like the fighting monks of former centuries, must "gird him for the fray," and it may be that this is one of these occasions. There is no doubt that there are many medical and sanitary interests in this State that have hitherto been sadly neglected, but which might be attended to were there only some influential man in the Legislature whose natural inclinations would lead him to bear them in mind. Medical men have not forgotten the recent action of the Legislature which cut down the Board of Health appropriations one-fifth lower than it was fifteen years ago, although the population of California has been doubled in that time, with the result the board has been crippled in all its movements, and rendered incapable of taking any active steps towards the prevention of disease. They are all aware that in the event of an epidemic breaking out in our midst we are almost powerless to prevent its spread, and that the same Legislature refused to establish an emergency fund to be drawn upon only in the event of such an occurrence.

It is possible that with a medical man for Governor, these and many similar evils might be remedied.

We do not know whether Dr. McNutt has consented to become a candidate for nomination, and certainly the interruption to his professional duties would be an obstacle to his doing so, as he is one of the most active practitioners in San Francisco, but should he decide to engage in a political contest he is likely to meet with support both outside and inside the profession.

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### **Medical Advertising.**

Much discussion has recently taken place in the San Francisco County Medical Society relative to the extent of advertising that is permissible to medical men. The conduct of a member had been called in question because he placed a card in the programme of a variety theatre calling attention to his attainments and his preference for certain diseases. This was naturally objectionable to the members of the society, but when the case came up for discussion the business cards of many practitioners were produced, including those of specialists, such as oculists and aurists, to prove that advertising is to a certain extent permissible to medical men and therefore the question became one of degree. In our opinion the ethical quality of a medical advertisement depends both upon the character or wording of the same and the medium through which it is extended to the public. Thus it is not professional for a physician to put his card in the public newspapers under any circumstances, much less upon a restaurant bill of fare or theater programme. Of course this does not include those cases in which it might appear as the director in a company or teacher in a medical school, for under these circumstances it appears as an advertisement of the institution and not of the individual. The card of a physician or surgeon should always remain in the form of the small slip handed to the patient as a memorandum; neither are these intended for general distribution.

The mention of his specialty on the card or door sign of an aurist or oculist signifies that he confines himself to the named



specialties, and that persons suffering from general diseases need not apply for treatment, so that it keeps away the general class of patients; but the same specialties on the card of a general practitioner are only a catch-penny to capture the public and approaches the quack advertisement as it is intended to convey the idea that he possesses more than ordinary skill in the treatment of certain diseases. In short, the whole difference between the two is that the sign of the specialist proper is one of limitation informing the public that he restricts himself to certain departments of the healing art, but not laying claim to any more skill even in these departments than is possessed by his professional brethern, whereas the mention of special diseases on the card of a general practitioner means that he is a good doctor and "the boss on fits."

Any direct or indirect assertion of superiority over his fellows on the part of a medical man is unprofessional, his advancement is not obtained by vaunting his skill as a merchant would his wares; all pre-eminence should be the reward of merit, not the self-assumed mantle of the egotist.

We have heard some Californian practitioners question the propriety of the Eastern and European custom according to which the graduate places the name of this college, such as M. D., Harvard, or M. R. C. S., England, after his name. This objection is very far-fetched, because it only requires reference to the title page of any medical work to see that this is almost the invariable custom. Moreover, it asserts nothing regarding a man's ability, it merely shows him to be the graduate of a reputable medical school, and is a guarantee to the public that he at least has had the opportunity of acquiring knowledge, but whether he availed himself of it time alone will show. It is a well-known fact that there are many second rate colleges throughout the United States, where the system of education is very imperfect, and which are only back-doors to the profession, yet their graduates affix the usual M. D., and appear before the public with the same title as that worn by the best trained

physicians, so that no one knows from whence they come. Could anything be more fatal to irregular and bogus colleges, or to men practicing without a diploma, than a universal custom of placing the name of each graduate's *alma mater* upon his card? It would be almost equivalent to displaying his diploma, and at the same time would be a stimulus to higher attainments, and more searching examinations in all medical schools, as everybody would then know who is responsible for the dullards that prey upon suffering humanity. Whenever we find a school that fears to let its graduates be known, let us endeavor to close its gates.

Some ardent reformers have questioned the propriety of medical men delivering popular lectures, as the custom is one which brings the speakers into prominence. It is the custom in San Francisco for the Cooper Medical College and the Young Men's Christian Association to deliver a course of health lectures to the public every month, which are attended and appreciated by the public and a notice of which generally appears in the newspapers upon the following day. We cannot understand how any one can object to an action which is so philanthropic, for the diffusion of such knowledge can only result in the promotion of public welfare; if the sin lie in the fact that only a small portion of the profession are asked to become instructors, then our only regret is that the population of San Francisco is so small and the number of doctors so large.

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Dr. M. A. Brondel of Alger claims to introduce medicaments into the body by electrolosis, in the following manner, taking iodide of potassium, for example. A blotting pad is saturated with a solution of the salt and placed upon the body, the negative pole of a battery in contact with it, the positive pole is placed upon another portion of the body. In a short time, the starch test shows the presence of iodine at the positive pole.

A committee was appointed to investigate the matter, who reported that the only iodine detected at the positive pole was carried there upon the hands of the operator and that when proper precautions were taken to prevent its accidental introduction, no trace of iodine could be found even with a strong and prolonged current.—*Gazette des Hopitaux*.

**Licentiates of the California State Board of Examiners.**

SAN FRANCISCO, Dec. 3d, 1885.

At a special meeting of the Board of Examiners held in this city, Nov. 19, 1885, the following parties, having complied with the law and the regulations of this board, were granted certificates to practice medicine and surgery in this State:

JAMES C. S. AKERLY, San Francisco; Cooper Med. Coll., Cal., Nov. 11, 1885.  
ROBERT O. BALDWIN, San Francisco; Med. Dept. Univ. California, Cal., Nov. 10, 1885.

WILLIAM FINLAY, Sydney, Australia; Cooper Med. Coll., Cal., Nov. 11, 1885.  
WALTER F. FINNIE, Grass Valley; Cooper Med. Coll., Cal., Nov. 11, 1885.  
JOHN GALLWEY, San Francisco; Med. Dept. Univ. California, Nov. 10, 1885.  
WILLIAM F. JONES, San Francisco; Cooper Med. Coll., Cal., Nov. 11, 1885.  
DANIEL D. LUSTIG, San Francisco; Med. Dept. Univ. California, Cal., Nov. 10, 1885.

THEODORE A. NICHOLS, Mission, San Jose; Med. Dept. Univ. California, Cal., Nov. 10, 1885.

JOSEPH P. PINQUARD, Grafton; Louisville Med. Coll., Ky., Feb. 26, 1883.  
JOHN H. RENEBOME, San Francisco; Cooper Med. Coll., Cal., Nov. 11, 1885.  
HENRY E. SANDERSON, San Francisco; Cooper Med. Coll., Cal., Nov. 11, 1885.  
WILLIAM E. SPEECE, Australia; Starling Medical College, O., Mar. 5, 1884.  
JOHN M. WILLIAMSON, San Francisco; Med. Dept. Univ. California, Cal., Nov. 10, 1885.

DAVID WOOSTER, San Francisco; Med. Dept. Univ. California, Cal., Nov. 10, 1885.

At the regular meeting of the board held Dec. 2d, 1885, the following certificates were granted, the parties having complied with all the requirements of the law and this board:

HOWELL V. ARMISTEAD, Hills Ferry; Med. Dept. Univ. California, Cal., Nov. 10, 1885.

ROBERT ARMSTRONG, San Francisco; Jefferson Med. Coll., Penn., Mar.—, 1868.  
ROBERT A. BOYD, San Francisco; Harvard Med. Coll., Mass., Mar. 11, 1868.  
SAMUEL G. BOYD, San Francisco; Harvard Med. Coll., Mass., June 24, 1885.  
CALVIN E. CAMP, San Francisco; Cooper Med. Coll., Cal., Nov. 11, 1885.  
ADOLPHUS M. EVANS, San Francisco; Cooper Med. Coll., Cal., Nov. 11, 1885.  
JUSTUS C. FRENCH, Gilroy; Harvard Med. Coll., Mass., June 30, 1875.  
ASBURY C. HELM, Stockton; Bellevue Hosp. Med. Coll., N. Y., Mar. 1, 1871.  
GEORGE L. HUTCHINSON, Colton; Long Island Coll. Hosp., N. Y., May 21, 1884.  
CHAS. E. LAWRENCE, Marrieta; Victoria Univ. at Coberg, Canada, May 13, 1885.

MARK F. PATTEN, San Francisco; Cooper Med. Coll., Cal., Nov. 11, 1885.  
DRIESBACH SMITH, San Francisco; Cooper Med. Coll., Cal., Nov. 11, 1885.  
CHAS. C. VALLE, San Diego; St. Louis Med. Coll., Mo., Mar. 7, 1879.

Certificates were refused to Mrs. Louisa Hagenow of San Jose, E. O. Darling of Pasadena, and James R. Cotter of San Francisco, on the ground of insufficient credentials.

## Notices of Books, Pamphlets, etc.

**PRACTICAL HUMAN ANATOMY.** By F. D. WEISSE, M. D., Professor of Practical and Surgical Anatomy, Medical Department of the University of the City of New York, Professor of Anatomy, New York College of Dentistry. Illustrated by 222 lettered plates, containing 321 figures. Pp. 456. Published by Wood & Co., New York. Wm. S. Duncombe & Co., San Francisco. Price \$6.

This is one of the best dissection manuals that it has been our fortune to meet with for some years. The work is intended as a guide to the student in the dissecting room as well as a book of reference for the practitioner, and is well calculated to serve both of these purposes not only on account of the method of teaching, but also by virtue of the excellence of the illustrations. These plates have all been drawn from the dissections of the cadaver, and are so numerous that every step of the dissection is shown, so that the student is able to study closely as he goes along and his work is almost reduced to following a chart.

Dr. Weisse does not intend that his book should supplant those of the older anatomists such as Quain and Gray, it is rather a dissector's companion, and he therefore intentionally omits much that is included in those descriptive works. His references to the osseous system are more in connection with its relation to the soft parts. We do not quite agree with Dr. Weisse when he abandons the names *origin* and *insertion* for the general term *attachment*; it multiplies the number of words necessary in describing a muscle, for we must always specify which attachment is intended, while the word *origin* or *insertion* avoids the chance of confusion. In addition to this it is inexpedient to change terms which always have had a definite meaning.

We cordially recommend the book to our readers. The plates alone are worth twice the price of the whole work.

**STYLOGRAPHIC NOTE BOOK.** Arranged by ALBERT ABRAMS, M. D. Published by Wm. S. Duncombe & Co., San Francisco. Price 30 cents.

**CHART OF URINARY ANALYSIS.** By ALBERT ABRAMS, M. D. Published by Wm. S. Duncombe & Co., San Francisco. Price 50 cents.

We would call the attention of our readers, and especially of students, to these works. The note book consists of 300 pages and is prefaced by memoranda of anatomy, physiology and other subjects, all of which are very convenient for purposes of reference.

The urinary chart is printed upon a large card. It contains full information regarding all the important urinary tests, and will be found to be a useful office companion.

## **Extracts.**

### **"Can Croup be Considered Clinically as a Well-Limited Morbid Entity?"**

RAUCHFUSS (St. Petersburg):—

The author observed that the manifold significance of the word croup arose from the fact that the term was not of scientific origin, but was used by the laity without exactness of significance. Bretonneau used it in the form of pseudo-membraneous croup, to signify laryngeal and tracheal diphtheria; while in Germany it was applied to anatomical changes in what were called croupous affections of mucous membranes. In recent times croup and diphtheria in their relations and antagonisms have been almost endlessly discussed, so that little remains of the original simple clinical conception of croup. Though Bretonneau believed that croup and tracheal diphtheritis were two terms for one idea, he was far from thinking that this idea was unconditional, for he admits the possibility of a croup which is independent of diphtheria, and warns his followers against diagnosticating all pseudo-membranous inflammations of mucous membranes as diphtheria. Virchow declared that it is necessary to consider croup from a clinical standpoint as a special affection of the larynx and trachea with a definite combination of symptoms, but that the subdivisions of croup should be considered in accordance with anatomical changes, and should be differentiated as catarrhal, fibrinous, and diphtheritic forms. It seemed questionable to the author, however, whether the word which indicates a simple clinical conception should still be employed, if the anatomo-clinical diagnosis cannot be embraced by one of the three chief forms of acute laryngo-tracheitis, and if, in the general idea of the disease, such heterogenous forms are included, as, for example, catarrhal and diphtheritic laryngitis. In favor of the idea of the unity of clinical conception of croup in its various forms, it must be admitted that the chief forms of laryngo-tracheitis may take their course even without the symptoms of croup, and that prognosis and treatment may be influenced by the presence or absence of these symptoms of croup. Therefore, in spite of the great certainty with which we are usually able to differentiate the various forms of croup, clinically, it yet remains that there is need of a simple arrangement of these forms for clinical purposes. Some stress is laid by the

author upon the necessity of laryngoscopic examinations in connection with the diagnosis and treatment of croup, this means being often efficient in enabling one to differentiate between the different clinical forms of the disease. In this connection, subchordal laryngitis is described which is without the fibrinous deposits of true croup, but has its other clinical phenomena, and is met in all forms of croup. The author believes that it is acute subchordal laryngitis which so often gives to catarrhal laryngitis in children the appearance of the series of phenomena which is seen in croup. The fact, which has been known since Bretonneau pointed it out, that the stenosis of the larynx and trachea in croup is due to the swelling of mucous and submucous tissues is of importance in the study of the disease from a clinical standpoint. This explanation holds alike in true and in false croup, a spasmodic origin being considered improbable. In regard to treatment, the plan of the author for many years was that in which mercury formed the principal medicative agent. Within recent years, however, this method has been reserved for severe cases and for very young patients, while for others hydrotherapeutics, including various means for establishing free secretion from the mucous membranes, has been relied upon. This method becomes the more rational when one recognizes the condition of stenosis as common to all cases of croup, and as caused by swelling of the mucous membrane of inflammatory origin. This mucous membrane, and its adjacent tissue, is to be relieved by action upon its blood circulation, upon its secretions, and by the application of moisture. That these results are obtained by mercury was observed by Bretonneau, who, therefore, gave it the preference among remedial agents. The same results may be obtained by antimony and apomorphin. As has already been stated, the author's present method of treatment is largely hydrotherapeutic. Every half-hour or hour he would give from one to two hundred grams of either plain hot water or tea with a little sugar, and perhaps a little cognac, etc.; three or four quarts of drink being thus taken daily, in addition to the milk, bouillon, etc., which may be required for food. Moist packs are also used, particular care being taken to keep the feet warm. If the temperature be high, moderately cold douches may be applied for ten minutes at a time, which will tend to regulate the respiration and overcome fatal somnolence. Internally small doses of apomorphin may be given, but not enough to excite

vomiting. To these may be added means for the purification of the affected mucous membranes, as the inhalation of alkaline sprays or vapors, carbolic acid in weak solution, etc. Should the fibrinous inflammation extend to the bronchial region, the question of tracheotomy must at once be considered. After such an operation, it is, of course, more than ever necessary to keep the air of the sick-room loaded with moisture. In conclusion, the author considers that croup may be divided into five classes or categories for casuistical and statistical purposes:

1. Light grades of catarrhal croup, pseudo-croup.
2. Inflammatory croup, severe grades of catarrhal croup.
3. Fibrinous croup.
4. Diphtheritic croup.
5. Secondary croup, which may occur in the course of, and in connection with, other forms of disease.

Each of these forms may be of a diphtheritic character—that is, in a causal sense; the two forms of catarrhal croup are only exceptionally of such a character, while fibrinous and secondary croup are frequently so. To the varieties of diphtheritic croup, in a narrow sense, must be added cases which are complicated with diphtheritic local phenomena, apart from the larynx and trachea, or with decided symptoms of diphtheritic infection. An important division of the categories of fibrinous, diphtheritic, and secondary croup would be formed by those cases which are complicated with tracheo-bronchitis. The causal factor for catarrhal, as well as for fibrinous croup, should always be clearly determined, or else it should be signified that it cannot be made out.

Virchow (Berlin) observed that he agreed, in the main, with the conception of croup as it had been enunciated by the author of the foregoing paper. He thought it always necessary to carefully distinguish anatomical considerations from clinical ones, otherwise misconceptions will arise by the changing of terms from their proper field and function. This was seen in the confusion which followed the development of the ideas which were involved in the terms apoplexy and dysentery, for example, the results of anatomical investigation requiring a terminology which contained the clinical concept. So with croup, which had a purely clinical significance until the time when the Napoleonic prize called forth a great number of contributions upon this subject. Then came the anatomical idea of the pseudo-membrane,

which, later, was found to have different significance and relations at different times. Then there may be pseudo-membranous deposits in the larynx and purulent ones in the trachea, occurring at the time; in other words, in addition to the well-known fibrinous process or inflammation, a purely catarrhal pseudo-membranous one. In addition to these two is the diphtheritic process, which penetrates the tissues deeply, and shows a tendency to necrosis of the same. These three forms constitute the clinical varieties of croup, for which there are different anatomical conditions. The employment of the idea of croupous inflammation, the so-called croup of the alveoli, was thought to be one of the most unfortunate applications of the same. With no form of pneumonia has croup of the larynx less in common than with croupous pneumonia, in which the beginning is hemorrhagic, and which only at a later period assumes the appearance of a purely fibrinous exudation. Pneumonia patients have no tendency to croup, and the pneumonia which occurs to children with the croup is usually not fibrinous in character.

Baginsky (Berlin) confessed that he was in harmony with the author of the paper in regard to the main points of the subject. He desired to call special attention to the fact that it is possible to make laryngoscopic examinations in young children. He feared, however, that the paper would give rise to misunderstandings in one particular, namely, in the statements which were made in regard to secondary croup, since in this form varieties of disease which differ anatomically are brought into relation with each other. He would like to ask Prof. Virchow to express his opinion as to the extent to which the assumption of an ascending croup seems admissible.

Virchow (Berlin) replied, "That one must deal very cautiously with the subject of ascending inflammations in such cases, since the proof that the larynx is free from deposits from the beginning is difficult to adduce. In the pharynx, also, there may be thin, entirely superficial fibrinous deposits."

A. Jacobi (New York) remarked, "That if Prof. Virchow were not entirely convinced of the existence of ascending croup, the reason doubtless was to be found in the fact that he was in the habit of seeing only the completed process in the dead subject. In the speaker's experience a boy with a stricture of esophagus lay for weeks, with a cough of moderate severity, with very little fever; he was able to play, and was usually out of bed. He had



very little dyspnoea, but after some weeks he suddenly became cyanotic and died in a few hours. A diphtheritic deposit was found upon the cicatrical tissue in the esophagus, which had been dilated daily with bougies. There were also very extensive fibrinous bronchitis and pseudo-membranes in the larynx. Without doubt the former had existed for some time, but the latter was evidently of recent origin. Occasionally, also, one meets with a case of stenosis of the larynx, in which there is intense cyanosis which demands immediate tracheotomy. The clinical history may record a cough which has lasted for some time, little or no fever, and occasionally fibrinous expectoration. Sometime a diagnosis may have been made of fibrinous bronchitis; at other times it may not have been made. The sudden change for the worse depends upon the formation of membranes in the larynx. Out of 450 tracheotomies we had seen sixteen or eighteen cases in which the condition in question existed. The operation furnishes no benefit at all or only very little. The patients usually die within twenty-four hours."

Virchow (Berlin) in reply said, "That there were, doubtless, cases of diphtheritic croup, in which the entire respiratory mucous membrane, from the larynx to the bronchi, was profusely infiltrated with diphtheritic matter. Of this character might be considered the variolous form of laryngo-tracheitis. The so-called pustules which are found on the respiratory mucous membrane are diphtheritic deposits which are developed in the region of the cylindrical epithelium. On the other hand, one may find, in the domain of the pavement epithelium, as in the pharynx, quite superficial deposits of fibrinous material. Usually the parts which are occupied by pavement epithelium show a tendency to diphtheritic infiltration, while those which are occupied by cylindrical epithelium show a greater tendency to fibrinous deposits, but this rule is not without exceptions."

Rauchfuss, in closing the discussion, observed, in regard to Baginsky's objection to the class of secondary croup in an anatomical classification of the various forms of croup, that the arrangement which was made by him referred entirely to clinical features of the disease. Anatomical subdivisions could not be dispensed with, as was explained by the stress which was laid upon the importance of laryngoscopic examinations in making a diagnosis in these forms of croup. Secondary croup was considered an etiological-clinical subdivision for which an accurate

anatomical-clinical diagnosis could be dispensed with no more reasonably or readily than in primary forms of croup. Those cases are to be considered as cases of secondary croup in which the croup occurs in an individual who is already sick. It occurs most frequently in the course of acute infectious diseases, like measles, typhoid fever, etc. If diphtheria did not, to such a marked degree, dominate, the severe forms of croup, it might be shown that diphtheritic croup should be considered as secondary. This, however, does not seem to be practicable, and for various reasons the term diphtheritic croup has been employed by preference. As far as the ascending form of the disease is concerned, in which fibrinous tracheo-bronchitis precedes laryngo-tracheitis, such cases had been seen by the author and had been considered as of diphtheritic and infectious origin. Such cases are, however, rarely seen.—*Proceedings of the International Medical Congress, 1884.*—*Arch. Pediat, Jan., '86.*

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## **TWO CASES OF EMPYEMA FOLLOWING SCARLET FEVER.**

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By I. N. MARSHALL, M. D.

CASE I.—Joseph M., aged nine, a rather delicate, pallid-looking boy, was admitted to Belvidere Hospital on September 5, 1883.

He had taken ill eighteen days before that, with the usual symptoms of scarlet fever of apparently a not very severe type.

On admission the face was rather puffy looking, but there was no distinct oedema. A few days afterward the urine contained abundant blood and albumen, and there was general anasarca.

The usual treatment in such cases was adopted here, viz., mild saline purgatives and diuretics with milk diet, but in about ten days, when the dropsical swelling had all but disappeared, the urine, however, still containing albumen, some evidence of pleuritic effusion appeared at the base of the right lung. There was dulness on percussion, but with this there was no respiratory distress and no pyemia.

During the next three weeks, the effusion gradually increased in quantity, and there began to be some elevation in the temperature in the evenings. There was great pallor and considerable emaciation, and the urine still contained a small quantity of albumen.

The only local treatment adopted was painting the chest with iodine, but this did not result in any marked good effect. Cod liver oil and syrup phosphate co. were given internally.

On October 25th, the dyspnoea became very extreme, and the whole right side, both back and front, was found to be absolutely dull on percussion. There was also marked bulging of the intercostal spaces. For a fortnight before this the morning temperature averaged  $99^{\circ}$ , and the evening  $102^{\circ}$ .

Paracentesis thoracis was performed in the axillary line and fifth intercostal space, twenty-eight ounces of fluid, healthy-looking pus were withdrawn, and the wound closed with a carbolic dressing.

This was followed by great relief to the patient. The temperature fell to normal; the dull percussion over the back became less marked, and in this situation an appreciable respiratory murmur appeared.

On October 30th, the urine again became scanty and albuminous, and patient had two or three well-marked convulsions, evidently of a uremic nature. The temperature at this time was normal or sub-normal. Under the use of diuretics and purgatives, he recovered from this condition.

On November 21st, the signs of pleural effusion having reappeared to some degree, patient spat up a considerable quantity of pus, which, there is good reason to believe, came from the pleural cavity. The signs of pneumo-thorax were not distinct, however.

By this time the case had assumed a decidedly phthisical aspect. There was extreme emaciation, with clubbing of the fingernails, and the evening pyrexia had returned. For the next few days the expectoration of pus continued.

On December 3d, a fluctuating swelling appeared at the seat of the puncture in the chest, and by this time, also, the dyspnoea had returned, and there was absolute dulness over the whole right side.

An opening was made into the swelling, six ounces of pus evacuated, and the wound closed. This was followed by some relief, but two days later, as it was evident that the pleural cavity had not been emptied, the patient was put under chloroform and a free opening made in the side. On inserting a drainage tube, forty ounces of pus came away freely. It was quite free from smell.

The operation was done with antiseptic precautions, and a carbolic acid dressing was applied.

After this the breathing became perfectly natural, and there was a marked diminution, though not a disappearance, of the evening pyrexia. The general health, too, now improved rapidly, and the patient gained both in weight and strength. A small quantity of inodorous pus continued to be discharged from the wound. After a few weeks he was able to get up and run about the ward. The right side of the chest became decidedly collapsed, and this gave the patient a peculiarly one-sided gait in walking. Notwithstanding this, he was able to run about and indulge in most of the sports enjoyed by his comrades; in fact, he acquired a reputation as a fighter of some dexterity.

On measuring the circumference of the chest, the right side was found to be eleven and one-quarter inches, and the left thirteen inches.

As the purulent discharge had become very much less, the drainage tube was taken out, but as this was immediately followed by a return of the pyrexia, it had to be reinstated in a day or two.

In April, 1884, the discharge increased without any apparent cause. The boy was again put under chloroform and a pleural cavity explored, with the object of making a counter opening. The cavity from which the pus came, however, seemed to be very much restricted, and only came in contact with the chest wall at the place where the opening already was. Syringing out the cavity with a weak solution of carbolic acid was tried, but was not followed by any diminution of the discharge.

The comparative dulness over the right side was distinct, but not absolute, and there was a pretty fair breath sound over the whole affected side. When a long breath was taken, there was distinct metallic tinkling, which seemed to come from the pleural sac.

At this time the urine was quite free from albumen. As the boy had been in the hospital for more than a year, and as his mother was anxious to have him home, he was dismissed, having still the drainage tube in the side. In October, 1885, he showed himself at the hospital, and was then in pretty fair health. There was still a slight discharge from the wound and the collapsed condition of the side continued, though not in such a marked degree.

CASE II.—Patrick C., aged four years, admitted on May 8, 1884, having had symptoms of scarlet fever, with a rash, nine days previously. When admitted there was nothing noteworthy about the case.

On May 10th, the urine became scanty and albuminous, and the temperature rose to  $105.4^{\circ}$ . There was some convulsive twitching of the muscles of the face. Hot-packs and poultices to the loins were administered, and the bowels were kept loose. Under this treatment, the urine became more abundant and less albuminous, and the anasarca all but disappeared.

The temperature still kept high, however, and, on January 1st, some dulness on percussion was detected at the base of the left lung.

On June 5th, the signs of pleuritic effusion were unmistakable. The whole left side, back and front, was quite dull to percussion, and the respiratory murmur was extremely faint. The apex beat of the heart was displaced and could be felt in the epigastrium. There was no great dyspnoea, so far, though the breathing was somewhat accelerated.

The evening temperature always keeping above normal, and there being no signs of the effusion going away, on June 20th it was determined to explore the chest by means of an aspirator.

This was accordingly done in the axillary line. A few drops of pus escaped from the needle. The needle was then withdrawn and a free opening made into the pleura.

Between two and three pints of creamy yellow pus, with a slightly offensive odor, escaped. A long drainage tube was then inserted, its mouth being transfixed by a silver wire to prevent its slipping within the wound.

In the evening the temperature had fallen to  $100.2^{\circ}$  and the patient was much easier. The urine was still albuminous. The wound was dressed daily for some time with antiseptic precautions, and the discharge gradually lessened and then ceased altogether.

The urine continued albuminous for some time, and was for several days distinctly colored by the carbolic acid.

On September 7th, the wound was noted as healed.

About this time the temperature began to rise, and the patient, who had been very bright hitherto, became dull and fractious.

Some retention of pus was suspected, and the wound was freely probed, but without anything being discovered.

As there had been some cases of enteric fever in the ward a short time before, it was thought possible that he might be taking that disease. This turned out to be correct, for in a few days the characteristic spots showed themselves, and he had a well-marked, though not very severe, attack of enteric fever. From this he made a good recovery, and was dismissed from the hospital well.

There was no perceptible contraction on the left side, and the breath sound was good all over the lung.—*Archives of Pediatrics*.

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### Idiopathic Headache.

By J. J. REYNOLDS, M. D., DEFIANCE, OHIO.

By the term idiopathic headache, I mean a headache which is the disease *per se* and not symptomatic or connected with any demonstrable lesion.

Such headaches must be differentiated from those severe superficial pains following the course of certain cranial nerves. These are properly designated neuralgias and are easily recognized. They must also be differentiated from those forms of headache which are natural accompaniments of other diseases and called symptomatic headaches. Among these are the headaches of cerebral syphilis. A persistent headache is a constant symptom of this malady, and an inquiry into the previous history of the patient, together with a consideration of the accompanying symptoms, ought to prevent any error in diagnosis. •

The headache of the chronic forms of meningitis might be mistaken for the idiopathic variety; but it will be noticed that, in addition to the headache, weakness of the intellectual faculties, feebleness of the limbs, etc., will develop, and these symptoms, taken in connection with some exciting cause, as external injuries of the skull, ear disease, etc., will point to the diagnosis of pachymeningitis.

There are a number of diseases of the brain—as encephalitis, tumors, cerebral abscesses, cerebral softening, etc.—of which headache is a prominent symptom. The headache of cerebral tumors is at first intermittent and later paroxysmal, and is rebellious to treatment.

If we mistake any of these serious cerebral troubles for idiopathic headache, time will undecieve us. For other symptoms, due to the nature of the disease, will usually develop; particu-

larly paralysis of those muscles whose motor centers are involved by the destructive process, disorders of sensation and disturbances of the special senses.

The pathology of migraine is not definitely settled. That it is a form of neuralgia there seems to be no doubt.

Some speak of it as a cerebral neuralgia, while others consider it a neuralgia of the sensory nerve filaments distributed to the meninges. Putzel says: "It is now almost universally considered to be a neurosis of the sympathetic nerve." Anstie, in Reynold's System of Medicine, speaking of neuralgia of the fifth nerve, says: "The most common of all the varieties of trigeminal neuralgia is migraine." Thus disposing of the question with one sweep. Rosenthal, on the contrary, speaking of migraine, says: "This term refers to a paroxysmal headache which was known to the older physicians, but was not distinguished by them from prosopalgia." To Romberg and Leubuscher he gives the credit of being the first to recognize the fact that migraine is a cerebral neuralgia.

The most reasonable theory of the nature of migraine or hemicrania (the usual form of idiopathic headache) is that it is the result of vaso-motor disturbances within the cranium, by which the amount of blood in the cranial cavity is either increased or diminished beyond normal limits.

DuBois Raymond considered migraine to be due to a contraction of the vascular walls, thus diminishing the caliber of the blood-vessels and producing anæmia. Moellendorf, on the contrary, believes there is relaxation of blood-vessels.

It seems probable that there are two forms of migraine—a hyperæmic and anæmic form. In the first form the vasomotor center controlling the cerebral circulation is depressed, and the blood-vessels consequently dilate. This has been called the angio-paralytic variety of migraine. In the second form the vasomotor center is stimulated and the vessels contract. This is called the angio-spastic variety.

An interesting question here presents itself, viz.: What is the cause, and where is the exact seat, of pain in headache? We know that the white substance of the brain conducts impressions, and that the grey substance receives impressions and generates nerve force. The encephalon is insensible to direct stimulation, *i. e.*, an irritant applied to the tissues of the brain will not produce pain. I believe the only exception to this is in the

posterior part of the pons varolii. It is evident, therefore, that the seat of pain in headache is not in the brain substance. Rosenthal, speaking of the headache of cerebral tumors, says it "is caused by local congestions and by the compression exercised upon certain parts of the brain, or upon the acutely sensitive pia mater."

Speaking of cerebral hyperæmia, the same author says: "The headache is due to the afflux of blood to certain parts of the brain, and to the pressure here exerted upon the dura mater and pia mater which are endowed with a lively sensibility."

The pain of migraine is probably immediately produced by direct pressure, either on the nerves that traverse the walls of the blood-vessels, or on those ramifying in the meninges, or both. In the angio-paralytic form, with the vessels dilated and the brain hyperæmic, the increased pressure would probably affect principally the nerves of the meninges, while in the angio-spastic variety the tetanic contraction of the vascular muscles would produce compression of the sensory nerves which traverse the vessels.

The pain of anæmic headache has its analogue in the pains of parturition, which are believed to be due to a like compression of the sensory nerves supplying the uterine vessels.

The answer to the question, then, may be summed up as follows :

The *cause* of the pain in migraine is compression of sensitive nerves. The *seat* of the pain is in the meninges in the hyperæmic form and in the blood-vessels of the brain in the anæmic variety. Could we go a step farther back and ascertain the cause, which, acting on the vasomotor center, produces the circulatory disturbance, our diagnosis would be complete. Whenever this can be done, the headache is known to be symptomatic, and as our diagnostic acumen increases, we shall be able to eliminate more and more of these cases from the class which I (for want of a better term) have called idiopathic.

I have frequently seen migraine just previous to the menstrual discharge. In these cases it is hyperæmic, and is relieved by the uterine hemorrhage. Sometimes the headache will reappear at the close of the menstrual molimen. It is then of the opposite character (anæmic) and due to excessive menstrual flow.

In the angio-paralytic form the head is very full. "Feels as though it would burst," I have often heard patients say. The



face is flushed. Often the ear of the affected side is red. The conjunctivæ are hyperæmic. The carotids beat with unusual vigor. The sufferer complains of "throbbing and beating" in the head. Anything which would tend to increase the amount of blood in the brain aggravates the attack; such as lying with the head low; inhalation of nitrite of amyl, while pressure on the carotid of the affected side affords relief.

In the angio-spastic or anæmic variety the face is pale, pressure on the carotid of the affected side increases the suffering, while hanging the head down diminishes the intensity of the distress, and inhalation of nitrite of amyl, which causes cerebral hyperæmia, gives relief. Hence the inhalation of nitrite of amyl is a valuable aid to diagnosis.

The ophthalmoscope is of special service in assisting us to a correct diagnosis in doubtful cases. In the congestive form of headache the retina is said to present a congested, scarlet red appearance. In the anæmic variety a correspondingly pale color of the fundus of the eye will be seen.

Manifestly the indication for treatment is to restore the equilibrium of the intra-cranial circulation, to overcome vascular spasm in the one case and to counteract the vascular relaxation and consequent hyperæmia in the other.

Now, there are certain remedies which influence the cerebral circulation in a special manner by either stimulating or inhibiting its vaso-motor center, and we can meet the case by giving a cerebral hyperæmiant or anæmiant as the case may require.

Among remedies which depress the vaso-motor center, thereby producing cerebral hyperæmia, and which are, therefore, indicated in the anæmic form, are: amyl nitrite, nitro-glycerin, *cannabis indica* and morphia.

Among remedies which stimulate the cerebral vaso-motor center, producing contraction of the blood-vessels and consequent anæmia, and which are therefore indicated in the hyperæmic form, are: chloral, chloroform, ether, paraldehyde, quinine, guarana, caffeine, ergot, cold to nape of neck or head and galvanism. Blood may also be drawn from the head by increasing the amount in other parts of the body, as by hot mustard foot baths, saline cathartics, etc.

Dr. Wm. A. Hammond's plan of treatment for the angio-spastic form is as follows: A hypodermic injection of about  $\frac{1}{4}$  gr. of morphia is given, followed by a drop of a one-per-cent. solu-

tion of nitro-glycerin every fifteen minutes. This, he says, soon dispels the attack; and in the intervals he continues the nitro-glycerin in the above doses three times a day. Cannabis indica yields good results in this variety given regularly during the intervals.

For the angio-paralytic form cold to the head and nape of neck, and internally a dose of 30 or 40 grains of guarana, or two grains of caffeine will often act speedily. Inhalation of chloroform or ether will likewise yield good results, as will also chloral. Ergotine by the mouth, or better, hypodermically, is very useful—often giving speedy relief. Galvanism during the intervals is useful when regularly applied. Ergot for the hyperæmic, and cannabis indica for the anæmic varieties are among the best remedies for continuous use during the intervals. Their continuous influence tends to break up the vicious habit and to give permanency to the cure.

Many headaches not hemicranial in character, but in which a faulty cerebral circulation is discernible, will also yield to the same class of remedies.—*American Lancet*.

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### Bronchial Asthma.

By E. CRESSWELL BABER, M. B. LOND.

Dr. Bulkley's paper, in the *British Medical Journal* for November 21st, 1885, on Asthma as related to Diseases of the Skin, and the article by Sir Andrew Clark, on the Theory of Bronchial Asthma, in the current number of the *International Journal of Medical Sciences*, lead me to make a few remarks on the congestive theory of asthma, more especially as the views which I have formed agree to a great extent with those expressed by the latter author. I do not propose to discuss the validity of the spasmodic theory of asthma. This has been ably done by Sir Andrew Clark. I merely wish to bring forward a few facts, the result of a prolonged study of the nasal mucous membrane during life, which appear to lend support to the view that the bronchial mucous membrane undergoes a temporary swelling similar in kind to that which occurs in certain morbid states of the nasal mucous membrane, though of course infinitely less in degree.

The respiratory nasal mucous membrane contains, as is well-

known, a large tract of erectile tissue, which is chiefly situated on the inferior turbinated bones. This consists, roughly speaking, of numerous large venous vessels, which, by their distension, cause temporary swelling or erection of the turbinated bodies. The swelling may be observed going up and down very rapidly, and, within certain limits, is a normal occurrence. When excessive, and accompanied with sneezing and serous secretion, it constitutes the neurotic attacks which are very commonly seen, quite independently of hay-fever. Sir Andrew Clark describes these cases as "hay-fever;" but, inasmuch as they are unconnected with pollen, and are not accompanied by fever, the term is obviously inapplicable to them, and should be confined to those instances in which, from their occurrence at certain periods of the year, pollen is the probable exciting cause. The symptoms already mentioned may be attended by any of the numerous reflex phenomena now known to be associated with the nose, the chief of which are: cough, asthma, redness and itching of the outside of the nose, nightmare, migraine, constant headache, supra-orbital neuralgia, giddiness, epilepsy, etc. Hay-fever is, therefore, according to this view, simply a neurosis of the nasal mucous membrane, accompanied by certain reflex phenomena, which at particular seasons of the year is produced by the pollen of plants in specially predisposed persons. In other cases, these neurotic attacks are caused by some local irritation in the nasal cavities (such as nasal polypi) or by other irritants inhaled in the air, or they are produced reflexly by the irritation of some other organ (for example, by the action of strong light on the eyes). The constitutional element is, as Sir A. Clark insists, a very important factor in the causation of these symptoms. When a morbid predisposition to erection of the turbinated bodies exists, very slight and trivial causes, which it is unnecessary to detail here, are sufficient to produce swelling of these structures.

The intimate connection which exists between the bronchial mucous membrane and that of the nasal cavities is shown, not only by the occurrence of neurotic nasal symptoms (swelling of the turbinated bodies, watery secretion, and sneezing) at the commencement of an attack of bronchial asthma—a circumstance, in my experience, of very common occurrence—but also by the fact mentioned above, that asthma is frequently a reflex symptom produced by intranasal irritation, many cases of

this description being now on record. If further proof were needed, Hack has reported a case in which an attack of bronchial asthma was produced by the application of a powerful irritant (galvanic cautery) to the nasal mucous membrane, in a person who had previously never suffered from the complaint. In many cases, also, bronchial asthma has been temporarily or permanently relieved by treatment applied to the nasal cavities. These few points, which might easily be enlarged upon, suffice to indicate the intimate relation existing reflexly between the nasal and bronchial mucous membranes.

It is, moreover, a remarkable fact that, in true hay-fever, all the other symptoms, with the possible exception of the sneezing, appear to be of a congestive (vaso-dilator) character, whence it may be argued that the asthmatic symptoms are probably of similar nature.

Sir Andrew Clark not only compares the supposed bronchial swelling to that occurring in the nose, but speaks of "mucous wheals" in the bronchi, and likens the swelling, which he supposes to occur there, to patches of urticaria, whose pathology, according to a recent authority (Fagge's *Principles and Practice of Medicine*, vol. ii., p. 673) is that of "acute inflammatory œdema of the cutis, which fills the lymph-spaces and expels the blood from the venules." The much greater frequency of association of asthma with neurotic nasal symptoms than with urticaria, and the closer resemblance of the two mucous membranes, I venture to think, favor the view that if the dyspnoea of asthma, as seems probable, is produced by temporary tumefaction of the mucous membrane, such swelling partakes more of the nature of that occurring in the nose than of the wheals of urticaria.

Whether the structure of the bronchial mucous membrane admits of its undergoing a pathological swelling, by simple distension of its blood-vessels, is a question which must be decided by future research.

An attentive study of the nasal mucous membrane, I have for some time thought, would throw light on the pathology of the less accessible parts of the respiratory tract. It is impossible, for instance, to treat many nasal cases without arriving at the conclusion of the importance of distinguishing between the local symptoms which are neurotic, and those which are truly catarrhal in character. The former are marked by distension of the erectile tissue and watery secretion; the latter, by

distension of the capillaries near the surface, and by the presence of a mucous or muco-purulent discharge. In the nose, we are able very fairly to separate these two conditions, although, of course, they are very commonly associated. The importance, if possible, of drawing a similar distinction in the bronchial mucous membrane needs no recommendation of mine; it has not only a theoretical, but a very practical, significance. —*British Medical Journal*.

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**Prevention of Laceration of the Perinæum in Primiparæ.**

By J. ALGERNON TEMPLE, M. D., M. R. C. S. ENG.

The issue of the *British Medical Journal* for November 21st, 1885, contains an article on the above subject by Dr. David Gaussen, which deserves more than a mere passing notice. Practically, it is of great value.

For many years, I have been greatly disappointed with the means recommended for prevention of laceration of the perinæum; and, after most careful study of the subject, I came to the conclusion that the only method of any value was to prevent extension of the head from occurring, and to compel it to be born in a state of forced flexion.

In primiparæ, the vulval orifice is small and resisting, and the occiput in its descent does not reach the pubic arch (as it does in multiparæ) before extension commences; as a result of this extension, the long occipito-frontal diameter, which measures about four inches and a half, is obliged to traverse the perinæum, to be followed by the fronto-mental, which measures about three inches and a half, making in all part of a circle about eight or nine inches in length. This naturally stretches the perinæum and vulval orifice to its utmost capacity, and it is during this time that rupture is apt to occur.

To guard against this overdistension in cases where I fear laceration, after the head has reached the floor of the pelvis, and just previously to extension, I have been in the habit of applying the short forceps, and then, by carrying the handles backwards, I flex the chin on the chest, while, at the same time, gentle traction is made downwards and backwards. In this way, I deliver the occiput first, keeping the chin close to the chest; this brings the cervico-bregmatic diameter, which is but three inches and a half, though the vaginal orifice. This plan saves

the perinæum one inch or more of distension. I have had the best results from this practice, and have taught it to my class of students for the past three years.

The practice as taught by Dr. Gaussen I think somewhat difficult to carry out with the fingers, though he desires to obtain the same end as I here advocate. With the forceps, it is easy and safe.

I think this subject one of great importance, and worthy of a trial by any who may have any doubt as to its efficiency. In fact, I may say I am doubtful of the propriety of carrying the handles of the forceps forwards, as taught in the text-books, in any case.—*The British Medical Journal*.

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#### Gonorrhœal Rheumatism.

We do not think there is any doubt as to the efficiency of salicylic acid and its compounds in all forms of acute and subacute rheumatism, even in that variety of so-called muscular rheumatism which relates itself closely to gout, and is especially seen in those whose ancestral tree bears gouty fruit. The disease known as gonorrhœal rheumatism is probably not rheumatism at all, but is a result of pyæmic poison, or at least is a toxæmic inflammation which is allied to septicæmia. It is, therefore, not to be expected that the salicylates would be of value in this disease. In a series of papers in late numbers of the *Edinburgh Medical Journal*, already alluded to in the *Gazette*, Prof. T. R. Fraser has shown that this *a priori* reasoning is sustained by clinical experience, and records six cases of acute so-called gonorrhœal rheumatism in which the salicylate of sodium was used freely without success. If, as is believed by Dr. Fraser, this so-called gonorrhœal rheumatism may be produced by non-specific, vaginal and uterine discharges, its alliance to septicæmia is even closer than we had supposed.

An important observation is made by Dr. Fraser, that the intolerance of the salicylates occasionally met with in patients is often, if not always, due to disease or functional disturbance of the kidneys.—*Therapeutic Gazette*.

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Dr. M. Bessette of Angouleme communicates to the Congress de l'Association Francaise, at Blois, a very interesting observation on the arrests of progressive gangrene of the lower extremities by the use of thermo-cautery.—*Gazette des Hopitaux*.

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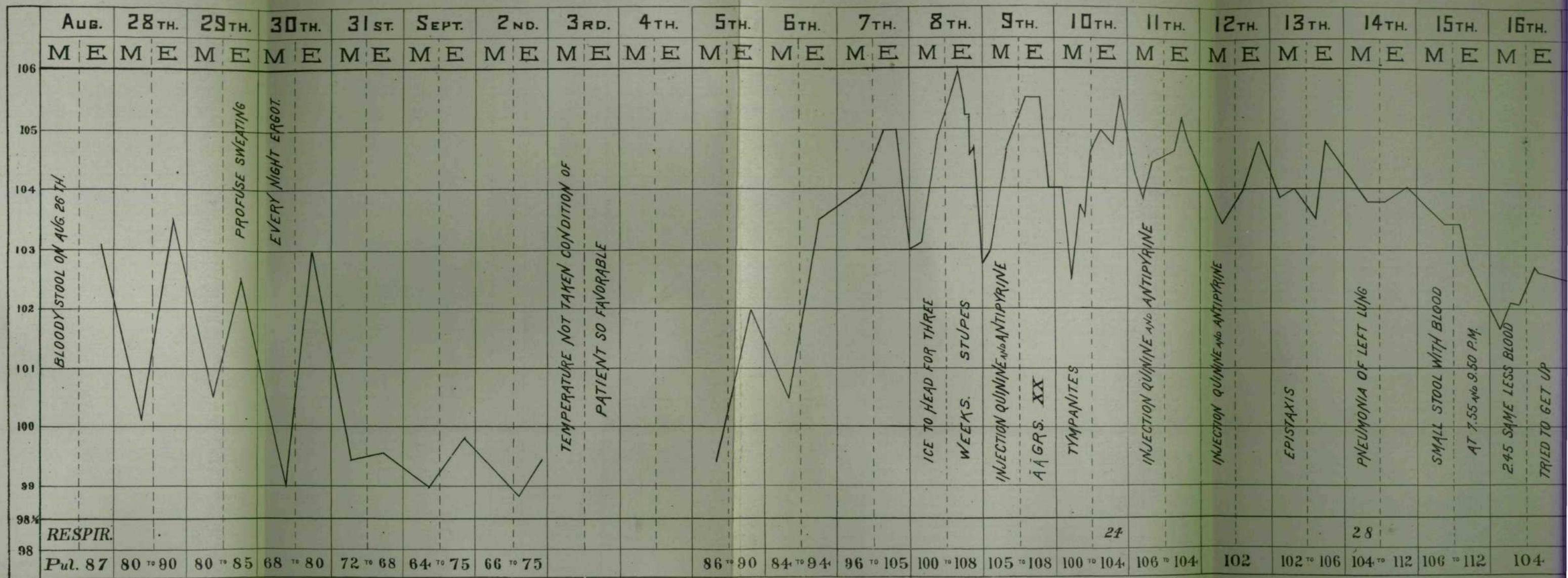
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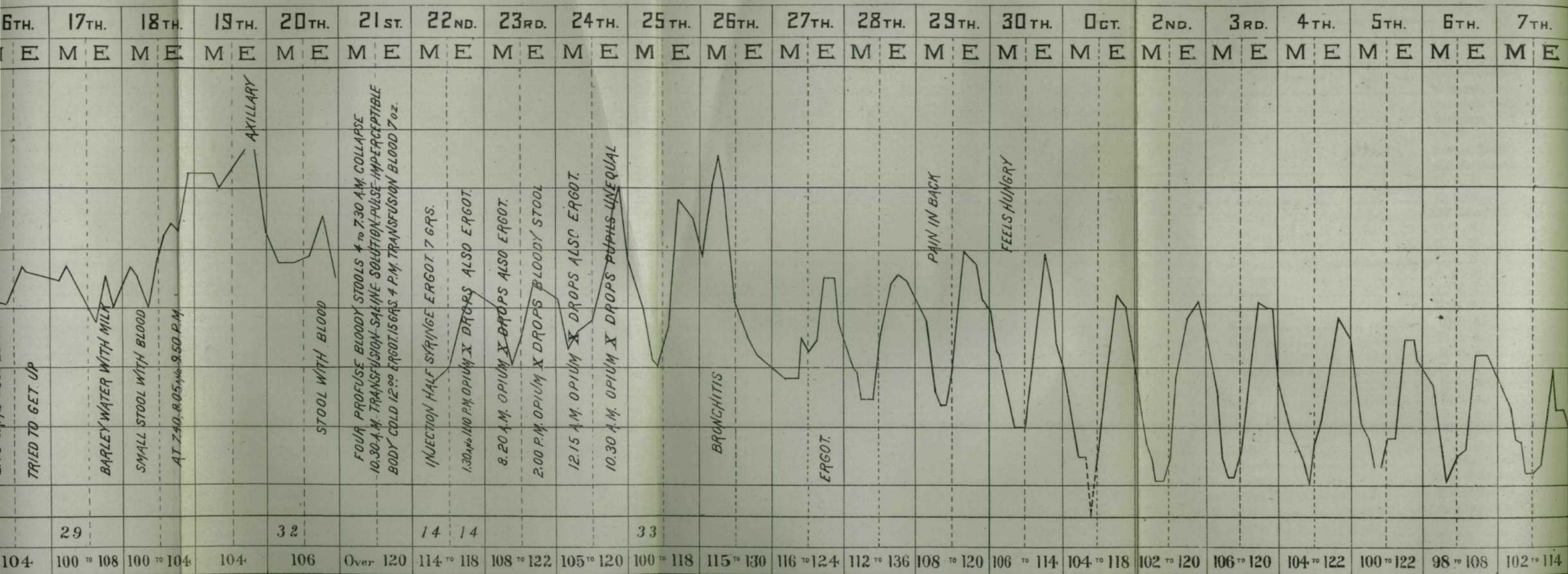
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# CASE OF SUCCESSFUL TRA





# TRANSFUSION IN TYPHOID FEVER



PACIFIC  
MEDICAL AND SURGICAL JOURNAL  
AND  
WESTERN LANCET.

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VOL. XXIX.

APRIL, 1886.

No. 4.

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Original Articles.

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**REPORT OF A CASE OF SUCCESSFUL TRANSFUSION  
IN TYPHOID FEVER.**

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By WM. S. WHITWELL, A. M., M. D.

(Read before the San Francisco County Medical Society.)

On the afternoon of August 22d, E. G. P., aged 32, came into my office. He said that on the 15th of the month he had taken a swim at the seashore and become very much chilled, and since that time had not felt well. There being no prominent symptom I prescribed some simple remedy and advised rest for a few days. On the evening of the 26th I was sent for and found him in a small room at the French Hospital. He had a fever of  $102\frac{1}{2}^{\circ}$  to  $103^{\circ}$  and reported that he had had two stools that morning, and with each had passed a considerable quantity of claret colored blood.

Making the diagnosis of typhoid fever I warned him that he might be dangerously ill, and advised his removal to quarters near my residence where I could visit him as often as necessary. This was done early the next morning, with the aid of a nurse who is still in attendance upon him. He was put to bed and placed upon a milk diet and developments awaited. The first recorded note is one taken August 27th at 4 p. m., and from this moment to the present an almost hourly record has been kept with great care, recording pulse, temperature, respiration, diet and general condition. The first note reads: Temperature  $103^{\circ}$ ; pulse 87; tongue dryish and coated; pupils slightly dilated; head hot; abdominal symptoms nil. August 27th, A. M., T.  $100\frac{1}{4}^{\circ}$ , P. 80. Has taken six pints of milk in 24 hours. P. M., T.  $103\frac{1}{2}$ ,

P. 90. It is sufficient to say that for several days the diagnosis first made was sustained, but that on August 31st and for the next five days the temperature remained so nearly normal, and all unfavorable symptoms vanished so completely, that it was thought perhaps a mistake had been made. Care was still exercised, and although the patient was allowed to read, he remained flat on his back and the milk diet was not deviated from. The pupils became normal, the perspiration ceased, and the bowels moved naturally. This break in the fever is rendered plain by examination of the temperature chart.

On the afternoon of the 5th there was a change in all the symptoms, the temperature mounting to  $102^{\circ}$  and then with but one fall rising, until on the afternoon of the 8th it reached  $106^{\circ}$  under the tongue. This was the highest point touched during the whole course of the disease, but by no means the turning point. Ice was kept constantly applied to the head; the arms and wrists were bathed in cold water; quinine and antipyrine were given in twenty grain doses at a time, by the rectum, but the temperature nevertheless hovered between the extreme point and  $103^{\circ}$  until the 14th. During this time the pulse was of good quality and never rose over 108, but it was noticed that after a dose of antipyrine it became small and irregular.

The other symptoms were abdominal swelling, picking at the bed clothes, *subsultus tendinum*, and a marked disparity in the size of the pupils, the right being larger than the left. This latter sign persisted throughout the active course of the fever and far into the convalescence and was indicative of grave nervous disturbance. On the 14th the respiration rose to 30 per minute, the cause being discovered on examination of the lungs. Consolidation of the left lung was taking place. This was dissipated within a few days by a jacket poultice, careful change of position and by small doses of digitalis to stimulate the action of the heart.

The temperature now began to fall, reaching on the morning of the 16th  $101\frac{3}{4}^{\circ}$ . During the evening of the 15th and the morning of the 16th there were three small stools, each mixed with blood. On the evening of the 18th there were three similar ones, thin, dark, and bloody. An attempt was made to control the hemorrhage by giving a prescription which Murchison states had for many years proved in his hands almost invariably successful. This consisted chiefly of tannic acid, turpentine and chloroform.

The pulse was still good and averaging but little over 100°. The respiration was 20 and over. Mentally the patient was not always clear, wishing at times to get out of bed. He slept most of the time, rousing up merely to take nourishment each half hour, which consisted of barley water, milk and whisky.

It was no longer possible, on account of the low, delirious condition of the patient, to take the temperature under the tongue. It was, therefore, from this time on taken in the axilla.

On the evening of the 19th the temperature was 104 $\frac{3}{4}$ °, but on the evening of the 20th, a large dark stool mixed with blood having passed, it fell to 102 $\frac{1}{4}$ °

On the morning of the 21st I was hastily summoned at 4:30 o'clock by the announcement that there had been another severe hemorrhage, more profuse than any of the previous ones. On my arrival another bloody stool had passed and I found the patient exsanguinated. The respiration was rapid; the pulse was over 120, and the body was cold. Believing that death was near unless some very decided step was taken, I determined on transfusion and started out before six to summon aid. I called on Drs. A. P. Whittell and C. Max. Richter, but owing to several unavoidable delays we did not arrive at the bedside until 9 o'clock, meanwhile two more bloody stools had been passed, and the patient was now in a still more desperate condition. The total amount of blood lost since 4 o'clock was estimated at 18 oz.; a very serious loss when the former condition of the patient is considered. At the suggestion of Dr. Richter, who has had considerable experience with this operation, a saline solution was injected into the median vein of the left arm. As the fluid flowed into the system the countenance showed great distress; the breathing became short, hasty and labored, while the pulse disappeared entirely from the wrist. Although 50 oz. had been prepared the operation was stopped after 15 oz. had been used, on account of the utter collapse of the patient, who looked as though he might die at any minute. Whisky was freely administered and after an hour or so a small thready, rapid pulse appeared at the wrist. This remained small and hardly perceptible. The ears were waxy and the face bore a sickly yellowish hue. Death was evidently still close at hand, unless something further was done, for should he by any chance rally what had been done to prevent a further occurrence of the fatal hemorrhage? Again I thought of transfusion and determined this time



that he should be supplied with "entire" blood, that there should be no substitute, nor should there be anything taken from the vital fluid. A simple Aveling apparatus was obtained, which is really a small Davidson syringe without valves, and with the aid of Drs. Whittell and Kerr, 6 oz. of blood were thrown from the arm of the nurse into that of the patient. To prevent coagulation the blood was forced in rapidly, it taking but a couple of minutes to inject the whole quantity. Again the distress was great and the rapidity of the breathing was increased, but the pulse remained about the same. Previously, a syringe (15 grains) of Bonjean's ergotin had been injected under the skin of the abdomen, and now at 8 o'clock another was injected. Twenty minims of McMunn's elixir was given and the patient each half hour was plied with strong black coffee. There was improvement by 8 o'clock, but by 12 o'clock it was very decided, for the body, for the first time in eighteen hours, became dry and warm. For six hours after the first transfusion the body was covered with a very profuse cold perspiration.

During these especially anxious twenty-four hours the temperature was not taken, and I doubt whether it would have been possible to even start the register from its lowest point, for it must have been far below normal.

The first temperature taken on the 22d recorded  $101\frac{3}{4}^{\circ}$ . From fear of return of hemorrhage the injections of ergotin were continued for a week. On the 26th a bronchitis sent the temperature up to  $104\frac{1}{2}^{\circ}$ . From this time on there was no untoward symptom and convalescence set in, the thermometer marking  $99^{\circ}$  for the first time on the 4th of October. As the thermometer used reads, I believe,  $\frac{1}{2}^{\circ}$  too high, I consider this temperature normal. The patient recovered health, strength and flesh, but has been kept in bed by a severe pain over the region of the ileo-cæcal valve, this pain extending to the back. This must, I believe, be due to adhesions following severe inflammation. He can lie on his back and on the right side, but if he lies on the left side or attempts to sit up the pain is severe. A few days since, after about a week of poor appetite, headache, etc., the thermometer showed again the stairlike ascent of typhoid, and on the third day reached  $103^{\circ}$ . This looked much like another attack, and, although the bowels had been perfectly regular, 10 gr. of blue mass was administered and the temperature promptly fell. Time alone is needed to put him upon his feet.

In looking back over the course of this case we notice a number of points which we believe contributed to its successful issue. In the first place there was none of that unfortunate cramping from want of resources, which so often confronts us and precludes the possibility of effecting a cure. The father of the patient thoughtfully telegraphed in the earliest stages of the disease: "Spare no expense in consultations, nurses, etc., etc." "Employ the best talent obtainable." Consequently nothing was wanting which money could buy. Secondly, his early removal to suitable rooms where he could be seen as often and as quickly as the emergencies, which constantly arose, demanded. A few hours delay at the time when pneumonia or bronchitis appeared, or when transfusion was deemed necessary and the result might have been very different. Again, a strong constitution and a good stomach which never once refused the half hourly doses of nourishment offered for weeks both by day and by night was much in the patient's favor.

Neither must we forget the valuable advice tendered by the consultants, Drs. Simpson, Lane and Kerr, nor above all the great aid in the *technique* of the critical operations of transfusion rendered by Drs. Whittell and Richter. The transfusion of "entire blood" from one system to another is so notably difficult that it is seldom attempted, for the slightest slip, if it does not cost the subject his life, may at least render him subject to many troublesome and dangerous complications from which he can but slowly recover. And here let us remark on the character of the fluids to be injected. In a case of sudden loss of blood and where the hemorrhage has been controlled a saline solution is most excellent, as may be also defibrinated blood or any other harmless fluid which may temporarily fill the void. Entirely otherwise is it when, as in this case, there have been repeated hemorrhages from a concealed source and where the little blood that remains is of poor quality. Our only hope of forming a firm clot at the mouths of the open vessels is by injecting healthy unde-fibrinated blood. These deductions are strengthened by the report of a similar case which lately occurred in Germany, where a saline solution was likewise tried and success only obtained after the transfusion of "entire" blood. Let us not forget the ergotine which probably acted as a powerful aid in contracting the open vessels and thus helping thrombus formation.

The pertinent question might be asked whether a more vigorous antipyretic treatment might not have shortened the case. We believe that it might, but not in a way satisfactory to the patient or his friends. Notwithstanding the high temperature which lasted for days all other symptoms, with the sole exception of the repeated hemorrhages, were favorable. This hemorrhagic tendency exhibited itself before the patient was under treatment by bloody stools, and continued to show itself in this manner and by epistaxis until after transfusion was performed. Had the favorite (with many) yet rather harsh treatment of the pyrexia by means of cold baths been followed, in all probability a fatal intestinal hemorrhage would have resulted.

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### **TRACHEOTOMY IN DIPHTHERIA AND ITS AFTER TREATMENT.**

#### **With a Report of Twelve Cases.**

By JEROME A. ANDERSON, M. D.

Tracheotomy is classed by many of our best surgeons as a difficult, if not dangerous operation. It is often called for at a moment's notice, and under the most unfavorable conditions. It has so far been followed by an appalling mortality, yet, as without it death is inevitable, it is eminently justifiable, and must always continue to be made.

In view of these facts anything which reduces the death rate either by simplifying the *technique* of the operation itself, or by rendering the after treatment more effective, however trivial it may appear, demands our careful consideration. To point out methods by means of which I have succeeded to some extent in accomplishing both these indications, is the object of this paper.

First, then, as to the operation. Every author whom I have consulted—which includes a large list—directs certain forms to be observed. A long incision, varying from one to four inches; a careful dissection; hooking up on a tenaculum or otherwise securing the trachea after fully exposing it; dividing three or four rings and inserting the tube constitute, in brief, the various steps to be taken. A few, in case of urgent necessity direct the trachea to be seized between the thumb and fingers and firmly held until the operator by bold, rapid incisions shall have entered its lumen.

In my later and most successful operations I have abandoned these directions entirely and now operate in the following manner, which is only original in its combination of details. First, the kind of operation is decided upon, giving the preference, if not absolutely contra-indicated, to the low, or that below the isthmus of the thyroid.

By so choosing, the chances of finding the trachea unobstructed by membrane are greatly increased, while the trachea itself is somewhat larger. Then select the exact point of penetration, locating the trachea and assuring the absence of any large abnormal vessels by the touch. Then introduce the scalpel and slowly and carefully thrust it to the trachea, enter it, and, in a child, divide about one-half inch of its length. The sensation imparted when the trachea is reached and opened is so plain and characteristic that even in inexperienced hands there ought to be no danger of penetrating too far. The one rule to be observed is to keep the head and neck straight, make the thrust in the median line, from before directly backward and slightly downwards until the trachea is opened. The advantages of opening the trachea by this first direct thrust are, that it is held exactly in the median line and in the proper position for dividing its rings by its natural attachments to surrounding tissues, which is not the case after dissecting down to it. Let any one who has never made the operation, attempt, in a fat neck and deep-lying trachea, to locate the proper point for incising the rings after the parts have been loosened and pushed aside by dissection, and he will be surprised at the doubt and uncertainty practically of what theoretically should be so plain. The very trachea itself often seems to disappear as if by magic, and good surgeons have confessed themselves puzzled at times before recognizing it. Of course all uncertainty may be avoided by the barbarous dissection four inches long, recommended by some surgeons. Happily for the little patients, however, few require to learn their anatomy upon the living subject.

To proceed. After incising the rings by the direct thrust as described, before withdrawing the scalpel, pass some dilating instrument into the trachea by its side, then withdraw the scalpel and quickly and deftly insert the tube. To dilate or hold open the tracheal incision, a good elastic wire looped like a hairpin is better than the forceps ordinarily used, because the latter are too bulky. In fact, I nearly always use a common hairpin.

If the trachea is unoccluded, the tube can be easily inserted and the operation practically concluded within two minutes or less of the first incision. Little or no blood enters the trachea until the incision in it is dilated to allow the insertion of the tube, and then it is at once coughed out. This in most cases effectually clears the trachea below the incision. After the tube is in, if a little blood still finds its way into the trachea gentle compression laterally will control it. Usually, however, it has seemed to me best to let the patient cough it up through the tube, as not only favoring the expulsion of any remaining shreds of membrane, but as tending by the convulsive effort to expand those portions of the lungs which may have become collapsed during the preceding partial asphyxia.

If, however, the tube cannot be inserted, or being inserted, increases the asphyxia, or if the first thrust markedly increase the asphyxia, it may be assumed with certainty that membrane lies below the incision, and has very likely been pushed before the scalpel and not divided. Then let the trachea alone, for no blood will enter, because the edges of the incision, being elastic, will at once approximate. Enlarge the external wound sufficiently to admit a finger, find the tracheal incision with the nail, and so guide the insertion of a long, slender dressing forceps, properly curved. With these seize and withdraw everything that obstructs its lumen. Do this thoroughly, for upon its thoroughness depends in a great measure the success of the operation. I have so withdrawn complete casts of the trachea down to and even below the bifurcation. The accompanying coughing and choking may seem alarming, but in reality are good indications, as showing a proper reflex response to tracheal irritation and a satisfactory condition of the sensorium.

Expect to find the trachea clear in all cases of quickly progressive asphyxia; look out for membrane low down where this symptom has been slowly becoming more pronounced for some days.

After clearing out the trachea until the respiration is deep and unobstructed, insert the tube, and close the wound about it neatly with silver sutures.

It is better, of course, to operate early, before the lungs become cedematous; but I have never had an opportunity to do so. Until it is plain to the dullest comprehension that the child is choking to death consent can seldom be obtained. With a les-

sened mortality, this horror of the operation among the laity may possibly disappear.

I have never used anesthesia. In diphtheria, as is well known, sensation is very obtuse, so much so, that absence of pain in the throat is an important aid in the differential diagnosis between this and other throat inflammations. The asphyxiation increases this obtuseness to such an extent that the operation is practically painless. Chloroform would increase the prostration; ether is too slow in exigencies. The increased danger of blood running down and occluding the bronchii during narcosis more than offsets, I think, any real benefit gained by anesthesia.

The advantages of the above method of operating may be briefly summarized as :

The celerity of the operation.

The ease and certainty with which the trachea is reached and opened.

The absence of the shock caused by large incisions and dissections.

The small amount of wound surface exposed to auto-infection from secretions expectorated; thus materially diminishing the danger of blood poisoning.

And, lastly, the absence of many details which tend to horrify relations and friends, and to bring reproach upon the operator in case of failure.

The after treatment begins by keeping the temperature of the room from 75° to 80° F. constantly. Have it so previous to the operation if there be time. Keep lime water constantly boiling, so as to render the air non-irritating by its vapor.

The essential point in the after treatment, however, is to spray an alkaline solution down the tube often enough to keep it absolutely clear. This means every 5, 10 or 15 minutes during the first 48 hours; less often after that time. My preference is a saturated solution of bi-carbonate of soda, containing one part to 2000 of mercuric bi-chloride. This is non-irritating and possesses the power of dissolving both mucus and the liquid fibrin poured out which would speedily harden into membrane if allowed to remain. Used persistently and intelligently, according to the necessities of each particular patient, this spraying will almost entirely eliminate asphyxia as a death factor, and restore the case to the dangers only of ordinary diphtheria. It is of no use to say to the nurse, "spray every 15 minutes" or

"every half hour," and depend upon this regularity to keep the tube clear. At any pronounced rattling or unavailing coughing, or husky respiration, the inner tube must be promptly removed, given to a second attendant to cleanse, while the nurse, who must positively never leave her charge a moment, thoroughly sprays down and into the outer tube, at the same time, as well as at all times, being prepared with a bit of soft rag to lightly touch off every particle of matter coughed up to its aperture. Nothing must be permitted to be drawn back, which, owing to the tenacity of the mucous, will surely happen, during the inspiratory effort, if the nurse is not quick and vigilant. If the cough brings matter partly out, but not sufficiently to be wiped off, spray at once. When the fit is over and the respiration again free, dip the cleaned inner tube in a 1 to 500 solution of bi-chloride of mercury, and return it moist. A bit of cloth saturated in this same strong solution is to be kept constantly on the wound around the tube. Since using it in this exceptional strength I have had no wounds attacked by membrane, which was the rule previously, if my patient lived long enough.

I will now give a brief report of my tracheotomies, with the results, excluding one for a foreign body, although the after treatment, I think, should be similar:

Case I. Packard, aged 3. Diphtheritic croup;  $1\frac{1}{2}$  inch incision. No after treatment, except to try to keep the tube clear by swabbing. Death in 52 hours from asphyxia, following occlusion of the trachea below the tube.

Case II. McCormack, aged 3. Diphtheritic croup;  $1\frac{1}{2}$  inch incision. Death in 15 minutes from shock and failure to relieve the asphyxia.

Case III. Edwards, aged 4. Membranous croup, so called;  $1\frac{1}{2}$  inch incision. Practically no after treatment, except steam in the room. Death in 3 days from asphyxia, following occlusion of the trachea below the tube.

Case IV. Fahey, aged 4. Diphtheritic croup; 1 inch incision. Spray of pancreatine and bi-carbonate of soda. Trachea kept open easily. Death in 4 days from blood poisoning and heart failure. This disease was several days in the fauces; then it invaded the larynx and trachea. Fully relieved by operation, but developed measles while convalescent and succumbed. Four in this family had diphtheria. In three it was followed during convalescence or immediately after recovery by measles, which were

very bad in another family occupying rooms in the same house, and with whom there was a constant intercourse maintained. Two of the three died.

Case V. Harvey, aged 8. Diphtheritic croup; 1 inch incision. Spray like last. Recovery. Tube left in 6 days. I abandoned the operation at one point in this case, believing the child dead. Revived by hypodermic of whisky and made a good recovery.

Case VI. O'Shaughnessey, aged  $2\frac{1}{2}$ . Membranous croup; 1 inch incision. Same spray; badly attended to. Death in 48 hours from asphyxia, following occlusion of the trachea below the tube.

Case VII. Hildebrand, aged 4. Membranous croup; 1 inch incision. Same spray. Tube kept easily open. Death in 4 days from blood-poisoning.

Case VIII. Smith, aged 3;  $1\frac{1}{2}$  inch incision. Death in 15 minutes from inability to clear the trachea. This unfortunate result was entirely owing to the lack of proper forceps for removing obstructions from the trachea. I had gone a long distance in ignorance of the nature of the case. I had to operate at once, and found the trachea even low down filled with membrane, which I was unable to extract. Had I forceps to clear the trachea, the result would have been, no doubt, different, the case, except the asphyxia, being very favorable.

Case IX. Cassassi, aged 2. Diphtheritic croup; 1 inch incision. Same spray. Tube easily kept clear, notwithstanding a profuse expectoration from bronchitis. Death in 36 hours from bronchitis and exhaustion. Bronchitis fully developed before the operation.

Case X. Greeneway, aged 6. Diphtheritic croup. Direct thrust. Same spray. Tube easily kept clear. Recovery. Tube remained in eight days. Temporary paralysis of fauces.

Case XI. Collins, aged 4. Diphtheritic croup. Direct thrust. Soda and bichloride spray. Recovery. Tube kept in ten days. Transient paraplegia.

Case XII. Voss, aged 2 years and 8 months. Membranous croup. Direct thrust. Incision enlarged and membrane extracted. Recovery. Soda and bichloride spray. Tube retained 22 days, owing to paralysis of epiglottis and fauces.

Thus a total of twelve cases gives four recoveries, or twenty-five per cent. But in three of these there was no intelligent after treatment, and in one, failure from want of instruments,



leaving eight which can fairly be taken as tests of the methods indicated. Of these, four recovered, or fifty per cent. Of those who died, but one perished from asphyxia, showing the operation *per se* to have been successful in seven out of eight cases, or eighty-seven and a half per cent.

Bear in mind, the highest results claimed for this method of operating and after treatment is only that it removes diphtheritic croup from what is practically certain death, and places it, as to danger, among the ordinary forms of diphtheria. All the perils of this formidable disease, except asphyxia, have still to be encountered.

I have little desire to enter upon the vexed question of internal medication. After tracheotomy my cases received the treatment of ordinary diphtheria. If asthenic, and the danger in the direction of blood poisoning and heart failure, they received chlorate of potash and iron. If sthenic and inflammatory, pointing to renewed peril from asphyxia by new membrane formation, chloride of ammonium, sulphite of soda and chlorate of potass were exhibited. All received whisky in large quantities and any food which they would take.

In case IX., recognizing the doubtful utility of tracheotomy from the physical condition, I tried tubage of the larynx, as recommended by some recent authors. I can not too strongly condemn it in diphtheria of the trachea, however useful it may prove in laryngeal affections. It is easy to insert the tube in the larynx, it is also easy to see how entirely this must fail to relieve asphyxia from obstruction in the trachea below the larynx. In this case the air entered the tube with a sound like a toy horn, and the only effect was to so increase the asphyxia, probably by partially detaching portions of membrane, that I was compelled to do a hasty tracheotomy to prevent instant death, which the parents would have perhaps properly attributed to the insertion of the tube. But for this I do not think I would have operated in so unpromising a case. Entire failure to relieve asphyxia also followed an attempt to tube a second case.

Mucus must of necessity quickly occlude the small apertures of the tube, and I have seen fatal progressive asphyxia where the thickness of the obstructing membrane was no greater than that of the tube proposed to be introduced. The child can not drink or be fed while the tube is *in situ*. In short, tubing the larynx can be of no possible service where, as in diphtheria, the

air must be mechanically admitted without a moment's interruption for many days.

I am also convinced of the absolute unity of membranous and diphtheritic croup. I have seen typical membranous croup cause blood poisoning, characterized by profound anemia with heart failure, as in case VII. I have seen cases of purely membranous croup co-existent in the same family with other cases of undoubted diphtheria. I have seen each, as far as human judgment could pronounce, produce the other by contagion. The most careful microscopic examination with good objectives, and varied staining fails in my hands to differentiate the two membranes. Before such a mass of practical evidence mere theoretical distinctions must give place.

One farther protest against so-called facts about this disease which I in common with the great majority of the profession accepted without investigation at second hand, and I am done. It is this. The germ of diphtheria has, I am sure, never been found. The alleged micrococcus I have discovered in scarlatina, in whooping cough, in measles, and in many forms of catarrh. It is only an altered pus corpuscle. It may contain the germ proper, but this remains to be demonstrated. The fact that this corpuscle is never found within the membrane itself, where according to our theories it ought to most abound, seems to me to indicate that in selecting it as the active agent of infection we are entirely astray.

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### CASES OF ANEURISM OF THE AORTIC ARCH.

Report to the San Francisco County Medical Society by W. E. TAYLOR,  
M. D., President of the Society.

In presenting these pathological specimens to the Society, I should like to premise my remarks upon their history by stating my interpretation of the word "aneurism," as I understand it. An aneurism is a pulsating tumor containing blood in connection with a blood vessel, and whose walls are entirely or in part made up from one or more of the arterial tunics. This excludes that form of tumor known as traumatic aneurism.

The chief cause of this disease is always to be found in a pre-existing diseased condition of the arterial walls. There is no such thing as the sudden or immediate formation of an aneurism; and it is probable that, in cases where an aneurism

is reported as appearing immediately after some severe effort, the tumor had existed sometime previous to its appearance upon the surface and had only been forced through the tissues by the exertion. In all the specimens now exhibited an examination will reveal the presence of atheroma extending along the coat of the vessel beyond the tumor. The constitutional diseases leading to this condition are syphilis, alcoholism, gout, rheumatism and in fact any disease that tends to produce degenerative changes in the vessels. There can be no doubt that the chief cause is syphilis, this has been my own experience and it is in keeping with the report of the Registrar General of England, where it is stated that in seventy-five per cent of the deaths from aneurism there is a syphilitic history. There is also a time of life when aneurism is particularly common, so common in fact that it may be described as the aneurismal age, just as we have a cancerous age, and this may be said to lie between the thirty-eighth and fifty-second years of a mans life. It is true that atheroma is a disease of old age, and we might therefore expect to find aneurism at the same period, but in old men the vessels change and the force of the circulation diminishes *pari passu*, so that at this time of life, the degenerated condition does not lead to the same results as when it occurs prematurely in a young man whose heart is still strong and vigorous. Exertion, therefore, is only a secondary cause acting upon a primarily diseased vessel.

All the specimens exhibited are examples of aneurism of the arch of the aortic.

Case I. This patient complained of cough, sore throat and difficulty in deglutition, all of which he attributed to severe cold. The metallic ring of the cough at once give rise to suspicion of an aneurism pressing upon the air passages, but a physical examination revealed nothing more than an occasional faint murmur accompanied by a musical sound at the right side of the sternum. He became much worse, so that for two or three weeks he was hardly able to swallow and the cough was so distressing that he was only comfortable when under the influence of chloral or opium. After this he improved for about three weeks, but only to be again attacked by a cough so violent that he was confined to his room and treated with hypodermic injections of morphia.

Even now there was no external pulsation nor other positive

sign of aneurism, but the diagnosis was the dilation of the aorta with an aneurism springing from the distal end of the transverse portion of that vessel and projecting downwards so as to press upon the œsophagus and lower part of the trachea or left bronchus, and also stretching the left pneumogastric, or recurrent laryngeal nerve.

About this time he developed hectic fever with night sweats and emaciation which together with the cough and expectoration closely simulated phthisis.

The patient died from hemorrhage after about eight months sickness, and the autopsy showed the presence of an aneurism which had ruptured into the left bronchus just below the bifurcation of the trachea. The aorta was atheromatous and much dilated, while the left pneumogastric nerve was stretched and flattened.

Case II. The patient was a fireman in the navy, stout, strong and healthy in appearance, who, three months after enlistment, began to suffer from hæmoptysis, and died after a little more than one week's sickness. The autopsy showed that an aneurism, springing from the aorta at the junction of the descending and transverse portions, had embedded itself in the upper lobe of the left lung into which it had opened, producing the hæmoptysis, and as the pulmonary tissue gave way before the pressure of the blood a final rupture took place into the pleural cavity that resulted in the death of the patient.

Case III. In this case there was a history of pneumonia, but after his recovery the patient continued to cough and even to bring up blood, and physical examination showed the usual signs of aneurism of the arch of the aorta together with symptoms of pressure upon the trachea. Post mortem examination showed the aneurism to be full of large clots, and a little hole passing beneath the laminated clot that lined the wall into the trachea through which the blood leaked and was expectorated.

Case IV. The patient first complained of pain, spasmodic in character, along the loins and small of the back, and soon afterward the characteristic aneurismal cough was developed, together with other symptoms of that disease. This man died from pressure on the air passages, and the autopsy showed not only an aneurism of the arch of the aorta, but also one on the abdominal aorta just below the diaphragm and pressing upon the œsophagus, which accounted for the lumbar pains.

Case V The patient complained of pain in the right sterno-clavicular region, and a pulsating tumor could be easily seen at this point. Soon after pressure symptoms were developed, the pain was so severe that he could not use his arm, and the cough so great that he was comparatively useless for three months. Gradually the cough and dyspnoea improved, the pain left him so that he regained the use of his arm, while at the same time the tumor became firmer, its pulsation less, and the pulse disappeared from the carotid and right wrist. This improvement continued for nearly a year, so that he resumed work and continued at it until he had a hemiplegic attack, possibly induced from the passage of a clot into the cerebral circulation, from which he recovered in two months. He ultimately died from pressure of the tumor in the air passages. The autopsy revealed a sacculated aneurism completely filled with clots and communicating with the arch of the aorta.

Case VI. In this instance the tumor was on the ascending part of the aorta. At first the patient experienced severe pain, but this was relieved by large doses of iodide of potash, so that he was able to follow his occupation for over six years, and continued to work until a few days before his death from pressure on the air passages.

Case VII. This patient lived for two years after the appearance of the tumor. It was an aneurism of the ascending aorta protruding through the chest to the right of the sternum, and complicated by mitral stenosis, cardiac dilatation, with displacement to the left side, and irregular action. He did not suffer from pain, dyspnoea, or difficulty in swallowing, and died suddenly while at stool. The post mortem examination showed an immense sac, capable of containing nearly two pints of fluid, adherent to the chest wall and pressing upon the sternum so as to produce absorption of part of that bone, together with the anterior portions of the second and third ribs. The sac seemed to involve the whole arch, but the greater portion came from the cardiac side; it was unruptured, contained no clot, but its internal surface was marked with numerous small pouches. The aorta was diseased as far as the diaphragm, probably further. The heart was enormous, weighing about thirty-two ounces, but apparently the valves were sound. An artery as large as the radial sprang from the arch, between the innominate and left carotid. Death probably resulted from heart failure.

The history of nearly all of twenty-nine cases of aneurism that have come under my notice during the past few years has been syphilitic, and all of them have shown, as the most prominent symptoms, hoarseness, cough, and the result of pressure on the organs. In all of them where an autopsy was obtained there was well-marked disease of the vessels.

There is no curative treatment for aneurism of the arch of the aorta. Rest, iodide of potash and diet will prolong life and relieve suffering, but they are only palliative, and a radical cure for an aneurism of the aortic arch by formation of clot means in nearly every case the death of the patient.

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### **ANEURISM OF THE ARCH OF THE AORTA.**

By C. DONNELLY, M. D.

THOMAS GARDNER, aged 42, a native of Scotland, by occupation a shoemaker; married 15 years; wife and two children; never addicted to drink intoxicating liquors. Had pleurisy over three years ago of the left side, and was treated by Dr. Perchment of Allegheny City, Pa.; was cupped, blistered, and the usual remedies given. The pleuritic pain commenced at the short ribs and then ascended to between the third and fourth ribs. He was nine months in bed before the tumor began to show itself as a small lump between the third and fourth ribs and beating like the pulse, it continued to grow larger and larger until the present time, three years and five months. He could not work at his trade, but could walk and attend to other business.

I saw Mr. Gardner in consultation with the late Dr. Walter, of Pittsburg, Pa., and attended him for about four months previous to his death. About a month before his death a discoloration of the skin appeared on the apex of the tumor, which gradually increased till about one and a half inches in diameter, when it began to mortify. The tumor at this time projected from the breast as large as a half section of a large cocoanut. He rested in a sitting position, propped up in bed, for several weeks before his death. On the night of his death he managed to get out of bed without his wife hearing him,—she always slept in a bed close to his, to be near in case he wished for anything,—and went down stairs to a basement kitchen and took down a basket containing bread, from a nail on which it was

hanging, cut and buttered the bread, and as is supposed attempted to replace the basket, and in so doing, the eschar on the tumor was burst and he fell to the floor, and was dead before his wife reached him, who, on hearing the noise, hastened to his assistance. I saw him a few minutes afterwards, a bloodless corpse. A few days previous to his death I had some excellent photographs taken, showing the unusual size of the projecting tumor.

#### POST MORTEM EXAMINATION.

Incision through skin from center of tumor, and around its base; then dissected it out by cutting through ribs and sternum. Tumor adhering to pleura of right side; upper part of right lung and pleura adhering to ribs. Adhesion between costal and intercostal pleura on left side from first to sixth ribs; third and fourth ribs separated by tumor, with two-thirds of third rib absorbed; left lung compressed to one-third its natural size. Heart natural in size. Pericardium attached to diaphragm, and extensively and firmly to lungs. Pulmonary artery undergone calcareous degeneration. Partial absorption of dorsal vertebræ from second to seventh, particularly the bodies of sixth and seventh. On left side, ribs and intercostal muscles considerably absorbed. The aneurismal sac was surrounded by a large tumor supplied with blood from the aneurism.

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#### REMOVAL OF A TUMOR OF THE BRAIN.

By DR. J. O. HIRSCHFELDER, Prof. Clinical Medicine, Cooper Med. Col.

Since the marvelous progress that has been made within the last fifteen years in the localization of cerebral affections, it has become a comparatively easy task in many cases to determine the position of such lesion with great accuracy. It has become easier with every year to diagnosticate the presence and situation of tumors of the brain, and there is no doubt that within a very short time the successful removal of cerebral neoplasms will become more frequent. Until now but one case has been reported—that performed during last year by Bennett and Godlee.

Failures in medicine, and especially partial failures, often teach as much as successes, and it is to be hoped that an important lesson may be learned from the narration of the following case, in

which the tumor diagnosticated was found by the operating surgeon and partially removed, even if the operation did not prolong but, on the contrary, shortened the life of the patient.

HERMANN SNYDER, laborer; nativity, Germany; age, 33; married; parents—mother died in childbed; father living and healthy, age, 71 years.

One brother and one sister living and well. One brother and one sister dead; causes unknown.

Diseases of childhood—measles.

Uses alcoholic drinks and tobacco moderately.

Denies having suffered from any venereal diseases.

Has enjoyed good health up to present trouble, which began about one year ago last August (18 months ago).

This sickness began by pain in the head of a dull, heavy nature, occurring in the early morning hours (4—6 o'clock, A. M.), but generally disappearing soon after rising, and always confined to the same spot, just below the occipital protuberance.

Sometimes he had attacks of dizziness during the day, when surrounding objects would seem to turn.

Next, the left leg felt stiff and lame and the eyesight grew dim—this was at first improved by glasses, but soon these were of no avail, and now amaurosis of both eyes is nearly complete.

Eyesight has failed rapidly since last November (three months ago).

Left arm also failed in strength, and patient could not tell when he held an object in his hands.

He has occasional epileptiform seizures, which began about the same time as did the headaches. They are irregular in occurrence; the muscles twitch, the patient foams at the mouth, and sleeps after the attack. He is conscious during these seizures, and cannot tell beforehand when they will occur.

Twitchings of the face were also noticed (left side) by friends during the attacks, and also spasmodic contractures of left lower extremity.

He has complained of latero-frontal pains for about one week past. He cannot urinate till the desire is very strong, and has had spells of vomiting and attacks of singultus.

There are spasms and jerking of muscles of left side, when the left arm will be drawn upward and facial muscles contracted, but these are unaccompanied by loss of consciousness.



## PHYSICAL EXAMINATION.

Patient is well developed and muscular, and weighed 179 lbs. one week ago. On wrinkling forehead, left side droops. Eyes close to equal degree. Left labio-nasal fold obliterated.

Left corner of mouth droops when mouth is closed, and more so on showing teeth.

Paresis of both upper extremities. Strength of left hand is slightly diminished, the right hand being 38, left, 30, with dynamometer. Patient is righthanded. Loss of muscular sense in left upper extremity, and to less degree in the lower.

The sense of taste and smell and movements of the tongue are normal.

Slight anæsthesia of the three terminal branches of trigeminal nerve on the left side, but sensation normal in upper and lower extremities of both sides.

Tendon reflex increased on both sides, especially the left; and striking below either patella causes contractures of muscles of opposite side.

Left ear hears watch at eighteen inches. Right ear the same.

In walking, brings the left heel down to the ground before the rest of the foot. He totters on standing with eyes closed.

Chest.—Broad, short, deep, well arched.

Lungs.—Percussion normal. Auscultation normal.

Liver.—Pneumohepatic line, upper border sixth rib. Diameter,  $3\frac{1}{2}$  inches.

Heart.—Upper border, upper border fifth rib. Right border, one-quarter inch to the left of left sternal border. Apex beat, fifth interspace, one inch to right of left mammillary line. Auscultation, tones all clear, first tones feeble.

Spleen.—Two inches in front of anterior axillary line.

Eyes.—Field of vision normal. Right eye counts fingers at five feet. Left eye has quantitative perception of light. External appearance normal. Pupils somewhat dilated. Reaction to light sluggish. Tension normal; no sensitiveness. Left eye, optic neuritis, with atrophy; arteries very small. Right eye, same condition, but to less degree; outer side of disc most involved. Black pigment seen in center of yellow spot of right eye.

February 7. Dizzy spells and headache in right parietal region to-day.

February 11. Condition worse. With attacks of dizziness, to-day nystagmus was very noticeable.

February 13. Had severe attacks of dizziness this forenoon. Nystagmus marked. Unable to sleep well for past four nights.

February 14. Given chloral hydrate, grains xv., last night. Slept well, and no more attacks of vertigo.

February 15. Had two attacks of dizziness this morning, in which nystagmus and dribbling of saliva were noticeable. Was given cheoral hydrate last night. Patient partook sparingly of gruel this morning, in view of an operation. Patient worse to-day. Paralysis more marked.

In this case all symptoms pointed to a tumor of the brain. We had the headache, the vertigo, the vomiting, the unilateral paralysis, and the atrophy of the optic nerves, which have been found to be characteristic of new formations within the cranial cavity. From the epileptic and epileptiform seizures occurring without loss of consciousness, the cortical seat of the growth could be concluded with great probability. It was likewise evident that the motor centers around the sulcus rolando upon the right side must be the seat, and from the fact that the face, arm and leg centers apparently were effected, the middle portion was supposed to be with certainty involved. It having been found that the seat of sensation exists in the parietal lobes of the brain, and anæsthesia of the left half of the face existing in our case, we took it for granted that the tumor affected this portion of the brain, and hence the neoplasm was located in the middle portion of the gyrus postcentralis.

Syphilis was excluded by the history and the absence of any other symptoms pointing to this disease, but, nevertheless, the patient was put upon large doses of iodide of potash (3 iss. per day). Upon this treatment he rapidly grew worse, so that it was decided to trephine, and, if possible, remove the tumor.

Accordingly, on February 15th, 1886, the right half of the head was shaved and patient etherized at 10:30 p. m.

The operation of trephining was performed by Dr. Morse, slightly behind the site of the middle portion of the sulcus rolando. Three buttons of bone were removed, and an opening about three inches across made through the skull, when the dura mater was found quite tense, thickened, and whitened at the posterior part of the wound, and on palpation the portion of brain beneath this posterior part was felt to be more dense

and prominent. The portions of skull removed were unusually thin—about one-eighth inch thick.

The dura mater was next slit open on a grooved director, when the parts beneath immediately pushed up through the opening, protruding about one-half inch. The protruding portions showed discolorations as of hemorrhagic infarctions, and on section did not exhibit the appearance of healthy brain tissue, but appeared to be gliomatous.

The outgrowth was excised in part, it being difficult to separate it entirely from the healthy brain tissue. The part removed was about two and one-half cubic cm. in size. Microscopic examination of the tumor showed it to be a glioma.

No pulsations of the brain were observed.

The patient was anaesthetised with difficulty, nearly two pounds of ether being used, and his struggles during the process were confined chiefly to the right extremities. He recovered well from the operation, recognizing those around him, and was transferred to the surgical ward "J." Vomited several times, three hours after the operation.

Operation extended over one and one-fourth hours.

February 16. Hypodermic injections of whisky were given yesterday afternoon and night. Patient has rested easily and the temperature is still low, though the pulse is rapid and feeble. Complains only of pain over site of operation and loss of power of left arm. Paresis in left side of face is more marked this morning and left upper extremity. Enema given—produced two passages.

February 17. Last evening the temperature rose to 101.2° in the axilla, ten grams of quinine were given, and this morning it was 101.2° beneath the tongue. Wound dressed this morning. Right side of face is slightly swollen, and right eye closed by oedematous lids. About three cubic cm. of detritus and gliomatous tissue came away during the irrigation. Antiseptic used is sol. ac. carbol. two and one-half per cent. Parts looked healthy, and were dressed with lint soaked in oil, layer of oil silk, and thick layer of cotton batting; all covered by bandages.

February 18. Wound dressed this morning. Broken down gliomatous tissue washed away in considerable quantity. Face is still somewhat swollen, and both eyes are closed by oedematous lids. On showing teeth, left side of face shows decidedly less

paresis. Left arm is still helpless. Enema, given, followed by two passages.

February 19. Wound dressed—œdema of face less. Gliomatous tissue still discharged.

February 20. Restless night. Wound dressed—parts looked healthy. Considerable discharge of broken down tissue. Some bleeding last night. Passed urine to-day without aid of catheter for first time since operation. No passage yesterday. Left arm still entirely helpless. Paresis of face no better but patient talks clearer, seems brighter and has had no further attacks of dizziness. Temperature hereafter taken per rectum, as mouth cannot be kept closed, the nostrils being nearly occluded.

February 21. Wound dressed this morning. Oozing of blood all day yesterday. Flaps bulged outwards by coagula and detritus. Swelling of scalp, extending from the wound down to the right ear. Passes urine in bed. No pain, and no dizziness yet experienced. Patient seems bright and talks plainer. Edematous swelling has disappeared from both eyes. Enema to-day—two passages.

February 22. Comfortable night. Wound dressed. Considerable swelling. Considerable discharge of broken down glioma and coagula. Slight fetid odor of the discharge from wound noticed for first time. Oozing of blood continues. Paresis same. No œdema of lids. Enema given—two passages.

10:30 P. M. Wound redressed, as the oozing became so extensive, by the House Surgeon. At this time about  $\frac{3}{4}$  ss. of liquid blood escaped with the coagula and detritus which had a decidedly fetid odor.

February 23. Restless night. Chills at 4 P. M., with vomiting. Bandages saturated with blood. Very fetid discharges from the wound. Very strong ammoniacal odor from the urine passed. Temperature higher than ever before. Pulse 111 per minute and thready. Hypodermatic injection given of whisky, m. xx. Wound dressed. Much detritus and coagula. Fetid odor strong.

4 P. M. Wound redressed. Odor very bad. At least 3 xii. of detritus washed away, composed of clots, broken down brain and gliomatous tissue. Patient not so bright as before. Paresis persists. Bleeding considerable. Passes urine in bed. Gradually growing worse—unconscious—singultus—stertorous breathing—pupils contracted—face pallid.

Died at 9:30 P. M.

Post mortem refused by the family. The House Surgeon passed his finger through the opening into the brain substance in different directions, and found it very much softened and broken down. When he lifted up the flaps he also noticed a hernia cerebri through the opening.

The unfavorable result of the operation in this case must be ascribed to the character of the tumor. The soft glioma was continuous with the adjoining brain tissue so that its complete separation was impossible without destruction of a large portion of the cerebrum. Had it been a hard tumor that could have been readily isolated it is very probable that the patient would have recovered.

### **LACTEAL SECRETION IN AN INFANT.**

By BARTON DOZIER, M. D., UKIAH CITY, CAL.

The following case which has come under my notice, I think worthy of publication:

Mrs. B. was confined on December 27, 1885, giving birth to a healthy nine pound female child. Every thing progressed favorably until about the seventh or eighth day, when the child became quite fretful, and moaned while lying in its crib as though suffering from some constant dull pain.

On the tenth day an examination of the child was made, and both breasts were found to be swollen to the size of hen's eggs, and very hard, as though "caked."

On manipulation a little milky fluid exuded from the nipples; in a few minutes the milk began to flow in a stream until about two tablespoonfuls were obtained from each mamma.

After this time the milk was extracted from two to three times a day, the child becoming very restless whenever the breasts became very full. At each milking from one to two tablespoonfuls was obtained, and pieces of cloth placed over the breasts to protect them from irritation, were saturated with the fluid by its constant flow from the nipples between the times of milking.

Camphorated oil was constantly applied to the breasts, and after a gradual decrease in the secretion, at this writing (child now nine weeks old), only a few drops of whitish transparent fluid can be pressed out.

The nipples at this time resemble those of a young girl whose breasts have developed to the size of a small orange, but the mammæ, aside from a little appearance of fulness, do not differ from those of a fat, well-nourished infant of same age.

The mother has had one other child with similar history, only the secretion was not so abundant, and ceased altogether in a few days. No microscopical examination was made of the fluid, but to all ocular appearances it had every resemblance to human milk.

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The object of the "Roussel Law" is the protection of infants. The alarming decrease in the proportion of births to deaths, which in the department of the Rhone, France, were of the former but 2.3 per 1000 in excess of the latter, induced legislation looking to the protection of newly born and nursing infants.

The results, so far, have been extremely satisfactory. The mortality in the department mentioned was as high as 40 and even 60 per cent but since the promulgation of the law mortality has descended to 10 per cent, and for this year to 7.78 per cent for infants cared for by nurses and 10.70 per cent for infants cared for by their family.—*Gazette des Hopitaux*.

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Dr. M. Bertin of Dijon, having ligated the common carotid for the cure of an "Angioma," found, two years later, that a new carotid artery had formed, slightly smaller perhaps than the original, but the pulsations were distinctly visible.

Dr. M. Duploy, of Rochefort, also calls attention to the case of a seaman upon whom he made a postmortem eleven years after having ligated the common carotid. The original artery was replaced by another, occupying almost the same position as the former.—*Gazette des Hopitaux*.

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**HYDROPHOBIA.**—The lady secretary of the Anti-vivisection League of England argues, in a letter to M. Pasteur, that cauterization removes all danger of hydrophobia. Her son once, and she herself five or six times, have thus escaped the malady, and both offer to be bitten by any mad animal in M. Pasteur's laboratory, on the condition of being allowed to treat the wounds themselves.—*Ex.*

## **Proceedings of Societies.**

### **MEMORIAL OF DR. A. M. WILDER.**

(Report of COMMITTEE OF S. F. MED. BEN. SOC.)

Abraham M. Wilder, M. D., a member of this Society for ten years, and its honored and most faithful Secretary for seven years, died of pernicious anæmia, on Sunday, January 17, 1886, his disease having been undoubtedly the result of the exposures, malaria, and over-zealous devotion to duty which marked his three years of service in the army during the war.

Dr. Wilder was born in Bolton, Mass., May 3, 1840, of stern old Puritan stock, tracing his lineage back through many generations of honorable names not only on his father's side, but also through the Fletcher family to which his mother belonged.

He inherited from his mother and imbibed through her teachings many of the traits which distinguished him through his busy and useful life, as she gave to his early education unusually painstaking and thorough personal attention. His early experience was that of the New England farmer's boy of forty years ago, rising at four A. M. to milk cows and drive them to pasture, chop wood and do other so-called "chores" until school time, passing the day at school with very scant leisure for the "play" so loved by boys, and studying in the evening.

In his maturer years he developed more and more the principle thus early engrafted of "all work and no play," until his waking hours seemed all too short for the multitude of cares which he chose to make his own.

Through his mother's devotion to his studies he was enabled to enter the High School at the age of twelve years.

In his fifteenth year the family removed to Kansas, then a frontier settlement, and assisted in the early struggles which made it a free State. His father conducted a farm and a lime-kiln, and in the building of houses and fences, well-digging, and every other necessary labor, toil and privation of frontier and pioneer life, our friend bore his full share.

The fall of 1856 found him behind the counter of the principal dry goods store of the then little town of Lawrence, and later, he was for a time employed in a boot and shoe store; in '57 or '58 the influence of the family physician procured him a

place in a drug store where he began laying the foundations of his studies in medicine, for three years devoting his attention to the multifarious duties of the drug store during the day, and spending the evenings in study under the direction of the family physician.

During these years, by rigid economy, he succeeded in saving money enough to take him to Boston, where he entered, in 1861, the Medical School of Harvard University. Here he lived most frugally as a student under the private tuition of Dr. John Green, now of St. Louis, spending a portion of his time daily in serving as private secretary to the Rev. E. E. Hale, whose friendship was most highly prized by Dr. Wilder through the rest of his life.

In 1862, with his preceptor and friend, Dr. Green, and a party of advanced students in the Medical School, he responded to a call of the Government for contract Surgeons, and made two successive short-term contracts, serving as assistant in hospitals, etc.; after which he successfully passed the searching examinations of the service, and received his appointment as Assistant Surgeon of Volunteers.

In 1863, while stationed in Washington on hospital duty, he enrolled himself as a student of medicine in Georgetown University, and took his degree of M. D.

It is a matter for profound regret that Dr. Wilder did not leave an autographic record of his army life; at present there are only a portion of his original orders and appointments to various posts of service, and the recollection of desultory conversations, from which we can draw the story of those years, which, though few and short, were so full of incident that they seemed a whole separate lifetime.

Dr. Wilder's remarkable talents and traits of character soon attracted attention from those in authority, and his appointment as Major and Surgeon of Volunteers soon followed his Lieutenancy, giving him a much wider sphere of action than would have been his as a regimental surgeon; later he was brevetted Lieutenant-Colonel, which was his rank when discharged. In the field and in post hospitals his surgical skill and sound judgment, his firmness and self-reliance, combined with the knowledge of business methods, and the habit of attention to detail, which were gained during his clerkships, gave him early prominence, and the fact that he served as Medical Director of three differ-



ent army corps in the field before his twenty-sixth year shows the estimation in which he was held. His name will be found on many a page of reports of operations in the Surgical History of the War of 1861-1865. He served continuously till the close of the war, and then for many months longer sought his discharge in vain, as the Government had need of his marked executive ability in the many complications connected with the close of the war and the disbanding of an immense army, but he was finally mustered out in October, 1865.

His labors while in the army were most arduous and regardless of personal ease or comfort, and he narrowly escaped with his life on more than one field of battle while engaged in his surgical duties. As chief operating surgeon of a post hospital, he once stood at the operating table for thirty-six hours without relief, and in many other ways evinced the wonderful power of endurance of his splendid physique, and the unsparing devotion of himself and all his faculties to his country and her defenders.

During a short visit to his home in Lawrence, Kansas, Dr. Wilder was married to Miss Mary E. Jenkins, who, with one daughter and one son, survives him, while five children died in early childhood, and were buried in Oak Hill Cemetery, in Lawrence, where the body of the father was laid to rest with theirs, February 9th, 1886.

After his discharge from the army he spent a few months in Boston, devoting much of his time to the study of ophthalmology under Prof. Henry W. Williams; then, in company with Dr. John Green, made a visit to the hospitals and clinics of London and Paris. On his return, in the spring of 1866, he settled in Lawrence, Kansas, in the practice of general medicine and surgery, where, by his indomitable zeal and the exercise of his finely equipped and cultivated talents, he won a high rank, as is shown by his appointment as chief surgeon of the Kansas Pacific railway, which position he held for several years. From 1868 to 1875, Dr. F. D. Morse was associated with him in practice. In May, 1875, he came to California, on what was intended as a brief trip for health, but was persuaded by Dr. Geo. H. Powers to remain and become associated with him in the special practice of ophthalmology and otology, and in that partnership the remainder of his life was spent. Here, as ever, he immediately displayed his firm intention to be at least among the foremost, and in the spring of 1876 he read his first paper on astigmatism before the State Medical Society.

The thoroughness and perfect clearness of this exposition of an obscure subject brought him to the notice of many, and was a corner-stone in what he steadily strove to make the broad foundation for the building of a wide reputation.

Two exhaustive reports to the State Medical Society on the progress of ophthalmology and otology, papers on color-blindness, and on "new and old codes," with many lesser articles, are still in print, attesting, after he is gone, his studious and progressive mind.

He became a member of the San Francisco Medical Benevolent Society in 1875, and has served for seven years as its secretary, bringing to this office the same fidelity, good judgment and zeal which always characterized him, keeping his accounts and reports with a precision, clearness and neatness which could not be excelled. He entertained high hopes for the future of the Society for which he was ever ready to devote his best energies, and in the introduction and discussion of professional topics at the Society's meetings he was always ready to take his part. He joined the San Francisco County Medical Society, and the State Medical Society in 1876, and the American Medical Association in 1885. He was also a member of the Harvard Club of San Francisco, and for several years was Surgeon of the First Regiment, National Guard of California, in which he took great interest, renewing there his military life, as well as in the Grand Army of the Republic and the Military Order of the Loyal Legion of the United States. In 1882 he assumed the Chair of Ophthalmology and Otology in the Medical Department of the University of California, where, by his thoroughness and striving after a higher and higher ideal of his own sphere and of what the school and the University ought to accomplish, he made himself a conspicuous figure. He had, in no mean degree, the mechanical faculty and power of invention, and at the time of his death had perfected and had only just received the first samples of some twelve or fifteen surgical instruments of his own device, which will be found in the next catalogue of Tieman & Co., too late, alas, for his enjoyment of their usefulness in his own hands or their appreciation by others.

In every relation of life, Dr. A. M. Wilder was the same true, conscientious, untiring, painstaking, thorough and self-reliant man. He was a strong partisan, strong in his likes and dislikes, but always anxious to be just to foe as well as friend. He was

singularly reticent in some ways, and always determined to work out for himself every problem presented, and to form his own judgments, and to be the founder of his own fortunes.

He had an inbred hatred of wrong, oppression, falsehood and dishonesty, and could not resist the desire to attack and conquer or reform every form of evil, wherever found. Nor was he contented with present excellence, but was always striving for progress and improvement. He certainly was not one of those whom specialism, as is often charged, makes narrow, for there was no department of knowledge, of philosophy, science, art, or literature in which he was not at all times ready to take and evince a lively interest.

In his death this Society has lost a most esteemed and valuable member, and in many a household, and many a circle, the kind, skillful physician, the warmhearted, constant friend, the busy, energetic, broadminded man of affairs will be sadly missed.

GEO. H. POWERS, M. D., } Committee.  
WASHINGTON AYER, M. D., }

#### RESOLUTIONS.

Drs. Powers, Ayer and Sawyer were appointed a committee to draw up resolutions.

WHEREAS, Death is the inevitable and common lot of man and,

WHEREAS, Abraham M. Wilder died on the 17th day of January, 1886, therefore,

*Resolved*, That we, members of the San Francisco Medical Benevolent Society, recognize our bereavement, and are deeply impressed with the loss we have sustained by his decease.

*Resolved*, That the medical profession at large has lost by his death a sincere, earnest and faithful laborer; one who devoted his life to the relief of the sufferings of others, and was a genial friend of the afflicted.

*Resolved*, That it is the sentiment of this Society that we convey our expression of sympathy to the surviving members of his family in their bereavement.

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CORRECTION:—Of the three tracheotomies by Dr. Davis reported in last month's proceedings of the S. F. County Medical Society, two were for diphtheria and one for croup. Only two of the cases were successful.

**San Francisco County Medical Society.**

SAN FRANCISCO, February 9, 1886.

The meeting having been called to order by the President, Dr. Taylor, the minutes of the former meeting were read and approved.

The following names were proposed for membership:

Dreisbach Smith, M. D., Cooper Medical College, 1885; W. D. Bell, M. D., University Pennsylvania, 1863; E. F. Card, M. D., Cooper Medical College, 1885; G. E. Camp, M. D., Cooper Medical College, 1885; W. F. Jones, M. D., Cooper Medical College, 1885; J. M. Williamson, M. D., Cooper Medical College, 1885. These were proposed by Dr. Plummer and Dr. Kerr.

F. A. Colby, M. D., Dartmouth Medical College, 1874, proposed by Dr. Whitwell and Dr. Kerr.

H. C. Sawyer, M. D., University of California, 1881, proposed by Dr. Hart and Dr. Fitzgibbon.

Peter A. Kearney, M. D., Cooper Medical College, 1884, proposed by Dr. Hart and Dr. Fitzgibbon.

J. T. McDonald, M. D., Cooper Medical College, 1884, proposed by Dr. W. S. Whitwell and Dr. W. Watt Kerr.

They were referred to the Committee on Admissions. The Committee on Admissions reported favorably on the credentials of Dr. Hermon Partsch, Univ. of Cal., 1884, and Dr. Katherine I. Howard, Univ. of Cal., 1885, who were forthwith elected to membership.

The special committee handed in the following resolutions relative to the death of Dr. A. M. Wilder, which were accepted by the Society:

WHEREAS, Dr. Abraham M. Wilder, for ten years a member of the San Francisco County Medical Society, died January 17th, 1886, in the very midst of an active professional life;

*Resolved*, That in his untimely death, this Society has lost an honored member, the community a valuable citizen, medical science and medical education a most earnest votary, and the sick and suffering a sympathizing and skillful physician.

*Resolved*, That the life and career of Dr. Wilder were a bright example of strict integrity, unswerving devotion to high ideals, unceasing industry and courage in pursuing noble aims, loyalty to country, truth and friends, and of cheerful self-sacrifice to duty.

*Resolved*, That this Society tender to the bereaved family this expression of their most profound sympathy and appreciation of mutual loss.

*Resolved*, That these resolutions be spread upon the minutes of the Society, and copies thereof sent to the family, and to the *Western Lancet* for publication.

GEO. H. POWERS, A. L. LENGFELD, G. W. DAVIS, B. R. SWAN,	}	Committee.
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Dr. Taylor then exhibited ten pathological specimens of aortic aneurism, and gave the clinical history of each. [These cases are reported in another part of this journal.]

Dr. Whitwell said that after examining the beautiful specimens exhibited by Dr. Taylor, we almost felt that we must agree with him *in toto*, and confess that the cure of this disease is impossible. In the absence of Dr. Richter, he would call the attention of the Society to some cases reported by that gentleman more than one year ago, when he distinctly showed that in some instances benefit could be derived from electrolysis, and would more particularly refer to one of those patients, who had been rendered unfit for work by the existence of an aortic aneurism, but who, after three or four sittings, had so far improved that the swelling and pulsation disappeared, the pain was relieved, and the gentleman had been following his occupation for nearly two years.

Dr. J. A. Anderson reported a case of aneurism of the arch near the innominate, where he had tried to produce consolidation by introducing into the sac silver wires tipped with platinum and connected with the battery. The patient professed to experience considerable temporary relief from this treatment, and requested its repetition, but this was refused. Dr. Lane some time after this ligated the innominate and subclavian without effecting a cure.

Dr. Max Axelrood said that, within the last few days, he had seen the case operated on by Dr. Richter and referred to by Dr. Whitwell, and, although the condition of the patient was improved, he could not be regarded as cured, because he still complained of distress and cough.

Dr. F. B. Kane said that we must remember the two different forms of aortic aneurism, as the treatment for each is distinct. First. There is the atheromatous degeneration of the aorta

with a local dilatation communicating with the rest of the vessel through wide gaping mouths. For this, rest in the horizontal position, moderate diet and large doses of potassium iodide constitute the only treatment. In the second form we have the aneurism on one side of the vessel and communicating with it through a small orifice and such a case as this he knew from his own experience could be beneficially treated by means of electrolysis.

Dr. Flood believed that in many of the cases reported as cured aneurism, there had been an error in diagnosis.

Dr. Arnold, in vacating the chair, thanked Dr. Taylor for his report, and expressed a hope that the other members of the Society would take example from the President and bring pathological specimens to the meetings, as these led to more interesting and general discussion than the most elaborate paper.

Dr. W. Watt Kerr then moved the following addition to Article VII. of the Constitution:

“Any member of this Society, who, in the opinion of the Committee on Medical Ethics, shall be guilty of conduct unbecoming the dignity of a member of this Society, shall be liable to the punishments as set forth in the foregoing clauses of this article.” This was seconded by Dr. O. V. Thayer and adopted by the Society.

Dr. Simpson said that evidently there was some defect in the Constitution and By-Laws, as it is left to the Society to determine what is professional conduct, and he would, therefore, move that the Committee on Medical Ethics should revise the By-Laws and subject them to the criticism of Mr. E. R. Taylor. This was seconded by Dr. W. W. Kerr and carried by a vote of the Society.

The Secretary reported that Dr. J. M. Eaton had failed to sign the Constitution within the time prescribed by the Constitution and By-Laws of the Society. The application was, therefore, declared to be rejected by the President.

There being no further business the Society adjourned until the fourth Tuesday in February.

WM. WATT KERR, M. D.,  
Recording Secretary.

SAN FRANCISCO, February 23, 1886.

The meeting having been called to order by the President, Dr. Taylor, and the minutes of the former meeting read and approved, the following propositions for membership were read by the Secretary:

W. E. Josephine Woods, M. D., University of California, 1885, proposed by Dr. Wanzer and Dr. Kerr.

Mark F. Patten, M. D., Cooper Medical College, 1885, proposed by Dr. Plummer and Dr. Kerr.

Elizabeth R. C. Sargent, M. D., Medical College Pacific, 1880, proposed by Dr. Kerr and Dr. Plummer.

Fred. J. Hund, M. D., University of New York, 1879, proposed by Dr. Plummer and Dr. Kerr.

Otto H. Hund, M. D., University of New York, 1880, proposed by Dr. Plummer and Dr. Kerr.

S. J. Boyd, M. D., Harvard, 1885, proposed by Dr. Plummer and Dr. Kerr.

John H. Renebome, M. D., Cooper Medical College, 1885, proposed by Dr. Plummer and Dr. Kerr.

Fred. W. Lux, M. D., Harvard, 1885, proposed by Dr. Plummer and Dr. Kerr.

Frank Rattan, M. D., Cooper Medical College, 1885, proposed by Dr. Plummer and Dr. Kerr.

G. F. Hanson, M. D., Cooper Medical College, 1885, proposed by Dr. Plummer and Dr. Kerr.

These were referred to the Committee on Admissions.

The Committee on Admissions reported favorably upon the credentials of Herbert C. Sawyer, M. D., University of California, 1881; Wm. F. Jones, M. D., Cooper Medical College, 1885; John M. Williamson, M. D., University of California, 1885; Peter A. Kearney, M. D., Cooper Medical College, 1884, who were forthwith elected to membership.

The Secretary reported that Dr. Fitch had returned to town and paid up all dues incurred before his departure for Honolulu, so that he again became an active member.

Dr. W. E. Taylor then resumed the discussion upon aneurism which had been continued from last meeting. He said that there is an aneurismal age, just as there is a cancerous age, and that this may be said to be between the thirty-eighth and fifty-second years of a man's life. It is that time of life when the nerves have been weakened, but the heart and force of the circulation

are full and strong. Among the causes of the disease syphilis is the most common, being present in about 75 per cent of the cases, while the gouty and rheumatic constitutions also contribute their *quota*. Much has been both said and written about the influence of strain in producing aneurism; but this is only a secondary factor acting upon a primarily diseased vessel, and in evidence of this he would show the existence of degeneration of the outer walls extending beyond the seat of the tumor in all the specimens now before the Society.

All endeavors to obliterate the sac and nourish the parts by means of collateral circulation is, in the case of aneurism of the arch of the aorta, impossible. He did not intend to say that treatment did not benefit the patient, but a radical cure of an aneurism of the arch of the aorta by formation of a clot meant in nearly every case the death of the patient.

Dr. Donnelly agreed with almost everything said by Dr. Taylor with exception to the part that syphilis plays in the production of aneurism, because his own experience in Africa, South America and Brazil, where syphilis is very common, had taught him that aneurism is correspondingly rare. As it is generally found in the laboring and working classes, he believed that exertion must play a very prominent part in the production of the disease.

Dr. Soule said that during his experience at the City and County Hospital more than thirty cases had come under his notice. The ages varied from 27 to 62, the average being 42; they were all among hard-working people, only one of the thirty was married, and only one was a woman. In all the cases there was atheromatous degeneration of the aorta, and, contrary to Dr. Taylor's experience, nearly all the deaths had occurred from rupture. He felt sure that all treatment must end in disappointment.

Dr. Fitch believed in the close relation between syphilis and aneurism, as both of these diseases are very common in the Sandwich Islands. He had never seen a case of aortic aneurism cured.

Dr. Cole said that, in his experience, there was always a primarily diseased condition of the blood-vessels, and when the aneurisms were multiple this extended through all the vessels of the body so as to produce what might be called an aneurismal constitution.

Dr. Plummer had never seen a recovery from aortic aneurism,



and was also a strong believer in Dr. Taylor's views regarding the relation between this disease and syphilis. Aneurism is commonest among the poorer and laboring class, and so are all the later organic affections due to syphilis. The reason of this is, that the poorer classes have not the money which would enable them to keep up prolonged treatment for venereal diseases; neither have they the intelligence to understand that such treatment is necessary to eliminate the poison from the system, but believe that the disease is cured when the primary cause is healed. He has found it to be most common among miners, sailors and soldiers, all of whom are subjected to exposure and other conditions of life which predispose them to aneurism.

Dr. Arnold, in referring to the rarity of aneurism among females, said that he had seen a case in the clinique of Prof. Bamberger at Vienna. Doubtless its greater frequency in that country is due to the more severe manual labor performed by the women. It is very probable that there always is some primary disease of the blood vessels, but if atheroma be the cause we should expect aneurism to be found in older men. He believed the excessive use of alcohol to be a very common cause of the disease.

Dr. Whittell thought that the theory of syphilis had been well maintained, yet he did not believe syphilis to be more common in the lower than in the higher ranks of life, and therefore could not find the entire explanation of the greater frequency of aneurism among the working classes in this cause. He believed it to be due to the frequent and prolonged strain to which the diseased vessels are subjected among working men, and in proof of the statement that exertion plays an important part in the production of the disease he called attention to this fact that aneurism generally occurs on those parts of the vessel which are unsupported by muscles.

Dr. Taylor, in closing the discussion said that his list of aneurismal cases contained one female. His remark that about 75 per cent of aneurismal cases occurred in syphilitic patients was based upon the report of the Registrar General of England, but he did not wish to be understood as omitting alcoholism, rheumatism, gout and any one disease which produces degeneration of the blood-vessels, from this list of causes. Aneurism occurs in middle aged men because it is in them that the vessels have degenerated while the circulation retains its force, but

in old men the vessels change and the circulation diminishes *pari passu*.

Dr. Donnelly then read the following resolutions:

*To the San Francisco County Medical Society:*

WHEREAS, The City of San Francisco, has been selected for the annual reunion of the Grand Army of the Republic and the Army of the Potomac, and as these veterans of the war of the rebellion will be accompanied by a representative number of surgeons of regiments, brigades and divisions, and as these officers will be overlooked or not recognized as a distinct body by their more conspicuous military commanders and comrades. I therefore think it but proper for the medical profession of San Francisco and this State to adopt such means as will give a hearty welcome to the late surgeons of the army and navy;

*Therefore, Resolved,* That the County Medical Society of San Francisco adopt such means as they may think proper for the reception of our veteran brethren and comrades of the late war.

*Resolved,* That the officers of the San Francisco Medical Society communicate with the officers of the State Medical Society for the purpose of deferring their annual State meeting until the first week in August, the time of the reunion of the veterans from all parts of the United States.

*Mr. President.* In offering these resolutions my only object is to suggest to my professional brethren that we ought to recognize in a positive and proper manner the great and valuable service rendered by these surgeons not only to our own country, but to the civilized world. Men of our profession will be here who on every battlefield, on every vessel of war, showed their moral courage, standing at their posts calmly and kindly relieving the sufferings of their fellow countrymen, whilst minnie balls, solid shot, and exploding shells were doing their deadly work around them, and when the battle was over and their comrades in arms retreated before the enemy, they did not desert their wounded, but remained as prisoners of war to perform the duties of their life-saving profession. These are the men that will visit us in a few months, they will come from all parts of our undivided county for which they risked their lives.

The surgeons who will visit us, with some that are here, are those who have made our name respected by scientists of all nations; men whose surgical operations and military hospitals,

as recorded in the "Medical and Surgical History of the Civil War," have placed us in the first rank of nations. These are the men whose works in perfecting the appliances for relieving the sick and wounded on the field and in hospitals, won the admiration of all foreigners assembled at our Centennial Exhibition. And those of you, gentlemen, who have visited Washington, know the monument that has been raised there by the contributions of these veteran surgeons, of hundreds of pathological specimens from all the great battlefields, showing the effects of the implements and missiles used in war for the destruction of man. In no department of the Government has there been done such honest effective work as in that of the Medical Department. In every position he occupied or occupies the veteran surgeon did and does his duty faithfully, he was a model of virtue and morality during the war, and an honor to his profession since. Let us receive him with all due respect.

Dr. Cole moved that the resolutions be made the special order of business at the next meeting when we would know how far the Constitution of the State Society would admit of any change being made in the time of meeting. This was seconded by Dr. Whittell and carried by the Society.

There being no further business the Society adjourned until Tuesday, 9th March.

WM. WATT KERR,  
Recording Secretary.

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**Sacramento Society for Medical Improvement.**

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SACRAMENTO, Feb. 16, 1886.

The Society met in regular session. In the absence of the President the chair was taken by Dr. A. D. Nixon.

The minutes of the previous meeting was read and approved.

The name of Dr. W. F. Finnie was presented for membership and referred to the Committee on Admissions.

Four letters from Dr. Graves relating to the progress of his case were read.

The resolution of Dr. W. A. Briggs in relation to unethical practitioners, consideration of which had been deferred at the last meeting, was brought up.

Dr. Briggs wished to offer as an amendment:

WHEREAS, The Sacramento Society for Medical Improvement has adopted the Code of Ethics of the American Medical Association;

Resolved, That members of this Society hereby refuse professional recognition to practitioners who persistently violate the Code of Ethics of the American Medical Association.

Dr. Simmons speaking to the resolution read sections two and three of Article V. of the code which had been constantly disregarded in the cases reported. The chair having put the question the resolution as amended was unanimously adopted.

Dr. Huntington reported a number of cases (25) in which he had employed cocaine as a local anesthetic with excellent results. Two of them operation for phymosis dorsal incision, and amputation of index finger at second and third interphalangeal articulation. Anesthesia throughout was complete. The quantity employed in these instances being fifteen minims for each case in two injections.

Dr. Parkinson, by permission of Dr. W. A. Briggs, reported a case of dislocation of the head of the fibula.

Dr. W. A. Briggs then read the paper of the evening, entitled "Germicides in Medicine and Surgery."

After considerable discussion on the theories and methods set forth in the paper, the Society adjourned to meet the third Tuesday in March.

JAMES H. PARKINSON,  
Secretary.

THE April issue of the *Overland Monthly* will contain at least two contributions to the Chinese Question, carefully written and from new stand-points. The *Overland* has already printed more than twenty-five papers and editorials, bearing upon this important discussion. It makes a point to give a fair hearing to both sides.

IN the line of out-door sketches, travel and adventure, the most notable sketches in the April *Overland* will be "On the Trail of Geronimo;" "Leaves from a '49 Ledger," and "Reminiscences of Calaveras."

## Health Reports.

### Report of the State Board of Health.

The mortality records for the month of February show a gratifying decrease from those of the previous month, especially in diseases affecting the respiratory system. That this is due, in a great measure, to the warm and dry weather that generally prevailed throughout the State during February can hardly be denied, and is strongly confirmatory of the opinion expressed by other observers, that the decrease of pulmonary diseases in point of fatality is coincident with a higher range of temperature and a lessened amount of moisture. We find from reports received from eighty localities, comprising an estimated population of five hundred and six thousand eight hundred and thirty-five, that the deaths from all causes numbered 674, a percentage of 1.3 per 1,000 in the month. Of these—

Consumption is credited with one hundred and thirty-one decedents, a decrease of thirty-eight from last report.

Pneumonia.—The mortality from this disease has decreased from ninety-two in January to fifty-two in February.

Bronchitis caused twenty-one deaths, a decrease of eleven.

Congestion of the lungs had the limited mortality of five.

Croup also shows a diminished death rate, recording but thirteen deaths, a decrease of eight from last report.

Diphtheria also shows a decrease of ten, but, nevertheless, was fatal in twenty-eight instances. Of these fourteen occurred in San Francisco, six in Visalia, two in Santa Rosa, two in Berkeley, one in Santa Barbara, one in Santa Clara, one in Hanford, and one in Anderson.

Whooping-cough caused three deaths in San Francisco.

Scarlet fever has decreased its death rate to seven. Three of these occurred in Alturas, Modoc county, one in Colton, one in San Francisco, one in Santa Barbara, and one in St. Helena.

Measles had a fatality of two in San Francisco.

Erysipelas caused no deaths.

Diarrhoea and dysentery has decreased its mortality to seven, and cholera infantum had only one death.

Typhoid fever was fatal in fifteen instances.

Typho-malarial fever caused but two deaths.

Remittent and intermittent fever had no fatality.

Cerebro-spinal fever caused one death in Hanford, and one in San Diego.

Cancer was fatal in thirteen instances, a decrease of sixteen from last report.

Alcoholism was fatal to seventeen persons.

Heart disease is credited with forty-five deaths, a decrease of seventeen.

The following towns report no deaths for the month: Downieville, College City, Fort Bidwell, Gonzales, Lincoln, Ontario, Ophir, Santa Maria, Ukiah, Wheatland, Williams, Yuba City, Hill's Ferry, Willits, Folsom, Elk Grove, Lakeport, and Le-moore.

#### PREVAILING DISEASES.

Reports received from eighty-four localities indicate a very limited amount of sickness throughout the State. The prevalence of pneumonia and bronchitis has abated in a great measure. Influenza still prevails in many localities. Among those places where—

Pneumonia is noticed, may be mentioned Red Bluff, Modesto, Bakersfield, Truckee, Vallejo, Ione, Santa Rosa, Johnsville, Sacramento, and San Francisco.

Bronchitis is likewise very prevalent over the State, but does not appear to be epidemic in any locality, or attended with any unusual mortality.

Influenza is epidemic in Newcastle, and is noticed as prevailing generally, being reported in Williams, Cottonwood, Hill's Ferry, Fort Bidwell, Ione, Vallejo, Anderson, Johnsville, Red Bluff, Livermore, Weaverville, Castroville, and Modoc county.

Whooping-cough is noticed in Rocklin, Forest Hill, Santa Ana, Jolon, Angel's Camp, Hill's Ferry, San Francisco, and Sacramento.

Measles prevail in Fort Bidwell, San Francisco, Susanville, and Ukiah, of mild type.

Scarlet fever is reported from Alturas, Redding (very mild), Anderson, Colton, Red Bluff, Santa Barbara, San Francisco, and St. Helena. The type is mild and the mortality limited. It should not be forgotten that the infectiousness of the disease is not to be measured by the mildness of the attack, and as this is a popular error, the responsibility of the physician in his relation to the public is greatly enhanced, as parents are, as a rule, ignorant of the fact that the infection of scarlet fever is

communicable for several weeks after the rash has disappeared, and are very prone to send their children to school while the skin is yet desquamating, a condition in which the infectiousness of the disease is most active. No child that has any rash, sore throat, or other evidence of scarlet fever, should be permitted to mingle with other children until a physician has declared that all danger of infection is over, and every house in which scarlet fever has appeared should be strictly quarantined, and, as in Michigan, a card should be fastened upon the entrance gate, declaring the disease and forbidding admission within. The disinfection of the house and clothing should be thorough, as the germs of this disease are particularly repellant to the action of germicides. The burning of sulphur in an efficient manner seems to destroy them effectually.

Smallpox has disappeared with the single case reported last month.

Diphtheria is still prevalent in various places. Dr. Payne writes from Berkeley that they have exterminated it there. It is noticed, however, in the reports from Anderson, Johnsville, Modesto, Ophir, Amador City, Ukiah, Etna Mills, Santa Rosa, San Francisco, Visalia, Hanford, Santa Barbara, Santa Clara, and Newcastle.

Croup is mentioned in Davisville, Igo, Ontario, Pomona, Amador City, Modesto, Anderson, and San Francisco.

Typhoid and typho-malarial fevers are noticed in Willits, Amador, Modesto, Williams, Igo, Truckee, Ione, Weaverville, and Vallejo.

Erysipelas appears in a mild form in Santa Ana, Johnsville, Bakersfield, Truckee, Rocklin, Downieville, Modesto, Davisville, Vallejo, and Calico.

Mumps is reported by Dr. Goodspeed as prevailing in San Mateo.

Dr. Groton reports four cases of trichiniasis in Plumas county, the particulars of which have not yet come to hand.

GERRARD G. TYRRELL, M. D.,

Permanent Secretary California State Board of Health.  
Sacramento, March 10, 1886.

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THE April *Overland* will contain two California stories, "Terecita," and "A Worshipper of the Devil;" also the continuation of Miss Blake's strong serial, "For Money."

## PACIFIC MEDICAL AND SURGICAL JOURNAL

AND

## WESTERN LANCET.

WILLIAM S. WHITWELL, A. M., M. D., EDITOR.

WM. WATT KERR, M. B., C. M., ASSISTANT EDITOR.

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*SAN FRANCISCO, APRIL, 1886.*

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**Editorial.****Medical Society of the State of California**

The sixteenth annual meeting of this Society will take place in San Francisco on the 21st, 22d and 23d days of April, and bodes well to be the largest that has ever convened in California.

There can be no doubt that the physicians throughout the State are beginning more and more to realize the benefits that accrue from membership in such bodies, the formation of several new local societies speaks well for the growing interest in the provincial towns, while the fact that during the last year nearly fifty new members have been admitted to the San Francisco County Medical Society affords ample proof that there is no decline of vigor in the cities. We could urge many reasons why every physician in California should become a member of the State Society. Among these are benefits from the break in the monotony of our lives by the annual meeting, and the fillip given to our failing energy by contact with more active bodies, the encouragement found in a realization of the fact that we are not alone in the battle between life and death, for even a companion in misery is an enjoyable luxury, and, lastly, the stimulus to progress in our profession that arises from a knowledge of what our neighbors are doing. But instead of occupying our readers' time and our own columns with endless argument, we would simply say to the practitioner, who has neglected such opportunities in the past, join the Society, and you will know



what you have missed, and to the novitiate in the profession, join the society and will know what you would have missed. This is not an instance in which "ignorance is blessed."

There are special reasons why this year's meeting should be exceptionally large. The Committee on Arrangements have been at work for some time, have prepared an excellent programme, and have made an arrangement with the leading hotels and all the railroads to allow a rebate of thirty-three and one-third per cent. to all physicians attending the meeting. In addition to this, many will wish to hear what is to be done regarding the International Convention and also to prepare a welcome to the medical men of the Grand Army of the Republic, many of whom will find that old comrades have preceded them to the Golden State.

The Society will convene under the presidency of Dr. W. P. Gibbons of Alameda, the distinguished botanist of this coast. As his successor in office three names have been suggested: Dr. Thorne of San Jose, who, without doubt, is entitled to the position; Dr. Jas. Simpson of San Francisco, who is well known to be one of the most experienced, successful and energetic physicians in this State; and Dr. Wm. F. McNutt, who has also been mentioned as a candidate for the Governor's chair.

We hope that during this meeting more free criticism of the reports and papers read will be indulged in by the members than on former occasions, when it has been the almost invariable custom to dispose of everything by referring it to the Committee on Publication.

It is necessary that some alteration be made in the method of admitting members to the Society. Hitherto it has been the custom for a candidate to present his credentials to the Board of Censors, who examined them and presented a report to the Society, on the strength of which the candidate was accepted or rejected. No time is appointed for presenting these reports; neither is anyone's candidature known to the Society until the report is presented. The result of this is that an unfavorable

report may be presented to the Society, and accepted, when the candidate's friends are not present to demand an investigation, or produce evidence before the Board that might free the candidate from charges brought against him; or it may happen that an objectionable person is admitted to the Society from the fact of his candidature not having been made known to members of the Society cognizant of reasons why the application should be rejected. It is, therefore, very evident that some important modification should be made in the present arrangement. All applications for membership should be announced to the Society either by the President or bulletin board, and the report of the censors handed in at stated times. Thus all applications received during the morning session might be posted on the notice board as they are made, read by the President at the close of the morning and reported on by the censors at some time during the afternoon session, and similar applications received during the afternoon would be acted upon in the evening. Some method such as this would render more effective and equitable the work done in the Board of Censors.

We trust that the attendance at our next will be large, the new members numerous, and the benefits unprecedented.

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#### **Publication of Transactions:**

At the last annual meeting of the State Society, the question of publishing its transactions in this journal was brought before its members. After some discussion it was decided that this should be done, but that the details should be arranged by the Committee on Publication. A contract was drawn up and signed by this committee and by the editor. That all members may know the terms of this paper it has been printed and will be found upon another page. The time has now arrived to decide whether this arrangement shall be continued. Usually two or three hundred bound copies of the Transactions are distributed among the members, the State Societies and a few

libraries, the volume being received in September or October. During the past year the minutes were published in June and one or more papers each succeeding month, all being printed before January. The journals were distributed to all members in good standing and the Transactions were seen by all subscribers and were supplied to all exchanges throughout the country; also to the State Societies and to some twenty libraries.

Last June and July the names of those desiring a bound volume of the proceedings was requested. Three answers were received; one promptly; one from a physician who is not a member; and one about six months late. Notwithstanding the paucity of answers and the little encouragement given, the transactions have been separately published, and will be sent to every member who will send in his name to the editor before the annual meeting which takes place the middle of this month. Each member then receives for his five dollars, not only his membership, but the *PACIFIC JOURNAL* for one year, and also a bound volume of the Transactions.

As editor of the *JOURNAL* the writer is most interested in its success, not so much from a financial standpoint as that as a medical publication it shall stand well among its cotemporaries and be of true value to its subscribers; as member of the State Society he is interested in its welfare, and is willing to do all that he can for the promotion of its interests. For these reasons he favors a continuance of the union agreed upon last year, for such a union cannot fail to extend the influence and prosperity of both Society and *JOURNAL*.

During the past year all has not gone as smoothly as could be wished, but it is sincerely hoped that with increased experience the mistakes committed may be avoided in the future.

Should the Society favor the present arrangement we would suggest that the minutes at least, be promptly handed to the editor at the close of the meeting so that they may appear in the May number. If the papers are sent in early the transactions should all be printed before December.

**Contract between the State Medical Society and  
W. S. Whitwell, M. D.**

This contract made June, 1885, between the Medical Society of the State of California, acting through its Committee on Publication, on the one part, and W. S. Whitwell, M. D., of the other part, witnesseth said Medical Society of California hereby contracts with and employs said W. S. Whitwell to publish its proceedings and transactions under the terms herewith annexed, for the term of one year ending at the meeting of said Society in the year 1886. In consideration of which said Society agrees to pay said W. S. Whitwell the sum of \$700 (seven hundred dollars), payable in advance in quarterly instalments of \$175 (one hundred and seventy-five dollars).

Said W. S. Whitwell accepts said contract, and agrees:

1. To publish the proceedings and transactions of the Medical Society of the State of California as furnished to him by the Committee on Publication of said Society in the journal known as the **PACIFIC MEDICAL AND SURGICAL JOURNAL AND WESTERN LANCET**, published monthly in the city of San Francisco, said proceedings and transactions in quantity not to exceed 300 (three hundred) pages of said journal.

2. To have published and distributed the whole of said proceedings and transactions within the period of 9 (nine) months from the signing of this contract, provided always that said proceedings and transactions shall be forwarded and furnished by the Committee on Publication within said period.

3. To furnish extra copies of reports or papers to members of said Society at a fair valuation, provided always that requests for such extra copies are sent in with the manuscript of said reports or papers.

4. To furnish a copy of the **PACIFIC MEDICAL AND SURGICAL JOURNAL AND WESTERN LANCET** monthly for the term of one year before mentioned, free of charge to each active member of the Medical Society of the State of California 25, (twenty-five) copies of said journal for the use of said Society to be placed at the disposal of its Secretary, copies of said journal not to exceed 20 (twenty) for libraries, and further copies to be sent to State Medical Societies. The list of members, libraries and State Medical Societies to be furnished by the Secretary of the Medical Society of the State of California.

4. To put on the cover of the journal before mentioned as collaborators the names of the Secretary of the Medical Society

of the State of California, and one representative from the Medical Department of the University of California.

Signed by the Committee on Publication for said Society.

A. B. NIXON, M. D.,  
G. L. SIMMONS, M. D.,  
JAMES H. PARKINSON,  
WALLACE A. BRIGGS,  
GERRARD G. TYRRELL.

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**Additional List of State Medical Society.**

According to the contract signed by the Committee on Publication, the members in the following list should have received the JOURNAL free of charge for the past year; their names have, however, but just been received from the Secretary, and consequently we are not able to furnish all the back numbers:

Bates, W. E.....	San Francisco.
Belinge, F. A. A.....	San Francisco.
Buckel, C. Annette.....	Oakland.
Bucknell, M. E.....	San Francisco.
Burdick, J. F.....	Oakland.
Callandreau, J.....	San Francisco.
Clark, Asa.....	Stockton.
Clark, Jonas.....	Woodland.
Curless, Wm.....	Truckee.
Dozier, Franklin L.....	Napa.
Dryer, J. L.....	Placerville.
Dutton, G. W.....	Tomales.
Eagle, Thomas B.....	Princeton.
Evans, C. W.....	Modesto.
Follansbee, E. A.....	San Francisco.
Grover, W. A.....	San Francisco.
Higgins, Alice.....	Anaheim
Hertel, C. A. E.....	Lodi.
Hopkins, St. George L.....	Oakland.
Jackson, G. H.....	Woodland.
Jones, William C.....	Grass Valley.
Jump, Alemby.....	Downieville.
Lawlor, William M.....	Oakland.
Lundbourg, M.....	San Francisco.
Lucas, W. T.....	Guadalupe.
Markel, R. S.....	Cloverdale.
Meares, J. L.....	San Francisco.
Neal, H.....	Hollister.
Phillips, Thos.....	Stockton.
Reid, Robert K.....	Stockton.
Rivas, Isaac.....	San Francisco.

Ross, Thomas	Woodland.
Shafter, J. C.	Olema.
Shurtleff, Benjamin.	Napa.
Simmons, G. L.	Sacramento.
Simmons, S. S.	San Francisco.
Smith, L. E.	Seattle.
Southard, W. F.	Oakland.
Stansbury, Oscar.	Chico.
Taylor, W. S.	Livermore.
Todd, T. M.	Auburn.
Von Hoffman, Chas.	San Francisco.
Watts, Nelson.	Chico.
Weldon, W. E.	San Francisco.
Widney, Joseph P.	Los Angeles.
Williams, N.	Richland.
Worthington, H.	Los Angeles.
Wythe, J. H.	Oakland.

### Licentiates of the California State Board of Examiners.

SAN FRANCISCO, CAL., March 4, 1886.

At the regular meeting of the Board of Examiners held March 3d, 1886, the following physicians, having complied with the law and all the requirements of this Board, were unanimously granted certificates to practice medicine and surgery in this State:

JOSEPH N. BARATTA, Los Angeles; Royal Univ. of Naples, Italy, Aug. 16, 1860.  
JOHN F. S. GRAY, San Diego; Coll. of Phys. and Surg. of the City of New York, N. Y., Mar. 1, 1871, and the Faculty of Med. of Montpelier, France, Nov. 19, 1881.

WILL. EDGAR LINDLEY, Los Angeles; Cooper Med. Coll., Cal., Nov. 11, 1885.  
D. GRANVILLE MCGOWAN, Los Angeles; Med. Dept. Univ. Pennsylvania, Penn., Mar. 14, 1879.

JAMES C. MCCALL, Stockton; Columbus Med. Coll., O., Mar. 1, 1879.  
PLATON VALLEJO, Vallejo; Coll. of Phys. and Surg. of the City of New York, N. Y., Mar. 10, 1864.

FIELDON R. WAGGONER, Grass Valley; Missouri Med. Coll., Mo., Mar. 5, 1878.  
W. E. JOSEPHINE WOODS, San Francisco; Med Dept. Univ. Cal., Nov. 10, 1885.

Reports have been received from official sources that the Alameda and Los Angeles County Medical Societies have appointed committees and raised the necessary funds for the prosecution of quacks in their respective counties.

In San Jose the war still continues. Since the first of the present month, a Chinaman has been held to answer the charge of practicing medicine without a license.

At Arbuckle, Colusa County, one B. Myers, *alias* B. Meyers, has been twice arrested for the same cause.

R. H. PLUMMER, Sec.

## Notices of Books, Pamphlets, etc.

**HOW WE TREAT WOUNDS TO-DAY.** By ROBERT T. MORRIS, M. D., late House Surgeon of Bellevue Hospital. New York and London: G. P. Putnam's Sons, 1886. San Francisco: W. S. Duncombe & Co.

A little book which the author says is modest only in size and possesses dignity only in its facts. It is a book which we cannot too highly praise, for it is one which, if read and studied by surgeons in general, would save much suffering and many lives, for it gives, as plainly as can be given in writing, the practical way of treating wounds in a thoroughly antiseptic manner; it notes all the details, so that, with a little attention and perseverance, any one can treat a wound as nowadays it should be treated, not only in an absolutely cleanly manner, but in such a way that it is impossible for a microbe to exist within it. The book is very clear, and written in such a spicy way that all who read will become interested. The methods of preparing sponges, ligatures, gauze, etc., are all given in detail, and the last chapter contains a description of a number of actual cases, giving the full treatment from the moment they were seen until they left the hospital cured.

**POST MORTEM EXAMINATIONS, WITH ESPECIAL REFERENCE TO MEDICO-LEGAL PRACTICE.** By RUDOLPH VIRCHOW. Translated by T. P. SMITH, M. D. With Additional Notes and New Plates. From Fourth German Edition. Price \$1.00. Philadelphia: P. Blakiston, Son & Co., 1885. San Francisco: W. S. Duncombe & Co.

Professor Virchow has long been known for the careful system which as early as 1846 he inaugurated at Charity Hospital in Berlin—a system which has rendered Berlin attractive above all other cities to pathologists. After an account of his early experience as Prosecutor, Professor Virchow traces the subsequent development of the present scientific method of making autopsies; he then explains the regulations which have been promulgated for the guidance of medical jurists. These cases are given in detail, and show how very careful he is not to let any point of interest escape him. With the translator, we utter the wish that a like method to that of Professor Virchow could be adopted in this country. The work is of great value to all interested in post mortem examinations.

**A GUIDE TO THE PRACTICAL EXAMINATION OF URINE FOR THE USE OF PHYSICIANS AND STUDENTS.** By JAMES TYSON, M. D. Fifth Edition. Revised Corrected. With Colored Plates and Wood Engravings. Philadelphia: P. Blakiston, Son & Co.; 1886. San Francisco: W. S. Duncombe & Co.

The fourth edition of this manual we had the pleasure of receiving, and now, within a very short period, the fifth lies before

us. The last edition has been somewhat enlarged, and chiefly through a consideration of new and delicate tests for albumin and of that class of proteids represented by peptones and mucin. We have believed it to be one of the best guides to the examination of urine for students, and its present improved form only increases that conviction.

**THE FIELD AND LIMITATION OF THE OPERATIVE SURGERY OF THE HUMAN BRAIN.** By JOHN B. ROBERTS, A. M., M. D., Professor of Anatomy and Surgery in the Philadelphia Polyclinic; Surgeon to St. Mary's Hospital, Philadelphia: P. Blakiston, Son & Co.: 1885. San Francisco, W. S. Duncombe & Co. Price \$1.25.

This essay was first read before the American Surgical Association in 1885, and is now published in book form. Dr. Roberts would be considered by many as very radical and bold in the treatment which he advises, but he gives his reasons, and then considers them one by one. He believes that the symptoms of compression are due to some form of intracranial inflammation; that by the improved method of treating wounds of to-day that a compound fracture is but little more dangerous than a simple one; that there is but little risk in the proper use of the trephine; that many regions of the brain may be incised with impunity, and finally that the study of cerebral localization is very necessary to the surgeon.

In chapter second the means by which the important cerebral convolutions may be located are discussed and this is followed by tables of indications and contraindications for operative procedure in traumatic cases and the localities from which the bone should be removed.

The author concludes that perforation of the skull will soon become quite common in cases of fracture, hemorrhage and abscess, but that the profession will be slower to open the cranium in cases of epilepsy, insanity and tumor.

This essay shows that a decided advance has been made in cerebral surgery within a few years by workers in this direction.

**FRACTURES AND DISLOCATIONS.** By T. PICKERING PICK, F. R. C. S., Surgeon to and Lecturer in Surgery at St. George's Hospital. Illustrated with 93 engravings. Philadelphia: Lea Bros. & Co. San Francisco: W. S. Duncombe & Co.

This is one of the series of Clinical Manuals for Practitioners and Students of Medicine, issued by the house of Lea Brothers & Co., which have proved so acceptable to the profession. The present volume is no exception to the rule, and will be found



of much value to the student. It is not always easy to determine on the line of treatment to be followed after consulting a treatise on this subject if one has not had an extensive experience. It is often convenient and safer to refer to a smaller work, in which the author lays down dogmatic rules which he has found to give good results. The present manual is written to the point, and a definite line of treatment is advised, which, if followed, can seldom lead the practitioner astray.

**THE METHODS OF BACTERIOLOGICAL INVESTIGATION.** By DR. FERDINAND HUEPPE, Docent in Hygiene and Bacteriology at Wiesbaden. Translated by HERMANN M. BIGGS, M. D. Illustrated by thirty-one woodcuts. New York: D. Appleton & Co., 1886. San Francisco: W. S. Duncombe & Co.

Within the last few years bacteriological investigation has assumed an importance which is still acknowledged by but a few. The translation of the excellent work of Hueppe will we hope lead more physicians to interest themselves in this science, the value of which to the general practitioner is increasing day by day. The author has tried to sift the extensive literature of the subject and to give importance only to those modes of investigation which have proven to be the most practical. The first chapter is devoted to the subject of Spontaneous Generation and the Principles of Sterilization; the second to the Forms of Bacteria; the third to Culture Methods; Pure Cultures; the fourth to Inoculations for the Determination of the Causal Relation of Bacteria growth to Decomposition and Disease; fifth to General Biological Problems. The work is written by one who thoroughly understands his subject and puts it clearly before the student.

**THE PRINCIPLES AND PRACTICE OF MEDICINE.** By the late CHARLES HILTON FAGGE, M. D., F. R. C. P., Physician to and Lecturer on Pathology at Guy's Hospital, including a Section on Cutaneous Diseases, by P. H. PYE-SMITH, M. D., F. R. C. S., Chapters on Cardiac Diseases, by SAMUEL WILKES, M. D., F. R. S., and complete indexes, by ROBERT EDMUND CARRINGTON, M. D. Volume 1. Philadelphia: P. Blakiston, Son & Co. 1886. San Francisco: Wm. S. Duncombe & Co.

There are so many works on Practice of Medicine that the physician almost shudders when he hears of an addition to this class of literature, for experience has taught him that the difference between many of them is of little more importance than the discussion whether Cicero should be spelled with a C or a K. Every teacher of medicine appears to think that he must become an author because his hobbies are not chronicled in any systematic treatise, indeed that it is as necessary for him to write a book as it is for an obstetrician to invent a forceps or for a

gynecologist to divide his name in the middle. Under such circumstances, it is refreshing to meet a work, such as the present one, which can justly lay claim to some originality.

No one can read Dr. Fagge's book without being impressed with the calm, deliberate style, the balancing of different opinions and the solid judgment, that all show the writer to have been a man of exceptional ability and experience. In advancing any new theory he states his premises and draws his conclusions not in an egotistic style, but after the manner of one whose sole desire is to arrive at the truth.

His remarks on the varying severity of infectious diseases are both novel and interesting. He calls attention to the fact that when any one of these diseases is introduced into a country for the first time, or from which it has been long absent, it is, as a rule, much more fatal than among those nations where it is endemic. This he explains by the suggestion that the occurrence of the disease in the children themselves, or in the parents before the birth of the children has afforded a certain protective influence so that the malady runs a milder course. In the same way he would ascribe a mild epidemic in any locality to an attenuation of the virus produced by its passing through a number of people successively, each one of whom was only slightly susceptible to it. Of course, such a theory as this is a strong argument in favor of inoculation, which, during the last few years has been advocated as the best preventive not only against smallpox, but also against cholera, yellow fever and hydrophobia. This work is clearly printed, well arranged and is one of the best upon the subject.

**MANUAL OF THE DISEASES OF WOMEN, BEING A CONCISE AND SYSTEMATIC EXPOSITION OF THE THEORY AND PRACTICE OF GYNÆCOLOGY.** For use of students and practitioners. By CHARLES A. MAY, M. D., late House Physician, Mt. Sinai Hospital, New York, etc. Philadelphia: Lea Brothers & Co., 1885. Cloth, 12 mo., pp. 357. Price \$1.75.

As an aid to the memory this little book will be found valuable to students preparing for examination and possibly to young practitioners who may occasionally find it convenient to hurriedly look up some of the principal points as to the diagnosis and treatment of diseases with which they are not practically familiar, but excellent as is the arrangement of its contents, and thoroughly reliable as seems to be the information it contains, it cannot take the place of larger works, though with them to consult, when at leisure, it will no doubt prove useful, and this

is all that the author claims for it. A. L. Bancroft and Company of this city have the work for sale.

TRANSACTIONS OF THE ACADEMY OF MEDICINE IN IRELAND. Vol. III. Edited by WILLIAM THOMPSON, M. A., F. R. C. S., General Secretary. Dublin: Tannin & Company, Grafton street, 1885. Cloth, 8 vo. pp. 468.

The volume before us contains sixty-four papers, ten coming under the medical section, twelve under the surgical, seven under the obstetrical, twenty-four under the pathological, four under the sub-section of state medicine, and seven under that of anatomy and physiology. As of especial interest to the medical profession, at the present time, we notice a most excellent discourse on cholera by Surgeon-Major Hamilton, of which we shall give our readers an abstract either in this or some future number. Great credit is due this young body for its vigorous efforts in promoting original research and advancing the interests of the profession, and we notice with pleasure the interest taken in state medicine or public hygienie. The volume is printed on good heavy paper, in clear type, and elegantly bound.

ORGANIC MATERIA MEDICA AND THERAPUTICS. By JAMES YOUNG SIMPSON, M. D. In accordance with the Sixth Revision of the United States Pharmacopœa. New York: J. H. Vail & Co. Cloth, small 8 vo., pp. 337.

This is a neat and well arranged little book, but as it contains no information that may not be as readily obtained from the larger treatises on materia medica found in every physician's library, we question the necessity for its publication. If the author, instead of contenting himself with being merely a compiler, would devote himself to original research in this field, we feel confident that his next production would be one of true merits. The work is gotten up in excellent style, and to those who may need a reliable but concise treatise on the subject we conscientiously recommend it.

TOWNES' MANUAL OF CHEMISTRY, THEORETICAL AND PRACTICAL. A new American from the Twelfth English Edition, embodying WATTS' "Physical and Inorganic Chemistry," with one hundred and sixty-eight illustrations. Philadelphia: Lea Bros. & Co., 1885. Royal 12 mo., pp. 1056. Price, cloth, \$2.75; leather, \$3.25.

While originally intended as an elementary text-book for the use of students, recent editions of this work have, by the constant absorption of the rapid accretions of chemical knowledge, been so materially enlarged that the term, "Manual," when applied to it in its present form, seems to us a misnomer. The

work, as it now appears, partakes rather of the nature of an exhaustive treatise, and to advanced students as well as to physicians and others who have the time and inclination to enter more deeply into the study of so interesting a subject than is ordinarily possible during the limited curriculum of our medical colleges, it will be found of great value. The average medical student and others who are just entering upon the study of chemistry, will, however, find some smaller work more serviceable, as, especially in the department of organic chemistry, the intricate formulæ of the endless variety of compounds, here given, would only tend to bewilder the beginner. The work may be had in the city from A. L. Bancroft & Company.

**A TREATISE ON THE DISEASES OF INFANCY AND CHILDHOOD.** By J. LEWIS SMITH, M. D., Clinical Professor of Diseases of Children in Bellevue Hospital Medical College, etc. Sixth edition, thoroughly revised, with forty illustrations. Philadelphia: Lea Brothers & Co., 1886. 8 vo., pp. 867. Price: Cloth, \$4.50; Leather, \$5.50.

The value in which this work is held by the medical profession is fully shown by the fact that it has now reached its sixth edition, which, like former ones, has been thoroughly revised and considerably enlarged. While the general plan of the book and the arrangement of its contents remain unchanged, several chapters have been entirely rewritten and in others such additions and alterations have been made as the author has deemed necessary in order to keep the work fully abreast with the advanced knowledge in pædiatrics. Hygiene and therapeutics hold, as heretofore, a prominent place, while discussion of the theories has been avoided, except as they influence practice. The author's style is pleasant and easy, and his description of diseases and their symptoms concise and clear, while his prognosis and treatment are based on a large personal experience as well as extensive reading. This work will, therefore, continue to maintain its place among standard text books, and we hope to have the pleasure of reviewing many future editions. It may be obtained in this city from A. L. Bancroft & Company.

**THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE EAR.** By OREN D. POMEROY, M. D., Surgeon to the Manhattan Eye and Ear Hospital, etc., With one hundred illustrations. Second edition revised, with additions. New York: D. Appleton & Co.: 1, 3, and 5 Bond street, 1886. Cloth, 8 vo., pp. 413.

The want of suitable text books on otology, which existed up to within a dozen years ago, has since then been amply supplied by the appearance of several excellent treatises by eminent spe-

cialists. One of the most recent of these is the work before us, the first edition of which has been exhausted, and a second brought forth in the short period of a little more than two years. This fact may well be regarded as an indication of the true merits of the work. To save space the author has left out entirely the anatomy and physiology of the ear, as these subjects may be studied elsewhere, and the first forty-four pages of the book are devoted to the description (amply illustrated) of the various instruments used in the diagnosis and treatment of aural diseases, including minute directions for examining the ear. We notice several instruments of the author's own device, and, as appearing to us of especial value, we mention a faucial eustachian catheter with which he claims that inflation of the tympanum is easily accomplished, when the ordinary method fails. Want of space prevents us from giving as full a review of the work as we could wish. Suffice it to say that it is what a text book for students and young practitioners should be,—clear, concise and practical. The author frequently warns against over-treatment, such as unnecessary syringing in otorrhea, etc., though he does not go to the other extreme of some of the advocates of the "dry treatment" who would have us beware of water as the most dangerous substance that can enter the tympanum. At the head of the list of remedial agents in suppurative otitis, he places nitrate of silver, which he uses in solutions varying in strength from two grains to more than 480 grains (saturated solution) per ounce. This appears to us to be rather heroic treatment, and we believe that boric acid, to which he gives the second place, or some of the other mild astringents, will, in most cases, be found equally effective, much safer and far more agreeable to the patient. At the end of the work a brief description of the several instruments that have been devised for aiding the hearing, such as ear trumpets, the audiophone or osteophone and Japanese fan, are given, but the author's own experience with these has been that but little benefit results from their use. The mechanical execution of the book is excellent and does credit to the publishers.

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A LAST RESORT.—"My poor man," said the doctor, "you are dangerously ill. Is there any word you want to send to your friends?" "Am I really so ill?" asked the sufferer. "Alas! I can offer you no hope." "Very well, then," said the sick man, "just telephone for another doctor."

## **Extracts.**

### **Reinfusion of Blood in Amputations.**

By JOHN DUNCAN, M. A., LL. D., etc.

On October 21st, 1885, Dr. Lindsay Porteous, of Kirkcaldy, sent to me a case of railway injury. The left leg had been crushed, and amputation was required in the lower third of the thigh. There had been no hemorrhage at the time of injury; but Dr. Porteous, as a measure of precaution, had placed a tourniquet loosely round the limb, with instructions to tighten it if necessary. Bleeding commenced during the journey; the tourniquet was insufficiently screwed up; and a large quantity of blood was lost before the patient reached the infirmary. When I saw him eight hours after the accident, he was pallid and collapsed, with a pulse, when perceptible, quick, irregular, and fluttering. Alcohol, ether-injection, and elevation of the limbs, had a scarcely appreciable and quite evanescent effect; and I came to the conclusion that it was impossible he should lose his leg and live through the operation. Intravenous injection seemed the only hope, and it occurred to me that I might to a certain extent utilize the patient's own blood for the purpose. In a large school like this there is no difficulty in finding blood-givers during the day, but at night a saline fluid is the imperfect alternative.

The patient was anæsthetised with chloroform, followed by ether. While I rapidly removed the limb, the blood which fell from it (in all about three ounces) was caught by an assistant in a dish containing solution of phosphate of soda. After the arteries had been tied, it was difficult for a time to say whether the patient was dead or alive; but I proceeded to inject the blood and phosphate of soda, mingled with distilled water in the last syringe-ful to increase the quantity. In all, about eight ounces were thrown into the femoral vein on the face of the stump. The quantities are not exact, because the graduated dish was necessarily flat to catch the blood, but are correct within a drachm, or at most two.

The patient was then quickly put to bed, placed in front of the fire, and teaspoonfuls of weak brandy and water were given to him frequently. The pulse had become quite preceptible by

the time he had been got into bed; it steadily improved during the night, and the man is now perfectly well.

The dominant idea in the procedure is to utilise the blood flowing from the amputated limb, which otherwise must necessarily be lost. Especially in shattered limbs, it is difficult to empty thoroughly before amputating; and both at the moment of incision, and also while ligaturing the arteries, a certain quantity of blood may always be caught. The importance of even a few ounces in cases of collapse can hardly be overestimated. No doubt, a simple saline fluid may for a time supply the means of working to the empty heart and vessels; but in my experience, the benefit is only temporary—for one reason, because it is essential that the blood-forming organs should act; and they require suitable nourishment, like every other part of the frame.

I am convinced that this little operation, so easily performed, will save many lives in the collapse of primary amputations, and will prove beneficial to wasted and anæmic patients in the major amputations for disease. I have now performed it in a sufficient number of cases, one of them an amputation at the hip performed by my colleague, Dr. Miller, to enable me to speak with confidence as to its safety and value.

The idea would probably not have occurred to me had I not, during the previous six months, had considerable experience in transfusion of blood from one human being to another. My colleague, Dr. Brakenridge, having under his care a case of pernicious anæmia, in which the decadence was so rapid that the end could not be postponed many weeks, came to the conclusion that it would be right to try transfusion of blood, and consulted me on the subject. I had tried myself, or seen tried by others, most of the instruments hitherto in use for direct transfusion, and had arrived at the opinion that all were unsatisfactory, either from the risk attending them, or from liability to failure in attaining the desired end. It appeared to me, therefore, that it was necessary to adopt the method of defibrination, or to delay the coagulation of the blood by some of the saline additions which have already been used for the purpose, in order that a sufficient quantity might be injected with sufficient slowness.

In making inquiry as to the experience of others, I was informed by my colleague, Dr. Cotterill, that he had on one

occasion performed transfusion of blood mingled with phosphate of soda, as recommended by Dr. Pavy, and that the immediate result of the operation had been all that could be desired. As the power of phosphate of soda to delay coagulation is undoubted, I determined to adopt a plan whose feasibility was thus assured.

It is unnecessary now to go into the history of the pernicious *anæmia*. Dr. Brakenridge will doubtless give the results of his very careful observation, when the case may be regarded as complete. Suffice it to say that, by four transfusions, the quantity of the red corpuscles and *hæmoglobin* was trebled, and that the improvement has been maintained for two months without further operation.

Before describing the mode of operating, I will merely mention another of our transfusion cases, highly creditable to my last house-surgeon, Dr. Carmichael, which he intends to publish more fully, along with some important experimental investigations on which he is engaged. I had operated in a case of *empyema* by resection of portions of seven ribs. A certain amount of blood was unavoidably lost during the operation, and through the night slow oozing took place into the thoracic cavity, making little show outside the dressings. Next day the patient seemed moribund; and, as he found that I was from home, Dr. Carmichael, who admirably assisted me in the other operations, had himself bled to six ounces, and injected that quantity with phosphate solution into the patient's veins. The man immediately rallied, and is now quite well.

An operation of this kind plainly requires attention to detail, but its extreme simplicity renders easy the avoidance of mistakes, some of which I committed in the earlier instances. I attach much importance to the perfect fluidity of the blood, and the aseptic condition of all the instruments. In no case had our patients the slightest fever, rigor, or disturbance of any sort subsequent to the operation. Glass was purified by prolonged immersion in a solution of bichloride of mercury; metal, in carbolic acid.

For introduction into the vein of the receiver, I use a short glass tube, of the size of a No. 6 catheter, having a pen-shaped point. To its other end, made slightly bulbous, about two inches of India-rubber tubing is attached. A simple glass syringe, holding four ounces, whose nozzle fits the tubing, is



perfectly effective. I keep up the temperature by surrounding it with boric lint, wrung out of hot water. A syringe which I had made with an outer glass envelope to hold warm water, I find rather cumbrous. A graduated glass vessel, kept floating in warm water, contains the solution of phosphate of soda, and receives the blood.

All are washed with aseptic water after removal from the antiseptic solution, and before being used.

In amputations, the most convenient vein is selected on the face of the stump, the glass point is inserted, and a catgut ligature put round it. While the process of ligaturing the arteries is going on, the blood is caught by one assistant, who adds the soda-solution as required, and is slowly injected by another. There is no time wasted, and the amount put into the circulation is precisely proportioned to what the patient would otherwise have lost, *plus* what amount of saline solution the surgeon may think right and appropriate to the case.

In the case of pernicious anæmia to which I have referred, a vein in the arm of the blood-receiver was exposed, and under it a double thread of catgut was passed. I then drew the blood from the donor into the dish containing the phosphate of soda, with which it was gently mixed by means of a glass rod. While an assistant filled the syringe, I opened the exposed vein of the receiver, the lower thread of catgut being gently pulled upon to prevent bleeding. The tube was now inserted, the upper thread tied round it with one knot, and the lower definitely secured and cut short. The blood was next slowly injected, the India-rubber tubing being pinched when the syringe required to be refilled. The upper catgut was finally tied and cut short when the operation was completed, and the little wound was stitched up.

There is a limit to the rate of injection on each side. One may possibly take longer to inject than the blood will remain fluid, or one may inject too rapidly for the comfort of the patient. In amputation, neither of these can easily happen; but in this case, I committed both errors. This point of course involves the question as to how much phosphate of soda ought to be added, and as to the coagulating quality of the blood. The solution of phosphate of soda was of 5 per cent, and one part of the solution was added to three parts of blood. A slightly larger proportion is probably advisable, and was frequently used in the amputation cases.

The donors for the pernicious anæmia were healthy and powerful young students. One of them, Mr. Hardyman, found before he was bled that his red corpuscles were largely above the average, and on that occasion six ounces and a half of blood were added to two ounces of soda-solution. I was obliged to stop before the last ounce was injected, because it showed signs of thickening in the dish, and it actually coagulated six or eight minutes afterwards.

On the next occasion, with the same donor, I hastened the operation considerably, in order to avoid this coagulation. The patient, however, had only received four ounces when she experienced so much distress from pain in the back and forcible cardiac action, that I ceased injecting. It was annoying to find that, by an error in compounding, the soda-solution had been made of double strength, and that the remaining blood had not coagulated half an hour afterwards.

Experience, in short, shows that, in such a case, and with sufficient phosphate of soda, one may occupy at least twenty or thirty minutes in injecting; and that at a slow rate the patient will experience not the least discomfort. At the same time, the effect will vary with the condition of the patient. In one amputation, I injected eight ounces in five minutes; in the hip, sixteen ounces in about fifteen minutes, without any disturbance. But in the case of pernicious anæmia, we had already by previous operations added considerably to the vascular contents, and the quantity of blood in the body was daily increasing, so that it is not astonishing that four ounces added to the blood in five minutes should produce unpleasant though evanescent symptoms. The more complete and rapid depletion has been, the more quickly and largely may repletion be effected.

One other observation has to be made. The process of re-injecting the patient's own blood is incompatible with the use of spray or irrigation during the operation. For myself, I am satisfied by experiment and from clinical experience that the spray does not kill micro-organisms in the air; and that in most cases the application of the germicide may safely be delayed till near the end of the operation. With pure hands and instruments, the risk from the air is trifling, and it is not worth considering when a patient is in imminent danger from hemorrhage and collapse.—*British Medical Journal*.

**Permanganate of Potassium in Amenorrhea.**

Dr. Fordyce Barker writes, on the use of permanganate of potassium in amenorrhea, to the *New York Medical Journal* as follows:

I first prescribed the permanganate in September, 1881, to a lady, thirty-six years of age, who had resided in Europe for the previous nine years. Some two years before an obscure form of disease of the nervous system had followed a severe moral shock, and she was under the treatment of Dr. Brown-Séquard for several months. She finally became insane, and was in a *maison de sante* in Paris for ten months. She left this institution, in March, before I saw her, rational, but morbid, irritable, and so suspicious as to make the lives of members of her family a burden, particularly for several days each month. Her general health was pretty good, but she had not menstruated for twenty months.

While I gave general directions as to her health in the use of laxatives, diet, open-air exercise, etc., I prescribed for the amenorrhea two grains of the permanganate of potassium three times a day. In four days, menstruation came on, and lasted three days. This was followed by such an improvement in her condition, physical and moral, that I ceased my attendance. Seven weeks after I was again called, and found her very nearly in the same state as at my first visit. She had not menstruated the previous month. The use of the permanganate was repeated, with the same result. This treatment was resumed the three subsequent months. Since then this lady has been physically well and morally happy, making her family also happy.

This success led to a further trial of this agent, and since that time I have used it in comparatively a large number of cases. I say comparatively, because I think no man can say that he has treated really a large number of cases of amenorrhea.

In order more clearly to illustrate my views, I will divide the cases which I have treated with this remedy into three groups, mentioning them in the order of their frequency:

*First.* Young ladies between the ages of fourteen and nineteen, who come from the country "to finish their education." Homesickness, entire change of their habits of life and associations, overtax of their brain power from their own or teachers' ambition to accomplish more in a given time than they ought to

attempt, not infrequently lead to an arrest of menstruation. I see at least ten or fifteen such patients every winter.

*Second.* Ladies, both young and married, who suffer severely from seasickness, that have left some European port within a few days of the menstrual period. With such, amenorrhea, of longer or shorter duration, is almost sure to follow. I am consulted by at least eight or ten such every year.

*Third.* Ladies between thirty and forty, generally married, some of whom have borne children, who rapidly begin to gain flesh, grow stout, while at the same time menstruation decreases in both duration and quantity, until at last it is only a mere pretense. This is generally attended with annoying nerve disturbances, pelvic weight, sometimes hemorrhoids, and often mental depression from the apprehension of growing old prematurely.

Now, it requires some moral courage on my part for me to boldly avow that never, where in either of these classes of cases I have prescribed the permanganate of potassium, have I *known* it to fail.

But this assertion requires explanation. The patients of this kind for whom I have prescribed have, with but two exceptions, not been those met with in my family practice or that of Dr. A. A. Smith, but have come to me for the special treatment of amenorrhea, many of them from out of the city, and from other parts of the country.

In all prescriptions for the permanganate, I write to the apothecary: "Return the prescription," and direct the patients to continue the use of the medicine, if necessary, for at least three months, and especially urge them to report to me, either personally or by letter, if the end is not accomplished. Many such have reported that all was right; many others from out of town I have not heard from, and perhaps I am wrong in believing that the treatment was successful. I must add that with this specific treatment, I endeavored not to neglect any other measures necessary to keep up a healthy and regular action of other functions.

I will add, in regard to the third class in my group, that every patient was a resident of this city. I presume that every medical man who has been long in practice has met with some such. In all these I have known the result from personal interviews—that there has been a satisfactory return of menstrea-

tion—although in two cases the use of the remedy was continued for five months. In all there has been entire relief of the cerebral and pelvic, and in some of the thoracic, nerve disturbances, cardiac and pulmonary. One patient was quite cured of a periodical asthma from which she had suffered monthly for three years.

Of course, I never prescribe this agent in cases where the amenorrhea is due to some grave constitutional disease, nor do I rely on it for the relief of sudden suppression, due to cold, moral shock, or an acute disease. In this class I think the pulsatilla, opiates, and local agents, such as fomentations and large hot rectal enemas, are generally successful.

In my early experience I found great difficulty in getting the permanganate put up by apothecaries in such a way that patients could take it without great repugnance, and it often produced severe gastric pain from its rapid decomposition. Mr. Angelo for a time put it up for me in a peculiar capsule, which did better than anything else, so far as the taste was concerned, and the pain was prevented by swallowing immediately a half-tumblerful of water not cold. But latterly I have found two-grain tablets do quite as well, if the same quantity of water is swallowed at once. Fraser & Co. have recently prepared it in grain pills, but I have not yet had the opportunity of trying them.

That all may judge how much weight should be attached to my clinical experience, I will add that I find by the stubs of my office prescription-book that I have prescribed the permanganate of potassium forty-three times since November 17, 1881, which exactly represents the number of cases of amenorrhea, of the groups mentioned before, as in this time I can not recall an instance where I have made a domicile visit for this disease.—*American Practitioner.*

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**THE COCAINE HABIT.**—The demand for cocaine has, like that for bromides and chloral, extended to the general public. One drug store in New York City sells no less than six ounces each month.

PACIFIC  
MEDICAL AND SURGICAL JOURNAL  
AND  
WESTERN LANCET.

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VOL. XXIX.

MAY, 1886.

No. 5.

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Original Articles.

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GERMICIDES IN MEDICINE AND SURGERY.

By WALLACE A. BRIGGS, M. D.

In the title of these few and desultory remarks I have chosen the word germicides in preference to antiseptics or Listerism. The last term seems to me peculiarly objectionable as introducing into medicine not only personal jealousy, but also a dogmatic and sectarian spirit altogether foreign to the genius of our profession. It must be admitted, however, to a higher plane than that barbarous word listerine, which, with its kin in bastardy, is doing so much to discredit American pharmacy. In any case the termination "ism" is more at home in religion than in science, and for one I hope, that in medicine at least, it may fall largely if not altogether into desuetude.

Less objectionable, but far from faultless is the term antiseptic, for it expresses not the suppression of the "power behind phenomena," but merely of the phenomenon itself. Putrefaction, indeed, is the work accomplished by certain bacteria, but it is by no means the universal expression of the presence and deadly activity of micro-organisms in general, and were it even so, we should say that it is not putrefaction we fear, but its cause, viz.: *Bacteria et hoc genus omne*.

Germicides, however, suit the action to the word, for they literally kill the germs on which contagious and perhaps infectious diseases depend.

The fact of contagion is so obvious and often so appalling in its consequences as to have arrested the early attention of man-

kind. The fact, however, is more obvious than its explanation, and it was reserved for modern medicine to suggest and verify a theory that harmonizes all of the facts, and one, too, that almost daily widens in its implications.

It was long known that liquids and tissues emanating from an animal sick with anthrax were capable of propagating this disease indefinitely. Later it was discovered that animals grazing in the neighborhood of the buried carcass of an anthrax victim were quite certain to contract this disease. Still later, indeed quite recently, Klebs and Pasteur demonstrated that by filtration the anthrax liquid is deprived of its specific and contagious properties. The microscope had already revealed the presence in anthrax liquids and tissues of a typical morphological element which was christened bacillus anthracis. This was presumably the element removed by filtration. Further research has shown the invariable presence of this bacillus in anthrax subjects, and not in them alone, but also in the earth and on the herbage about their dead and buried carcasses.

This bacillus, like many others, may be propagated artificially, and even so modified by culture as to represent any degree of virulence from that of absolute fatality to that of slight indisposition.

Let us see what follows from these and kindred investigations:

1. The contagious principle of anthrax is particulate, because:

a. It does not transude the filter.

b. It is visible by the aid of the microscope.

2. It propagates itself indefinitely.

3. It preserves its type, *i. e.*, it produces after its kind.

4. It varies, *i. e.*, it produces after its kind but with variations and not with the absolute uniformity of the merely catalytic ferment. These variations are evidenced:

a. By the varying virulence of the different generations of culture bacilli.

b. By the varying fatality of epidemics.

5. It does not originate *de novo*.

Now, what theory other than that of a living contagion can co-ordinate these facts? So far, the imagination of man has suggested no other, and it seems to me as invulnerable as the theory of gravitation.

What has just been said of anthrax has the equal warrant of

demonstration in several other contagious diseases, viz.: Cow-pox, sheep-pox, relapsing fever and chicken cholera, and it has the warrant of logical inference in all of them. With slight qualification it is true of septicæmia, that insatiable *bele noire* of the last generation of surgeons and accoucheurs

But if certain diseases depend on bacteria or kindred organisms, what more rational than to attempt the prevention and the cure of such diseases by destroying their respective bacteria?

Not having had either time or opportunity to verify it, I express with some diffidence the opinion that, among those who have given antiseptic surgery an unbiased trial, its chief opponents are the ovariologists.

In a certain way the peritoneal cavity offers to germicides a crucial test. If they succeed here they may be made to succeed everywhere.

Unfortunately, as I believe, both for science and for mankind, the test is one under which they have seemed to break down. I say "seemed" for I believe that as yet antiseptic ovariectomy is the rarest form of that rare thing, antiseptic surgery. In this regard our profession has too often used the "livery of heaven to serve the devil in," *i. e.*, it has adopted the imposing paraphernalia of antiseptics without accomplishing its purpose.

In accounting for the seeming failure of germicides in abdominal surgery I would mention:

The use of carbolic acid. Of all the germicides in common use this is confessedly one of the most inefficient, and I think it may be said without exaggeration that, in operations involving the peritoneal cavity, carbolic acid has been not only a stumbling block to science, but also a positive source of danger to the patient. While it has not preserved the patient from the perils of septicæmia, it has exposed her to the wholly gratuitous danger of carbolic acid poisoning.

As of scarcely secondary importance I would mention:

The form in which the germicide has been used—that of the spray. The spray is untrustworthy in general, but especially so in a cavity whose surfaces are so sinuous and so absorbent as are those of the peritoneum. Germs could be readily imported between the peritoneal folds and there do their fatal work without the sprays molesting or making them afraid. Even if the feeble germicide should come in contact with them it would be absorbed, in all likelihood, before accomplishing its infirm but beneficent purpose.



The application of an untrustworthy germicide in an untrustworthy form is sufficient to invalidate all of the general conclusions derived from its use. Such is carbolic acid spray in ovariectomy.

These considerations are sufficient, I believe, to warrant us in questioning the propriety of the dereliction of antiseptics by the most successful ovariectomist the world has yet produced. But, granting that a Keith or a Tait may abandon it with impunity, we may still question the propriety of its abandonment by the average ovariectomist. Not all of us have at our command imposing hospitals over whose portals has been chiseled in bas relief—"Sacred to the peritoneal cavity! No germs need apply."

Before proceeding further, let us consider the assumption that "cleanliness is all there is in Listerism."

It must be accepted, provisionally at least, by all who have kept *au courant* of medical literature, that septicæmia is a disease of bacterial origin, and that if we could either annihilate these bacteria or always exclude them from wounded surfaces, septicæmia would disappear at once and forever from our nosology. In the prevention of septicæmia, then, cleanliness is the cardinal principle. But however conscientious in our observance of cleanliness, we cannot be assured of the absence of bacteria by any power outside of revelation. Germicides then are used by the careful surgeon, to make assurance doubly sure. Wanting a microscopic eye as well as the infinite time and patience to apply it, he adopts as an aphorism, Every man is unclean until cleansed; everything is infectious until disinfected. Even Tait, and, I think, Keith, disinfect their sponges with almost religious ceremony. Tait says: "Of the sponges to be used, it is impossible to speak with too great emphasis, as I distrust them more than anything else about the operation. I never let them out of my sight, and I will not permit anyone but the nurse in charge of them to touch them." But why is this feeling of solicitude restricted to the sponges? Is it a mere lurking superstition, or is there some rational principle underlying it?

In speaking of the sponges later on, he says: "After each operation I wash them free from color, and then soak them for forty-eight hours in a strong solution of washing soda or ammonia to dissolve the fibrin. They are then washed repeatedly until the water comes from them perfectly clean, and after that they are placed for a week in a five per cent solution of phenol."

But if cleanliness be all there is in antiseptics, why the phenol?

The truth is, that while Keith and Tait, in common with many other surgeons, have abandoned the details of Listerism, they still adhere, in practice at least, to its underlying principle—the prevention of septicæmia by the destruction of septic bacteria.

Our knowledge of the use of germicides is yet in its infancy. Science does not rise full-fledged from the ashes of error and ignorance, but the verdict of posterity will be, that with the eye of genius Joseph Lister caught in antiseptic surgery a glimpse of eternal truth.

In the study of antiseptics too implicit confidence must not be placed in the results of hasty laboratory experiments. The influences retarding, preventing or favoring putrefaction, are too diverse and complex to be dismissed with a flourish.

Antiseptics, *i. e.*, agents preventing putrefaction, may be divided into three classes, *viz.*, those that:

- (1.) Destroy the microphytes on which the process of putrefaction depends.
- (2.) Inhibit their activity, but do not destroy them.
- (3.) Precipitate their pabulum, and thus render it unfit for their nourishment.

Substances acting in either of these ways may be effective in a retort, but, since the antiseptic is rapidly absorbed from the traumatic surface, obviously only those of the first class, the germicides proper, are adapted to the purposes of antiseptic surgery.

The surgeon, as well as the accoucheur, should be thoroughly familiar with the powers (and the dangers) of several germicides, as no single germicide is suited to all the varying requirements of surgical and of obstetric art. Those enumerated in the following list will be found sufficient for all practical purposes:

Mercuric iodide.

Aluminium acetate.

Cupric sulphate.

Argentie nitrate.

Iodoform.

Iodine.

Sulphurous acid.

To one accustomed to the use of carbolic acid, the germicidal powers of mercuric iodide seem marvelous, if not incredible.

In aqueous solution of 1 to 30,000 it destroys the bacillus anthracis, and in solution of 1 to 300,000 the various species of putrefactive bacteria.

But surgery is not the only appanage of the germicides. Medicine offers a more varied, if not a more promising, field for their employment. Here, although wholly empirical, their first triumphs were won. While the surgeon was dazzled by the luster of his shining blades and the splendor of their achievements, his less brilliant, but none the less useful, brother was curing biliousness with calomel, chancreoids with nitric acid and gonorrhoea with nitrate of silver.

Germicides, however, were in use long ere this; to pagan religion are we indebted to the first authentic instances of their employment. Nearly four thousand years before the Christian era the priests of Isis and Osiris embalmed their faithful dead, the better to preserve them for the corporeal resurrection. There is more than a fanciful resemblance between their dressing and that of Lister, and, if Pythagoras were alive to-day, he might maintain, with no little show of reason, that the father of antiseptic surgery was originally an Egyptian priest, and after these long years had domiciled again in human form and brought his dressing up to date.

In medicine the possible uses of germicides are coextensive with the presence in the human organism of bacteria and their infinitesimal congeners. In the parasitic skin diseases the germicides are our chief if not our only weapons; so are they in gonorrhoea, and probably in syphilis. In those septic conditions of the alimentary canal, so often and so erroneously denominated biliousness, they have no substitute; neither have they in thrush, in cholera infantum, in cholera morbus, or in the more chronic forms of septic diarrhoea; possibly at no distant day epidemic dysentery may be embraced in the same category. In the contagious and infectious diseases, the great scourges of the human race, including the plague, the yellow fever, the cholera, the exanthemata and phthisis, that greatest scourge of all, more deadly even than perennial war, for it more than decimates, it septimates every generation of every age and of every country; in these, I say, it needs no unbridled fancy to depict for germicides a triumph, in comparison with which all other triumphs of therapeutic art shall sink into insignificance.

But, not to exchange the robes of the physician for those of

the mere enthusiast, let us proceed to the consideration of some of the special applications of germicides in the domain of medicine.

First as to the alimentary canal. In their abnormal conditions the digestive organs present a nidus peculiarly favorable to the development of the lower organisms, and I believe that many, if not most of the annoying phenomena of indigestion depend on fermentation and putrefaction of their contents. An indigestion originally dependent either on some passing condition of the primæ viæ or on some solitary indiscretion in diet is often indefinitely prolonged by the development of torulæ, sarcinæ and other microphytes. The acids and gases evolved by their baneful activity confirm a condition that otherwise would be evanescent. The delayed digestion of the so-called atonic dyspepsia, I am convinced, is often due to the excessive acidity of the stomach contents which, in its turn, is due to the growth and activity of torulæ and sarcinæ. By the destruction of these microphytes or even by the temporary inhibition of their activity, we greatly relieve if we do not cure the dyspeptic; and certainly in those cases not dependent on incurable organic lesions we make a long stride towards cure.

But how destroy these microphytes or inhibit their activity? Chiefly by the internal use of germicides. Those best adapted to this purpose are, so far as my observation extends, the yellow oxide of mercury, the mineral acids, iodine and carbolic acid.

Of these, the yellow oxide is probably most suitable in the majority of cases. It is efficient. It is a digestive as well as general tonic. By its gradual solution its action is prolonged and even extended into the intestine. It is easy of administration. Thus we see that it answers a number of indications most admirably. It should be administered in about 1-10 gr. doses three times a day and always after meals.

Hand in hand with this, of course, should go the proper selection of foods, their thorough mastication, and the use of digestive and general tonics such as pepsin, the vegetable bitters, arsenic, and especially moderate quantities of alcoholic stimulants.

In dilatation of the stomach the administration of the appropriate germicide should be preceded by a thorough washing-out of that viscus.

Ringer and, I believe, Fothergill and Bartholow, recommend the use, before meals, of the mineral acids in cases of excessive acidity and of the alkalies in deficient acidity of the stomach contents. This advice, as they say, is based on the physiological fact that alkalies increase the secretion of the stomach acids while, on the contrary, acids diminish it. This explanation has always seemed to me a little strained and especially so since the demonstration of the germicidal power of the mineral acids. Were it the true one excessive acidity should be its own remedy. The excessive presence of the normal acid, I believe, is very rarely a cause of acid indigestion; on the contrary, the acid of acid indigestion is the acid of fermentation. With this view the explanation of the efficacy of the mineral acids before meals, and of their failure after is very simple. Administered on an empty stomach their degree of concentration is sufficient to be germicidal, while on a full stomach it is insufficient and so the would-be remedy aggravates the trouble by adding its own acidity to that already existing.

The value of the mineral acids in this condition is not solely dependent on their germicidal powers; muriatic acid and nitric acid in a less degree assist in the digestion of the albuminoids and by their astringency give tone to the debilitated mucus membranes.

Muriatic acid before meals, therefore, is one of our most valuable resources in the treatment of acid dyspepsia.

The bisulphite of sodium in full doses or in divided doses repeated as necessary, is especially adapted to the treatment of those cases of acute septic indigestion, otherwise known as bilious attacks. It occurs to me that perhaps in these very cases it was, that calomel, as an unsuspected germicide, acquired its false reputation as a cholagogue. If administered in the very outset, both experience and observation assure me that bisulphite of sodium will often abort these distressing attacks. Here it is best given in drachm doses dissolved in mint water to mask its abominable taste.

It must be fresh so as to contain an excess of sulphurous acid which is liberated in the stomach and on which its efficiency depends.

Iodine in doses of one or two drops well diluted and repeated pro re nata seems peculiarly adapted to the treatment of those cases of septic indigestion accompanied by intractable vomiting.

In what, if any, of the septic conditions of the stomach contents carbolic acid is preferable, I am unable to say, but I believe that in medicine as it has done in surgery, it will give way to its more trustworthy but less malodorous congeners. In combination with iodine in the condition just mentioned, however, its use may be advantageous.

The only radical treatment of cholera infantum is germicidal. Formerly calomel and latterly carbolic acid, chloral hydrate and mercuric chloride have been used, but these are all eclipsed by the yellow oxide of mercury. Adjuvant treatment, of course, should not be neglected nor should the fact for a moment be lost sight of, that once rid of the microphytes in this disease, the patient is convalescent.

Thrush is one of the few diseases whose microphytic nature is unquestioned by cavil itself. It is promptly relieved by germicides conjoined with tonics and proper hygienic and dietetic regulations.

Turning to the genito-urinary tract we may remark that although empirically and unsuspectedly so, the treatment of gonorrhœa is and long has been purely germicidal; so too is the symptomatic and even radical treatment of some forms of cystitis; the treatment of chancre, as our patients learn to their cost, is severely germicidal; if we have any treatment for chancre it is germicidal.

The extensive experience of Credé and others proves that ophthalmia neonatorum may be almost certainly prevented by instilling into each eye of the new-born a germicidal solution of argentic nitrate, 1-100.

Subcutaneous injections of germicidal solutions are said to do excellent service in erysipelas; their external application is warranted by long empirical use.

The respiratory tract presents a more doubtful, but by no means an absolutely unpromising field for the trial of antiseptic medication. Except in the treatment of affections of the nose, trachea and larger bronchi, antiseptic sprays are of little value here, for they do not reach the smaller bronchi, much less the pulmonary alveoli. We must resort to the volatile germicides, iodine, turpentine, carbolic acid, etc., changing frequently from one to the other for fear of producing unpleasant constitutional effects.

Instances in which germicides are useful in the treatment of

disease might easily be multiplied, but my purpose in this paper is to demonstrate the breadth of their applicability rather than to enter into the details of their application.

In conclusion let me say that if anything entitles the 19th century to rank as an era in the history of our art it is the discovery of germicides and their application to the cure and prevention of disease. Directly it is the dominant factor in the success of modern surgery; and in the future of medicine, it is the "bright particular star."

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### **TYPHO-MALARIA FEVER.**

By S. C. GIBSON, M. D., Anderson, Cal.

[To have been read at the meeting of the now defunct Northern California Medical Society.]

*Mr. President and Members of the Northern California Medical Society:*—My object in reading this paper is not to teach or to advance any new ideas, but only to give my limited experience, and then hope the Society will express their opinion of this fever, and, by so doing, you will doubly repay me for my trouble.

Typho-malarial fever should not be confounded with the asthenic condition which sometimes accompanies remittent fevers, and which, when it occurs, is called the typhoid state or condition. In this case, the word typhoid is used strictly in its adjective sense, and hence malarial fever that passes into an asthenic or typhoid state, is not typho-malarial fever.

Typhoid fever, it is well known, has different forms, each varying in intensity according to different system, constitution, mode of life and habit of patient, also surrounding influences, location, and many other predisposing and exciting causes, which have a tendency to modify the course and severity of this most dreaded disease.

Typho-malarial fever is one of these forms.

This fever, to my mind, is caused by the combined action of two poisons—malarial and typhoid.

It is certain that in some localities in this country, during the summer and autumnal months, well marked cases of typhoid fever proper are wholly unknown, but there occurs in its place a fever of a malarial type. Of course this is in the malarious

districts, when intermittent and remittent fevers are prevalent. This fact I have noticed both in this State and in the Mississippi valley. It chiefly attacks the young and those who have resided but a short time in malarious districts. With one exception, I cannot recall a case whose age was over twenty-five years; neither were my cases in infants, but from the ages of six to twenty-five years.

It requires, according to my experience, as much skill to conduct a patient safely through its self-limited course as it would through a course of typhoid fever. We usually find it begins as simple remittent fever to all appearances, and thereby we are often led to administer medicine which we find in the end injurious.

It is frequently as late as the fourth or fifth day before symptoms develop which point clearly to a typhoid fever complication.

This complication is portrayed by the appearance of tongue, tympanitic condition of bowels, perhaps some slight delirium, and with other symptoms connected with the abdominal lesions.

There is soreness, on pressure, near the junction of the ascending and transverse colon. The diarrhoea that is peculiar to typhoid fever is sometimes present during the first week, but usually the bowels are costive, and remain so till the latter part of the second or even the third week. In my opinion, the greatest diagnostic difference between typho-malarial and true typhoid fever lies in the fact that the oscillation of the temperature is more marked in the former than in the latter. This oscillation in typho-malarial fever is several degrees in twenty-four hours; in morning 99 or 100 degrees, and in the evening 102 or 103 degrees, or, in severe cases, even 104 or 105 degrees.

If delirium be present it is not of that low muttering type found in typhoid fever that leaves the mind of the patient a perfect blank, but occurs in the evening when the temperature is the highest and soon passes off to again appear on the following evening. In the same case at different times we find the grastie symptoms predominating, giving the fever the type of malarial, and at other times the reverse, the typhoid symptoms being most prominent.

Convalescence is frequently protracted in this fever, and I have seen several cases, after the typhoid symptoms have disappeared, and even after the twenty-eighth day, where for several days



there was a slight raise in the temperature each evening, of 1 or  $1\frac{1}{2}$  degrees, just enough to retard convalescence.

The liability of perforation of bowels and hemorrhage from mucous surface is the same as in true typhoid fever, everything being equal. But as I remarked in my preface, owing to malarial symptoms predominating at the beginning, we are often led to give a purgative, and thereby often irritate the bowels to such an extent that hemorrhage or perforation follow. It is always a source of pleasure to me upon the development of this fever to know that I have not used anything that will act injuriously, and for this reason when called to a case of fever, I am always somewhat on my guard.

I begin with quinine, having usually prescribed it before the true nature of the disease is manifested, and continue its use throughout the whole course of disease. The continued use of quinine is indicated for two reasons:

1st. For its anti-malarial property;

2nd. As an antipyretic, the dose according to height of temperature.

The greatest source of danger in this, as well as in true typhoid, is the high temperature and the paramount indication in treatment is its reduction. In all mild cases, in which the temperature never rises above 102 degrees, I rely solely on quinine.

But when the temperature is over 103 degrees, with a rapid pulse, I add to my antipyretic treatment some arterial sedative and sponge the patient with cool water, to which has been added alcohol or ammonia. If repeated sponging should fail to reduce the temperature, then cold water is applied, as follows: A gum cloth is spread upon the bed and the undressed patient laid upon it with his knees drawn up; after covering him with a light blanket, sponge him thoroughly, first over head and neck, then the breast and abdomen, until the temperature is reduced to 100 degrees or less. Do not apply the water to the extremities, but on the contrary, apply bottles of hot water to feet.

By this means the temperature can be reduced in from twenty to forty minutes. Should these cold applications be met with too great protest from the patient or produce a sensation of chilliness bordering on collapse, a prolonged warm bath may be used which is capable of achieving not only an equal but even a greater reduction of the temperature than by any other method.

The new antipyretics, thallin and antipyrine, I have never as yet had the opportunity of testing.

When there are more than two or three stools a day I then consider that there is a diarrhoea and meet it with appropriate remedies—usually prescribing opium in some form with a vegetable astringent.

Should there be much tympanites with a dry and parched tongue I use the turpentine emulsion. A slight costiveness without tympanites, I regard as rather favorable. When hemorrhage occurs, I use fld. ext. ergot with opium and astringent, keeping the bowels locked up for forty-eight hours or more. I also apply an ice bag or cold cloth to ileo-cecal region and give the patient cracked ice in abundance.

For depression when pulse is small and rapid, brandy is given every hour or two till pulse becomes slow and full. When pulse is 130 per minute or over, I then associate with brandy a few drops of tinct. of digitalis at each dose.

In the latter part of the disease when tongue is red and tender, showing inflammation of the whole tract of the alimentary canal, I then give a saturated solution of chlorate of potassium three or four times a day. The most important adjunct to the treatment of this fever as well as in typhoid fever is sustaining the vital powers, by the frequent use of nourishment in liquid form given in sufficiently small quantities to avoid fermentation.

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## **REPORT OF CASE OF MALFORMATION OF THE ANUS AND RECTUM.**

By M. F. PRICE, M. D., Colton, California.

[Read before the San Bernardino County Medical Society, Feb. 2nd, 1886.]

Malformations of the anus and rectum are arranged, by authors, generally under four heads:

- 1st. Narrowing of the rectum, or congenital stricture;
- 2nd. Closure of the anus by a membranous diaphragm, as the extension of the integuments over the natural site;
- 3rd. Entire absence of the anus, the rectum ending in a blind pouch, and
- 4th. The rectum the same as in the late variety and the anus normal, a septum separating the anal and rectal pouches.

All of these varieties may be complicated with rectal fistulæ,

or the rectum may open into the bladder, urethra, vagina, or in the groin or lumbar regions. Instances, very rare, are on record of its opening in very unusual places, "as on the sacral region, at the umbilicus, on the side just below the scapula, and on the face, the congenital vice, having, in each case, been conjoined with other aberrations of structure."—(Gross.)

Whenever the malformations under consideration exist in any of the above named varieties, I think there is usually some other, and accompanying natural defect, physical or mental.

In the foetus the anus develops from below, and the rectum from above, the two pouches advancing toward each other until they finally coalesce. This development may be arrested at any stage, thus forming the malformations of which we are treating.

When found to exist, surgical interference is the only resource. In the first variety named, the treatment is quite simple, and consists of dilatation, or nicking the stricture, or both. In the second variety the membrane closing the orifice should be cut with a crucial incision, with the corners snipped off, if necessary, and kept from closing by daily passage of bougies. In the fourth variety the surgical procedure is, also, often very simple, as the septum is frequently thin, and the meconium can be felt forcing down in a fluctuating sac, by the finger pushed up, into the anal pouch, and the membrane can be thoroughly incised with a bistoury, the finger being used as a guide. Where the connection is thus established it is to be maintained, as in the other cases, by passing bougies. It is in the third variety that the most serious cases are found. In the first place it is impossible to determine just how the high rectal pouch is, and exploratory incisions, or thrusts in the dark, are very hazardous, owing to the danger of puncturing the bladder or other organs. "The results of attempts to establish an outlet by means of incisions alone, though the perineum are not favorable as regards a useful anus."—(Kelsey.)

Nearly all authors recommend an effort to bring the rectum down, if reached through the perineum, and stitch it to the skin, but even then the results have not been generally favorable. If the rectum cannot be reached through the perineum, then the only resort is to colotomy. It may be a matter of doubt as to whether this is justifiable under any circumstances, for at best the operation is not likely to prove a success, and even if it should, it is questionable if it prove a benefit rather than a curse, for would not the death of the child be preferable to a useless

life, which must make the person an object of disgust to himself and those around him? Gross unequivocally says death is far preferable.—(Gross Surg. Vol. II., p. 685.)

Viewed from the patient's side, I confess I fully agree with the above quotations; but viewed from our standpoint, a human life which *may* be saved, in the balance outweighs every other consideration, and we as surgeons should not hesitate a moment. This is the view taken by Agnew. He says, "it is always the duty of the surgeon to save life, and if he neglects to employ all the resources of his art to that end, he has failed to meet the moral requirements of his position."—(Agnew's Surg. Vol. I., p. 412.)

With these prefatory remarks, the import of which is familiar to you all, I will proceed to the object in view in writing this paper, viz.: The narration of a case, which I had at Yuma, Arizona Territory.

AMELIA B. was born Nov. 17, 1882, of German father and American mother, with imperforate anus, with a rectal fistula which opened just within the labia majora at the posterior commissure. This fistula was very small, admitting only the smallest probe, and yet must have permitted enough meconium to pass to stain the diapers, thus deceiving the Mexican midwife and nurse, so that the defect was not discovered until the fifth day, when I was called in, and found the condition as above described, and the child suffering with the effects of obstruction of the bowels. The next morning (Nov. 23, 1882), I operated for the production of an anus. The sphincter seemed to be complete, and the puckering of the skin indicated an effort of nature to form an anus. After passing a probe through the fistula I entered a bistoury at the natural anal site, and cut carefully until the probe was reached which was followed up until the rectal pouch was entered, plainly indicated by a copious flow of the retained meconium. The rectum ended about one and a quarter inches from the perineum. The cut was so long, and the condition the child was such that I did not deem it advisable to attempt to pull the rectum down, nor to dissect it from its connection. I therefore cut in different directions through the tissues, making the opening include the fistula down to the perineum, and large enough to admit the largest bougie, leaving the sphincter intact. This opening was maintained by the frequent passage of bougies, and the effects of the intestinal obstruction fought vigorously. The child was

in convulsions the most of the time for 80 hours, and three different times artificial respiration was resorted to. These convulsions were perhaps partly due to shock. It finally began to rally, and from this time on did well, the new portion of the rectum healing, and perfectly performing its functions. After about a fortnight I intrusted the passing of the bougies to the mother. Everything progressed favorably, the child growing rapidly, until Jan. 7, 1883, when I was sent for, the messenger saying, "the place has grown up again." On my arrival at the house, the mother told me the anus had closed again, but that she thought it had been all right the day before. I found, as represented, that a thin membrane, continuous with the skin, had completely closed the orifice. The vigilance in passing the bougies had been relaxed, and the gradual closing had been unnoticed. The membrane was at once cut with a crucial incision, and the corners snipped off, and the mother instructed to be more vigilant in the use of the bougie. From this time the recovery was rapid and complete. The remnant of the fistula from the new anus to the forsa navicularis still remained, for the cure of which I intended to operate at a later date, as soon as the child had fully recovered from the shock and other debilitating influences, but was prevented from one cause and another until April, 1884.

I had made a number of examinations, and concluded that the fistula did not include the whole of the sphincter ani, so that it would only be necessary to lay the perineum open to the fistula. A grooved director was passed into the fistula at the vulva, and brought out at the anus and the tissues incised. The wound was dressed with carbolized vaseline, and allowed to heal, which it did kindly and rapidly without annoyance to the child. From the moment of this last operation the constipation, and all nervous irritation passed away, and the child improved rapidly. She has a strabismus (single convergent), caused probably by the convulsions aggravated, perhaps, by nervous shock. The child was in such a precarious condition that I did not think it safe, with unskilled lay assistants, to administer an anesthetic. I saw the patient late in February, 1885. She was then apparently in perfect health, of good size, inclined to obesity.

The results in this case have been good, the operations having completely overcome the congenital defect. The perineum *may* be somewhat weakened by the last operation, but even that, I think, will, in time, be naturally overcome.

**A FEW WORDS ON GLAUCOMA.**

By GEORGE C. PARDEE, Ph. B., A. M., M. D.

Until von Graefe's great discovery in 1856 of the almost specific action of iridectomy, glaucoma was considered to be an incurable disease, sure to lead to blindness. Von Graefe's discovery, which in itself gave him immortality as one of the greatest of human benefactors, has robbed this disease of its greatest terrors, and guaranteed a rescue from darkness to the hundreds and thousands who are yearly afflicted with it. According to the statistics of thousands of cases of eye disease collected at the great European eye-clinics, glaucoma was present in about one per cent of all cases presenting themselves. It attacks both sexes with about equal frequency. While it is a disease essentially of advanced middle-age, it has been found in young people and even in young children. If it appear in one eye, its fellow is almost sure to be also attacked, though the length of time intervening may vary from a few hours up to many years. The nature of the disease is, as yet, a subject of dispute, though it is more than probable that the different theories are all of them correct. Its etiology carries one through a long list of diseases of different parts of the eye and other organs, as well as certain bodily and mental conditions. Among the more prominent of the existing causes may be mentioned neuralgia of the trigeminus, gout, rheumatism, stoppage of an habitual hæmorrhoidal hemorrhage, cessation of menses, long-continued sorrow and trouble, especially if accompanied with much weeping, sedentary habits producing abdominal plethora, great mental excitement of any kind, venereal and alcoholic excesses, overuse of the eyes, indigestion, colds, traumata, heredity and exposure to too-bright light. Most of these exciting causes must presuppose a tendency to glaucoma as already existing in order to account for its appearance. There is also another cause which is comparatively frequently to blame for the appearance of a glaucoma in an eye which, undoubtedly, was previously disposed to it. This is the local application of a solution of atropine. Many an eye has been lost by the dropping into it of a drop of atropine solution for the purpose of expanding the pupil for purposes of diagnosis or to combat a supposed iritis.

Hippocrates, Galen, Rufus of Ephesus, Pliny and many others of the ancient writers on medical subjects, mention the disease, and all of them declare it to be incurable. Even Des-

marres, 1858, commences a chapter in his book by saying, "Glaucoma being incurable, it is very difficult to lay the foundation for its treatment." And Sichel, 1841, says: "This disease is completely incurable." And, as a matter of fact, before the introduction of iridectomy, there never was a case of true glaucoma cured; but every case ended, sooner or later, in complete blindness.

The disease itself is generally preceded by more or less marked prodromes. Among these may be mentioned: Colored halos around gas, lamp or candle-flames; the subjective perception of colored rings and balls; periodical disturbances and defects of vision; attacks of neuralgia in and around the eye; the sudden increase of intraocular tension, with the ophthalmoscope, excavation of the optic disc, pulsation of the retinal arteries either spontaneously or on the application of a slight pressure to the ball through the lid, hyperæmia and increased sinuosity of the retinal veins. The pupil is more or less expanded and reacts slowly to light during these attacks, and the aqueous humor may be slightly cloudy. All of these prodromes may appear several times and again disappear before the true glaucoma manifests itself. But in seventy-five per cent of all cases showing these prodromes, the disease sooner or later appears. Months and even years may, however, be occupied by the prodromal stage, the attacks gradually increasing in intensity, and frequency until the glaucoma is fully established. This latter may be assumed to have occurred where, in the intervals between the attacks, vision is still defective.

The completed glaucoma manifests itself in several forms. Of these, *glaucoma simplex* is, perhaps, the most to be feared, because it is often very insidious in its march. The affected eye may be nearly, if not quite, normal in appearance, there being no appreciable injection of the conjunctival vessels, no cloudiness of the aqueous, no shallowness of the anterior chamber, no abnormality in the size of the pupil, and even the increase of tension may be very slight or even absent. In such cases a diagnosis is very difficult without taking into account all the concomitant circumstances, and, above all, using the ophthalmoscope. The age of the patient, failing vision without any visible lessening of the transparency of media, scotomata, and obscurations of the field of vision without any apparent cause, should call the attention to glaucoma. The ophthalmoscope

will, if the disease have existed for some time, reveal an abnormally discolored and cupped optic disc; the arteries are found small in caliber and often pulsating, the veins swollen and tortuous.

This form of glaucoma can run its course and end in total blindness without the appearance of a single inflammatory symptom. It is, therefore, often neglected by those afflicted with it. There being no inflammation, such patients are loth to consult a physician until driven to it by approaching blindness. The gradual failure of vision is attributed to old age, to cataract, to anything and everything but the correct thing. Even the general practitioner, who may have had but little experience in the management of diseases of the eye, not infrequently fails to make the correct diagnosis when called upon in such cases, but allays the fears of his patients by telling them that they have cataract, and advises them to wait until the "ripeness" of the cataract is shown by blindness and then to consult a specialist about an operation.

*Glaucoma simplex cum inflammatione intermittente* is a form of the disease which differs from that just described in that it is accompanied by periodical attacks of inflammation. In such cases there are times where pericorneal injection appears, the anterior chamber becomes shallow, the aqueous and vitreous humors become cloudy, the pupil expands and reacts slowly and the intraocular tension becomes still greater. Pain is felt in and around the eye, and the patient complains of increased dimness of vision and subjective lights. These attacks may last a few hours only or extend over as many days. After their disappearance the eye returns to the condition of pure simple glaucoma, but each attack leaves the vision a little worse than it was before. The time between each two attacks may vary from a few hours to as many months. This form has a danger peculiar to itself. Since the attacks are of short duration they seem to yield to the simple remedies which patients nearly always try before consulting a physician. Thus, those afflicted with the disease imagine they have the means of cure in their own hands and neglect to apply for medical aid and advice until the trouble has reached an advanced stage. Another danger lies in the ease with which one of these attacks can be mistaken for a case of conjunctivitis or iritis. In such cases irreparable damage can be done either by an act of omission or commission. If



conjunctivitis be diagnosed, an astringent collyrium is given and invaluable time is lost, as the attack now passes off spontaneously while the disease is left to pursue its course. If an iritis be decided upon, atropine is prescribed, the first application of which may light up a raging, uncontrollable inflammation and in a few hours destroy vision completely.

The third form, *glaucoma inflammatorium acutum*, is characterized by a sudden and violent inflammation. The patient writhes under the most intense neuralgic pains in and around the affected eye. Fever, quick pulse and even vomiting are often present. The lids swell, the conjunctiva reddens and even becomes chemotic; the cornea becomes hazy and anæsthetic; the anterior chamber becomes shallow; the aqueous humor clouds up so that the discolored and slowly reacting iris is seen only with difficulty; the pupil, contrary to its behavior in all other acute inflammations of the eye, expands; the intra-ocular tension is greatly increased, the eye often feeling as hard as stone; vision is affected to a greater or less extent; in some cases total blindness supervenes in a few hours. Such an attack may last for a few hours or days, and then disappear, leaving the eye looking comparatively well. Vision may return to a greater or less extent; but another attack, which is almost sure to follow, leaves it in a worse condition. The final result, if the proper therapy be not resorted to, is complete blindness. The danger in this form, outside of that inherent in the disease itself, lies again in the spontaneous disappearance of the attacks, leaving the patient and the inexperienced physician confident of the efficacy of the remedies applied.

*Glaucoma inflammatorium chronicum* is gradual and insidious in its advances. The acute attacks of inflammation are not present. The patient's attention is generally first called to his eyes by temporary defects of vision, and the subjective perception of colored rings. But these disturbances soon pass off, and but little weight is attached to them, it being hardly noticed that the vision is gradually failing. Only when scotomata appear or vision becomes very badly interfered with, or the other eye is affected, are the patient's fears aroused sufficiently to cause him to consult a physician. On account of its insidious advance both patient and physician are easily misled as to the importance of the matter, and the correct diagnosis is too often made only when the disease has progressed so far that only a partial result can be hoped for by the proper therapy.

The inflammatory symptoms in this form of glaucoma are but slight. There is a slight hyperæmia of the episcleral vessels, the larger ones showing distinctly and surrounding the cornea with a wide-meshed network of dark colored branches. The cornea is slightly cloudy and anæsthetic; the aqueous humor is often periodically discolored; the anterior chamber becomes gradually shallower; the pupil expands, responds slowly to light and is frequently uneven in outline from the greater or lesser posterior synechiæ; there is a more or less outspoken grayish-green appearance of the vitreous—hence the danger of diagnosing cataract; the iris becomes discolored and atrophic; and the final result, if left to itself, is total blindness.

The therapy of an established glaucoma of any form is expressed in one word—iridectomy. There have been numerous and persistent attempts to supplant von Graefe's great discovery by other means, operative and medicinal. But authority is unanimous in its support of iridectomy. In the prodromal stage, when its symptoms are not severe and do not return at short intervals, it is well to preserve the eyes from all those influences which tend to hasten the glaucomatous process. Presbyopiæ should be carefully corrected by the proper glasses; excessive use of the eyes should be forbidden; bright light should be avoided; the eyes should be protected from wind and dust; everything tending to produce congestion of the head (such as tightly fitting neckwear, singing, long continued speaking and the playing on wind instruments) should not be allowed; the bowels should be kept open; temperance in all things should be insisted upon; quietness and cheerfulness of mind should be secured, and the general health should be carefully attended to. As a local application, especially when the attacks show themselves, a solution of eserine, on account of its well known property of diminishing the intraocular tension, may be used in the eyes with advantage. But if the prodromal attacks be severe and frequent, the earlier an iridectomy is performed, the better and more satisfactory will be the result. In the prodromal stage the operation is easy of performance, more sure in its results, as great changes in the retina and optic nerve have not yet taken place, and the probable danger to vision from an acute inflammatory attack, which may supervene at any time, is warded off. After the disease has become established, especially in the acute inflammatory form, the operation should not be de-

layed any longer than is absolutely necessary. Every day that is allowed to pass is fraught with the danger of a new attack, the result of which may be total blindness and is sure to be a still further dimming of vision.

I have written thus at length for the single purpose of calling the attention of the general practitioner once more to the dangers to which this disease exposes those afflicted with it, and, if possible, to save from errors of diagnosis and their ruinous consequences, both patient and physician. It is only too often that the oculist is called upon for advice by patients whose eyes are partially, or even totally, blind, from glaucoma, and who have been treated with liniments, blisters and other medicaments, local or internal, for "neuralgia." Such patients are astounded when told that an operation is the only thing holding out any prospect of even the slightest relief. They blame—and not without cause—the physicians who failed to apprise them of their danger, but lulled them into fancied security with assurances that their vision would improve when the neuralgia was cured. Not only does the reputation of the physician who makes such a mistake suffer, but he must carry on his conscience the weight of the knowledge that he has unwittingly helped to inflict blindness upon an unfortunate sufferer, and has been the cause of unnecessary pain and discomfort. The very fact of a rapid decrease in vision, scotomata, neuralgic pains about the eyes, subjective perception of light occurring in any person, especially in one of middle age, should call attention to the eyes and lead to a careful examination of them; and, if there be any doubt, the advice should be given to consult some one who makes a specialty of ophthalmology. I might even go further, and say that neuralgic pains about the eyes, especially in middle-aged or older persons, is a suspicious circumstance, even if nothing else should be complained of, and should cause one to think of the possibility of glaucoma. Let the general practitioner look at the selfish as well as the moral side of the question. Let him remember that one mistaken and, consequently, neglected case of glaucoma may injure him greatly in reputation and pocket. And, above all, let him not forget that there is such a disease as glaucoma; that, if neglected, it leads to the most disastrous results, and that about one per cent of all diseases of the eye are of a glaucomatous nature.

It may be thought that I am an alarmist in this matter. But

in my own practice it is not an uncommon thing to meet with cases of neglected glaucoma which have been treated as neuralgia, and allowed to reach that stage in which an operation can be but of partial benefit in stilling pain and preserving what glimmerings of vision may still remain. And my experience, both at home and abroad, is not alone in the matter. Other oculists speak in the same manner, and are constant in the warnings to their brother general practitioners. One English oculist complains that out of sixty-seven glaucomatous cases presenting themselves to him for advice, not less than fifty-two came to him at a period when but little could be expected from an operation! If the general practitioner were compelled to pronounce the verdict of irretrievable blindness on some poor, confiding wretch, who had come to him full of hope and sure of a speedy relief from all his troubles; if he could see the look of mingled despair, incredulity, pain and dashed hopes come over the face of one such victim; if he could feel the sadness which one human being must feel on telling another that little, if anything, can be done for him and that partial or total blindness must be his fate, he would be very careful with "neuralgia of the eyes," and would not pass it lightly over.

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### **NOTES ON A GERMAN HOSPITAL.**

By SARAH I. SHUEY.

The Dresden Maternity Hospital, in its construction and appearance, is not a fair sample of the best German hospitals. It is a very old building, gloomy and dark, and has few modern improvements.

Besides the Lying-In department, it contains several surgical and medical wards for women. The confinements number about fifteen hundred a year.

There are several cases in minor gynecological surgery or a major operation almost every day; from three to eight accouchments daily, and weekly a polyclinic averaging fifty patients. There are eight internes, each in turn taking full charge of the parturient chamber, except in cases of dystocia.

There are two lying-in chambers in the hospital, one being used for a few weeks, and then the other; each when not in use being thoroughly cleansed and fumigated. When a patient is admitted to the hospital, a careful record is made of the name,

occupation, parentage, residence, age, religion, weight, height, color and muscular development; the diseases of childhood experienced, viz., measles, scarlet fever, affections of the glands of the neck, inflammation of the eyes and rachitis; the time of the menstrual flow, its duration at each period, the amount, profuse or scanty, regular or irregular, painful or not painful; the time of conception, the number of former pregnancies, and the course of each. Then follows a record of the present condition. This includes a thorough examination of the mammary glands, abdomen, veins of the lower extremities, and the condition of the feet, limbs, and genitals; the position of the child in utero; the umbilical and uterine souffle, and the foetal heart-sounds; measurements of the pelvis are also taken.

When labor begins, the parturient is put to bed in a large room containing ten or twelve beds, often all occupied at the same time.

Again measurements of the pelvis and abdomen are taken and the position and presentation of the child recorded, and a careful and accurate account of the different stages is kept by the physician in charge. *He alone* is allowed to make vaginal examinations. *The most scrupulous cleanliness* is enjoined, and he is required to use a strong solution of carbolic acid for the hands before each examination.

Professor Winckel insists that puerperal fever rarely occurs in the hospital unless from carelessness in regard to anti-septic measures, and that if more than one patient is attacked it is almost always due to the physician in attendance. Puerperal cases were never isolated.

A midwife is present at each bed. She supports the perineum according to instructions given by Professor Winckel, viz., by placing the patient on her left side and, with the palm of the right hand presses firmly against the perineum, and the left hand bearing upon the child's head, in order to give time for slow distention of the perineum.

In three thousand cases Winckel found 14 per cent sustained ruptures, and out of the 14 per cent 34 per cent were primiparas over thirty years of age. He says that perineal rents are no more likely to occur in the birth of boys than of girls.

Ruptures are immediately repaired. The woman is placed on her left side. The edges of the wound are thoroughly cleansed, and the discolored torn particles snipped off and a greater or

less number of stitches are taken corresponding to the length and depth of the tear. A straight needle is inserted three or four lines from the edge of the wound and as deeply as possible. The stitches are drawn tightly in order to secure early union, and to more perfectly exclude the lochial discharge.

In superficial tears the continuous suture is used, but in deep ones both the continuous and interrupted. The stitches remain from three to six days. During this time the perineum is carefully cleansed. If œdema of the margins of the wound occur and the stitches show a tendency to cut through, they are taken out. If endometritis or any disease of the vagina exist, a two per cent solution of carbolic acid is used as an injection two or three times a day.

Professor Winckel applies sutures even in cases in which inflammation of the vagina or slight œdema has existed previous to delivery, and has, nevertheless, had excellent results. Enemas are given each day to move the bowels.

If the urine be not easily passed in the abdominal position, a catheter is employed. In deep lacerations the knees are closely bound together and the patient kept on the side. Serrefines are rarely used. About two-thirds of the cases operated upon heal by first intention. The third stage of labor is conducted according to Credé's method, the placenta usually being expressed with the fourth or fifth contraction of the uterus and from five to twenty minutes after the birth of the child. There is rarely any retention of membranes or placenta, rarely any hemorrhage or hour-glass contraction. Forceps are seldom applied unless the foetal heart-beats become rapid or weak, or the mother's strength gives out.

The parturient never receives vaginal injections unless the temperature rises or hemorrhage follows delivery, then, beside the injection of water in the vagina, a hypodermic injection of ergotine over the uterus is given. Each morning the perineum and breasts are examined. Between the ninth and twelfth day the woman is able to leave the hospital. Before dismissal another examination is made, and the condition of the uterus, its size, weight, position of the cervix, of the labia, of the perineum and of the breasts are carefully accorded.

At birth, the child is weighed, its length taken and the diameters of its head.

As a routine practice, a two per cent solution of nitrate of

silver is dropped into the eyes of the child. (10 or 20 grs. to the ounce.)

The placenta and membranes also receive careful examination. The size, weight, the character of the cotyledons, large or small, calcareous, etc., the point of attachment of the cord, and the surface exposed at the time of expulsion. Of the membranes, the character of the tear and its position with reference to the placenta. The length and diameter of the cord is noted, and the direction in which the umbilical arteries coiled around the umbilical vein.

Weakly infants weighing not more than three or five pounds are kept for the first few days in Credé's warming apparatus, consisting of a copper box with double walls, between which is space for hot water. The child is wrapped in flannel or soft cotton.

About ninety-five per cent live.

The cases of fissured nipples are common.

Out of 80 cases,

8 began to show fissures within 12 hours after delivery.

13	"	"	"	24	"	"	"
11	"	"	"	2nd day	"	"	"
17	"	"	"	3rd day	"	"	"
16	"	"	"	4th day	"	"	"
10	"	"	"	6th day	"	"	"
4	"	"	"	8th & 9th day	"	"	"
1	"	"	"	10th & 11th day	"	"	"

The treatment consists in taking the child from the breast, until the nipples are healed.

Cases of mastitis are rare. The assertion that an obstruction to the flow of milk is the common cause of mastitis, Professor Winckel believes to be wholly incorrect, and any attempts to empty the breasts by artificial means or to soften them by friction, when they are engorged or inflamed, is not only futile but cruel.

He says that it is indeed possible that the distended acini may produce irritation and congestion of the gland, but this is by no means a uniform result, and it is still less probable than that an exudation should succeed this congestion. The exudation is produced not by the accumulation of milk, nor is the milk transformed into pus, as many suppose, but the exudation occurs rather by passive engorgement of certain portions of the

breast, due to the constriction of the lacteal ducts and acini. As a rule, inflammation of the breast generally begins by the extension of the disease along the connective tissue, and usually appears after the existence of fissures, whereas the excessive congestion of the breast seen in the first days of child-bed quite commonly terminates in absorption, and mastitis in non-nursing women is extremely rare.

He also does not regard a sudden interruption of lactation as a cause of mastitis.

He cites many cases of sudden interruption rendered necessary by illness or the return of the menstrual function, or the death of the child, and in not a single instance had inflammation of the gland followed.

In a number of 2,300 nursing women, 918 suffered with engorgement of the breasts, but only 136 of mastitis, *i. e.* 6 per cent of the whole number, and 15 per cent of those affected. 67½ per cent were among primiparas, 30 per cent among women who had had two or three children, and 1.5 per cent among women who had had many children.

Among those affected were as many blondes as brunettes. The treatment consisted in taking the child from the inflamed breast, not fearing to use the one unaffected. The breasts were strapped and fomentations of luke-warm lead water were applied night and day. Giving at the same time castor oil, mag. sulph. sulphate of soda or small doses of calomel.

The fomentations were continued until the lumps or knots entirely disappeared.

Of 136 cases of mastitis, 91 yielded to the lead treatment, resolution taking place.

If the swelling, fever and throbbing pain continued and an abscess was inevitable, iodine was painted on the gland and as soon as fluctuation occurred, a free incision six to eight lines long was made under carbolic spray. Afterwards a two per cent solution of carbolic acid was injected and a drainage tube inserted. Then a dressing consisting of a layer of protective silk, covered by salicylated cotton, then a moderately tight bandage with other layers of cotton, and a Lister gauze bandage outside of all.

The bandage was not renewed until pus began to appear on the outer dressing, usually every two or three days. The duration from the beginning of the suppuration till the incision closed



was from two to forty-two days, the average being fourteen days.

The cord was found wound around the neck in 23 per cent of the births.

Prolapse of the funis had occurred frequently in Professor Winckel's practice, viz., in 2,000 cases, there were 53 of prolapse. In 10 cases the cord was replaced and remained, and the children lived. In 2 cases it was twice replaced and the children lived. In 2 other cases when replaced it returned though repeatedly replaced. One of these cases was saved by application of forceps, and version was performed in the other, but the child died. The cord remained after being replaced in those cases in which the head was still high in the pelvis, and not in a position for the application of forceps.

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**CARBOLIC ACID INTERNALLY.**—A practitioner of large experience sends the following:

In the few brief notes you have published on carbolic acid in indigestion, I think you have by no means stated the full range of the remedy even in this condition. In the first place, I have found carbolic acid in doses of from two to four drops a better antacid than any of the alkalies. It arrests fermentative action in the stomach, of whatever kind, with greater certainty in shorter time than any drug I know of. And in sick stomach it often gives quick relief. In vomiting, from any of the usual causes, it is usually serviceable, and in some cases is of benefit where other remedies have failed. It frequently quiets the sick-stomach of pregnancy. I have used it almost daily in my practice for the past eighteen or twenty years, and know of no drug in which, in the conditions named, I put so much trust.—*American Practitioner.*

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**THE USE OF ETHER AS AN INTOXICANT.**—At a recent meeting of the Diocesan Synod of Armagh (Ireland) reference was made in the course of a discussion on temperance, to the practice in various parts of the north of Ireland of using ether instead of whisky. A large traffic, it appears, exists in ether, more especially as it is a cheaper intoxicant than whisky. Several cases of insanity are stated to have occurred from the excessive use of ether, some at present being in the Omagh and other lunatic asylums.—*Ex.*

## **Proceedings of Societies.**

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### **Minutes of the Sixteenth Annual Session of the Medical Society of the State of California.**

The Medical Society of the State of California met in sixteenth annual session at B'nai B'rith Hall, San Francisco, April 21, 1886, and was called to order at 10:40 A. M. by the President, William P. Gibbons.

James Simpson delivered an address of welcome, and the report of the Committee of Arrangements.

The President delivered the annual address which was referred to Committee on Publication.

On motion of J. Grey Jewell, a committee of five was ordered appointed to consider the recommendations made by the President in his annual address.

On motion of R. H. Plummer, the following amendments were adopted:

To Art. II., sec. 4, by striking out the words, "by the exhibition of his diploma;" to Art. III., sec. 7, by adding after the word "election," "in the absence or loss of applicant's diploma, the Board of Censors may accept satisfactory proof that the diploma has been presented to the State Board of Examiners of this Society, and a license to practice issued thereon. It shall be the further duty of the Board of Censors to examine into the present professional standing of applicants."

On motion of C. G. Kenyon, the Society decided to adhere strictly to the order of business as laid down in the programme by the Committee of Arrangements.

Minutes read and approved. Adjourned.

AFTERNOON SESSION, APRIL 21, 1886.

The President in the chair.

Report of the Committee on Publication was read by its chairman, James H. Parkinson.

On motion of M. M. Chipman, the report was received.

On motion of J. F. Burdick, the recommendations of the committee were adopted and the committee was given full power to act.

Report of Committee on Mental Diseases was read by its chairman, W. H. Mays, and after discussion referred to the Committee on Publication.

The report of the Committee on Practical Medicine and Medical Literature was read by its chairman, A. H. Agard, and referred to the Committee on Publication.

R. H. Plummer read the reports of the Treasurer and of the Secretary of the Board of Examiners.

On motion these reports were referred to an auditing committee consisting of G. W. Davis, J. T. McLean and C. M. Blake and also to the Committee on Publication.

On motion of W. A. Briggs, a committee of three, consisting of W. E. Taylor, H. S. Orme and W. F. McNutt, was appointed to consider and report upon the advisability of petitioning the Governor for the privilege of inoculating criminals under death sentence with leprous virus.

James H. Parkinson introduced the following amendment to the Constitution:

Art. 1, sec. 4, strike out the remainder of section after "for his election," and add "Members by application. Any regular physician not disqualified by any by-law of this Society can become a member on making application to the Secretary in writing. He must furnish with this application a certificate from the Secretary of the local Society where he resides stating that he is a member of the same in good standing and that he possesses the license of the Board of Examiners of this Society; or, should no local society there exist, he shall furnish a certificate from two members of good standing in this Society stating that he is a reputable practitioner and that he possesses the license of the Board of Examiners. The sum of \$5 as dues for the current year must accompany each application."

Minutes read and approved. Adjourned.

EVENING SESSION, APRIL 21, 1886.

The President in the chair.

G. G. Tyrrell presented Treasurer's report which was referred to an auditing committee consisting of Washington Ayer, G. F. G. Morgan and M. M. Chipman.

The Auditing Committee reported the accounts of the Treasurer and the Secretary of the Board of Examiners as correct.

The report of the committee was received and adopted and the committee discharged.

G. W. Davis of the Committee on Practical Medicine read a supplemental report entitled the The Haematopoietic and Circulatory Systems. Referred to Committee on Publication.

W. F. McNutt also read a supplemental report on practical medicine entitled Congenital Malformation of the Left Lobe of the Liver. Referred to Committee on Publication.

J. Grey Jewell, chairman, read report of Committee on Graduating Exercises. Referred to Committee on Publication.

W. I. G. Dawson read a paper on Chronic Pleuritic Effusion and exhibited patient. Paper referred to Committee on Publication.

Minutes read and approved. Adjourned.

MORNING SESSION, APRIL 22, 1886.

President Gibbons in the chair.

On motion of H. J. Crumpton the motion to refer the recommendations of the President in his annual address to a Special Committee was reconsidered and rejected.

The recommendations in regard to certificates of membership were referred to Board of Examiners and the recommendations in regard to legislation to the Committee on Legislation.

On motion of W. A. Briggs, that portion of the President's address pertaining to the American Medical Association, was referred to a Special Committee appointed by the President and consisting of James Simpson, F. W. Todd, R. Beverly Cole, H. J. Crumpton, J. Grey Jewell and H. S. Orme.

L. C. Lane as a member of Committee on Surgery, read a paper entitled Medicine—Old and New—with a chapter from Caelius Aurelianus. Referred to Committee on Publication.

Report of Medical Topography, etc., was read by its Chairman, J. B. Trembly, and referred to Committee on Publication.

On motion of Washington Ayer, the Committee on Publication was authorized to expend sufficient money to illustrate this report.

On motion of A. B. Stuart, the name of M. M. Shearer was referred back to the Board of Censors for further consideration.

Minutes read and approved. Adjourned.

AFTERNOON SESSION, APRIL 22, 1886.

President in the chair.

Report of Committee on Gynecology was read by its chairman F. Walton Todd and referred to Committee on Publication.

Washington Ayer read report of Committee on Necrology, which was referred to Committee on Publication. A. B. Stuart presented a supplemental report which was likewise referred.

Report of Committee on Medical Education read by title and referred to Committee on Publication.

Board of Censors presented this Report: "Regarding the case of Edward Donnelly the Board of Censors would refer the matter back to the County Society, and recommend that it be laid over for one year awaiting the decision of said Society. They would further recommend that the applicant's fee be returned."

On motion of G. H. Powers, John J. Cochrane, Surgeon U. S. A., was invited to sit in the convention.

The following officers were elected for the ensuing year:

President, W. S. Thorne.

Vice-Presidents, R. H. Plummer, W. F. McNutt, A. G. Anthony, W. R. Cluness.

Permanent Secretary, Wallace A. Briggs.

Assistant Secretaries, J. H. Parkinson, L. M. F. Wanzer.

Treasurer, G. C. Simmons.

Board of Censors, W. W. Kerr, T. B. DeWitt, A. G. Anthony, H. S. Orme, G. G. Tyrrell.

Board of Examiners, James Simpson, W. F. McNutt, Charles H. Steele, C. E. Blake, C. G. Kenyon, R. H. Plummer, William Lawlor.

Alternates, G. W. Davis, W. W. Kerr, H. H. Hart.

On motion of L. M. F. Wanzer, the thanks of the Society were tendered to Mrs. R. H. Plummer for the invaluable aid rendered the Secretary of the Board of Examiners in the discharge of his official duties. The Secretary was instructed to notify W. S. Thorne of his election to the Presidency of this Society, and to request his immediate presence at its sessions.

San Francisco was selected as the next place of meeting.

J. H. Wythe, chairman, read report of Committee on Histology and Microscopy which was referred to Committee on Publication.

Report of Committee on Diseases of Women and Children was read by title and referred to Committee on Publication.

Minutes read and approved. Adjourned.

EVENING SESSION, APRIL 22, 1886.

President in the chair.

A. B. Stuart presented the following preamble and resolutions:

WHEREAS, It is becoming a frequent occurrence to attempt to hold surgeons responsible for imperfect results in both opera-

tive and conservative surgery, especially in cases of fracture and dislocation, and frequently where no professional attention could have a controlling influence, in many cases due to the severity of the injury, want of vitality in the person of the injured, or unjustifiable carelessness on the part of the patient, the attendance, or both, therefore, be it

*Resolved*, That the Medical Society of the State of California, in council assembled, wishing to protect its members, when innocent of the charges, and at the same time do no wrong to the public and their patrons, do hereby instruct the President to appoint a committee of five to take into consideration the advisability of forming a protective union, auxiliary to the said Medical Society of the State of California, known by a designated name, and designed to benefit not only its members, but also the general profession and the public; and further be it

*Resolved*, That if said committee, after considering the subject in all its bearings, concludes to report favorably, it be instructed to present a draft of a Constitution and By-Laws for the consideration of this Society at its next annual meeting.

The supplemental report on Mental Diseases entitled "The Country Doctor, in relation to commitments of the insane," by C. M. Fenn, was read by title and referred to Committee on Publication.

W. W. Kerr, chairman, read report on Public Hygiene and State Medicine, which was referred to Committee on Publication.

The following message was received from the President elect, W. S. Thorne:

Please present to the members of the Medical Society of the State of California, my grateful recognition and acceptance of the great honor they have done me this day. An important session of the Asylum Board prevents a personal presentation of my thanks at this time. Accept from me the hope that the results of your session will be commensurate with the learning and the ability of your members.

Supplemental report on Obstetrics by T. J. LeTourneux, was read by title and referred to Committee on Publication.

G. L. Simmons, chairman, read report of Committee on Surgery, which was referred to Committee on Publication.

Minutes read and approved. Adjourned.

MORNING SESSION, APRIL 23, 1886.

First Vice-President R. H. Plummer in the chair.

Report of Committee on Ophthalmology was read by its chairman W. F. Southard, and referred to Committee on Publication.

W. F. McNutt presented report of Special Committee on Inoculation with leprous virous as follows:

Your committee beg leave to submit the following and to recommend its adoption,

*Resolved*, That the President of this Society be requested to appoint a Special Committee of five to investigate the etiology of leprosy, making such experiments and investigations as they may deem necessary, and to report at the next annual meeting of this Society.

On motion the report was received and adopted.

The Committee on Prize Essays presented the following report:

We award the Society prize to Herman Partsch for his original and exhaustive essay entitled "Motion in the Etiology of Seasickness." We would also commend the able paper entitled "Comparative Anatomy" presented by J. W. Robertson of Crescent City, and would respectfully suggest that both papers be published in the transactions of the Society.

M. A. CACHOT, Chairman,  
LUKE ROBINSON.

On motion of M. M. Chipman the report was received and adopted.

A paper entitled "A Law Creating a State Analyst" was read by M. M. Chipman, and referred to Committee on Publication.

William P. Gibbons, chairman, read Report of Committee on Indigenous Botany and Adulteration of Drugs, by title. Referred to Committee on Publication.

The following resolution introduced by G. G. Tyrrell was adopted:

*Resolved*, That the Committee on Legislation be instructed to co-operate with the State Board of Health in its endeavor to secure the passage by the legislature of such amendments to the laws of health as laid down in the Political Code as will render them effective, and also be requested to consult with the State Analyst and take such measures as will make his office of practical benefit to the people of this State.

The special committee appointed to consider the recommendation of the President in regard to the American Medical Association reported as follows:

*Resolved*, That in the interest of harmony and with the desire of making the International Medical Congress to assemble in Washington in 1887 a success, the Medical Society of the State of California would recommend the American Medical Association to annul the action of the committee of 1884, and also that of the committee of 1885, and to incorporate the two committees into one with the instruction to make out an entirely new programme.

JAMES SIMPSON,  
J. GREY JEWELL,  
F. WALTON TODD,  
H. S. ORME,  
R. BEVERLY COLE,  
H. J. CRUMPTON,

Adopted.

F. A. A. Belinge reported a case of hepatic abscess with recovery. Referred to Committee on Publication.

A. H. Woodill presented notice of amendments to Constitution making provision for affiliation of County Societies with the State Society.

Minutes read and approved. Adjourned.

AFTERNOON SESSION, APRIL 23, 1886.

First Vice-President R. H. Plummer in the chair.

George Chismore read a paper entitled Litholapaxy with Combined Crusher and Evacuator. Referred to Committee on Publication.

N. S. Giberson presented a synopsis of a paper on Abscess of the Kidney. Referred to the Committee on Publication. The author remarked that the paper had already been published in Philadelphia.

The following message was received from the President, William P. Gibbons:

My heartfelt congratulations to Dr. Thorne, with confidence of a glorious future to the Society.

James H. Parkinson read a paper entitled Anæsthesia by Ether. Referred to Committee on Publication.

J. D. Arnold read a paper entitled Laryngeal Phthisis. Referred to Committee on Publication.



R. G. Reynolds read a paper on *Calendula* which was referred to Committee on Publication.

George C. Pardee read a paper on the Ophthalmoscope in General Medicine. Referred to Committee on Publication.

An invitation from the Mayor of San Francisco to visit him at the City Hall was received and accepted with thanks of the Society.

The following resolution was presented by H. S. Orme, and adopted by the Society:

*Resolved*, That the Committee on Legislation be instructed to act in conjunction with the State Board of Health in preparing a bill for presentation to the State Legislature at its next session forbidding the burial of human bodies within the limits of this State without first having obtained a regular permit signed by the proper official designated by law for that purpose.

G. W. Davis presented the following amendment to the Constitution: Art. 3, sec. 7, after "the Board of Censors shall examine the credentials for admission to the Society," add "after all applications have been read by the Secretary in the body of the house and posted on the bulletin in the ante-room."

The Secretary was instructed to issue to F. A. Colby credentials as a delegate to the Oregon State Medical Society.

The following amendments to the Constitution, submitted last year, were adopted:

Art. 5, Sec. 15. The section of ophthalmology shall include, as sub-sections, the subject otology, laryngology and rhinology; the chairman of the section of ophthalmology shall also be chairman of the sub-sections, with power to assign to his associates the various subdivisions of this section for report thereon.

Art. 5, Sec. 10. It shall be the duty of the Committee on Education to be present on the final examination of the regular medical schools of this State, and to report on the education imparted and required by these institutions as compared with that imparted and required by other States of the Union and of Europe, and on such other matters as they may deem worthy of consideration in reference to medical education.

Minutes read and approved. Adjourned.

EVENING SESSION, APRIL 23, 1886.

First Vice-President R. H. Plummer in the chair.

N. S. Giberson read a paper entitled *Malpractice: Is it the*

result of Popular Ignorance on Medical Subjects? Referred to the Committee on Publication.

J. Thad. Johnson submitted a paper which was referred to Committee on Publication.

R. F. Rooney submitted a paper on Criminal Insanity. Referred to Committee on Publication.

Papers entitled Small vs. Large Doses of Medicine, by J. K. Vance, and Encephalocele, with Fibro-Cystic Tumor of the Occiput, by H. M. Pond, were read by title and referred to the Committee on Publication.

Auditing Committee reported the accounts of the Treasurer correct.

Report received, adopted and committee discharged.

On motion, the dues of the Secretary and Assistant Secretaries were remitted.

Washington Ayer and G. G. Tyrrell were appointed to escort the President-elect to the chair.

On motion of W. A. Briggs, a committee, consisting of R. H. Plummer, E. W. Woolsey and J. R. Tucker, was appointed to secure reduction in railroad fare to and from the annual session of this Society and of the American Medical Association for the year 1887.

The report of I. E. Oatman, Chairman of the Committee on Medical Legislation, was read by title and referred to the Committee on Publication.

On motion of J. Grey Jewell the thanks of the Society were tendered to the President for his able and efficient services in behalf of this Society.

Minutes read and approved. Adjourned.

At the various sessions of the Society the following applicants were favorably reported by the Board of Censors and duly elected to membership in this Society.

W. E. Taylor, Winchester Medical Coll., Va., 1859.

F. A. Colby, Dartmouth Med. Coll., 1874.

H. C. Crowder, Rush Med. Coll., 1874.

W. F. Lynch, Cooper Med. Coll., 1882.

Edward Gray, Coll. Phys. and Surgeons, N. Y., 1875.

Thos. W. Serviss, McGill University, 1881.

W. E. Dozier, University of Vt., 1883.

Maurice Pritchard, Detroit Med. Coll., 1870.

J. S. S. Gray, Coll. Phys. and Surgeons, 1871.

- G. W. Westlake, Med Coll. of Ohio, 1866.  
C. E. Dansfeld, St. Louis Med. Coll., 1883.  
W. D. McCarthy, Cooper Med. Coll., 1881.  
A. H. Woodill, Coll. Phys. and Surgeons, N. Y., 1866.  
C. L. Gregory, Cincinnati Coll. of Med. and Surg., 1874.  
J. Pfenniger, Med. Coll. of Ohio, 1866.  
Platon Vallejo, Coll. Phys. and Surg., N. Y., 1864.  
H. M. Pond, Univ. of Cal., 1880.  
G. C. Simmons, Harvard, 1885.  
J. C. Sundberg, Chicago Med. Coll., 1874.  
J. C. S. Akerly, Cooper Med. Coll., 1885.  
G. F. G. Morgan, St. Louis Med. Coll., 1884.  
A. J. Pedlar, Med. Coll. Pac., 1877.  
F. H. Gates, Univ. Cal., 1885.  
N. S. Giberson, Jeff. Med. Coll., 1876.  
G. W. Graves, Med. Coll. Va., 1858.  
H. H. Gardner, McGill Med. Coll., 1878.  
Wm. P. Sweetland, Univ. of Mich., 1872.  
Chester Rowell, Univ. Pacific, 1870.  
R. E. P. Gober, Bellevue Med. Coll., 1884.  
Jacob N. Brown, Med. Coll. of Ohio, 1860.  
J. P. Welch, Texas Med. Coll., 1875.  
Mary W. Moody, Univ. Cal., 1883.  
John T. McLean, Univ. Louisiana, 1850.  
W. H. Wallace, Univ. City N. Y., 1878.  
W. D. Anderson, Harvard, 1864.  
O. V. Thayer, Med. Coll. Vermont, 1846.  
Geo. Gerlach, Med. Coll. Pac., 1874.  
Walter Lindley, Long Island Med. Coll. Hos., 1875.  
G. E. Alexander, Jefferson Med. Coll., 1873.  
Chas. Anderson, Med. Coll. Ohio, 1874.  
A. M. Gardner, St. Louis Med. Coll., 1877.  
J. H. Renebome, Cooper Med. Coll., 1885.  
John Fife, Univ. City N. Y., 1882.  
Herman Partsch, Univ. Cal., 1884.  
H. M. Kier, Univ. Mich., 1869.  
Wm. C. Eidenmueller, Univ. City N. Y., 1884.  
C. C. Firth, Med. Coll. Ohio, 1882.  
Thomas Slater, Coll. Phys. and Surg., Edinburgh, 1860.  
W. W. Macfarlane, St. Louis Med. Coll., 1866.  
W. L. Wills, Univ. Pa., 1882.

- W. F. Finnie, Cooper Med. Coll., 1885.  
I. E. Seymour Baker, Univ. Maryland, 1881.  
Blanche Joy, Cooper Med. Coll., 1884.  
John F. Foulkes, Univ. Cal., 1880.  
C. J. Paton, Univ. Cal., 1883.  
C. A. Rogers, Rush Med. Coll., 1879.  
C. C. Wadsworth, Wooster Univ., 1874.  
F. Ginnasi, Univ. City N. Y., 1874.  
J. M. West, Rush Med. Coll., 1864.  
Thornton Craig, McGill Univ., 1876.  
A. C. Collins, Univ. Cal., 1885.  
J. F. Dillon, Univ. Iowa, 1881.  
G. Ollino, Univ. of Turin, 1872.  
Paolo DeVecchi, Univ. of Turin, 1872.  
E. R. C. Sargent, Med. Coll. Pac., 1880.  
J. de S. Bettencourt, Med. Coll. Pac., 1884.  
Geo. L. Fitch, Bellevue, 1870.  
L. M. Lovelace, Jefferson Med. Coll., 1868.  
W. E. J. Woods, Univ. Cal., 1885.  
Catherine Howard, Univ. Cal., 1885.  
H. C. Sawyer, Univ. Cal., 1881.  
Albert Abrams, Univ. Heidelberg.  
E. Roscoe Merrill, Harvard, 1885.  
E. G. Frisbie, Cooper Med. Coll., 1882.  
B. H. Baumeister, Univ. Cal., 1882.  
R. I. Bromley, Univ. Cal., 1882.  
A. A. D'Ancona, Univ. Cal., 1884.  
A. L. Lengfeld, Univ. Pac., 1871.  
R. C. Meyers, Univ. Cal., 1880.  
J. M. Williamson, Univ. Cal., 1885.  
Andrew C. Smith, Med. Coll. Pac., 1877.  
Frank Rattan, Cooper Med. Coll., 1885.  
John A. Miller, Univ. Cal., 1875.  
A. S. Lovelace, Med. Coll. Pac., 1878.  
M. F. Patten, Cooper Med. Coll., 1885.  
W. F. Jones, Cooper Med. Coll., 1885.  
F. Z. Bazan, Faculty of Med. Paris, 1873.  
Edward Parson, Univ. of London, 1863.  
P. A. Kearney, Cooper Med. Coll., 1884.  
D. W. Montgomery, Coll. Phys. and Surg., N. Y., 1882.  
Saml. G. Boyd, Harvard, 1885.

- Saml. E. Knowles, Univ. Pac., 1871.  
 C. F. Buckley, Queen's Univ., Ireland, 1865.  
 A. E. Verrinder, Cooper Med. Coll., 1884.  
 Geo. C. Pardee, Univ. Leipsic, 1885.  
 R. F. Verrinder, Cooper Med. Coll., 1885.  
 J. D. Arnold, Univ. Washington, 1876.  
 J. H. Healey, Med. Coll. Pac., 1881.  
 Naomi E. Hoy, Cooper Med. Coll., 1884.  
 J. D. Hartley, Univ. Mich., 1873.  
 W. D. Johnston, Univ. Pac., 1871.  
 J. E. Kunkler, Univ. Pac., 1863.  
 C. E. Farnum, Med. Coll. Pac., 1878.  
 E. B. Harris, Univ. City N. Y., 1847.  
 J. Thad. Johnson, Washington Univ., 1868.  
 B. C. Bellamy, Coll. Phys. and Surg., Iowa, 1880.  
 Isabel Lowrey, Med. Coll. Pac., 1880.  
 Agnes Lowrey, Med. Coll. Pac., 1880.  
 W. F. Pratt, Cooper, Med. Coll., 1883.  
 Chas. S. Cowan, Miami Med. Coll., 1880.  
 Chas. S. Boscow, Coll. Phys. and Surgeons, Iowa, 1884.  
 Nathan Rogers, Med. Coll. Pac., 1879.  
 J. W. Keeney, Bellevue Hosp. Med. Coll., 1874.  
 R. O. Baldwin, Univ. Cal., 1885.  
 Jno. Gallwey, Univ. Cal., 1884.  
 J. P. LeFevre, Univ. Cal., 1881.  
 W. F. McAllister, Univ. of Pa., 1870.  
 W. G. Smith, Coll. Phys. and Surg., N. Y., 1881.  
 Jno. Montgomery, Missouri Med. Coll., 1885.  
 J. S. Eastman, Missouri Med. Coll., 1878.  
 Chas. A. Clinton, Univ. Cal., 1881.  
 Henry N. Winton, Univ. Cal., 1885.  
 A. L. Scholl, Univ. Cal., 1884.  
 Ed. S. O'Brien, Med. Coll. Pac., 1879.  
 W. E. Robe, Med. Coll. Pac., 1878.  
 B. S. Young, Rush Med. Coll. Pac., 1874.  
 J. S. Stone, Med. Coll. Ohio, 1873.  
 F. M. Sponogle, Wooster Univ., 1879.  
 W. B. Clark, Univ. Cal., 1884.  
 C. A. Davis, Vanderbilt Univ., 1881.  
 Abbie E. Beasom, Woman's Hosp. Med. Coll., Chicago, 1884.  
 May C. L. Gydisson, Woman's Hosp. Med. Coll., Chicago,  
 1884.

H. V. Armistead, Univ. Cal., 1885.

H. V. Mott, Univ. Pac., 1863.

J. W. Stitt, Bellevue Hosp. Med. Coll., 1878.

H. M. Sherman, Coll. Phys. and Surg., N. Y., 1883.

Martin Hagan.

WALLACE A. BRIGGS,

Permanent Sec'y.

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**San Francisco County Medical Society.**

SAN FRANCISCO, March 9th, 1886.

The meeting having been called to order by the President, and the minutes of the former meeting read and approved, the following names were proposed for membership:

F. Ginnasi, M. D., University of New York, 1884; G. F. G. Morgan, M. D., St. Louis Medical College, 1884; Henry R. Bell, M. D., University of Maryland. These were proposed by Drs. Plummer and Kerr and referred to the Committee on Admissions.

The Committee on Admissions reported favorably on the credentials of G. F. Hanson, M. D., Cooper Med. Coll., 1885; F. A. Colby, M. D., Dartmouth Coll., 1884; W. E. Josephine Woods, M. D., Univ. of California, 1885; E. R. C. Sargent, M. D., Med. Coll. of the Pacific, 1880; F. W. Lux, M. D., Harvard, 1885; S. G. Boyd, M. D., Harvard, 1885; Mark F. Patten, M. D., Cooper Med. Coll., 1885.

These were balloted for and admitted to membership.

Dr. W. F. Younger was re-instated as a member of the Society.

The Secretary then reported that the limit set in which Dr. Axelrood might pay his dues had expired at the last meeting and asked for further instructions. It was moved and seconded that in accordance with the by-laws Dr. Axelrood should be expelled but Dr. Kenyon offered as an amendment that his name should be dropped from the roll. The amendment was seconded by Dr. Kerr and carried by the Society.

The Secretary reported that the special committee on prosecution of illegal practitioners had engaged a lawyer who was to be paid twenty-five dollars for every conviction obtained. He therefore moved that \$75 of the sum allowed to the committee for this purpose should be advanced to them, that they might meet the running expenses. This was seconded by Dr. Kenyon

and carried by the Society. Under the head of unfinished business the resolutions of Dr. Donnelly relative to a reception for the medical men of the Grand Army of the Republic during their visit to this city came up for consideration.

The Secretary stated that the Constitution of the State Society would not admit of the annual meeting being postponed and Dr. Donnelly therefore offered the following as a substitute for the former resolutions:

*Resolved*, That the San Francisco County Medical Society meet on any evening between the 3d and 9th of August, 1886, for the purpose of entertaining the surgeons of the army and navy of the late war, visiting San Francisco, with the Grand Army of the Republic and the Army of the Potomac.

*Resolved*, That at the last meeting of the Society in July, the day or evening of entertaining the above mentioned surgeons shall be decided upon.

*Resolved*, That the President of the Society be and is hereby authorized to appoint such committee as may be required to make arrangements for receiving our illustrious guests.

Dr. Chesley said that this event was of so great importance to California, as to constitute a State event, and he, therefore, thought that the matter should be brought before the State Society at its next meeting, so that arrangements might be made for a general welcome to the medical men of the Grand Army of the Republic.

Dr. McNutt suggested that as the General Committee on Arrangements for the reception of the Grand Army was to meet upon the following evening, the Society might depute certain members to appear at that meeting, and learn what programme was intended.

Dr. Chesley did not think that our committee would have much weight in the General Committee of the G. A. R., as it was our intention only to entertain the medical men of the army; he, therefore, thought that our office-bearers should form a committee to make arrangements, and also bring the matter before the State Society. Dr. Donnelly thought that this committee should be quite distinct from that of the Grand Army, and he, therefore, favored Dr. Chesley's suggestion.

Dr. Hart did not believe it was necessary to appoint a committee to wait upon the State Society, as a communication from the Secretary would have the same effect, and a committee

might afterwards be appointed to make the necessary arrangements when the form of entertainment had been decided upon.

Dr. Kenyon moved that the President and Secretary be a committee to represent the San Francisco County Medical Society in the General Committee of the G. A. R., at its meeting on March 10, '86, and that the Secretary be authorized to communicate the matter to the State Society at its next meeting.

Dr. W. E. Fifield seconded this motion. He believed that the object of sending representatives to the General Committee was merely to ascertain their programme, so that there might be no clashing.

Dr. Taylor thought that we would do better by acting apart from the General Committee.

Dr. Kenyon's motion was carried, but, as the Secretary was unable to attend the meeting, Dr. McNutt was substituted for him.

There being no further business the Society adjourned.

WM. WATT KERR,

Recording Secretary.

SAN FRANCISCO, March 23, 1886.

The meeting having been called to order by the President, and the minutes of the former meeting read and approved, the following were proposed for membership:

J. C. S. Akerly, M. D., Cooper Medical College, 1885.

J. C. Sunberg, M. D., Chicago Medical College, 1874.

F. H. Gates, M. D., University of California, 1885.

These were proposed by Drs. Plummer and Kerr.

Wm. P. Sweetland, M. D., Bellevue Medical College, 1876, and B. H. Baumeister, M. D., University of California, 1882, proposed by Drs. Frisbie and Plummer, and referred to the Committee on Admissions.

The Committee on Admissions reported favorably on the credentials of Dr. F. Ginnasi, Dr. H. R. Bell and Dr. Geo. F. G. Morgan, who were forthwith elected to membership.

The Secretary reported that Dr. Stallard had donated the back numbers of the *British Medical Journal* to the library of the Society, and moved that a vote of thanks be extended to him for the gift. This was carried by the Society, and the Secretary instructed accordingly.

Dr. Barkan then exhibited a case of luxation of the crystal-



line lens produced by a missile. There neither was pain nor inflammation but the sight was lost, and on examination the lens was found in the anterior chamber, resembling a drop of oil, wedged in between the iris and the cornea. The retina could be seen detached posteriorly and floating up and down, but there was no injury to the sclerotic or choroid. The patient could see the hand moving before his eyes, but could not count the fingers. Dr. Barkan said that he did not intend to interfere with the case, as the lens was safely secured in the chamber, was semi-transparent, and its removal at the present time, while the retina was detached, would endanger the remaining sight.

Dr. Whittell did not believe that the lens should be left in its present position, as it was sure to become opaque, and would, sooner or later, require removal.

Dr. W. F. McNutt then reported five cases of hepatic abscess. He said that the great difficulty in the diagnosis of these cases lay in the neglect of the etiology of the disease, as the local symptoms are often very obscure and insufficient for diagnostic purposes. In most cases there was a history that would point to embolism or infarction of the liver.

Dr. J. A. Miller said that the relation between acute hepatitis and abscess of the liver lay in the fact that the former constituted a favorable nidus for the latter.

Dr. Richter reported a case in which a young man had hepatic abscess. It was unaccompanied by signs of digestive disturbance, but he suffered from pain and swelling in the epigastrium with profuse sweating. He aspirated and removed several pints of pus, introduced a drainage tube and kept the parts well washed out, after which the patient made an excellent recovery.

Dr. Richter also desired to correct any false impression that might have been produced regarding a case of aneurism reported by him to the Society as cured by electrolysis and subsequently commented on by Dr. Axelrood. He had seen the patient, who said that Dr. Axelrood had no authority to make the statement referred to, as he is in good health and able to perform active duty.

Dr. W. E. Taylor reported that the General Committee of the G. A. R. had not organized, and therefore no steps could be taken in making arrangements to meet the medical men.

Dr. McNutt reported that all the citizens of California are expected to join in welcoming the army. He had mentioned to

the committee the following men as well qualified to form a Bureau of Information on medical subjects: Drs. Orme, Saxe, Thorne, W. P. Gibbons, W. H. Mays, Clunness, Graves, Lane, Henry Gibbons, Simpson, Swan and Taylor.

Dr. Donnelly reported that his resolutions had been filed in the General Committee.

Dr. Plummer did not think it appropriate to appoint a separate committee, as the number of men in the G. A. R. is so great that we cannot offer them a separate entertainment.

After considerable discussion on this subject, the Secretary said that, according to the motion passed at last meeting, nothing could be done until after the meeting of the State Society.

There being no further business the Society adjourned.

WM. WATT KERR,  
Recording Secretary.

# **Sacramento Society for Medical Improvement.**

SACRAMENTO, March 16, 1886.

The Society met in regular session. Dr. H. L. Nichols, President, in the chair. In the absence of the Secretary, Dr. W. A. Briggs was on motion elected Secretary *pro tem*. The minutes were then read and approved.

The Committee on Admissions having reported favorably on the credentials of W. F. Finnie, M. D., Cooper Medical College, San Francisco, Nov., 1885, he was on motion elected.

This being the annual meeting the retiring President delivered a brief address.

The reports of the Secretary and Treasurer were read and ordered on file.

The usual vote of thanks to the retiring officers were adopted.

On motion an assessment of \$2.50 *per cap.* was levied.

The Society then went into the election of officers, the result of the ballot being for the ensuing term:

President, W. H. Baldwin.

Directors, W. A. Briggs, G. L. Simmons, W. R. Clunness.

Secretary and Treasurer, J. H. Parkinson.

Dr. T. A. Snider read a paper on the treatment of continued fever, which was followed by a long and interesting discussion of the etiology and treatment of this affection.

In consequence of the meeting of the State Medical Society occurring on the 20th of April, the Society adjourned to meet on the fourth Tuesday in that month.

JAMES H. PARKINSON,  
Secretary.

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**Alumni Association of the Medical Department, University of California.**

SAN FRANCISCO, March 2d, 1886.

The first quarterly meeting of the Alumni Association of the Medical Department, University of California, was held at their hall, 32 O'Farrell St., San Francisco, at 8 o'clock, p. m.

President A. P. Whittell presiding.

Upon calling the roll the following members responded: Drs. A. P. Whittell, John A. Miller, F. Delmont, J. W. Blake, J. A. Anderson, R. C. Meyers, B. H. Baumeister, H. C. Sawyer, R. A. McLean, M. W. Moody, L. M. F. Wanzer, Wm. P. McDermott, J. P. LeFevre, H. W. Dodge, M. A. McLaughlin, L. A. Sabey, A. A. D'Ancona, Jules Simon, DePuy, and Winslow Anderson.

The honorary members present were: Professors A. L. Lengfeld and W. Ayer.

The minutes of the previous meeting were read and approved.

Under the head of reports of committees, Dr. Winslow Anderson presented the report of the Printing Committee, showing an expenditure of \$94.50 for lithographing diplomas of membership and printing By-Laws, etc.

On motion the report was accepted and placed on file.

Communications were read from Professors W. F. McNutt, F. H. Terrill and W. H. Mays, and from Drs. D. T. Callaghan and J. S. Riley. The same were ordered on file.

The following names were placed in nomination for membership and unanimously elected: Drs. M. B. Pond, Napa; K. I. Howard, S. F.; J. T. Riley, Port Costa; W. E. Josephine Woods, S. F.

Prof. Edward S. Holden, A. M., President of the University, was elected by acclamation to honorary membership.

Next in order was the business proper of the evening, viz.: The reading of an essay by Doctor John A. Miller, entitled

"Medical Education in the United States and an outline of the German system."

This was an elaborate, interesting and highly instructive production, drawn largely from personal experience and observation in this as well as in the old world. A system of preliminary training in the laboratories in the various sciences of microscopy, histology, pathology, physiological and experimental chemistry was recommended and shown to be essential as a foundation upon which to build the more thorough and scientific superstructure of medical education of to-day.

The so-called *isms* and *pathies* emanating from the many easy going "so-called" *medical schools* of America, were very justly decried, and examinations by a State Board of Medical Examiners, irrespective of any diploma the individual may possess, was suggested as a remedy for the many quacks and charlatans that float the country and impose upon the public.

The essay elicited considerable discussion by Drs. R. A. McLean, Jerome A. Anderson, Sabey, McLaughlin, Delmont and Winslow Anderson, at the conclusion of which a vote of thanks was extended to the author, Dr. John A. Miller.

On motion a committee of three was appointed by the chair to make a summary of the essay and present it to the Medical Faculty of the University, with the recommendation of the Alumni Association.

Committee, John A. Miller, Robert A. McLean, Winslow Anderson.

Next in order was an address by Dr. R. A. McLean, but owing to the lateness of the hour Dr. McLean asked to be excused, which was reluctantly granted.

Some thirty-five diplomas were ordered engrossed and issued to active and honorary members.

An adjournment was then taken till the first week in June, 1886.

WINSLOW ANDERSON,  
Secretary.

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**Licentiates of the California State Board of Examiners.**

SAN FRANCISCO, CAL., Feb. 4, 1886.

At the regular meeting of the Board of Examiners held in this city, Feb. 3, 1886, the following physicians having complied with the law and all the requirements of this Board, were unanimously granted certificates to practice medicine and surgery in this State:

- EDMUND AMUAT, Eureka; the Univ. of Berne, Switzerland, June 15, 1881.  
 SYRENE B. BOUMMETT, Sheridan; Coll. of Phys. of Keokuk, Ia., Feb. 26, 1884.  
 CALVIN A. CASE, Turlock; Med. Dept. Univ. of Michigan, March 30, 1870.  
 FRANK A. COLBY, San Francisco; Med. Dept. Dartmouth College, N. H.,  
 March 4, 1874.  
 CHAS. H. CRAWFORD, Hollister; Bellevue Hosp. Med. Coll., N. Y., March  
 15, 1882.  
 GEORGE F. HANSON, San Francisco; Cooper Med. Coll., Cal., Nov. 11, 1885.  
 JOSEPH M. LOOP, Colton; Med. Dep. Univ. Michigan, Mich., March 29, 1855.  
 THERON NICHOLS, Pasadena; Chicago Med. Coll., Ill., March 2, 1867.  
 EDWARD M. PATTERSON, Oakland; Harvard Med. Coll., Mass., March 8, 1871.  
 JOSEPH H. SOPER, Roseville; Coll. of Phys. & Surg. of Chicago, Ill., March  
 13, 1883.  
 CHARLES S. STODDARD, Oakland; Bellevue Hosp. Med. Coll., N. Y., March  
 14, 1883.

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SAN FRANCISCO, CAL., April 9, 1886.

At a regular meeting of the Board of Examiners held April 7, 1886, the following physicians having complied with all the requirements of the law and this Board, were unanimously granted certificates to practice medicine and surgery in this State.

- W. PENN AGNEW, San Jose; Med. Dept. Univ. California, Cal., Nov. 3, 1875.  
 FREDERICK BASS, San Francisco; Med. Dep. Willamette Univ., Oregon,  
 April 13, 1885.  
 EDWARD F. BROWN, San Francisco; Albany Medical College, N. Y., March  
 4, 1885.  
 WILLARD P. BURKE, Rural Health Retreat; Cooper Medical College, Cal.,  
 Nov. 11, 1885.  
 WILLIAM B. HARKINS, Towles Station; Coll. of Phys. & Surg., Baltimore,  
 Md., March 3, 1880.  
 YOUNG D. HARRINGTON, San Jacinto; Texas Med. Coll. & Hosp., Texas,  
 March 15, 1877.  
 JAMES W. JESSE, Roseville; Med. Dep. Univ. State of New York, N. Y.,  
 March 6, 1886.  
 SAMUEL E. LATTI, San Francisco; Rush Med. Coll., Ill., Feb. 19, 1884.  
 JOHN H. LOWRY, El Monte; Rush Med. Coll., Ill., Feb. 21, 1877.  
 JAMES A. MCKEE, Elk Grove; Rush Med. Coll., Ill., Feb. 16, 1886.  
 DOUGLAS W. MONTGOMERY, San Francisco; Coll. of Phys. & Surg. of New  
 York, N. Y., May 16, 1882.  
 HENRY P. PEEBLES, Los Angeles, Miami Med. Coll., O., Feb 28, 1873.  
 JOSEPH A. PROSEK, San Francisco; (Lien certificate) Med. Coll. of the Pacific,  
 Cal., Nov. 2, 1876.  
 GUSTAVUS C. SIMMONS, Sacramento; Harvard Med. Coll., Mass., June 24, 1885.  
 JOHN C. SUNDBERG, San Francisco; Chicago Med. Coll., Ill., March 10, 1874.  
 FRANCIS C. TREMBLEY, Willows; Victoria Med. Coll., Canada, —, 1885.  
 ROBERT MCWILLIAM, San Diego; Missouri Med. Coll., Mo., March 11, 1874.

Drs. J. H. Josselyn and Li Po Tai have been arrested in this city for practicing medicine.

## PACIFIC MEDICAL AND SURGICAL JOURNAL

AND

## WESTERN LANCET.

EDITORS:

WILLIAM S. WHITWELL, A. M., M. D.

WM. WATT KERR, M. B., C. M.

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*SAN FRANCISCO, MAY, 1886.*

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**Editorial.****Medical Society of the State of California**

Last month witnessed the most successful meeting of the above Society that has ever convened, the attendance throughout being unprecedentedly large, the new applications for membership numbering almost one hundred and fifty, and the papers being far above the average, both when weighed in the mental and physical balance.

The election of Dr. Thorne to the Presidential Chair gave general satisfaction, as it did justice to one whose claims have been long recognized but neglected by the Society. In him will be found a worthy successor to the retiring President, Dr. W P Gibbons, whose efficient rulings conducted the meeting to such a successful termination.

As most of the papers will appear in this journal our readers will have ample opportunity of judging these for themselves, but there are some matters in the transactions which we are desirous of bringing before the profession without further delay.

It was only natural that at such a time the subject of the International Medical Congress should come up for discussion, and, to prevent loss of time, a committee was appointed, that introduced a resolution requesting the American Medical Association to annul the work done by both of the former committees of arrangements, and to appoint a third one from both of these

to re-arrange the whole business. How far such a scheme is practicable at this late time we cannot tell, certainly it is in opposition to the resolution of the present committee declaring its acts to be final and not subject to revision, and, what is more important, it is acknowledging an authority in the American Medical Association over the actions of the Congress which it does not possess. But this vexed question regarding the power of a National Association to specify the conditions under which an International Congress, made up of men governed by different codes of ethics, will convene, can best be settled by the Congress itself at its next meeting, and any compromise that will bring peace with honor and carry the approaching convention to a successful termination is probably the more prudent course, although, personally, we would rather see the whole thing fall to the ground and another place of meeting selected than yield one point to those men who have done so much injury to the reputation of the medical profession in America.

Another matter of general interest was the introduction of a resolution craving the appointment of a committee to promote the formation of a protective association, for the purpose of defending its members and the profession against those groundless suits for mal-practice that have become so numerous during recent years. The necessity for some such measure as this must be apparent to every one, for such a suit, although as a rule unsuccessful, always results in pecuniary loss and professional injury to the defendant, while the complainant escapes free, as he in many cases only serves as a figure-head to a speculating lawyer. Under such circumstances the complainant should be compelled to furnish bonds covering all the expenses of the trial, to be forfeited in the event of it being proved that there was no cause for action.

Finally, it gives us pleasure to announce that under the new arrangement with the Committee on Publication every active member of the Medical Society of the State of California, in good standing, is entitled to one year's subscription to this

journal, and also to a bound copy of the transactions. A recognition of the fact that, while the publication of the proceedings in the journal led to their wide distribution, and a correspondingly increased interest in the affairs of the society, a bound volume of the transactions was more convenient for reference purposes, led the proprietor to furnish such a copy of last year's proceedings for each member who was in good standing during that session. These can still be had gratuitously, by applying to the publishers.

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**PNEUMONIA TREATED WITH LARGE DOSES OF DIGITALIS.**—Petrescu, of Bucharest, reports remarkable success in the treatment of acute pneumonia from the administration of large doses of digitalis, given in the form of recent infusion. His conclusions, based upon the observation of three hundred and fifty cases, are as follows:

1. Digitalis causes antiphlogistic and diuretic effects only when given in appropriate doses.

2. The dose is from one to one and a half drams, given during the twenty-four hours and continued for several days. He has given as much as five drams inside of three days.

3. The treatment of pneumonia by digitalis is the only method at present of reducing the mortality of the disease to a minimum.—*Deutsche Med. Zeitung.*

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**DECIDING ON A DISEASE BY BALLOT.**—We were about three miles from Natchez, when we heard a great shouting and wailing in a negro's cabin by the roadside, and it was decided to dismount and go in. It was a tumbledown structure with but a single room, and into this were crowded sixteen or eighteen colored people, mostly of the female sex. On a heap of straw on the clay floor was a sick woman. She was rolling her eyes and writhing as if suffering great pain. When asked what ailed her, an old white-haired negro, who was called "doctor" by the others, replied:—"Dat's jist what we doan' agree on. Some says it's de bilyus colic, an' some says it's de gallopin' consumpshun."—"Why man, something ought to be done for her right away."—"Zactly, sah—'zactly, an' Ize de doctah das would like to take right hold ob the case."—"But why don't you?"—"Kase Ize boxed up, sah. I nebber gin the same medicine fur gallopin' consumshun dat I do for bilyus colic, an' until we kin decide on de ailment I doan' dare go ahead." We were on our horses and ready to move off when the old man came out with a happier look on his face and said:—"Gem'len, we has sorter took a vote on it, an' we has declar'd it rheumatism by one majority. Ize gwine right at it to heat de bricks an' gin her an all-night sweat."—*Ex.*



## Notices of Books, Pamphlets, etc.

**A HANDBOOK OF DISEASES OF THE NERVOUS SYSTEM.** By JAMES ROSS, M. D., LL. D., Fellow of the Royal College of Physicians of London, and Senior Assistant Physician to the Manchester Royal Infirmary. With one hundred and eighty-four illustrations. Philadelphia: Lea Brothers & Co., 1885. San Francisco: A. L. Bancroft & Co. 8 vo., pp. 723. Price, cloth \$4.50; leather \$5.50.

The rapid progress made in the domain of neurology within the past twenty years has produced such a vast amount of literature upon this subject as to be completely bewildering to the medical student or the busy practitioner, and it has become well nigh impossible for any one but a specialist to keep up with the advanced knowledge in this department of medicine. The author has therefore rendered a great service to the profession by condensing into one volume the principal facts pertaining to neurology and nervous diseases as understood at the present time, and he has succeeded in producing a work, at once brief and practical, yet scientific, without entering into the discussion of theorists or burdening the mind with mooted questions. The work is divided into two parts. In the first part, which again is subdivided into eight chapters, the author treats of general neurology under the heads of anatomy and physiology (normal and morbid), general symptomatology and general treatment. In the second part he takes up for consideration the special pathology of the nervous system. Here he gives very full clinical descriptions of the various neurotic diseases with an outline of treatment. The second part is divided into twenty-one chapters, the last chapter treating of general diagnosis, considered under three sub-heads, the clinical, the topographical and the pathological diagnosis. The work, which will be found a useful one, is gotten up in the usual elegant style of the publishers.

**TEXT-BOOK OF OPHTHALMOSCOPY.** By EDWARD G. LORING, M. D. Part I. The Normal Eye, Determination of Refraction, Diseases of the Media, Physiological Optics, and Theory of the Ophthalmoscope. New York: D. Appleton & Company, 1, 3 and 5 Bond Street, 1886. San Francisco: James T. White & Co. Cloth, 8 vo., pp. 274.

A careful examination of the first volume of this work has given us so much pleasure that we shall await the appearance of vol. ii. with deep and sincere longing. The first two chapters are devoted to general remarks on the ophthalmoscope and the

different methods of examination as well as the kinds of light to be used. In the next two chapters we find a minute anatomical description of the fundus of the Normal Eye and its ophthalmoscopic appearance. "Five-sixths of the art of ophthalmoscopy," says the author, "are contained in a knowledge of the Normal Eye," and he most emphatically urges the student to familiarize himself with physiological appearances and anomalous developments, which latter he should never mistake for abnormalities. In the fifth chapter the optical condition of the eye is treated of exhaustively and minute directions for determining both normal and abnormal refraction, including astigmatism, are given. The sixth and last chapter treats of examination of the media of the eye. Numerous cases are recorded by way of clinical illustration and the text is further illustrated by wood-cuts and colored plates. In the appendix, which covers sixty-four pages, the general principles of the ophthalmoscope, physiological optics, the metric system, etc., are considered and various ophthalmoscopes and adjuncts to the ophthalmoscope described. The book is gotten up in good style, and we do not hesitate the opinion that, as the physician's diagnostic armamentarium is incomplete without the ophthalmoscope, so will his library also be incomplete without this most excellent guide to its use.

**AN ATLAS OF CLINICAL MICROSCOPY.** By ALEXANDER PEYER, M. D. Translated and edited by Alfred C. Girard, M. D., Assistant Surgeon United States Army. First American from the Manuscript of the Second German Edition, with additions. Ninety plates with one hundred and five illustrations, chromo-lithographs. New York: D. Appleton & Co., 1, 3 and 5 Bond street, 1885. San Francisco: James T. White & Co. Cloth, 8 vo., pp. 194.

This being, as far as we know, the only work of its kind ever published—at least in the English language—we say, without hesitation, that it really supplies a long-felt want; and to the translator as well as the publishers is due great credit for having placed within the reach of the medical profession in this country a most excellent guide to greater scientific accuracy in bed-side study, for without such a guide the microscope will prove of but little value in the hands of the beginner. The beautifully executed plates are faithful representations of original drawings by the author, and are the result of patho-microscopical studies of the various secretions and excretions of the body extending over a number of years. Considerable attention is given to the microscopic study of the alvine discharges in all forms of intest-

inal disease, and the author justly deplores that this part of clinical microscopy has been so sadly neglected, and urges its importance in all cases of chronic diarrhœa, where the etiology is uncertain, as many of these are induced by parasites, a condition which can only be diagnosed with the microscope. We feel hopeful that the labors of the author will stimulate at least the younger members of the profession to a more diligent use of an instrument from which so much valuable aid can be derived in making a diagnosis, as the microscope.

**A HANDBOOK OF THERAPEUTICS.** By SIDNEY RINGER, M. D. Eleventh Edition. New York: William Wood & Co. San Francisco: W. S. Duncombe & Co.

Although many additions have been made in the text relating to almost every subject, yet, through the omission of lengthy personal experiments, this edition is not larger than the last. The section upon counter-irritation has been rewritten and shortened, and the new articles include boric acid, coto bark, methylene, paraldehyde, apomorphine, convallaria, cocaine, antipyrine, cascara sagrada and euonymine. The work is too well known and valued to require further consideration.

**MATERIA MEDICA AND THERAPEUTICS.** By JOHN B. BIDDLE. 10th edition revised and enlarged by Clement Biddle and Henry Morris. P. Blakiston, Son & Co. San Francisco: W. S. Duncombe & Co.

This standard condensed work upon the subject of therapeutics has always been popular with medical students because it furnishes in clear and concise statements, the deductions, regarding which they would form but vague and cloudy ideas were they to depend entirely upon larger works. The day has passed when general readers of medicine were content to wade through long dissertations upon every subject of interest. Unfortunately life is too short and the amount of important literature is too great. Clearly expressed facts are all that can be digested. It is, however, demanded that the facts shall be correct. The condensed statements in this work will be found fully abreast of the times, but devoid of speculation and methods of physiological research. While no information is offered regarding the host of new remedies obtained through modern chemistry, as resorcline, antipyrine, etc., yet the opinions expressed regarding the well known drugs, even including cocaine and paraldehyde, are thoroughly up to date, and form a reliable guide to the study of modern therapeutics.

**CANCER.** A study of three hundred and nine-seven cases of cancer of the female breast, with clinical observations. By WILLARD PARKER, M. D., Cloth, 8 vo. pp. 104. New York and London: G. P. Putnam's Sons, 1885. San Francisco: A. L. Bancroft & Co.

To a posthumous publication from the pen of so distinguished a surgeon the medical profession throughout the world should, in respectful memory of his great services to humanity, accord a hearty welcome, and as a contribution to the study of one of the most formidable diseases that afflict mankind, it is no less deserving of our close attention and deliberate consideration, embodying, as this little volume does, the carefully recorded observations of all the cases treated by the author during an active professional life extending over a period of more than half a century. It has been the author's aim to study cancer more especially with reference to its etiology, in order thus to establish a rational basis for treatment, both prophylactic and curative. Cancer is, according to the author's views, a disease of civilization and a product of generous living, luxurious habits and idleness. Mental affliction he also recognizes as an important factor in its production; also local irritation, prevented function, dysmenorrhœa and other uterine irregularities. His own observations do not favor the theory of transmissibility of cancer from parent to child, and he therefore leaves out heredity as an etiological factor. As prophylactic measures he advises frugality, active out-door life, cleanliness, healthy dress, cheerfulness of disposition, and strict attention to maintaining regularity of the various functions, particularly that of menstruation. With regard to curative treatment the early and thorough removal of the tumor is important, but not sufficient. The diathesis must be changed; in other words, the patient's constitution should be so modified by changing the mode of life that it will be no longer prone to reproduce the disease.

**ELECTRICITY IN MEDICINE:** With Hints relating to the Selection and Care of Electrical Apparatus. By AMBROSE L. RANNEY, M. D. New York: D. Appleton & Co., 1885. San Francisco: James T. White & Co.

Dr. Ranney has, for several years, given instruction in electrotherapeutics and electro-diagnosis, and has lately been appointed professor of nervous and mental diseases in the medical department of the University of Vermont; he is, therefore, peculiarly well fitted for the writing of such a guide as this. Physicians often feel the necessity of having an electrical battery, and yet are seldom clear in their minds as to exactly the kind of which they have need. They are, therefore, imposed upon in one way or another by the makers, who are continually trying to

foist their wares upon the medical public. A little attentive study given to such a book as the one under consideration would save much expense and annoyance, for then the physician would buy intelligently, and thus acquire a really useful and serviceable instrument. He will, at the same time, learn the value of the different varieties of electrical currents and receive many practical suggestions as to their application. The book is divided into three parts, viz.: Electro-physics, Electro-diagnosis, and Electro-therapeutics. It is well illustrated, and at the end are placed fourteen plates after Ziemssen and Flower, for the purpose of aiding the student in treating morbid states of the motor and sensory apparatus. We can highly recommend it, to all who are at all interested in the application of electricity to the treatment of the various nervous affections.

VON ZIEMSEN'S HANDBOOK OF GENERAL THERAPEUTICS. In seven volumes. Vol. IV The Treatment of Diseases by Climate, by Dr. HERMANN WEBER. General Balneotherapeutics, by Professor OTTO LEICHENSTEIN. New York: Wm. Wood & Co. San Francisco: W. S. Duncombe & Co.

We have already called our readers' attention to this extensive work, and have reviewed the first three volumes. The present one is not less interesting, for the physician is called upon almost daily to give his opinion as to the climate a patient shall seek for the best benefit of his health. It has not been the author's intention to speak of all climates, but merely to lay down the general principle of climatology, and then to name certain localities as examples. This, also, has been the aim of the author of the second part of this volume, viz., balneology. The author of this portion of the work treats first of the general action of simple baths and of those containing the gases or the salts; he then considers the action of water taken internally, and discusses the value of the most important groups of mineral wells. The appendix contains a description of the sand, bran, malt, and herb baths; and, finally, there is a synopsis of the curperical indications of different drinking and bathing cures in individual cases.

THE DISORDERS OF MENSTRUATION—A PRACTICAL TREATISE. By JOHN W. UPSHUR, M. D. New York: G. P. Putnam's Sons, 1886. San Francisco: W. S. Duncombe & Co.

This is a small unpretentious book, in which the author reviews the causes and the treatment of the more common of the ailments peculiar to women. It is written in a pleasant, popular style, and may succeed in calling the attention of a few physicians to these subjects who are not given to the reading of large treatises. We can recommend it to any one who wishes an hour's instructive reading.

## Extracts.

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### Corrosive Sublimate in Obstetrics and Gynæcology.

Since the publication of a former review on this subject in the *Medical Chronicle* (July, 1885) several papers have appeared. Keller records the experience gained from the use of this agent in the gynæcological department of the Institute at Bern, including a fatal case of mercurial poisoning of great interest. An abstract of the results in the maternity department is given in the above mentioned review. Since October, 1884, in all operations, whether vaginal or abdominal, a solution of sublimate of the strength of 1 in 2,000 has been employed both for the irrigation and cleansing of wounds. During vaginal operations the vagina was frequently and abundantly irrigated with a solution of the above strength. The results were extremely satisfactory until the occurrence of the following case, three months after the beginning of the trials with this method.

From a woman, æt. 52, very anæmic and exhausted as the result of carcinoma uteri, the uterus was totally extirpated *per vaginam* by Muller's method. During the operation, which lasted  $1\frac{1}{2}$  hours, and at the conclusion of it, the field of operation was irrigated with a solution of 1 in 4,000. When the operation was completed the vagina was plugged with iodoform gauze. The next day the vagina was irrigated twice, each time with a solution of the above strength, the trunk being raised at the time, to prevent as far as possible any of the fluid remaining in the peritoneal cavity. On the morning of the following day tenesmus and diarrhoea set in, blood appearing in the stools later on in the day. The pulse was very feeble and rapid, increasing up to 156 in the evening. There was great thirst and restlessness, with dyspnoea and contracted pupils, due to the opium that was administered. Urine: About  $10\frac{1}{2}$  oz. of a turbid reddish-brown color passed in 24 hours, containing much albumen with crowds of hyaline and granular casts, a few red blood-corpuscles and free renal epithelium. There was much bladder-epithelium due to cystitis, which had existed before the operation and had given rise to a trace of albumen in the urine. The dysenteric stools continued throughout the third day after the operation, until the beginning of the fourth day, when death—in a

state of collapse—occurred, 76 hours after the operation. The patient became gradually weaker, the pulse became so rapid that it could not be counted, the temperature was raised to 102°F., and the urine completely suppressed. There had been no symptoms of salivation or stomatitis, probably owing to the rapidity of the course of the poisoning.

The autopsy revealed the following essential facts: There was a collection of dark red fluid blood between the diaphragm and liver, a soft blood clot on the omentum, about 2 oz. of turbid blood-colored fluid in the peritoneal cavity, and a large blood clot on the sigmoid flexure. The surface of the operation wound had a healthy appearance, and there was an absence of suppuration in the neighborhood. Œsophagus, pharynx, trachea, and bronchi contained contents of the stomach, etc. The kidneys were of normal size, the capsule of the left somewhat adherent, the stellate veins injected, surface pale, the cortex pale, and the glomeruli were not injected with blood. None of the appearances of acute parenchymatous nephritis were seen in a microscopic section. The liver was pale, but the gall bladder was distended with brownish bile and numerous gall stones. In the first portion of the ascending colon, the follicles were swollen, the folds of the mucous membrane were of a dark green color, superficially ulcerated where the discoloration was, and somewhat injected around these patches. No other noteworthy changes in the alimentary tract. Though the absence of deposits of calcareous matter in the kidneys, and of all the signs of parenchymatous nephritis are against this being a case of mercurial poisoning, yet the observer considers the changes in the ascending colon as pathognomonic.

This untoward result has altered their procedure to the employment of 1 in 2,000 solution for the disinfection of the hands and for intra-uterine injections, of 1 in 4,000 for vaginal irrigations and swabbing the surface of wounds, and of 1 in 8,000 for irrigating the vagina during the course of an operation.

Fritsch simply points out that by his method of operating such a result as the above could not well occur, for the solution would not remain long in contact with the peritoneum. He divides the uterus from its attachments at the side, pushes a carbolised sponge above the uterus into the peritoneal cavity, and then stops all irrigation. The peritoneum is stitched to the anterior vaginal wall before the uterus is removed. After the removal of

the organ, the sponge is extracted and Douglas' space plugged with iodoform gauze.

The procedure adopted at Giessen by Kaltenbach in cases of laparotomy is described by Scriba. The vagina is washed out before and after the operation with 1 in 2,000 solution of sublimate, and wiped out with sponges on handles dipped in 1 in 1,000 solution. The abdominal wall, both before and after the operation, is cleaned with 1 in 2,000 solution. The sponges intended for the peritoneal "toilet" are well wrung out of 1 in 5,000—6,000 solution. The cut surface of the pedicle or of any tissue is dabbed with sponges dipped in 1 in 1,000. The instruments are disinfected by being placed, after cleaning and washing, in a Koch's sterilising box maintained at a temperature of 130°—140°C. for from two to three hours. It is obvious that instruments with wooden handles cannot be subjected to this treatment, and, as far as possible, each instrument should be formed out of one piece of metal. In the beginning, when he was using a more concentrated solution, a few cases of slight stomatitis occurred, but since using 1 in 5,000—6,000 no symptoms of poisoning have been noticed. In cases of total extirpation of the uterus *per vaginam* his practice is in marked contrast with that adopted at Bern. During the operation he never irrigates the vagina, but contents himself with dabbing the field of operation continually with sponges dipped in 1 in 1,000 solution. This method of procedure has now been adopted in four cases of myomotomy, six of ovariectomy, six of removal of the ovaries, five of total extirpation of the uterus *per vaginam*, two of excision of tumors of the tubes, and one case in which the sac of an extra-uterine foetation was opened. Some of these cases were very complicated, yet in every case the recovery from the operation proceeded satisfactorily. In the twenty-one laparotomies immediately preceding these, where carbolic acid was employed, two were fatal from septic intoxication, and two as the result of constriction of the intestine, caused by adhesive peritonitis. But how much of this improvement is due to the increased care in carrying out antiseptic precautions, and how much to the change from carbolic acid to sublimate?

Sublimate has been used in the Maternity Hospital at Turin since 1882. A peculiar roseolous rash has been noticed three times, appearing first on the breasts, preceding or following salivation. In some cases symptoms of slight mercurial poisoning



were noticed. It is used as a prophylactic in the strength of 1 in 4,000, and if septic processes have already occurred, a solution of 1 in 2,000 is employed. Lessona considers that it is the best antiseptic agent known, but that anaemia and kidney-disease contra-indicate its use.

In Von Herff's paper the thirteen cases of serious corrosive sublimate poisoning, published in the *Centralblatt für Gynäkologie*, and alluded to amongst others in this and the former papers on this subject, are exposed to a strong criticism. Two of the cases he rejects because it is not quite clear that irrigation with corrosive sublimate was the only cause of poisoning. In another case he considers a portion of the solution entered directly into the circulation; and in a fourth case that some of the liquid passed through the Fallopian tubes into the peritoneal cavity. The concentration of the solution used cannot be made responsible for the symptoms of intoxication, for in that case the number of fatal and serious cases of poisoning would have been immensely increased. He is convinced that grave symptoms occur only when some of the solution remains behind in some part or other of the genital canal. This cannot be in the uterus, for irrigation calls forth energetic contractions of it, and the small quantity remaining moistening its walls forms hardly soluble compounds with the blood exuding from its surface. But in cases where the uterus is in a state of atony, or there are wounds in its structure, absorption may occur rapidly, and in such he is of opinion that sublimate should not be used. The author has found that irrigation, especially with corrosive sublimate, calls forth contraction of the muscular wall of the vagina, but above all of the sphincter vaginae and levator ani. The strong contraction of these latter muscles leads to a retention of the fluid used for irrigation in the vagina. He then proceeds to show that the vagina can absorb substances, for if he washed it out with 4 per cent carbolic acid the urine was yellow if the vagina was completely emptied afterwards, and dark if not. [Keller has clearly shown in a subsequent paper (*vide Medical Chronicle*, Vol. II., p. 329) that mercury is absorbed by the vaginal wall.] Hence he avoids any possibility of this retention occurring by repeated pressure on the perineum, and by the use of a double catheter.

A. JASPER ANDERSON.

—*Medical Chronicle*. (England.)

**Antipyrin and Thallin.**

Welt records the results of a long series of observations on the action of these two substances carried out in the Zurich clinic.

**ANTIPIRIN.**—The mode of administration was by the rectum, the powder in all cases being dissolved in fifty grammes of tepid water and injected by means of a small glass syringe. The administration of the drug by the mouth was often found to produce vomiting. Two-gramme doses (30 grs.) were always used to begin with, in children one gramme, the dose being increased within a few days to three, four, and, if necessary, even to five and six grammes, but the latter doses were seldom required. The observations extended over 1,134 cases. The minimal efficient dose in each case being determined, it became of importance to find out whether the non-febrile stage could be prolonged by giving larger doses. The result was that in general the larger the minimal dose required to reduce the temperature to the normal, the more lasting was the effect. Thus, with doses of two grammes, the average length of time free from fever in 290 cases was 3.6 hours; with three grammes the time in thirty-two cases was 4.5 hours; with four grammes in forty-eight cases it was 5 hours; and after five grammes in eighteen cases it was 5.3 hours. Also the effect of doubling the minimal dose in prolonging the duration of this non-febrile stage was observed in many cases, the result being that in the great majority of cases the period was more than doubly lengthened.

The antipyretic action of the drug began immediately after its administration, the temperature at once beginning to fall till the subnormal was reached.

Appearances of collapse such as have been described by other observers as accompanying the fall were never seen; but some peculiar changes were to be noted, viz., perspiration, at first slight, afterwards more profuse, reddening of the face and extremities, marked cyanotic appearance of extensor aspects of fore-arms and hands, and a feeling of coldness experienced over all the prominences of the body. Although this picture resembles somewhat that of collapse, yet a feeling of collapse on the part of the patient was altogether absent. The pulse was little or not at all affected by the fall in temperature. In seventy instances the antipyrin had absolutely no effect on the temperature, mostly with the smaller doses of one to three grammes, but sometimes also with the larger; with four grammes

this was noted seven times, once with five grammes, and once with six grammes, the last being a case of croupous pneumonia. As a result of the administration of the drug, a rash was observed in 10.6 per cent of all the cases. In many this appeared very early, in one case being fully marked within twelve hours, but in general a larger administration of the remedy was required for its production. The character of the eruption was not always the same, although in all cases it was of the nature of a roseolous or erythematous efflorescence. In three cases it was hemorrhagic. The appearance of the rash was not accompanied by any uneasiness on the part of the patient; in no case especially were there any shiverings. The eruption was not limited to any particular part of the body, being seen on head and face, palms and soles, as well as over the body. It lasted generally to about the middle of the second week, sometimes, however, extending itself into the third week. According to his observations, antipyrin is an excellent symptomatic remedy, but is absolutely without influence on the disease itself. Especially satisfactory was its action on the hectic fever of phthisis. In the great majority of cases it lowered the temperature, but no further effect on the disease itself was to be noted.

THALLIN.—The observations made were not nearly so numerous as with antipyrin. It also is a powerful and very active antipyretic agent. In only three cases out of 141 observations was it without any effect on the temperature. The largest quantity given was one and a-half grammes (twenty-two grains) in six hours; the usual dose was one-fourth of a gramme (four grains) given hourly. In all the other cases the thallin reduced the temperature to the normal. Its mode of action in this respect much resembles that of antipyrin; the temperature first of all begins to fall, and then a gentle perspiration breaks out. After its use an erythematous, sometimes cyanotic, appearance of the skin was also to be noted, most marked on the face and extremities; with the rising of the temperature again a rigor was often seen, and at such times the cyanosis became more marked, especially in the face, which was sometimes quite blue. The occurrence of these rigors on the rising of the temperature was very characteristic, occurring as they did in 12 per cent of all the cases, as compared with only one-half per cent with antipyrin. The rigor sometimes lasted over two hours. In this respect the thallin more resembles kairin than antipyrin, the only

difference being that with thallin the patients, in spite of the shiverings, really did not feel ill. In one case after a dose of half a gramme (seven grains) giddiness with noise in the ears was present; also in one case albumen appeared in the urine, disappearing again immediately the thallin was stopped. Vomiting occurred in 7.1 per cent of the cases, as compared with 13.5 per cent in the case of antipyrin. Diarrhoea was also sometimes observed, being stopped by simply discontinuing the thallin; antipyrin, on the other hand, has rather a styptic effect. The appearances of collapse, so often seen after kairin, were not noticeable with thallin; hence he is inclined to place thallin between kairin and antipyrin in order of merit, the latter being the best of all. Its effect in reducing the temperature is of longer duration than that of thallin. On the disease itself, thallin, like antipyrin, has absolutely no effect. (*D. Arch. f. klin. Med.*, Dec. 3, 1885.—*Practitioner.*)

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#### Removing Calculi from Male Children.

Mr. Thomas Annandale, Professor of Clinical Surgery in the University of Edinburgh (*British Medical Journal*, January 2d), presents the following new plan to remove small calculi from male children. He quotes Erichsen to the effect that he scarcely recollects to have met with a middle-aged man who had been operated on in childhood by the lateral method. Mr. Annandale believes that he has overcome the difficulties in the way of using a lithotrite in these cases. He relates then a case of a boy aged  $4\frac{1}{2}$ , where, while under chloroform, the urethra was dilated by passing Nos. 6, 7, 8 and 9 silver catheters in succession; only No. 9 was slightly grasped by the urethra. Before this instrument was removed four ounces of antiseptic fluid (corrosive sublimate, 1 to 4000) were injected through it into the bladder. This catheter being withdrawn, a small lithotrite, equal in diameter to a No. 8 bougie, was introduced into the bladder. The stone was seized and it was then found that by depressing the handle of the lithotrite its vesical extremity, together with the stone, could be readily felt through the abdominal wall immediately above the pubes. The lithotrite being held in position, a small incision an inch in length was made in the middle line of the abdominal wall over

the pubes and for a short distance above it. The various tissues were divided until the wall of the bladder was exposed at the point against which the blades of the lithotrite and the enclosed stone were pressing. A little further depression of the handle of the lithotrite caused the extremity of its blades covered by the stretched wall of the bladder to protrude through the wound in the abdominal wall; and a small incision having been made through the wall of the bladder by cutting upon the extremity of the lithotrite, the instrument with the stone was pushed through the wound. The stone was here extracted from the blades of the lithotrite, and the open extremity of a No. 7 India-rubber catheter was seized and drawn into the bladder and along the urethra as the lithotrite was removed, thus leaving a drain for the urine to escape from the bladder. The wound in the abdominal wall was closed by two horse-hair stitches, and a drainage tube inserted into it so as to aid the escape of any urine which might flow from the bladder wound. Irrigation with corrosive sublimate, 1 to 2000, was employed during the operation, and the wound and parts around were covered with a dressing of corrosive sublimate wool. The stone removed was the size of a horse-bean, of uric acid formation. The urine was slightly tinged with blood for the first twenty-four hours. Forty-eight hours after, the catheter and drainage tube were removed, and the patient had not the slightest bad symptom. For twelve hours after the removal of the drainage tube the urine came by the abdominal wound; but, after this, it passed almost entirely by the urethra, and the patient was running about the ward, perfectly well, on the tenth day after the operation.

Mr. Annandale claims that this is not simply a supra-pubic lithotomy, but a much less serious proceeding. Its advantages over lateral lithotomy are: 1. That the urethra, prostrate and neck of the bladder are left uninjured. 2. That it is a much more simple proceeding, and does away with the principal risks which have occasionally been encountered in performing the operation on children.

Mr. Annandale confesses that it requires some manipulative dexterity to seize a small stone in a male child's bladder, but not greater dexterity than every operating surgeon should possess.

PACIFIC

# MEDICAL AND SURGICAL JOURNAL

AND

## WESTERN LANCET.

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VOL. XXIX.

JUNE, 1886.

No. 6.

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### Original Articles.

#### CHRONIC METRITIS.

By C. VON HOFFMAN, M. D.

During my sojourn in Europe last year, I had the opportunity of witnessing especially in Germany the progress made of late in gynecology. I found that the views of such men as Schroeder, Fritsch and Martin differ materially from those of Emmet, Mundé and others. Thinking it might be of some interest to you to observe these differences I shall consider the subject of chronic metritis, giving at the same time my own experiences in the treatment of this affection.

The term Chronic Metritis is not met with in all works on gynecology. Thus, for example, the disease receives in England the name hyperplasia or hypertrophy of the uterus, and in America it is called subinvolution. Emmet denies even the existence of a chronic metritis and speaks of the disease in question as a congestive hypertrophy of the uterus. The following quotation will perhaps more clearly explain his standpoint in the controversy. He writes: "A whole generation of physicians has been misled by the delusion of chronic inflammation and ulceration of the uterus, conditions which no one has yet been able to demonstrate on the dead body." It is evident from this that he does not recognize a genuine chronic metritis, when he speaks of congestive hypertrophy and subinvolution.

A section of an uterus in a condition of chronic metritis reveals to us a distinct and characteristic picture. The connective tissue is in a state of hyperplasia, there is an irregular distribu-

ion of the muscular fibres and of the connective tissue. The middle coat of the blood vessels is increased in thickness, which is caused by a loss of the muscular fibres, they being substituted by fibrous tissue, so that the lumen of the vessels is greatly diminished in size.

The lymphatic vessels are gaping and the peritoneum is unusually thickened. Finally, the mucous membrane, the endometrium, shows all the changes resultant upon inflammation.

Everywhere in the uterus may be distinctly seen the destruction of the specific tissue of the organ and its substitution by the product of long continued inflammation in any part of the body, of connective or fibrous tissue. It is readily found in the enlarged uterus, and we have therefore a right to speak of chronic metritis. The expression signifies nothing more nor less than chronic inflammation of the uterus.

In a clinical sense the disease may be defined as a hyperplasia of the connective tissue, which is combined with increased tenderness and often follows confinement.

The process of involution is disturbed by various causes, such as inflammation of the endometrium when sexual intercourse is indulged in too early, or when digestion is impaired and nutrition of the uterus is consequently faulty. These causes have the same significance after miscarriages, so that abortion is not infrequently the forerunner of chronic metritis.

There are, on the other hand, many patients suffering from the disease who have neither miscarried nor given birth to a child. In these cases, the process commences with an affection of the mucous membrane, which may be brought on by gonorrhea, disturbances of menstruation, the miserably deficient hygiene of school life, or the rules of society, coupled with the innate modesty of young girls, which sometimes do not permit of an evacuation of the bladder, when overdistended with urine.

Authors do not agree as to whether improper or excessive intercourse is capable of bringing on chronic metritis. I myself believe, that onanism or cohabitation with impotent husbands may bring on the trouble. Occasionally disturbances of the digestive tract, when the vessels of the abdomen are overloaded with blood, will compel patients to seek the aid of a physician.

Some make a distinction between inflammation of the corpus and collum uteri, but it is rare for these affections to exist separately. It is especially after laceration of the cervix that it alone

becomes enlarged without implicating the corpus. Chronic metritis is generally combined with endometritis and often with perimetritis, despite the fact that the patient has suffered but a short time.

As the symptoms of chronic metritis are well known and the diagnosis readily made, I will at once proceed to a consideration of the treatment.

In order to prevent the disease, it is essential to prevent women, after confinement, from weakening their systems by a course of starvation. If the bowels are active, a good strong nourishing diet is far better than a regimen of tea and toast.

In France lying-in women are served with a drink called "chandeau," composed of the yolks of eggs, white wine, sugar and cinnamon, and in Germany they are dieted upon beer, which has been warmed, bread and sugar.

As a matter of course, after a difficult labor and after a first confinement, some precaution must be resorted to, locally, to keep the parts clean, by the use of disinfectant lotions. For a time after leaving the bed, hip baths of a decoction of oakbark are very efficacious, especially when the patients feel as if the vulva was distended and when air escapes from the vagina.

Again, the administration of ergot instead of opium, to suppress any afterpains, is to be recommended after confinement.

The disease may be prevented in young girls by proper exercise, such as swimming, gymnastics, horseback riding, or any healthful exercise, calculated to develop the body. The bowels are to be kept regular, and the desire to empty the bladder should always be complied with. During menstruation, anything which will shake the abdomen violently must be avoided.

It is often necessary to warn newly married couples against excesses, and it is hurtful as well for many young wives to do laborious housework. It is even stated that honeymoons are productive of the disease.

The treatment may be classified under three heads, namely:

I. Medicinal treatment.

II. Local treatment.

III. Operative treatment.

It is impossible to mention all those medicines given to relieve the secondary symptoms, dyspepsia, neuralgia, costiveness; their number is legion.

Of drugs, which act favorably upon the uterus, there are but two—*secale cornutum* and *hydrastis canadensis*.



*Secale cornutum* is not efficient in all cases; only those of short duration are benefited by it. If the hypertrophy of the connective tissue is established, ergot must be without effect, as it acts solely upon the muscular fibres. When the uterus is large, in the first degree of retroflexion, and emitting a bloody discharge, ergot will give good results, if given in the dose of 1.0 once or three times daily. Should it prove of benefit, the dose of 1.0 daily may be continued for several months. The use of the fl. extr. hypodermically is inconvenient to the physician and disagreeable to the patient, and does not offer any compensating advantages.

The other drug from which we may expect something is the fl. extr. of *hydrast. canad.* Its active principle is not known; nevertheless, after its administration I have seen recovery from irregular, especially too frequent and abundant menses, as well as dysmenorrhœa. I have given it to young and unmarried women, the dose given being 20 drops twice or three times daily.

No other drugs can be compared with these two in the treatment of chronic metritis.

From the use of mineral waters advantage may be derived, after the uterus has commenced to diminish in size, but we can hardly hope to effect a cure by mineral waters only. Those waters which contain iron and aperient salts are recommended. Seaside bathing often proves beneficial, or, in case this is not possible, hip-baths of brine or saltwater, containing as well a decoction of oakbark, may be prescribed with undoubtedly good results.

You all know how many different methods for the local treatment of chronic metritis have been published. They are all tried and are often excellent, but generally the physician discards, after a thorough trial, one method in disgust and begins another. This shows that we cannot depend on these methods. The use of iodine, iodoform, collodium canthard., of the sound, of the sponge tents, electricity, of the hot iron, does not seem to give reliable results in all cases, and is often very inconvenient and even dangerous on account of its necessitated repetition. Martinetti, in Florence, saw diminution of the size of the womb on thrusting Pacquelin's needle into the substance of the cervix in eight to twelve different places. He repeated the treatment at the end of three weeks. Beigel reports the cure of two cases after injecting ergot into the cervix.

We should begin the treatment in every case, except with young unmarried women, by the abstraction of blood from the uterus. To effect it, scarifications are the best, as the application of leeches is not advisable. All the good obtainable from leeches may be obtained by scarifications, and control over the quantity of the blood withdrawn is not lost. Furthermore, the small cysts in the cervix, which are known as the ovula nabothii, may be opened at the same time. The scarification can be used, so that the cervix only is punctured, or that small cuts may be made over the cervix, which may be extended with advantage into the cervical canal. The quantity of blood taken away should be about two or three tablespoonfuls. This procedure may be repeated every three days. If the blood flows freely, it is better for the patient to keep quiet for one or two hours. On the contrary, if the flow is only in drops, she should be advised to take gentle exercise, until the hemorrhage becomes more profuse.

Even in cases of menorrhagia the influence of scarifications is a good one, if they are made twice a week between the menstruations, the latter often diminishing in quantity as a consequence.

Soon after commencing treatment the uterus becomes smaller and the tenderness disappears. The pain caused by the scarifications is very slight, providing the instrument used is sharp. Should the blood flow too freely, a small tampon with liq. ferri is sufficient to control it.

A milder form of reducing the uterus is the insertion of tampons soaked in glycerine. They are indicated in place of the scarifications, when the patient is very anemic and when the indications are against blood letting. The tampons may be applied by the patient herself each day. They may be used simultaneously with the scarifications, and enhance the treatment to a very great extent, if they are introduced on days alternating with the latter. An addition of tannic acid, iodine, iodide of potassium, boracic acid, or iodoform, is often made to the glycerine.

That which next demands consideration is the vaginal douche. Almost every physician and almost every patient is familiar with it and with the mode of administration. It is my practice to add to the water, if endometritis and ulcerations are present, carbolic acid, sublimate or pyroligneous acid.

Besides these, injections intended to relieve the pain, mustard

plasters, blisters may be used. Wet towels covered with oil silk or flannel are also very effective, applied over the abdomen.

The hot water injections are recommended so universally, that it seems as if all cases were made better by them; but there are cases in which no benefit is derived from them. These are old cases, in which no contraction of the muscular fibres can take place, as the hypertrophy of the connective tissue is too far advanced. Then it is better to discontinue them.

Before I speak about the operative treatment I would like to mention the influence of pregnancy on chronic metritis. Very often one hears that patients think or have heard that pregnancy would cure them of all their complaints. This is an error, as fresh cases alone are benefited by it and then the proper care after confinement is a *sine qua non* of success. Old cases often give rise to hemorrhages within a few days after the confinement and ergot is then powerless to stop the bleeding. These hemorrhages occur in consequence of the loss of the contractile fibres. The patients leave their beds in a poor condition; at the end of six weeks the old well-known symptoms reappear and the treatment must be resumed. Far more frequently miscarriages and often sterility on account of the accompanying endometritis are observed.

The operations for the cure of chronic metritis are three in number, first the amputation of the cervix, Emmet's operation and a third one, a modified Emmet, which I shall describe to you.

The first amputation of the cervix with the intention of healing chronic metritis, was made by Carl Braun in Vienna. In 1864 he published several cases, and showed that after the operation the uterus was reduced in size nearly one-half. This took place when only part of the cervix was removed and not necessarily the whole of it. The walls of the uterus became thinner, so that a regular involution was possible. The hypertrophied connective tissue showed fatty metamorphosis, and was thus reduced in quantity.

The operation was highly recommended a second time in Cassel, a few years ago, by Aug. Martin. He was able to report 70 cases of amputation in chronic metritis with the very best results. Since then he has operated several hundred times, and it is his method I recommend, as I have also experienced the best results from it. The operation, as done by him, is without

any danger, so that the patients never have any rise in temperature, nor any parametritis nor exudations. Fritsch says: "Should there be any sickness after the operation, the operation is not dangerous but the operator."

As this cannot be said of other methods of amputation, I shall merely mention the amputation with the ecraseur or galvano-cautery. No one does this operation any more, since Sims and Hegar have established the rule to use only the knife and scissors, and thus prevent stenosis and other evil effects.

In almost all cases, where amputation is necessary, there is found, besides hypertrophy of the uterus, an endometritis, leucorrhœa or menorrhagia, which may be treated at the same time, and Martin says that he tried almost all different ways to bring the mucous membrane back to its normal state, but that he found that the use of the curette and injections of the liq. ferri give the best results. The publications of Martin and Duvelius show that a normal mucous membrane is formed after the curette is used, that even normal pregnancies occurred, where before sterility existed.

As a matter of course, symptoms of a peri or parametritis must disappear, before the operation is thought of.

The patient being etherized, she is put in the lithotomy position. By using one of Fritsch's specula the uterus is brought into view very easily and the anterior lip fixed by a tenaculum forceps. The assistant on the left side of the operator may hold the speculum, and the assistant on the right side takes the tenaculum forceps, steadies in that way the uterus, and can, at the same time, direct the nozzle of the irrigator, so that a weak solution of carbolic acid or sublimate is made to run continually over the cervix. After having used the sound to ascertain the direction of the uterine canal the curette is introduced. The whole mucous membrane is then scraped off, the uterus is washed out with the irrigator, then liq. ferri 2.0 to 3.0 injected and the irrigator used again, till the water flows out clear. The whole vagina and cervix is then again disinfected by allowing the solution from the irrigator to flow more freely.

The cervix is then incised on both sides down to the vaginal insertion. Both lips can now be drawn asunder, and on the border of the healthy mucous membrane of the cervix a cut is made across the posterior lip. From the external side of the lip another cut is made, till both meet, and thus a piece, sometimes

larger, sometimes smaller, just as much as the case requires, is removed. After this is done, sutures are immediately applied. The same is done on the anterior lip, and then there only remains to apply a stitch or two on both sides to close the incisions. The sutures are cut, the uterus cleaned and pushed back into its normal position. The patient remains in bed for seven or eight days, using twice a day a disinfectant injection. On the tenth day the stitches may be removed.

This operation is especially intended for all cases of chronic metritis in women, who have not borne children or have not been extensively lacerated. If the lacerations are very deep, and if they are the cause of catarrh and hypertrophy of the cervix, the well-known Emmet's operation must be performed. It is not necessary that every laceration should be sewed up. Mundé says: "There is no question, that the importance of the lesion has been greatly exaggerated in the past few years," and adds, "that the significance of a cervical rent as a cause of uterine disease, lies not in the existence of the rent itself, but solely in the symptoms which it produces, and in the direct influence which can be traced to it, as the prime factor in the production or maintenance of some pathological condition or functional derangement in the pelvic organs, or elsewhere in the body." Mundé considers only one-half of all the lacerations of the cervix which occur as requiring treatment of any kind, and of these but one-quarter or one-eighth of all lacerations as absolutely requiring Emmet's operation.

There are many cases of laceration, where the uterus itself does not show any other alterations in its structure. Such an uterus is very correctly described by Emmet as having the shape of a mushroom, where the cervix, which has become everted, represents the top and the corpus the stem. These are the cases which give the best results after the operation.

Not infrequently we find patients, in whom not only the cervix, but the corpus is hypertrophied, so that above the enlarged cervix with its laceration the uterus is felt fully as large as the cervix, sometimes even longer. There Emmet's operation gives rarely perfect satisfaction. I would then recommend the operation mentioned before as being a modified Emmet. Emmet himself says in the last edition of his book, that since he has commenced to perform his operation, he condemns the amputation as a too frequent remedy for laceration. A few pages fur-

ther on he says: "We should remove the cellulitis as far as possible by treatment, and as the pelvic inflammation disappears, the cervical catarrh will diminish or cease, unless the follicles have undergone cystic degeneration to such an extent as to compromise the reparative process. It will then be necessary to resort to partial amputation of the cervix or to an operation devised by Schroeder." This shows, that even Emmet acknowledges, that in some cases more has to be done than simply his operation. In all cases, where the follicles have undergone cystic degeneration to a great extent, and I add, when the corpus is very much enlarged, a partial amputation, combined with Emmet's operation, will give excellent results. It is well known, that in Schroeder's operation, which Emmet speaks of, the diseased mucous membrane alone is removed and the sewing is not very easy, so that the operation will, I think, be done exclusively by specialists. The other operation Martin describes thus: "When the tear is on both sides, the lips can be separated very easily; if the tear is only on one side, the other side is cut through down to the vaginal insertion. Then, as in Emmet's operation, that part of the mucous membrane, which as a broad undenuded tract forms the continuation of the uterine canal to the os, is circumscribed on the posterior lip. After this, an incision is made across the posterior lip of the portion near the lower end of the lip, at which the external os is to be formed. This piece of the lip is cut off and stitches applied to stop any bleeding. In the same manner a piece of the cervical mucous membrane on the anterior lip is circumscribed, to correspond with that left on the posterior lip. Then the cicatricial tissue in the angle is thoroughly removed and the excision of the anterior lip made. Whereupon the stitches are applied, here as in the posterior lip. The rent on both sides still remains to be closed, which can be repaired as in Emmet's operation. In this way a very exact and natural form of the cervix is achieved."

The résumé is, that the treatment of chronic metritis consists mainly in what is known as the preparatory treatment for Emmet's operation. When the patient does not get better after a thorough trial of hot water injections, scarifications, ergot, glycerine tampons, baths, etc., then the question arises, which of these three operations may be performed. If there is no laceration, then we have to use the curette and to amputate the cervix

with the knife. The size of the piece which is removed, corresponds to the extent of the disease. When we find laceration accompanied with enlargement confined chiefly to the cervix, then Emmet's operation is in its place and will never disappoint.

When the follicles are much degenerated and the corpus uteri considerably enlarged, Emmet's operation combined with the excision of the lips will bring about recovery.

To be in conformity with the views everywhere reigning in surgery, it is necessary that these operations should be made aseptically and we can do this very easily by constant irrigation of the parts operated on, with carbolic acid or sublimate. Without any inconvenience the constant flow of disinfectant solutions can be maintained, when the patient is put in the lithotomy position. And at the same time I have found that the healing process is a quicker and a more reliable one.

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**Address Delivered at the Opening of the Sixteenth Annual Session of the Medical Society of the State of California.**

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By WM. P. GIBBONS, M. D., President.

The annual reunion of scientific bodies is always regarded with interest, in anticipation of results which bring in review the past and the present workings of intellectual energy. As a means, moreover, of drawing into closer fraternal relation members of the body, and of imparting increased stimuli toward new researches, such occasions are valuable to every individual.

In the great diversity of special studies which is characteristic of medical science, the fact is to be recognized, as indicating a high degree of general culture, that every individual is qualified to participate in the deliberations of its meetings, and of adding new contributions to the general stock of knowledge. The members of this Society, coming together under such auspicious conditions, are naturally imbued with high expectations, that its proceedings will make a worthy chapter in the history of medical science on the Pacific Coast.

At the same time, it is with satisfaction that we look over its past history, and recognize the good work which has been done by the noble pioneers of the profession, under the adverse conditions incident to a new country, and a cosmopolitan population. There are a few yet left among us, who can trace, over the well lined chart of memory, the record of nearly two score

years of active participation in the contests and struggles, the trials and the sacrifices which were endured by the builders of this grand and flourishing commonwealth. It is almost needless to say, that this profession, as a body, sustained, with unwavering faith, its world wide reputation for energy, and diffused humanity, during the transition stages of California, between political anarchy and organized civilization. The splendid asylums, the hospitals, and other humanitarian institutions, the scientific and literary organizations which may be seen on every side, are permanent memorials, the foundations of which will ever bear the impress of medical men as among their conspicuous builders.

If, then, we reverently regard those of the profession, who, having nobly finished the work of their day, have gone to a well earned and peaceful rest, it will be but a feeble tribute to their excellency and worth, to express the hope that we may fill their places with like honor, and carry on the work of advancing civilization, in such manner, that future generations may bless the day when the standard of medical science was planted and sustained on the extreme western shores of the continent.

Entering on the duties of this session, it will be unnecessary to anticipate subject matters, which are to be presented under various sections. A few practical points connected with the welfare of the profession, will receive brief notice.

The attention of the Society is respectfully directed to the certificates of membership which have been issued to its members. Soon after the adjournment of the last session Dr. W. A. Briggs, Secretary, sent me a roll, filled in with the names of new members. After having signed several, my attention was directed to the unartistic manner in which the penmanship had been executed; and further inspection developed the fact, that the name of the Society was not correctly represented in the text, and did not conform to the name upon the seal. On consulting with the Committee of Arrangements, it was deemed advisable to withhold these certificates and to present the matter to the Society for proper action. The certificates alluded to are on the table.

The subject relating to illegal practitioners has engaged the earnest attention of the Board of Examiners. While the report will show that all that could be done with limited means has been accomplished, it is apparent that the successful treatment



of this complex evil still remains, in a great measure, among unsolved problems. The commercial axiom of there being a steady relation between supply and demand, has a significant application to this question. For certainly, the business of the class of people which comes under this head could not flourish without remunerative patronage; and such sustaining patronage, must be derived, in a great measure, from beneath a golden canopy of blind and ignorant faith.

This brings into view a prominent defect in our educational system, in not fortifying the youthful mind with that discriminating power, which teaches the true economy of life and enables it to appreciate the difference between the educated and professional mind, and the medical imposter.

It is certainly an anomaly in the world of letters, that there should be found men of education and passing culture, who trust their lives and the lives of their families in the hands of recognized charlatans.

I know men, distinguished for the fulness of their legal education and occupying high judicial positions, who take these pseudo doctors into their families as guardians of health; men who claim to be leaders of the people and statesmen and who are looked upon as oracles in matters pertaining to the enlightened administration of public affairs, who draw these scalawags to their bosoms, where heart beats in unison with heart; men, eloquent and renowned in the pulpit, with minds enriched with the treasures of hundreds of generations, who soar in a spiritual atmosphere, seeking emanations of divine truth, who fraternize with medical scamps, who are made up of hypocrisy and moral corruption; men who are fond of displaying their versatile talents in alumni associations and who wear the badges of their alma mater as tokens of high endowments, who lead these imposters across the threshold of sacred homes to pollute the atmosphere where loveliness and virtue should alone preside; merchants, proud and haughty in bearing, who send their wives, arrayed in splendid robes and sparkling with jewelry, in liveried carriages, to seek for health in the parlors of a Mongolian doctor and there to sit and sip his high-flavored teas, compounded from dried lizards, frogs, worms, bugs and other materials, culled from the lowest and the most loathsome organisms of the animal world.

Illegal practitioners and empirics—they are fed by Mammon;

not sustained by legislation. They laugh at your feeble efforts to pass the threshold of the inner temple of educated crime, where men try to hide from the world their gross debaucheries by munificent offerings of gold; where women descend by stealth from the consecrated estate of mothers, and crouch in criminal subserviency, before the prime ministers of Satan; that their life blood may stain and pollute the altar of virtue, and little helpless souls murdered, on their silent and solitary and mysterious journey from the spirit world, whence they were coming to weave circlets of living gems within the cherished household, and to perpetuate the attributes of Deity on earth—all, all, that the career of sensual pleasures might not be disturbed, nor the wild dances of lust arrested.

The prevalence of quackery is not the only evil against which the medical profession has to contend. It is an old saying, consecrated by time and authority, that "a man's worst enemies are those of his own household." In unorganized professions, where the struggle for material advantages is prompted by undue ambition or unguarded zeal, and where conflicts of opinion are certain to be developed, it sometimes happens that the character of the physician is lost in that of the wrestler, to the detriment both of the man and his profession.

It is with regret that an illustration of this has occurred in a neighboring county during the last year, where an action for malpractice was instituted against a respectable physician, and a shameful verdict secured against him, principally on the testimony of two other doctors, whose crude testimony outweighed, in the estimation of an incompetent jury, that of ten prominent surgeons of the State.

And here, a word will not be amiss, in relation to the matter of expert testimony. The constantly expanding area of the collateral sciences pertaining to medicine, has long since rendered specialties in practice an absolute necessity. As custom now prevails, a doctor is liable to be summoned as an expert in any criminal case, independent of his special qualifications, and as ignorant jurors can perceive no more difference in doctors than they do in potatoes, the testimony of one who never treated a fractured limb, will carry as much weight as that of an accomplished surgeon, and so in other classes of cases. The effect of conflicting testimony, independent of its character, may induce a decision, not only to the disgrace of medicine, but to the pre-

vention of the ends of justice. The idea is thus suggested, that there may be a propriety in local societies designating certain of their members who shall be recognized as expert witnesses in special departments of medicine and surgery, and that the law should provide for payment of their services, when summoned before a court.

The frequency of actions against physicians for malpractice is generally a method of blackmailing on the part of unprincipled people, who, having received professional treatment on the basis of charity, apply to depauperated lawyers, who take their cases on contingent fees. This matter has claimed attention from our Eastern brethren, and Dr. W. S. Parke, of Pequa, O., has recently made a suggestion of the framing and passage of a law, the force of which would be to put the plaintiff under sufficient bonds to indemnify, in case of failure to sustain his charge, the physician or surgeon in all pecuniary loss which he may have incurred, as well as a fair compensation for loss of time.

While entertaining a warm sympathy for our brother, the defendant in the case just alluded to, I am impressed with the belief that he has, in common with others, exposed himself to some degree of criticism. For, when men voluntarily stand aloof from association with the profession to which they belong, they surrender their claims to the sympathy of the body, in the trials which they may be called upon to endure. The gentlemen who were involved in this controversy reside in one of the richest counties of the State, which has the names of forty-one regular physicians on record. And yet, there is no local organization among them, and they have but five representatives on the roll of the State Society, among which are none of the contestant parties. These are typical facts which have parallels in half the counties of the state; they are such as are militating against the unity and the consequent reputation and power of the medical profession in California. Go where we may, among lawyers, clergymen, merchants, scientists, mechanics, or laboring men, and each class is a factor in the State, wielding a recognized power, whereby its interests are promoted and protected by legislation, and these results are accomplished by fraternal organizations of all professions. That of medicine combines in the body the highest scientific qualifications for power with the most feeble cohesive elements, simply because it pays so little attention to organizing for purposes of fraternal

union, and of diffusing the leaven of science throughout the domain of society.

The medical mind of California is as high toned and as well educated as that of any other State in the Union. Constituted, as it is, of representatives of one hundred and five of the best American schools and of seventy-one of the solid schools of Europe, it should be able to feed the channels of science with choice products of its toil, instead of stooping to suck the nipples which supply elaborated food to the routine practitioner.

Let us, then, diligently promote the work of organization throughout the State. And let every physician be imbued with the consciousness that his interests and reputation are co-ordinate with the interests and reputation of the profession—that they cannot maintain an independent existence.

There is a widespread custom which reflects on the reputation and intelligence of the profession. I allude to the practice of physicians in giving certificates to proprietary medicines and pharmaceutical formulæ, and recommending various other things, by way of imparting to them commercial success. It is extraordinary that some medical men should so far forget a cardinal principal of ethics as to become advertising doctors for druggists. It is also surprising that others, having an excessive secretion of the "milk of human kindness," should feel it a duty to recommend to their "medical brethren" the use of formulæ compounded of drugs which have maintained a recognized place in pharmacopœias for hundreds of years past.

While the position in which these gentlemen place themselves is almost too puerile for serious consideration, it is, at the same time, so humiliating to professional dignity, as to need rebuke.

In looking over such advertisements, a layman might be led to believe that the dreams of the alchemists have been evolved into realities, that diseases were being driven back into Pandora's jar, and the dawn of day, which promises perennial health, was sending its golden beams of hope to the human family through the intervention of advertising angels, which bear on their fleecy pinions the glittering escutcheon of M. D.

This benignant vision receives exhilarating intensity from a widely-distributed certificate in recommendation of a certain variety of wine, for the use of physicians, their patients, and the world at large, which, presumably, may be imbibed *ad libitum* without disturbing the normal functions of the ganglionic cen-

ters. Attached to it are the broad signatures of twenty-eight professors of medical colleges in Eastern States! I am deterred from criticising these gentlemen without a hearing, from the strong probability that each of them can make out a *good case* for himself.

The increasing activity of pharmaceutic science, in presenting new combinations of old drugs, in attractive and elegant forms, and in assigning active properties to comparatively inert substances, may not be objectionable from a business point of view; in many cases, it must be acknowledged, it is a boon to medicine. But, regarded in connection with medicine as a science, and with physicians, as craftsmen of science, there are strong reasons to urge, that medical men should not lend their title to promote commercial enterprises. For that title is not personal property, but a trust, conferred on individuals for sacred and ennobling purposes; and when yielded, at the close of life, it should be enhanced in value, by accumulated culture, and with its honor untarnished.

I have endeavored to avoid making any allusion to the unfortunate dissension produced in the medical fraternity, by the action of the last meeting of the American Medical Association held in New Orleans.

But, I cannot discharge the feeling, that this Society, in common with other State associations, owes a duty to its members and to the entire profession both in America and Europe, by endeavoring to effect some compromise, whereby all dissatisfaction and acerbity of feeling may be obliterated, and a successful result assured for the International Medical Congress which is expected to meet in Washington in 1887. The Medical Society of the State of California is not called upon to open any discussion on the causes which produced this dissension. Such would be neither profitable nor relevant. The waves of contention bring no benefactions to the human heart. It is enough for us to realize, that the present status of this question involves our national reputation, and that our European brethren are anxiously looking for some assurance, that harmony and good faith shall be established, as prerequisites for their fraternal co-operation in making a truly International Medical Congress.

The American mind is trained to free exercise of thought and expression; it is untrammelled by conventional traditions, and its projectile energy is ever seeking further expansion in the myterious realms of space.

If collisions sometimes occur among its elastic members, they are but incidental vagaries, reminders that others are seeking truth around the same centers of psychical activity. Differences in opinion are fundamental factors connected with human progress. To allow such differences to play a graceful part in professional intercourse, is to throw an incandescent lustre over the dark by-ways of nature, and to unite more closely, in bonds of sympathy and brotherhood, members of the noble profession we here represent.

Says the London *Lancet* of January last: "We shall adhere to the conviction that the chief parties in this melancholy controversy have the same objects, and even the same opinions on the main questions which have been raised, and that it is only by some unhappy accident that they are made to take opposite sides, when all should pull together for a huge international and scientific purpose."

Other European journals have expressed corresponding sentiments, and the question is now squarely before the profession of the United States, either to heal this unfortunate breach of harmonious feeling, or to sacrifice the respect of our foreign brethren.

After mature deliberation, I feel justified in suggesting that this Society adopt a resolution and instruct its delegates to present and urge its passage at the next meeting of the American Medical Association recommending that the action of the committee appointed at its session of 1884, be annulled; and also, that the action of the committee appointed at its session of 1885, be annulled; that the two committees be incorporated into one, which shall commence anew the work of organizing for the International Medical Congress, by outlining a new programme.

This plan of compromise receives force by being urged by two or more medical journals in the east, it will neither touch the tender feelings, nor will it make any member of either committee feel that he will stultify himself, by giving it cheerful and earnest support.

Every physician will bear in mind, that in this matter there is but the one cardinal point, the protection of national reputation, and that there is but one way of effecting this—by subjecting emotions to the control of that exalted and unselfish judgment, which stamps nobility in the human character, and the impress of divinity on the workings of immortal mind. So mote it be.

**REPORT ON PRACTICAL MEDICINE.**

By A. H. AGARD, M. D., Chairman.

In keeping with the requirements of the Constitution of the Medical Society of the State of California, it becomes the duty of your Committee on the Practice of Medicine and Medical Literature to present some thoughts pertaining to the progress of medicine during the year that has passed since we last met. When dealing with a science which it has taken many centuries to evolve, and to bring to its present condition of usefulness, a twelve-month is a unit quite too brief with which to measure satisfactorily its movements. In order to be certain of our reckoning it sometimes becomes necessary to take long observations. The history of medicine furnishes many interesting epochs. None of them were established, nor so fully developed as to have their true character admitted during the first year of of their inception. The introduction of vaccination by Jenner may be cited as an example. It gave us one of the most marked epochs in the history of medical treatment during the last 100 years, and one that gained recognition rather rapidly, and yet, it took many years before we fully saw its importance, and we are to-day confronted with the suspicion that there may be in it an under-lying principle, of great worth, which is not yet understood. Indeed it is now given out as one of the problems of the day, that inoculation with attenuated viruses is to be the long-sought desideratum in the treatment of contagious and infectious diseases. If so, the how and the wherefore are to become one of the urgent medical studies of the hour, and it has recently been opened for reconsideration.

Medical progress is a very slow coach. As we jaunt along in it we sometimes fancy we are going at a rapid speed; but a careful observation often demonstrates that the mile-stones of real advancement pass by slowly. The rattle and the clatter of the wheels of change deceive us sometimes. Randolp's old aphorism: "All change is not improvement," is as applicable in medicine as in other departments of human activity. It is only by taking larger views that we feel fully assured of a correct estimate of the various changes in practice, and feel confident of real progress. Hence, in our annual *resume*, it will be necessary to consider some matters that have occupied the attention of the profession, it may be for many years, but have

received special consideration during the present year. Again, the field of medical investigation has become so broad that my limits will make it impossible for me to mention, even briefly, all the matters of interest connected with the studies of the day. Fortunately, the medical journals deal with them extensively and are largely read, and other members of your committee will take up and treat, more ably than I can, some matters that this report cannot reach.

#### COCAINE AND SOME OF ITS USES.

The use of cocaine as a local anæsthetic may be regarded as one of the most important advances in medicine of recent origin. General anæsthesia is not always safe and sometimes not desirable; hence some means of producing local exemption from pain has been sought. In cocaine we have an agent which acts almost perfectly to obtund pain in mucous surfaces. Some of its uses are already too well-known to need mention here; but it is daily finding new fields of usefulness.

I have recently been enabled to ligate hemorrhoids painlessly by its use, employing no other anodyne. In my first case I tied off four tumors, using the needle and double ligatures, with so little pain that there was no attempt by the patient to retract the protruded parts, and with one hand he assisted all through the operation by holding up the buttock; in fact, he said he felt no pain. Before returning the ligated parts I inserted into the rectum a suppository containing two grains of iodoform and one grain of cocaine. He had no after pain requiring opiates and escaped the usual distresses from strangury.

The distress which females suffer from the presence of the tumescent carunculae at the urethral meatus can be greatly relieved by the use of a four p. c. solution of cocaine, and under its influence the tumor can be removed almost painlessly. Pruritus vulvæ, which sometimes baffles all efforts for relief, may be quieted for a time by the use of this remedy, and thus the patient be enabled to get some hours of quiet rest.

Cocaine is mostly employed in surgical proceedings involving the mucous outlets of the body; but in all this use, it has a value to the general practitioner, as from its employment here he gets valuable hints for its use in other directions.

The tormenting pains and distress resulting from ulcerations within and about the glottis in advanced stages of tubercular



phthisis can be greatly relieved by spraying or mopping the parts with a four p. c. solution of cocaine, or a cocaine tablet can be placed on the base of the tongue. Phonation becomes more perfect and less labored, respiration less difficult and deglutition becomes comparatively easy. The relief lasts four or five hours.

Dr. J. M. DaCosta, in a recent paper, has supplemented his earlier observations on the use of cocaine in hay-fever and rose-cold, and reaffirms his previous claim, that it gives valuable aid in relieving the symptoms in these troubles. It often converts an attack of threatened severity into a mild one, and enables the victim to be passably comfortable at home, and thus to escape the discomforts of a flight to a hay-fever resort. He uses not less than a four p. c. solution, either as a spray in the nostrils or drops it in with a dropping-tube, but gives preference to the latter. He notes, what others have observed, that there are persons who seem to be wholly insusceptible to its influence, and who fail to receive any relief or experience any effects from even an eight p. c. solution.

E. Fletcher Ingalls, M. D., of Chicago, who was probably the first to use this remedy in hay-fever, in a recent article reiterates his former conclusions in relation to its value in this disease. He, however, cautions against its too free, or long continued use as being harmful. The first effect of the drug on mucous membranes is to stimulate the inhibitory nerves and blanch the the parts; but if this condition is made too intense or is too long continued, turgescence follows with hyperæsthesia, a condition which if often repeated might result in serious change of structure. It is quite probable that the slight corneal opacity which has been mentioned as following its use may result in this way.

Seth S. Bishop, M. D., of Chicago, has found cocaine a valuable remedy in internal otitis, a few drops of a four p. c. solution giving prompt relief, and he claims that it is often permanent. He prefers the solution to a powder of the drug if used before perforation, and theoretically passes the solution through the tympanum by endosmosis.

This remedy has been somewhat extensively used during the year in the treatment of the insane; but I think the results thus far have not been encouraging. Dr. George C. Catlett, physician to the State Lunatic Asylum at St. Josephs, Mo., under

date of January 30, 1886, after recording the history of a case where death followed the use of cocaine, though under circumstances which leave the cause of death in doubt, says: "The following conclusions have been arrived at from the observed effects of cocaine, which has been administered very extensively to the insane within the last six months:

"1. It is an agent of great potency. It acts primarily with great power and celerity upon the cerebral and spinal nervous system, and secondarily upon the heart and vascular system.

"2. From its potency and rapidity of action, it is liable to initiate organic lesions and functional disturbances which are uncontrollable. It is not uniform in its action, and is, therefore, an uncertain agent.

"3. Its effects are too transient and unstable to become a reliable and efficient remedy in constitutional and organic diseases. The aphrodisiac effects attributed to it have not been observed, neither have the intense nausea and inability to vomit been observed. Its permanent and beneficial effects in melancholia and allied affections are not established facts, in the writer's opinion.

"4. It is an agent of great potency, and as it is under trial to determine its limits of usefulness and danger, it should be prescribed with increasing precaution and discretion."

Our acquaintance with this newcomer has been brief. It has been just long enough to establish some of its virtues; not long enough to make us acquainted with its drawbacks. Some of them are beginning to be apparent. One of the latest and most serious objections to its general use is found in the baneful effects of the cocaine habit. It has been used hypodermically in some cases to supplant the morphine, chloral and alcohol habits; but in some reported cases with most disastrous results—the last state being found much worse than the first. From what has already been observed of the effects of the plant, the profession should discountenance the use of the fangled preparations of the leaves of *erythroxylon coca*, sent out by some proprietary drug firms to be chewed, smoked, etc. It is a well-known fact that thousands in some parts of South America are slaves to the coca. I am told by an intelligent gentleman who once had charge of a large number of men employed in the construction of a railroad in Chile, that coca was issued to the men as a ration as regularly as meat and flour. They would not work without

it, and seemed as absolutely slaves to its use as some nations are to the use of tobacco.

Probably no remedy ever had a more rapid or a more favorable recognition than cocaine. Its brief history is brilliant, its future full of promise, unless it shall prove to be but a pioneer of its class, and its use be supplanted by something better. As a local anæsthetic, it has a wide field for usefulness. The effects of the alkaloid upon the nervous system must be more carefully studied and better understood before its systematic use can be considered at all safe.

#### CEREBRAL LOCALIZATION.

Recent investigations, made with the purpose to test the value of the observations made by Ferrier, Monk and others, who claim that function is located in certain points in the cerebral cortex, having well defined borders, seem not to fully sustain the conclusions of the "localizationists." Flourens taught that all parts of the grey matter were equally concerned in function. This is not now believed to be probable. The extremists, on the other side, who claim sharply defined areas of function, have received a set-back by a paper recently published by Golz, who claims to have demonstrated that when areas of function have been removed and the animal survived long enough, there followed a re-establishment of function.

\* Brocas convolution as a language center was not an exception. If future investigations confirm Golz's observations, the conclusion will be, while there are in the cortex, foci of function, they are without distinct border lines. If so, much that was hoped from cerebral localization will be impracticable, especially so in surgery of the brain. The work already done by the "localizers" adds to our knowledge of the relation of function to cerebral influence, and we hope for more definite results, as the end of the investigation has not yet been reached. *Science* rather aptly illustrates the present status of the inquiry by saying: "Professor Golz would mark off his map like those which represent the distribution of plants. In one part the vine would have its center, in another rice, in a third barley; but each locality would have some vine and some barley, although there would be some places which would have neither."

RECENT STUDIES IN PATHOGENESIS. THE GREAT MEDICAL PROBLEM  
OF THE DAY.

The numerous and abstruse questions connected with microscopic pathogenesis have continued during the past year to engage the attention of many of the most able investigators of our time. There seems no abatement of enthusiasm, no lessening of the most thorough, pains-taking and conscientious work that the first minds of the day can give to the labor of working out the intricate problems involved in the study. No more important work ever engaged the attention of the profession, and never at any time has there been so much accomplished in so short a period.

Whatever the results may be, and they cannot yet be told, much valuable information will be added to our stock of medical lore, and this period of activity promises to mark an epoch in the history of science.

Students in medicine are always great workers. They are constantly delving away and following the best lead they know, and are always hopeful of being able to open up a bonanza for the good of suffering humanity. They may not always delve wisely. They may sometimes mistake a "stringer" for a "mother-lode," and find themselves at last in barren rock, or getting non-paying "dirt." On looking over the field, I have sometimes thought that the mine of medical knowledge was perhaps first opened by quarrying down upon the out-croppings of a stringer, and now, after having been for centuries mining along converging off-shoots, we are just approaching the mother-lode of medical study.

From the most remote knowledge we have of medicine, down through all the centuries to a very late date, it was held to be the business of the physician to heal the sick. Such is the popular idea of his mission to-day, among enlightened and barbarous peoples the same. I believe, however, China is an exception. There the physician is paid by the government and is expected to see that nobody gets sick—is held responsible for the health of the people.

It is, and has always been considered a lofty aim to strive to restore the sick to health, and to reduce to a minimum the sum of human suffering. This is a most worthy mission and well and faithfully have its workers occupied the field.

But broader views are beginning to obtain, and they reveal to

us more extended fields beyond; with harvests ripe and laborers already occupying them. To cure disease is no longer the *ne plus ultra* of our professional endeavor. It is believed there is something more beyond.

Some novels relating to the history of medical thought and study, tending to show how the present condition of medical investigation has been evolved, seem, also, prefatorially appropriate.

It has been said: "It is appointed unto man once to die;" and the period of his life has been given as "three-score years and ten"—man so constructed that, the arrangement for supplying the muscles of the body, necessitated by the fact of his living, must prove inadequate, and he dies, in a measure, painlessly by the gradual wasting of his energies, and at a time when his anxiety to live is at a minimum. This is the death appointed for him to die, and seventy years is given as the time when this great and inexorable change may be expected. This gives us an idea of the theoretical man, viewed in the light of his creation. As we see him in the light of observation, another and quite different set of facts present themselves and strike the attention. We find his average age is less than one-half his allotted time, and but a small portion of the human family, of any given period, reach the age of seventy years, and die the death appointed. We see a very large part of the race dying by disease or accident, an end reached most often through pain and suffering, and at a time when all the faculties are acutely awake to pain, and when death is felt to be unwelcome and a misfortune.

Out of this state of facts, which has been before the world from the beginning and head of all men, has grown the physician's system of cure. He has been learned in the lore of his profession, faithful in his work, earnest and untiring in his endeavors. Still, man dies out of time; hence we find medical men and society beginning to ask after the true worth of Restorative Medicine. When we look about us a moment at the facts as they are, the inquiry is neither irrational, nor strange.

From its home in Hindostan, Asiatic cholera breaks out. Traveling along the thoroughfares of human intercourse, it spreads from land to land; crosses continents, seas and oceans: depopulates towns and cities and sends to untimely graves tens of thousands of the human race. From one-half to three-

fourths of all attacked die, despite the best directed efforts at restoration.

Here and there all over the civilized world, tubercular consumption is constantly invading family after family; claiming for its victim, here the interesting young daughter, when she is pursuing, or has just completed the curriculum of school or academic attainments. Flushed with happy hopes for the future, elate with bright prospects and worthy plans for life, she is stricken and fades away. Here and there it is constantly taking the young man, a valuable life goes out and the world loses all it might have gained from the working out of his noble plan for a useful career. It takes the mother from her children, the father from the family; the old and the young; invades the homes of the poor and the residences of the rich, is perpetually filching its victims everywhere, and despite years of study given to the matter and the volumes written upon it, despite the best directed efforts of Restorative Medicine, probably ninety out of every one hundred attacked die sooner or later, victims of consumption. While it does not produce the consternation that follows in the wake of cholera, yet its ravages are so constant and so widespread that its mortuary footings far exceed those of any epidemic disease known.

Yellow fever breaks out in some tropical seaport, travels along the track of commerce, destroys business, depopulates towns and cities on the right hand and on the left, and what has Restorative Medicine to offer its victims?

Here and there diphtheria invades family after family; occurs now and then epidemically, when, sometimes nearly every case results fatally, notwithstanding our dissertations upon its nature and pathology, and our arrangements for treating it. Thus we might go on to the end of a long catalogue of maladies, and when through, the question recurs again, what is the real worth of Restorative Medicine? Does it satisfactorily fulfill the requirements of the case? Is there nothing better hoped for to offer a world thus slaughtered by disease?

To the thoughtful these questions come as a grave problem, which has been pressing for a solution during the last half century as never before, and it must be solved.

I would not belittle in the minds of of any, the value of curative medicine. To the one stricken with disease it is everything. It is the only hope, and it is a hope following in the direction

which nature has pointed out by her own processes. It is not strange that man should long and enthusiastically follow so worthy a teacher and leader. The thought and labor that have been expended in efforts to cure disease are most praiseworthy, and the results when such efforts are under the direction of the educated, discreet and conscientious physician, sometimes seem almost superhuman.

The old Romans used to stay up the hands of their physicians by this praiseworthy sentiment: "Man never so much resembles the gods as when seen giving health to the people." This expressive motto when inscribed over the gateways to their vast bathing rooms, where all resorted, hints to us that *they* understood it to embrace more than was embodied in their ideas of cure for the sick.

In view of the fatal results that come in spite of our best directed efforts at cure, there is a sense in which it is far more important to society that the well be shielded from attacks of disease than that the sick be cured.

Conclusions reached by thoughts in this line have prompted students of medical science to attempt a step in advance, and thus we have lately been hearing much about the prevention of disease. To an age so enlivened with the enthusiasm of successful endeavor as the present, the hull of the old aphorism, "What cannot be cured must be endured," has no charm, and the quest has been, and is, after some means of preventing that which seemed so difficult of cure; thus the idea of a Preventive Medicine began to assume practical shape and was furnished a name.

A difficulty soon came up. It early dawned upon the workers in this field, that to prevent a result, the cause of which was obscure or unknown, would be more difficult than to make brick without straw. Some began to feel that etiology was after all probably the "mother lode" of medical study. Without a more perfect knowledge of pathogenesis, no very satisfactory advance could be made in the direction of preventive medicine. A want of a more definite knowledge of the causes of disease has weighed down the profession through all the ages of the past, and is the old man of the mountain under which it is staggering to-day. A history of the superstitions, fancies and theories advanced and believed in by the peoples of the globe, to account for the diseases which affect the race, would fill a volume and make very

amusing reading, were it not that they relate to so serious a matter. The learned of all ages would not escape ridicule, and probably some of the theories of our own day will be derided by those who follow us. This is to be hoped, for some of them are so unsatisfactory that it would be some relief to feel they were to be supplanted by something better. The serious matter in this connection is, treatment of disease will always coincide more or less closely with the ideas held of its causation. If the latter be wrong, the former will rarely be right.

Out of these conditions has grown the late, almost wild, hunt after causal conditions.

Not to dwell at length on the history of the suggestive thoughts that have served to give direction to the present inquiry, it will suffice to state that the interest now clusters around the idea that there are specific microbes, having morphological or other characteristic manifestations by which they may be identified, which operate in some way to cause all contagious and infectious diseases.

This theory of the ætiology of these diseases is by no means new. It was very generally believed more than one hundred years ago. It came up for investigation then very much as it appears to-day. The principles involved in the controversy were the same then as now, and I cannot see that they are nearer settlement by unquestioned demonstration now than they were a century ago. There were then, as now, two parties. One held, and endeavored to prove, that the "animalcules," as they were called, produced morbid conditions. The other party believed these low forms of life the result of morbid processes. I think the suggestion that there are organisms that are pathogenic and others that are post-morbific, is a more recent thought, and may be in the line of advancement. The forms with which we deal are much more minute than those with which the earlier investigators wrestled. It is an interesting fact that the size of the microbe holds an inverse ratio to the power of the glasses used in the study. The methods of investigation, however, have been changed. The earlier investigators worked by a process of negation and tried to demonstrate that, if they withheld the spores of the animalcule, the disease did not appear. We essay to demonstrate it positively by exhibiting the supposed cause by inoculations in the lower animals. Both methods are defective, as they lack the element of scientific exactness. It was impos-



sible for them to be certain that they excluded the presence of all spores; thus far equally impossible for us to prove that we introduce nothing but the microbe.

Virchow, probably more than any other man, is responsible for the present status of investigations relating to the influence of minute organisms, as possible factors in the production of morbid conditions. Although not then, nor even now, a believer in such relations, he, many years ago, when his studies led him to supplant Harvey's motto, "*omnia vivum ex ovo*," by his "*omnis cellula a cellula*," constantly had the possibility before him. While engaged in his investigations which led him to announce his cellular theory of life, and later, his cellular pathology, he often observed the field filled with active "monads," which he classed as vibriones, and deemed them but evidences of a putrifiactive condition.

In 1848 he examined cholera dejections, and said: "I demonstrated the presence of vibriones and ciliated monads." He then discussed the question of their being pathogenic, and said: "I take no stock in the diseases caused by infusoria, and as regards cholera, such forms are found only in the evacuations and were in no way characteristic of cholera, but simply indexes to the commencement of putrification." Thus forty years ago the microbe had mental arraignment as a guilty factor, even in producing cholera, and his behavior was being watched. Twenty years later Virchow again says: "Nevertheless, I cannot subdue the hope that experimental investigations may yet succeed in finding a specific vibrio for cholera. I will, therefore, not reject the thought of the existence of a cholera fungus."

He had watched this matter for more than twenty years, and was still watching and hopeful. He further adds: "One may conceive, therefore, that the cholera miasma consists of a fungus ferment, for which there are many reasons. Yet this is still a bare analogy, a possibility but no confirmed fact."

With these provocative suggestions, thrown out by pioneer thinkers, the profession wrestled without gaining satisfactory results, until the outbreak of cholera in 1883. Investigations by various observers, in India and elsewhere, went on; but nothing was settled in regard to the pathogenic influence of micro-organisms in infectious diseases. At this time the delicacy of manipulation and the whole *technique* of the investigation had become so exact and so complicated that experts only could pur-

sue the matter further and the whole matter fell into the hands of the specialists, and with them it still remains. The profession at large has only to stand back and pass judgment upon their reported facts, and these facts, as reported, are, as yet, so contradictory that no satisfactory conclusions can be reached. The theory that these low forms of life were probably in some way concerned in the genesis of morbid conditions, has had, for reasons that I cannot now consider, a very willing recognition by the profession for a long time; thus the advocates of the doctrine cannot complain that their case is in the hands of a jury prejudicial against them.

Recently the cholera field has been very thoroughly looked over by a most able corps of specialists in microscopical studies from nearly all parts of the educated world. The medical profession has been on the tiptoe of anxious expectation for the results from such a formidable battery of observation.

The Germans have sent two commissioners to infected districts, England, France, Belgium and our government, each one. Dr. E. O. Shakespeare, who went at the invitation of President Arthur, has but just returned and his report is not yet published. Surgeon-General Hunter has also made a report of his observations of cholera in Egypt, and Mr. Watson Cheyne has also made a lengthy report of his observations, and the physicians of Naples, and some in other cholera infected cities, have not been idle in the work of investigation.

During the past year the German commissioners held a second conference, and other commissioners have matured and published reports. The record of facts from these various bodies, and from individual observers—their theories and speculations would fill a volume and cannot be introduced here. Even the conclusions reached are too lengthy for this report, and they are, in a general way, so sadly antagonizing that we are reminded of the showman's injunction: "You pay your money and you take your choice."

At some points, however, there seems to be an approach to agreement. Nearly all concede that cholera is an infectious disease, and is caused by some *materiae morbi* which operates as a poison through the intestinal track—has such a facility for auto-reproduction under favorable conditions of warmth, moisture and filth, that it is believed it must be an organism, having vital and reproductive powers peculiar to low forms of life.

This, however, is opposed by Surgeon-General Hunter, who denies the contagiousness of the disease, discredits the observations of the believers in the germ theory, and takes no stock in Koch's comma-bacillus. Koch, who took the lead in the German conference, claims to have found in cholera dejections a microbe, which, from its form, he has named the comma-bacillus. He has always found it present in the flecks of mucous in the lower, smaller intestines. In this the commissions all agree. Koch claims not to be able to find this microbe in any other disease, and thinks he has shown strong reasons why it should be accepted as the morbid agent in the production of cholera. The French commission, two of its members being co-workers with Pasteur, claims to have found in cholera cases a great variety of bacilli, and believes them all to be connected with a condition of decomposition, and in no way pathogenic, as they were not found in the blood nor in the tissues of the body. Then they go on to figure a form which they did find in the blood, and put that forward as the morbid cause. The figure-of-eight form, however, which they found in the blood, has been explained, and as yet attracts no attention.

The English commission, with Klein in the lead, reaches conclusions opposed to every position but one, taken by the Germans. The former admit that Koch's comma-bacillus is found in the flecks of mucous present in the intestines of patients dead from cholera; but deny, what Koch affirms, that colonies of this microbe were to be found in the mucous membrane of the intestines. Klein argues that the bacilli found in cholera are all agents of decomposition, or at least associated with condition of decay. Koch affirms that he has demonstrated that the bacilli of putrescence are fatally poisonous to the comma-bacillus; they even devitalized its spores, if it has any. Again Klein, with Finkler and Pryor, assert that the comma-bacillus is found entirely outside of cholera influence—in the mouth of healthy persons and elsewhere, and Deenke found it in old cheese, and hence they affirm that it is innocuous. Koch admits that a comma-bacillus may be found that morphologically resembles the bacillus of cholera—that several are known which cannot be accurately differentiated from the former by the eye, and that the bacillus under consideration is to be certainly recognized only by its behavior in solidified gelatine cultures. Dr. Ermengen, in his report to the Belgian Government, though at first disa-

greeing from Koch, has come to substantially sustain his important conclusions, and Watson Cheyne antagonizes the conclusions of the English commission and coincides fully with those of the German.

In regard to the results of experiments upon animals made with infected virus and "pure cultures," observers are as much at variance as in relation to the morphology and life-history of the bacillus.

Virchow, who may be called almost a pioneer in these minute morphological studies, and is a Nestor in medical logic, was chairman of the second German Conference, held in May last. He listened to Koch's opening address, in which he explained his work and observation in full detail. On that occasion, speaking of pure culture tests, he said: "Experiments on animals are not absolutely reliable. As long ago as 1847, by the injection of putrid materials into the blood of dogs I produced, not only similar anatomical changes, but also excited vomiting, diarrhœa, and other symptoms of cholera, thereby producing parallel manifestations, yet, I guarded myself against considering the two conditions identical. *I regard Koch's experiments as inconclusive.*"

Koch, and those who coincide with him, state emphatically that the comma-bacillus of cholera is not an organism of putrescence. They claim that as soon as putrescent action is set up in the intestines of cholera patients, other microbes multiply rapidly and the comma-bacillus disappears. He also affirms positively that it will not germinate in cultures where the microbes of decay have been previously sown. On the other hand the French and the English commissions, and many others, believe it to be a microbe which finds a vivifactive nidus in conditions of decay, and is a result of cholera lesions and is in no way a causal agent.

Professor Pettenkofer, who has long been an advocate of ground influences in the production of infectious diseases, took part in the debate in the German Conference, and, while he avoided approval of the comma-bacillus theory, he seemed disposed to hedge a little; or at least to fit for himself a soft place upon which to land should he be forced to come down from former positions. He once held that intercommunication had no influence in the spread of cholera. While now admitting this as a factor he says: "This alone is not sufficient to account

for an epidemic of the disease; that seasons and conditions of place must be entered as factors," which is simply saying, what all admit, that a filth-saturated soil, warmth and moisture are important factors in the spread of infectious diseases.

Koch, by his deftness of manipulation, has clustered around his bacillus the attention of the medical world. The first practical question, is, does this microbe in any way act as a factor in the pathogenesis of cholera? As the case now stands, the reply is, nobody knows. Koch, himself, is not absolute in his claims. He is too thoroughly imbued with the spirit of educated inquiry to assert scientific demonstration. He asserts confidently that he has discovered in cholera cases a bacillus which, morphologically and by culture tests, presents characteristics which differentiate it from all other germs of its class; that it is always present in cholera and he has not been able to find it in other morbid conditions. He claims also that he has made pure culture tests from which he has produced cholera manifestations in animals, and has in many ways demonstrated that this microbe is probably the *materiae morbi* of cholera, and now he intimates that it belongs to his opponents to prove that it is not, by saying "they have not yet disproved my claims."

Attempts have been made to do this. Klein ligated loops of intestines in six monkeys. He did this very carefully with antiseptic precautions, after first determining that there were no comma-bacilli in the normal viscus. He then injected a saturated solution of magnesia sulphate into the occluded part. In his report of the results Klein says: "In three of the animals killed after 48 hours, the tied loop contained a brownish fluid with many mucous flakes. In the contents were found numerous comma-bacillus. In one case they were more numerous than in some typical acute cases of cholera. It is evident from this that the pathological state of the intestines produced the conditions favorable for the multiplication of the comma-bacillus, and that they are, therefore, the *result* and not the *cause* of the disease. I am unable to distinguish them from the cholera bacillus, and they appear to be identical with the latter."

The experiment is unsatisfactory. If it proves anything it has relation to the origin of the bacillus found, and goes to establish the spontaneous germination of living forms; a theory not now believed in by most biologists. The Koch partisans reply that Klein relied upon morphological appearances entirely,

and thus could not be certain that his bacillus was the identical microbe involved in the controversy, as the latter can be identified with certainty only by its peculiar behavior in solidified gelatine cultures.

This is about the *status* of the controversy at this time. Nearly all parties admit the presence of the comma-bacillus in cholera; but if there as a pathogenic factor, or as a pathological product is not scientifically demonstrated.

The profession has probably more confidence in Koch's delicacy of manipulation and accuracy of observation than it has in the work of other observers; but when the matter comes to hinge on so slender a point as the ability of a microbe to liquify a sharply-tapering cavity in a test-tube of gelatine, as compared with a broader and less tapering cavity made by another bacillus, which so nearly resembles the former that no eye but Koch's can distinguish the difference, and Klein could mistake one for the other, it must be conceded that a very grave and far reaching question rests upon a very delicate basis.

No conclusions can yet be reached. We are obliged to wait for further data before rendering opinions. With such minds as we have enlisted in the controversy, we feel hopeful of more light from future observations. Their antagonisms will serve to sharpen the investigation.

Despite this contrariety of report, there is plainly to be observed a growing confidence in the germ theory of disease—a sort of unconvinced, mental assenting, that contagious and infectious diseases are caused by a micro-organism of some kind and in some way; but it must be admitted, even by the enthusiasts, that if each disease has its specific microbe it is extremely difficult to determine it. If all the microbes are as foxy as the comma-bacillus has proved to be, the hunt will be an exciting one, and furnish plenty of amusement before they are all caught, and practically trained to good behavior.

#### THE PATHOGENESIS OF TUBERCLE

Is another problem, having important relations to the practice of medicine, that has been pressing for solution for some time. The bacillus tuberculosis, which came to our happy relief a few years since, is still before the court charged with a very grave crime; nothing less than carrying off thousands of the human race annually. Proceedings have been going on during the last

year. I think but little progress has been made in the way of new testimony. The work has been mostly a sort of review of the evidence and pleadings before the jury.

By some the matter is deemed already settled and by them a verdict of guilty has been passed. They claim that bacillus is always found in tubercle and inoculations with bacillus produce tubercle; *ergo* bacillus is guilty as charged. This conclusion is reached notwithstanding there are morbid, cheesy deposits found which do not contain the microbe, and other observers affirm that inoculations with other irritant matters than tubercle produce caseous deposits. To escape the dilemma it has been affirmed that caseous deposits which do not contain the microbe are not tubercle. To say there is no tubercle without the presence of bacillus tuberculosis and reject cheesy deposits which, morphologically and pathologically, resemble and have the manifestations of tubercle, is not satisfactory. If a florist should assert a theory that all roses were red, and when brought a white flower which in every way resembled a rose but in color, he should reject it as a rose because it was not red, he would be called an unscientific innovator. We are not yet well enough acquainted with the life history of micro-organisms to feel safe in relying upon their presence or their absence to differentiate morbid conditions, in opposition to morphological appearances and similarity of manifestations.

The charge against this microbe is based upon little more than a suspicion. Its dead body is found suspiciously mixed up with very grave morbid conditions. As yet there is no witness who has ever seen it commit crime. To be seen at all on its field of action it must first be killed with staining fluids, and thus, until a better history of what it is, what it does and how it does it, can be furnished, this microbe, and probably many others, may be considered out of court; for I believe it to be a rule in law that death puts an end to all criminal proceedings.

The caseous condition in which this bacillus is found is antedated by morbid, cellular changes. What the practitioner of medicine feels most interested in knowing, is, what is it, that develops this antecedent condition, not what produces the retrogressive change of caseation. For aught we yet know, this bacillus may have nothing to do as a genetic factor in the earlier process of tuberculization, and may be concerned only in changing the cacoplastic deposits of the tubercular process into the

aplastic, cheesy and calcareous form—the later manifestations of this morbid condition. For this there is some analogy; possibly in the calcareous sack of the *trichina spiralis*.

Again, if it shall still be demonstrated that this bacillus has to do with the whole tubercular process, it will furnish the practitioner no royal way to the therapeid of the disease. Without a better knowledge of what this bacillus is, what it does and how it does it, very little will be gained. Preventive medicine may be benefited; but thus far restorative medicine has gained little by the bacillus theory. Speaking of this matter, Virchow says: "Phthisis of the lungs has remained what it was—a complete process, commencing in very different ways; sometimes in the mucous membrane of the air passages, sometimes in the interior of the alveoli, and sometimes in the parenchyma of the lungs, and giving rise to entirely different products, sometimes simply inflammatory, and then specifically tuberculous ones; and whoever wants to comprehend this complex process must have learned something more than how to stain bacillus. The bacillus has advanced the comprehension of the process so little, that one has returned again, after a very short time, to the investigation of predisposition and immunity. I was engaged in this investigation a generation ago." "In this place I desire to show that the knowledge of the bacillus, however necessary it may be for the comprehension of the origin of the disease process, nevertheless does not explain the process itself, nor does it make its special investigation unnecessary." "The demonstration of the bacillus lepræ has excluded a whole series of other possible explanations; but a positive progress in diagnosis and cure of lepra will not be made until our knowledge of the local affection of lepra has been enriched with something more than the addition of a few bacilli to the lepra cells." Thus the matter stands to-day. The investigation is in a state of active progression. The future is full of promise; but, as yet, little of practical worth has been demonstrated. As we look over the field, the situation furnishes the eye of an artist with a grand study. Seated around we see as entertained spectators the assembled medical world. Mingled interest and hopeful expectation are lined on every face. In the arena we see the microbists—the mental gladiators of the day—trained and equipped for battle. Each little group of co-workers seems deadly in earnest hunting down the game. They give to their auditors most exciting re-



ports of its character, haunts and manifestations, and of their methods and adventures, and meantime are active quickening each other by their antagonizing thrusts. In the background stands the noble form of Virchow—clustered around are his admirers. Intensely interested in every move before him, he meets the gibes of his enemies with the philosophic: “I looked this ground over twenty years ago, and my cell, which you ignore, will yet be needed before your studies can become practicable.” “The cells were, indeed, forgotten for a time. Many a one who, through the medium of his Abbé-Zeiss apparatus, had made the cells invisible, and who perceived nothing but the colored microbes, may have really believed that the cells needed no further consideration. But they are, nevertheless, still existing, and, to speak frankly, are, after all, the essential part.”

These are the words of this great master in pathological study.

Not angered by the thrusts of some hot-headed enthusiasts who are ready to throw to one side his life-long work, for a phantasmal show; he even mingles his defense with intimations of the line which their investigations should follow, by pointing them to observations made by Dr. Elias Metschinkoff of Odessa published in 1884, which go to show the relation there may be between cellular life and parasitic encroachments. Metschinkoff, in his investigations of the daphnia, a water-flea which is destroyed by a parasitic fungus, studied most carefully the life-history of this fungus in its connection with the destruction of this animal. He determined that when the double-pointed, spiral spores of the plant penetrated the cells of the animal, the cells digested them, and thus the animal lived upon its enemy; but when the spores gained a lodgment, perfected their growth, and threw out conidia, the cells succumbed and the animal died. He thus claims to have demonstrated the fact of intra-cellular alimentation and that the life of the animal was destroyed when its cellular elements were no longer able to cope in battle with the fungus. These facts, although seeming to be important and in the line of progress in our study of the microbe as a pathogenic factor, have, as yet, attracted but little attention save from Virchow, and are by some considered unsatisfactory.

There seems to be a wide-spread belief that all persons suffering from contagious and infectious diseases are in some way poisoned; that they suffer from the presence in the system of some toxic agent. The mere presence of microbes in various

parts of the body is not deemed sufficient to account for all, probably not for any, of the graver manifestations seen in these diseases. The most enthusiastic believers in the germ theory admit that their positions are vulnerable until they can demonstrate the manner in which the microbe gets in its work. Metschnikoff has shown us how the phagocytes of the daphnia are overmastered by his fungus, *monospora bicuspidata*; but this fails to explain our problem. Take the comma-bacillus in cholera. It is an organism that has not the parts belonging to Metschnikoff's fungus. It has no conidia, and if spores, they have not been satisfactorily demonstrated, and if it had all of these organs, it would be irrational to believe that a few bacilli, more or less, located in the lower intestines, could reach tissue elements enough to produce the rapid phenomena of cholera.

It is believed by some that the microbe becomes toxiferous by converting the tissue elements into a poisonous ptomaine. Others believe that its emanations are poisonous, and produce the morbid manifestations, and claim that this explanation is supported by analogy. These positions are both alike purely theoretical and without demonstration.

To all these objections the microbists reply: these diseases exist; the microbes are found associated, and we are willing to accept the latter as genetic without demonstration. They say to the opposers: you have not demonstrated the germ theory to be untrue. Demonstration is equally difficult on both sides. These diseases have a cause. We have shown that it is reasonable to believe the microbe to be that cause. If it is not, demonstrate to us what is, and we will be content. The opposition admit the force of the argument by entering upon the search for other causes.

It seems to be now, as it has been for nearly a century, a strife between the microscope and organic chemistry. Sometimes one seems to have the best of it, and then the other; and, as yet, both seem to have left us very much in the dark. We are still looking for an Œdipus to solve our riddles in ætiology; for the sphinx is still seated on the high rock by the wayside, and she still slays the people for their ignorance. A generation or two ago we had strong hopes of being able to crown organic chemistry king, for solving the problems of medicine; but it failed. The microscope came in to take its place, and just now it looks as though, after making most wonderful demonstrations, it had

nearly reached its limit of possibilities, and is about to fail with the solution of the riddle almost uttered. Some of us have been looking to see the sphinx dash herself to earth; but, lo! she sits still on the rock and propounds her unanswered problems. But if the microscope fails, we are not to be left without hope. Organic chemistry is nerving herself up for a renewal of effort.

Some quite recent observations have been made in the chemistry of probable morbid agencies that deserve more than a passing notice, and if they are confirmed by further experiments, the chemists are hopeful that the microbe can be retired as a genetic factor in disease, at least may lose its present significance; indeed, the microbe has already been declared by them "an accident."

Salmi, some years since, while making chemical studies in the products of putrescent animal tissue, discovered certain matters which he named ptomaines. Guatier, in looking over the same field, has demonstrated these products of decomposition to be alkaloids. He also finds analogous alkaloids in living animals. These he has named "leucomaines." He also finds in living animal tissue a non-crystallizable substance which he denominates extractive matter. From these investigations we have ptomaines, leucomaines and nitrogenous extractive matters, all resulting from the decay of animal tissue. By experiment it has been demonstrated that these cadaveric results are all poisonous, the extractive matters the most so. It has also been determined that the toxic manifestations are quite different for each. The extractive matters produce pyrexia while the alkaloids act as depressants and are apyretic. These products of decay, when accumulated in the organs of the body, give rise to morbid conditions—produce fever, coma, collapse, and other very serious manifestations.

The question has been asked, how can these substances be called cadaveric, since at least two of them are, and all may be, found in living tissues?

Since the days of Liebig, it has been a generally accepted theory that the aggregate of phenomena that we call life, if not a result of, are at least coincident with the death of the molecules of the tissues. There goes with every manifestation of organic life the fact of molecular death in the organ. Thus the fact of life is in some way associated with a process of death and

decay in living beings. The probability of this theory of life with, if not from, molecular death, finds strong corroboration in the fact that the body is largely provided with most perfect apparatus for excreting and emunctories for freeing the organs from excrementitious matters. It is from the products of this molecular decay that Guatier obtains his leucomaines and extractions.

If there occurs an overproduction of these materials of waste, or if there be restricted elimination, an accumulation follows and intoxication will result. Thus it may be said that man is self-infecting; that he may, and often does, die poisoned by cadaveric alkaloids resulting from his own vital processes. These facts are not new. They have been long recognized in a general way; but these later investigations serve to give to our conclusions an element of logical exactness, and may serve to relieve the microbe of some part of his responsibility. Many die poisoned of their own cadaveric wastes, and it is not just to attempt to charge the crime to a microbe because it happened to be present. If a man poisons himself by a too rapid production of excrementitious matters—lives so fast that his eliminative organs are overburdened, he is self-destroyed; or if he is neglectful of the functions of elimination and allows the spark to be smothered because too ignorant, or too lethargic to shake down the ashes from the grate that holds the fire of life, he is also a suicide, and in either case should be ashamed to charge his "taking off" to the doings of a microbe, an agent so minute that it can be seen but with an Abbé-Zeiss, and then only after it has been painted.

The microbe and the elements of auto-poisoning may both be photogenetic, and they may go hand in hand in the work of human destruction; but in the present status of our knowledge of these matters, it is not wise for the practitioner of medicine to wander too far from the old and well-established doctrines of excretion and elimination, the intelligent application of which has restored to health more patients than have been saved by all the parasitocides that have been showered upon us for the last twenty years. I would add that Guatier's discoveries are deemed of such importance that they were made the subject of a paper read before the Academy of Medicine of Paris, in February last, by M. Peter, in which he examined at length their clinical significance. He argues that man is often auto-infected; that

diseases that are by some charged to the microbe are produced by the accumulation of excrementitious matters in the body. He affirms that he has demonstrated that typhoid fever can be, and is, produced in this way; patients become auto-typhosed by leucomaines and extractives from the retention in the body of the wastes incident to organic life.

There is one more phase of the controversy over the microbe, that deserves a moment's attention as a curiosity. W. Henry Kesteven, M. R. C. S., London, has recently published an article entitled "Tissue Selection," in which he advances the theory that the microbe is changed in character and vital-history by its environment. After premising that all life springs from life, he goes on to say, that the air and all of man's surroundings are teeming with minute organizations and with their spores. From necessity these must gain access to all the different outlets of the body, and gain lodgment in the organs. These in their new relations are supposed to become changed in character and habits, so as not to resemble their pro-genitors. In one kind of tissue they are one thing, in another something else; but all are developed from the same antecedent. They find, as he affirms, a happy nidus for new growth in and about inflammatory conditions, and develop into messengers of mercy—busy themselves as scavengers, and aid nature in her efforts to rid the body of inflammatory products. This is all very good of the microbe; but if the theory gains demonstration, it will make it very awkward for anti-septicism. This theorizing seems an attempt to give the much-abused microbe a certificate of character and to introduce it into good society, by claiming that *it*, like man, is amenable to the laws of evolution and development. If man is developed from an ape, there is analogy for believing the microbe may be developed, if not into a doctor and have care of the sick, it may, at least, become the physician's aid and chief of staff.

Surely, the microbe is a puzzler and a perplexity.

#### PARASITICIDES.

Those who believe that the germ theory of disease is a demonstrated fact, as well as those who accept the theory as probable and soon to be demonstrated, and these embrace a large part of the practitioners of the day, are anxious to ascertain how the new ætiological factor is likely to influence their therapeutics. Investigations have been pushed with vigor in all directions. Such has been made in the field of parasiticides. Many import-

ant remedies of this class have been experimented with, and with some, their relative values have been determined, and several important points in their use have been settled. In this field the careful and pains-taking work of George M. Sternberg, M. D., U. S. A., has been valuable and most praiseworthy.

It has been found difficult to introduce into the body, parasitocides of sufficient power to destroy such organisms as may have found a lodgment there, without at the same time destroying, or at least doing serious damage to, the cellular elements. In other words, it is found difficult to cure the microbe patient without killing him. It has also been determined that spores have a much higher immunity than the living organisms; agents that will destroy the latter leave the former fertile.

Klein has recently published the results of some observations made to determine the real worth of various so-called antiseptics and germicides, which go to show that many of the accepted tables of these agents have been carelessly made out, and are untrustworthy and misleading. He claims to have demonstrated that many of these germicides, as now used, are as harmless to the life of the microbe as water. The matter is one of great practical importance. Unless Klein's conclusions are disproved, they will weaken confidence in all germicidal measures. He has demonstrated that quite weak solutions may render germs quiescent, even for long periods. But this is no proof that they are lifeless; for when they are placed afterward in media suitable to their development, they spring into life, are active and grow rapidly. Many observers have concluded when they found media that inhibited the growth of the micro organism, they had a germicide, when, as Klein concludes, it was only a case of dormancy; an arrest of life-manifestations through want of a congenial nidus. Klein found if he added phenyle-acetic acid to a medium, 1 part to 1,600, the germ refused to grow; and yet, if he left them in the same solution of a strength of 1 to 200 for hours and then placed them in a suitable nourishing media, they became active. He exposed the spores of a bacillus anthracis to this acid, 1 to 200 for forty-eight hours, and then inoculated guinea-pigs with them and the animals died of typical anthrax. He also found that 1 part to 300,000 of mercuric bichloride completely inhibited the growth of this bacillus without doing the least damage to its vitality. He exposed, for twenty-four hours, spores of the bacillus anthracis to Calvert's fluid, pure

terebene, phenol, ten per cent, mercuric bichloride, one per cent, and then inoculated guinea-pigs with them, using spores and antiseptic and all in the process. The animals died of anthrax and the blood was found teeming with bacillus anthracis.

Still, it is fashionable to use these agents and our courts, even, are likely to hold the practitioner responsible who ignores them. We are just now furnished with three or four that are in public favor and may claim brief mention. Carbolic acid is popular with the masses, but is losing favor with the profession. Mercuric bichloride, potassio-mercuric iodide and hydronaphthol are later candidates for favor, and have each some points to recommend them. The mercuric salts are admired for their unequaled potency, and feared for the same, and they are also corrosive and unpleasant to manage. Hydronaphthol has more to recommend, and less to condemn it, than has any agent of the class yet brought forward, and threatens to rapidly supplant carbolic acid and to some extent will take the place of the mercuric salts.

Hydronaphthol, introduced to the profession by Dr. G. R. Fowler, of Brooklyn, is the latest new-comer, and it has some characteristics that give it precedence over its predecessors. It is a product in the phenol series; is a grayish, crystalline powder, having a slightly aromatic taste and odor. It is soluble in cold water to the extent of one part to two thousand. It is about twenty times more soluble in hot water, and upon cooling leaves a solution, one part to one thousand, and is freely soluble in alcohol, ether, chloroform, glycerine, benzole and the fixed oils. It is said to be twelve times as effective as carbolic acid; thirty times as potent as salicylic acid; sixty times more powerful than boracic acid. In saturated, aqueous solutions, its inhibitory action is perfect; as complete as ten per cent solutions of carbolic acid; but these solutions are not germicidal. It has been somewhat extensively used in the east, and is favorably mentioned. It is in use in the Pennsylvania Hospital, and Dr. R. J. Lewis says in a recent paper, that Dr. Fowler's claims for the agent are confirmed by results both in the hospital and in private practice. It is non-corrosive and is in no way unpleasant to use either systematically or otherwise, and is indicated wherever carbolic acid might be considered useful.

Notwithstanding an effort to be brief has rendered some portions of this paper unsatisfactory, yet the multiplicity of topics

which it seemed essential to notice, has extended it to an unusual and unwarranted length. But, tedious as it may have grown, I cannot feel that this hurried conspectus of the medical studies of the day would be complete without mentioning, though very briefly, some practically important considerations which may be grouped under the head:

#### SUSCEPTIBILITY AND IMMUNITY.

Whatever view may be taken of pathogenetic agencies, it is a fact of every day's observation, and undisputed, that there is in all living organisms a variable element of resistance to, or toleration of, genetic morbid causes. This resistance, or toleration, whichever it may be, is so feeble in some that they are classed as susceptible; while in others, so strongly pronounced as to amount to an immunity.

From what has gone before, we are ready to conclude that it is very difficult to determine satisfactorily, morbid, causal factors, and often even more difficult to deal with them successfully, when ascertained. In this condition of variable susceptibility, it seems to me that nature has given us a hint of a broader field of study than is found in the experiments with germicidal agents.

It is also a matter of constant observation, that by cultivation, the susceptible may have resistance or toleration strengthened until there is established an *acquired* immunity. The contagious, eruptive fevers give immunity from re-attacks; vaccination furnishes an acquired immunity from attacks of variola; and some persons become acclimated in a malarious district, in other words acquire an immunity from the effects of malarial poison.

The problem is, how is all this brought about? How does the system acquire exemption from the encroachments of morbid poison?

The old theory, as applied to vaccination and the eruptive fevers, is, and it is assented to by Pasteur, that the first invasion permanently exhausted the system of a something that was essential to the growth of the poison. This theory is open to very grave objections, is irrational and is largely believed in only for the want of a better explanation of the phenomena observed.

Pasteur, in making observations in connection with his inoculations in chicken cholera formulated another theory, which



he gives as follows: "We may admit the possibility that the development of the microbe, in place of removing or destroying certain matters in the bodies of the fowls, adds, on the contrary, something which is an obstacle to the future development of this microbe. The history of the life of inferior beings authorizes such a supposition." This is quite as irrational as the first theory, open to the same objections, and Pasteur seems to have disproved it by his own procedures.

George M. Sternberg, feeling dissatisfied with these theories, gave the subject some attention, and in April, 1881, published a paper in *The American Journal of the Medical Sciences*, in which he brought out another theory, which, if not invulnerable, has the quality of being on a broader basis and more rational than previous ones. He claims that the protoplasm, or, to introduce things that are more tangible, the tissue cells, by one exposure to the presence of the virus, gain a sort of toleration, which enables them to withstand future influences of the same virus. This places the cells much in the condition of the lad with his first cigar; it makes him deathly sick, but by persevering effort he comes to tolerate the poison. Inasmuch as the cells are short lived and are rapidly displaced by other cells, this theory would be open to similar objections brought against the earlier ones. Dr. Sternberg has, therefore, introduced the hypothesis that this condition of toleration is transmissible, and passes from the parent cell to the offspring.

He states his views in the following language:

"The view which I am endeavoring to elucidate is, that during a non-fatal attack of one of the specific diseases the cellular elements implicated, which do not succumb to the destructive influence of the poison, acquire a tolerance to this poison which is transmissible to their progeny, and which is the reason of the exemption which the individual enjoys from future attacks of the same disease."

Having called attention to this line of medical investigation, because of its importance in connection with the process of seeking immunity by inoculation with attenuated virus, I drop all further consideration of the subject and close this too lengthy report.

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A CORRESPONDENT of the *British Medical Journal* says that there is at present no doubt that the epidemic disease which has appeared at Brindisi is true Asiatic cholera.

## **Proceedings of Societies.**

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### **Proceedings of the San Francisco County Medical Society.**

SAN FRANCISCO, April 13, 1886.

The meeting having been called to order by the President, Dr. W. E. Taylor, the minutes of the former meeting were read and approved.

The following names were then proposed for membership: Geo. C. Pardee, M. D., Univ. of Leipsic, 1885; Wm. C. Eidenmuller, M. D., Univ. of City of New York, 1884; D. W. Montgomery, M. D., Coll. Phys. and Surg., New York, 1882; J. C. Ackerly, M. D., Cooper Med. Coll., 1885.

Proposed by Drs. Plummer and Kerr.

John Gallwey, M. D., Univ. of Cal., 1885; C. A. Clinton, M. D., Univ. of Cal., 1881; Henry N. Winton, M. D., Univ. of Cal., 1885; Wm. F. McAllister, M. D., Univ. of Penn., 1870; Albert L. Scholl, M. D., Univ. of Cal., 1885; R. D. Baldwin, M. D., Univ. of Cal., 1885; S. L. Knowles, M. D., Univ. of Cal., 1871.

Proposed by Drs. Taylor and McNutt.

Jas. Stanton, M. D., Univ. of Cal., 1882; F. A. Nichols, M. D., Univ. of Cal., 1885; F. Wooster, M. D., Univ. of Cal., 1885; C. M. Enright, M. D., Univ. of Cal., 1884.

Proposed by Drs. Whittell and Winslow Anderson.

These were referred to the Committee on Admissions.

The Committee on Admissions reported favorably on the credentials of E. F. Card, Cooper Med. Coll., 1885; Wm. P. Sweetland, M. D., Bellevue, N. Y., 1876; Frank Rattan, M. D., Cooper Med. Coll., 1885; J. C. Sundberg, M. D., Chicago Med. Coll., 1874; B. H. Baumeister, Univ. of Cal., 1882, all of whom were elected to membership.

The resignation of Dr. J. Sullivan was read by the Secretary and accepted.

Dr. Von Hoffman then read a paper entitled Chronic Metritis. [This paper is contained in another part of the JOURNAL.]

Dr. Davis was of opinion that metritis very rarely, if ever, existed without an accompanying endo-metritis and parametritis. In the treatment of such cases he used local applications, especially a mixture of iodine, iodide of potash and

glycerine, as this seemed to relieve the congested vessels and leave the tissues altogether in a healthier condition. In addition to this he recommended hot water injections, used in the recumbent position, and very frequently the external application of unguentum hydrarg. In anaemia constitutional treatment by means of arsenic and iron was absolutely necessary.

Dr. J. A. Miller, in referring to the pathology of the disease, said that uterine inflammation should be regarded as identical with inflammatory processes in other organs of the body. When the question of operation arose Emmet's was to be preferred in those cases where there was no hyperplasia, erosions or cysts, but when these conditions did exist Schroeder's was better suited.

Dr. C. B. Brown said that Dr. Gordan of Maine had introduced an operation for hyperplasia, which yielded good results, especially when combined with the judicious use of the curette. It consisted in excising angular portions as in the operations for laceration. It was claimed that this did not cause inflammation, but this could not be relied upon.

There being no further business the Society adjourned until the fourth Tuesday in April.

WM. WATT KERR, M. D.,  
Recording Secretary.

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SAN FRANCISCO, April 27, 1886.

The meeting having been called to order by the President, Dr. W. E. Taylor, and the minutes of the former meeting read and approved, the Secretary read the following propositions for membership.

R. F. Verrinder, M. D., Cooper Med. Coll., 1884; E. B. Harris, M. D., Univ. of City of New York, 1847; Jno. E. Kunkler, M. D., Univ. of Pacific, 1863; John Montgomery, M. D., Missouri Med. Coll., 1885; W. D. Johnston, M. D., Univ. of Cal., 1873; Dreisbach Smith, M. D., Cooper Med. Coll., 1885; C. E. Farnum, M. D., Med. Coll. Pac., 1878; A. E. Verrinder, M. D., Cooper Med. Coll., 1884; J. H. Healy, M. D., Med. Coll. Pac., 1881; C. F. Buckley, M. D., Coll. Phys. and Surg. Ed., 1864, Queen's Univ. Ireland, 1865; Naomi E. Hoy, M. D., Cooper Med. Coll., 1884.

These applications had already been referred to the Committee on Admissions and would be reported on at next meeting.

The Committee on Admissions reported favorably upon the credentials of the following gentlemen who were forthwith elected to membership.

Geo. C. Pardee, M. D., C. A. Clinton, M. D., Henry N. Winton, M. D., J. N. McDonald, M. D., Wm. F. McAllister, M. D., R. O. Baldwin, M. D., Jas. Stanton, M. D., C. M. Enright, M. D., John Gallwey M. D., Wm. C. Eidenmuller, M. D., J. C. Ackerly, M. D., D. W. Montgomery, M. D., Albert L. Scholl, M. D., S. E. Knowles, M. D., T. A. Nichols, M. D., J. D. Hartley, M. D.

Dr. Donnelly reported a case of excision of the hip joint.

An examination of the joint after the operation showed the bone, ligaments and surrounding membranes all more or less destroyed, the head and neck of the femur absorbed, and an effort of nature to restore the joint by a ligamentous union with the acetabulum. Notwithstanding the extent of the disease and an intercurrent attack of diphtheria, the patient made an excellent and rapid recovery.

Dr. Perry said that in his experience he had not found any serious disease more amenable to treatment than morbus coxarius when taken in the early stage. Among the very first symptoms was the production of pain upon pressing the head of the bone into the acetabulum. His custom was to order the child to bed and keep it there even when to all appearances it was perfectly healthy. If the disease had progressed further he took the additional precaution of applying a dextrine bandage which he preferred to leather as it was tougher and also possessed more elasticity.

Dr. Taylor did not believe in the hurry displayed by most operators to get the patient on his feet after the operation, and when the amount of disease in the bone and tissues surrounding the joint was remembered, he believed that it would be better to keep the patient off his feet even for some months after the operation, because if it takes so long for a simple fracture to unite, surely it must take much longer for a diseased joint.

Dr. Donnelly replied that the moment dead bone is removed healing takes place rapidly, and he therefore believed that the sooner a patient gets out the better are his chances of complete recovery, as it gives him the benefit of fresh air and other adjuvants to improve his general health.

Dr. Taylor exhibited a patient upon whom he had operated for sarcoma of the orbit. The case was brought to his attention

some months ago when the patient was being treated for obstruction of the lachrymal duct. At first the disease was supposed to be syphilitic, although there was no specific history, and treated with potas. iod. and mercury without any benefit, but subsequently an operation was undertaken for removal of the tumor. After the removal of both eyelids the orbit and antrum were found to be full of a soft pulstaceous mass which was removed by means of a scoop. The tumor had commenced deep down in the antrum and orbit as a soft pulstaceous mass and became harder as it approached the surface, so as almost to resemble scirrhus, but there have been no symptoms of recurrence. The lachrymal, superior turbinated, and ethmoid bones of the left side are destroyed. The patient made a good recovery and the right eye is perfectly sound.

There being no further business the Society adjourned until Tuesday, May 11th.

WM. WATT KERR, M. D.  
Recording Secretary.

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**Sacramento Society for Medical Improvement.**

SACRAMENTO, April 27, 1886.

The Society met in regular session, Dr. W. H. Baldwin, President, in the chair.

The minutes of the previous meeting were read, corrected and approved.

Through the courtesy of Dr. Hirschfelder, of San Francisco, Dr. G. C. Simmons exhibited a section of a glioma of the brain which had been removed from a patient under the Professor's care. A portion of the tumor was also shown. The case, which is one of the few that so far have been operated upon, was remarkable for the perfection of diagnosis and for the relief of symptoms which had followed.

Dr. Cluness exhibited a small tumor which he had recently removed from Mr. —, at 80 years. The tumor was situated on the back below the scapula, and to the right side. It had existed for fifteen years. Seven months since some moisture was apparent on the surface; ulceration then set in, and within the last three months it had grown almost 100 per cent. No pain had been complained of at any time. Examination showed that, in addition to the dorsal tumor, there was one on the right arm and a nodule on each leg.

The dorsal tumor, and also that on the upper extremity, was removed. On the under surface of the segment excised from the back, a small tumor projected.

The diagnosis was multiple melanotic sarcoma. The operation was performed for the relief of symptoms.

Dr. Lainé exhibited a vesical calculus, uric acid, weight 2 oz., which he had removed from a patient aged sixty-five years, by the lateral operation. The subject made a perfect recovery.

Dr. W. A. Briggs, who was present at the operation, commented on the amount of tolerance which the bladder exhibited in the presence of so large a body.

The infrequency of calculi occurring in this section of the State having been remarked, Dr. Cluness mentioned a case in which he had operated some years ago.

The subject was a boy aged two years. A small calculus was removed by the median operation. When five months old he had exhibited symptoms apparently of cystitis.

A year later the operation was again undertaken for a new calculus. In another year a third stone had formed and was removed in a similar manner.

The wound, on recommendation of Drs. Lane and Brigham, was kept open and the bladder irrigated daily. After six months the opening was closed. There had been no recurrence.

Dr. Baldwin read a paper on Stricture of the Urethra. The author laid particular stress on the necessity of an accurate diagnosis, and drew attention to the mistake of accepting the size of the meatus as the normal caliber of the canal. The treatment recommended was free internal urethrotomy, with, in most cases, division of the meatus.

In the discussion which followed, the question of permanency in the results of various methods advocated was debated.

Dr. Simmons said he had performed internal urethotomy more frequently in former years, but of late had not cut so often. Within the last twelve months he was called to treat three cases which had been operated upon by a prominent New York specialist and discharged as cured. He thought that the invariable tendency of cicatricial tissue—wherever present—to contract had been rather lost sight of.

There being no further business, the Society adjourned to meet on the third Tuesday in May. Subject of the evening's paper, by Dr. W. E. Briggs: Binocular Hemipia.

JAMES H. PARKINSON, Secretary.

## PACIFIC MEDICAL AND SURGICAL JOURNAL

AND

## WESTERN LANCET.

EDITORS:

WILLIAM S. WHITWELL, A. M., M. D.

WM. WATT KERR, M. B., C. M.

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*SAN FRANCISCO, JUNE, 1886.*

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**Editorial.****The American Medical Association.**

This association held its thirty-seventh meeting at St. Louis on May 4th, 5th, 6th and 7th. It was a harmonious one and full of interest to the profession at large.

The President, Dr. William Brodie of Michigan, in his address made several important suggestions, which, after being referred to a committee, were reported favorably upon and adopted by the Society. As did our own President in his annual address before the California State Society, so did Dr. Brodie denounce the endorsement by certificate, advertisement, testimonial, or indirect approval of any form of proprietary remedies and appliances, and said that "the stigma of professional disgrace rests upon any regularly educated physician who allows his name to be advertised as endorser of any patent, secret, or proprietary medicine."

Dr. N. Senn of Milwaukee delivered the address on Surgery, the subject of which was The Present Status of Abdominal Surgery. This was an especially interesting paper and can be found in full in the *Medical News* of May 8th, 1886. The address on Medicine was delivered by Dr. J. F. Whittaker, and that on State Medicine by Dr. John H. Rauch of Illinois. State Medicine was defined "as the connection of the State with that branch of science which relates to the prevention,

cure and alleviation of the diseases of the human body." Dr. Rauch justly thought that "a low standard of education and absence of uniform legal requirements were responsible almost exclusively for the overcrowding in the profession." He therefore urged the passage of uniform State laws which should exact from every candidate a proof of his professional fitness, and suggested that "the Committee on State Medicine be instructed to frame regulations for the practice of medicine, which should be endorsed by the association, as a standard to which all existing legislation should be made to conform as speedily as practicable."

The journal committee reported that Dr. Davis had consented to remain as editor for the ensuing year.

Dr. E. H. Gregory of St. Louis was elected President and will therefore preside at the next meeting which is to be held at Chicago in June, 1887.

The report of the Committee on Organization of the International Congress was accepted without debate. Whether this bodes well for the association remains to be seen.

On account of the death of Dr. Austin Flint it was necessary to elect another President. Dr. N. S. Davis was chosen to this position and Dr. J. B. Hamilton was elected to the then vacant position of Secretary-General.

We know now that there will be no further interference with the organization, and we trust that those who have taken control of the arrangements for this international meeting, appreciate the responsibility which rests with them, and that they will have reason to be satisfied with the result.

The first essential for such a gathering is necessarily coin—with a unanimous profession this would have been easily forthcoming—but even at this early date, as matters now stand, it has been realized that something must be done, therefore it was unanimously resolved to appeal to the Congress of the United States to help the association out of the impending difficulty. If this hoped for appropriation be forthcoming, then from a financial standpoint all may go well.



**Dr. Arning's Report Upon Leprosy in the Sandwich Islands.**

During the last two years Dr. Arning has been engaged in the study of this disease, and his report contains much that is both valuable and interesting. His researches were conducted under the patronage of the Hawaiian Government, and the excellent use he made of the opportunities thus afforded make it a matter of regret to all who are interested in obtaining an increased knowledge of the etiology of this disease that his labors should have been interrupted by the withdrawal of this support.

In his investigation he paid particular attention to the detection of the *Bacillus Lepreæ*, and found it in the nodules and infiltrations of the skin and mucous membranes, as well as in the discharges from the nose and mouth in cases where those parts were affected.

It is very interesting to learn that in the anæsthetic cases the bacillus was not found in the spots from which sensation had disappeared, but in the nerves supplying these parts, and similarly that the red patches which frequently usher in the disease are due to vaso-motor congestion produced by leprous disease of the nerve.

Dr. Arning is of opinion that the bacillus does not exist in the blood as such, although it is possible that it may be present there in spore form as yet unrecognized; and those cases in which it has been found may probably be explained by contamination when the blood was escaping through a puncture in a diseased part of the skin.

Post mortem examinations of leprous bodies showed that the disease is not limited to the cutis and peripheral nerves, but that the ulceration of the bowels and disintegration of lung tissue are due to breaking down of leprous infiltrations. As yet none of these microscopic observations have been verified by obtaining a pure culture of the bacillus or by reproduction of the disease in the lower animals.

Dr. Arning fully recognizes the incomplete condition of his work, and would not have published his observations at this time had not the Board of Health expressed a wish that he should furnish them with some account of his researches. He complied with their request to the best of his ability, but declined to include in his report private notes and experiments relating to such cases as were still under observation. This resulted in a withdrawal of the government support and a discontinuance of the facilities granted, so that the investigations have come to a premature end. The people were so impressed with the importance of Dr. Arning's work that a committee of citizens undertook to furnish the funds necessary for its renewal and continuance through other two years, provided that the government would renew the facilities formerly granted. Some concessions were made but of so limited a character that the doctor could not accept them, as he felt that it would be impossible for him to carry out his work conscientiously under the restrictions imposed.

We cannot help regretting the short sighted policy of the Hawaiian Board of Health in trying to force Dr. Arning to make public his unfinished work. Nothing is more injurious to the progress of medical science than hasty conclusions drawn from imperfect observation, for they are certain to constitute the basis for some new line of treatment which may be followed by the most disastrous results. Furthermore, they frequently obstruct progress by directing other observers into wrong paths or by inducing them to accept such conclusions as final, and thereby discouraging further investigation. Thus the fact that Dr. Arning has, after two years labor, failed to reproduce leprosy by the bacillus lepræ has induced many to come to the conclusion that the bacillar origin of the disease is a myth. But from analogy with other diseases there is every reason to believe that there is a micro-organism peculiar to leprosy, and that Dr. Arning's want of success is probably due to our ignorance of the special conditions favorable to the growth of the bacillus,

and our failure to discover the different forms through which it may pass.

Had the government been unable to expend the necessary money, or had it deemed Dr. Arning incapable of doing the work there would have been some show of reason in withdrawing its support; but to take this step merely because he refuses to rush to an unwarrantable conclusion, or to make public unfinished observations which may mislead others, is a hasty and ill-advised act which can only be regarded with feelings of regret.

We are not so fortunate as to be personally acquainted with Dr. Arning, but his report shows him to be a conscientious and painstaking observer who has more pleasure in searching for truth than in seeking notoriety by rushing into print with half a dozen half-developed theories.

It is our intention to reprint part of the report in our next number, as it contains much information that is valuable to physicians practicing on this coast.

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A PROPOSITION was made at the last meeting of the American Surgical Association to form a Congress of American Physicians and Surgeons. This proposition is the outcome of the dissatisfaction felt with the American Medical Association. The said Congress is to admit all regularly constituted societies, and will, therefore, include all societies which deal with the special branches of medicine. The question of code is not to be raised either at the admission of members or during their membership. The Congress is to meet for strictly scientific work. We shall be sorry to see such a movement succeed, not that we are not in accord with its principles, but because we shall be sorry to see a grand association of nearly forty years' standing weakened by the withdrawal of men who should be working for its best interests. Let a fair trial be made to harmonize conflicting opinions, and then, and not till then, let the movement be set on foot to form a new national society.

## Health Reports.

### Reports of the State Board of Health.

Reports received from eighty-eight localities, for March, continue to show a very favorable condition of the public health, and an entire absence of any epidemic disease accompanied by an increased mortality. The unfavorable weather augmented the deaths from consumption, and also somewhat increased the mortality from pneumonia and congestion of the lungs. The constant rains, the cold and humid atmosphere which generally prevailed throughout the State being most unfavorable to those suffering from pulmonary disease.

Consumption caused one hundred and fifty-three deaths—an increase of nineteen from last report.

Pneumonia is credited with causing fifty-eight deaths, which is an increase of six over last month.

Bronchitis was fatal in seventeen instances, which is a slight decrease.

Congestion of the lungs caused eleven deaths, which is an increased mortality of six from this cause.

Diphtheria. Deaths from this disease are reported as numbering twenty-one, which is less by seven than report of last month. Fourteen of these died in San Francisco, one in Sacramento, one in Vallejo, one in Riverside, one in Los Angeles, one in San Diego, one in Oakland, and one in Etna Mills.

Croup had a mortality of nineteen, which is an increase from last report. The deaths from this disease occurred in Truckee, Santa Cruz, San Francisco, Oakland, North San Juan, and Modesto.

Whooping-cough caused four deaths—one in Oroville, one in Oakland, and two in San Francisco.

Scarlet fever has had the limited mortality of eight. Three of these occurred in Riverside, three in Los Angeles, one in San Francisco, and one in Alturas.

Measles caused two deaths in San Francisco.

Diarrhoea and dysentery are credited with five deaths only, which is the smallest mortality recorded for some time from these affections.

Cholera infantum was fatal in one instance,

Typhoid fever caused thirteen deaths.

Typho-malarial fever records three deaths.

Remittent and intermittent fever are credited with four deaths.

Cerebro-spinal fever was fatal in ten instances.

Cancer caused twenty-three deaths this month—an increase of ten from last report.

Diseases of the heart caused forty-four deaths.

Alcoholism was fatal in eight instances.

The following towns report no deaths this month: Shasta, Williams, San Mateo, Amador City, Lincoln, Willits, Nicolaus, Redding, Gonzales, Castroville, Livermore, Alleghany, Fort Bidwell, Millville, Ontario, Lemoore, Auburn, Calico, Yuba City, and Jolon.

#### PREVAILING DISEASES.

From the reports received from ninety localities, we judge that the amount of sickness throughout the State is confined chiefly to affections of the respiratory system, which is to be expected from the atmospheric conditions prevailing throughout the month.

Pneumonia is noticed as prevailing to a limited extent in each town heard from.

Bronchitis is likewise experienced all over the State, but does not appear to be attended with any extensive mortality except among the very aged.

Influenza is epidemic in many places, but is mild in character, with no fatality.

Whooping-cough is prevalent in Lincoln, Nicolaus, Millville, Jolon, Forest Hill, San Francisco, Oroville, and Oakland.

Scarlet fever is prevalent in Los Angeles, Riverside, Alturas, San Mateo and San Francisco. Dr. J. S. Baker writes that the form of scarlet fever prevailing in Los Angeles is of a mild character with very limited mortality.

Measles also prevail in Truckee, Sacramento, Susanville, Ventura, San Francisco, and Fort Bidwell. Dr. G. W. Kober, Post Surgeon at the latter place, writing in regard to the prevalence of measles there, says: "If any evidence was needed to show the importance of general and individual hygiene on the influence of disease, it is illustrated by this fact, that while there was no death from measles among sixty-five whites attacked, in thirty cases occurring among the Indians, six—three adults and three

children, or one in five—have thus far died. This condition is nowise due to imprudent treatment on the part of their medicine men, as they are not active, and most of the cases had received treatment at my hands." The fact that measles coming among an uncivilized community is always more fatal than among the civilized is demonstrated by the above return. The same fatality was experienced among the Fiji Islanders in 1877, when it was introduced among them from Sydney, and caused the death of one-fifth of the population.

Diphtheria still prevails in San Francisco, but in a lesser degree. Sporadic cases have also been noticed in Sacramento, Vallejo, Modesto, Etna Mills, Riverside, San Diego, Los Angeles and Oakland.

Croup is present wherever diphtheria is noticed, and is proportionately fatal.

Typhoid and typho-malarial fevers are not prevalent in any place. Sporadic cases were noticed in Lakeport, Weaverville, Sacramento, Bakersfield, Livermore, Rocklin, Etna Mills, Plymouth, Igo, Vallejo and Willits.

Remittent and intermittent fevers are prevalent in many places, but of a mild type and limited in number.

Erysipelas in sporadic form is mentioned in reports from San Mateo, Lemoore, Ukiah, Bakersfield, Etna Mills, Mariposa, Downieville, Rocklin, Alleghany, Truckee, Forest Hill and Hill's Ferry. No fatality from this disease is reported.

The cases of trichiniasis mentioned in our last circular occurred in Lassen County, and were discovered by Dr. W. D. Groton, of Susanville, in the persons of four Italians who had freely partaken of some sausage meat prepared by themselves, as I understand, from a hog raised in the neighborhood. As these persons had been under treatment for typhoid fever by some other physician, it reflects great credit upon Dr. Groton in diagnosing so accurately the cause of the affection, as, in the experience of the writer, these are the first cases of this disease that have been detected in California. Hitherto the disease has never been suspected as occurring in this State. Dr. Groton kindly furnished me with some of the sausage, and microscopical examination of it revealed the trichina in every specimen examined. As it was most important that the disease should be confined to the locality in which it appeared, the State Board of Health advised that all feverish or sickly hogs should be at once killed and their car-

casses burned. If this advice is acted upon we may hope to arrest at once the development of trichinæ in this State.

Hog cholera, or infectious pneumonia-enteritis, has also been reported in another locality. This disease has now obtained a diffusion that prompt measures earlier taken might have arrested. There is no doubt that the safest means would be to destroy all swine so attacked and cremate their carcasses; we would thus prevent the possibility of introducing into the human system, by the consumption of the tainted flesh of such animals, the germs of a very insidious and loathsome disease, exhibiting the more prominent symptoms of typhoid fever, anthrax, or erysipelas, with each of which it has often been confounded. From the fact that the disease is both infectious and contagious, and that recovery from it is seldom complete, it would seem an act of wisdom on the part of the owners of a large number of hogs to have the diseased animals destroyed completely and their abode thoroughly disinfected. All consumers of swine flesh should be admonished to see that it is *thoroughly cooked* before eaten, and under no circumstances eat any hog's flesh raw or underdone.

GERRARD G. TYRBELL, M. D.,

Permanent Secretary California State Board of Health.

Sacramento, April 10, 1886.

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Reports have been received from seventy-six localities for April, and they indicate a very favorable condition of public health and a continued absence of any very fatal disease of an epidemic character. The increased mildness of the weather has diminished the mortality from pulmonary disease, without increasing it from diseases of the bowels.

Consumption caused one hundred and thirty-two deaths—a decrease from last month of twenty-one.

Pneumonia was fatal in forty-five instances, twenty-nine occurring in San Francisco, four in Sacramento, three in Oakland, and the balance throughout the State.

Bronchitis likewise shows a diminished mortality, fifteen deaths, only, having occurred, eleven of these in San Francisco.

Congestion of the lungs caused five deaths—a decrease of six from last report.

Diphtheria again shows an increased mortality, recording twenty-seven deaths this month. Of these, sixteen occurred in San Francisco, two in Anaheim, three in Berkeley, one in

Dixon, one in Hill's Ferry, one in Livermore, one in Oakland, one in Sacramento, and one in San Jose.

Group. The deaths from this disease show a decrease from last report. Nine deaths are recorded from it, eight of which occurred in San Francisco and one in Los Gatos.

Whooping-cough caused four deaths.

Scarlet-fever, although prevailing in many places, reports record but three deaths from it.

Measles caused no deaths.

Diarrhoea and dysentery records but four deaths.

Cholera infantum shows an increased mortality, five deaths being reported this month.

Typhoid fever caused sixteen deaths—a slight increase over last report.

Typho-malarial fever was fatal in one case only.

Remittent and intermittent fever caused no deaths.

Cerebro-spinal fever is reported to be the cause of death in thirteen instances, six of which occurred in San Francisco, two in Watsonville, one in Riverside, one in Truckee, one in Marysville, and two in Los Angeles.

Cancer caused nine deaths this month—a decrease of ten from last report.

Diseases of the heart caused thirty-seven deaths.

Alcoholism was the cause of death in eight instances so reported.

Trichiniosis was reported by Dr. W. S. Taylor as occurring in a family in Livermore, with one death from this disease. The animal from which the malady was derived was raised in the county, but the source of its infection was not discovered.

There were no deaths reported in Auburn, America, Amador City, Alturas, Calistoga, Cedarville, Cottonwood, Castroville, Downieville, Davis, Gonzales, Jolon, Newcastle, Santa Maria, Upper Lake, Weaverville, or Wheatland.

#### PREVAILING DISEASES.

The prevailing diseases for the month of April were of a very general character, small in number, mild in type, and without any epidemic tendency. This we gather from reports received from nearly a hundred localities in different parts of the State.

Inflammatory diseases of the chest were mentioned quite frequently, and also an increase of remittent and intermittent fevers.



Pneumonia appears to prevail to a limited extent in Sacramento, San Francisco, Oakland, Los Angeles, Napa, Arbuckle, Cottonwood, Etna Mills, Calico, Nevada City, Cedarville, and Santa Barbara.

Bronchitis, in like manner, is present in Williams, Ukiah, Nicolaus, Martinez, Lakeport, Calistoga, Merced, Modesto, and San Francisco.

Influenza is general in many places, and is especially noticeable in Alturas, Bakersfield, Anderson, Upper Lake, Castroville, and Bodie.

Whooping-cough prevails in Ukiah, Grass Valley, Napa, Nicolaus, Amador, Susanville, and Jolon.

Scarlet fever is still noticed in reports from Riverside, Fort Bidwell, Alturas, Anderson, Anaheim, Arbuckle, Cedarville, and Truckee. In the latter town its prevalence was due to the absence of proper precaution in permitting the intercourse of the sick with the well, the non-observance of sanitary laws, and especially the neglect of disinfection and isolation.

Measles are quite prevalent in Sacramento, Fort Bidwell, Susanville, Alturas, Modesto, and Merced.

Diphtheria prevails in San Francisco, but not extensively. It is also mentioned in reports from Oakland, Berkeley, Sacramento, Nicolaus, Hill's Ferry, Livermore, Amador, Etna Mills, Anderson, Anaheim, Modesto, and Jolon.

Croup prevails more or less wherever diphtheria appears, and it is now almost universally conceded that the cases of membranous croup distinct from diphtheria are very rare.

Diarrhoea and dysentery are beginning to be reported as noticeable in Williams, Ukiah, Martinez, Etna Mills, Bakersfield, Angel's Camp, Modesto, Lemoore, and Willits. As the warm weather approaches, these diseases will become more prevalent. At present the disease is seldom fatal, but increased virulence may be expected as the summer advances. As cholera may be imported this year, communities and individuals cannot be too expeditious in putting themselves and their surroundings in the best possible sanitary condition attainable, so as to limit the spread of diarrhoea and dysentery, and possibly cholera. Cleanliness in person and home is the best possible prophylactic against disease of any kind, and its adoption cannot be too strenuously urged at this time.

Typhoid and typho-malarial fevers are not noticeable by their

frequency, as at present they do not prevail except to a very limited extent in San Francisco, Santa Clara, Mariposa, Modesto, Calistoga, Igo, and Oakland.

Remittent and intermittent fevers are becoming more prevalent as the warm weather approaches. No fatal case occurred from either last month, which is evidence of the mild character of the attacks.

It cannot, however, be too earnestly impressed upon the profession that the strongest safeguards against the introduction of diseases into our midst will be such as are erected by the people themselves as a result of their being brought to comprehend the essentially protective nature of perfect sanitation.

GERRARD G. TYRRELL, M. D.,

Permanent Secretary California State Board of Health.

Sacramento, May 10, 1886.

### San Francisco Health Report.

	Jan.	Feb	Mar	Apl.
Total, 1885.....	438	468	502	468
Total, 1886.....	519	382	479	418
Phthisis.....	91	67	67	77
Pneumonia.....	66	28	34	29
Bronchitis.....	25	13	12	11
Heart Disease.....	31	22	23	15
Aneurism.....	2	1	—	—
Apoplexy.....	16	12	8	8
Typhoid.....	5	9	7	12
Paralysis (Hemipleg).....	4	8	10	9
Cancer.....	16	9	15	6
Diphtheria.....	13	14	14	16
Croup.....	15	7	13	8
Infant Convulsions.....	16	10	18	14
Meningitis.....	17	9	10	16
Casualties.....	12	21	13	10
Suicides.....	5	4	9	8
Homicides.....	3	3	2	1

It appears that of the 726 patients treated by Pasteur's method only four deaths have occurred. One of these was a little girl bitten by a dog, and on whom the treatment was commenced 37 days after being bitten; the other three were Russians suffering from severe wounds inflicted by a mad *wolf*, and on whom the inoculations were commenced 15 days after the accident.

## Notices of Books, Pamphlets, etc.

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**PRACTICAL SURGERY**, including Surgical Dressings, Bandaging, Fractures, Dislocations, Ligatures of Arteries, Amputations and Excisions of Bones and Joints. By J. EWING MEARS, M. D. With four hundred and ninety illustrations. Phila.: P. Blakiston, Son & Co. San Francisco: Wm. S. Duncombe & Co. Price, cloth \$3.75; sheep \$4.75.

We are pleased to call the attention of students to this surgery for the author does not pretend to deal with the whole domain of surgery but of only a few subjects which he treats in a concise and practical manner. These subjects are profusely illustrated, the drawings being taken for the most part from eminent authorities. Under the head of Surgical Dressings a full account is given of the antiseptic system of dressing wounds and of the different agents employed.

Under Bandaging, Mayor's system of handkerchief bandaging is fully described, and in speaking of immovable bandages a full description is given of the methods of preparation of those from plaster, glue and tripolith.

**PRACTICAL CLINICAL LESSONS ON SYPHILIS AND THE GENITO-URINARY DISEASES.** By FESSENDEN N. OTIS, M. D. New York, 1886: Printed for the author by G. P. Putnam's Sons & Co. San Francisco: Wm. S. Duncombe & Co.

The first edition of this work having been exhausted, the author has temporarily issued, through Messrs. Putnam's Sons, a student's edition, which shall fill the gap until professional work will allow time for the preparation of a regular second edition, which will contain several important additions. Dr. Otis expects to add matter on the subjects of Hereditary and Infantile Syphilis and of the Genito-Urinary Reflex Irritations, and to write a number of chapters on Diseases of the Prostate and upon Stone in the Bladder.

**A GUIDE TO THE PRACTICAL EXAMINATION OF URINE.** For the use of Physicians and Students. By JAMES TYSON, M. D. Fifth edition, revised and corrected. With colored plates and wood engravings. Philadelphia: P. Blakiston, Son & Co., 1886. San Francisco: Wm. S. Duncombe & Co. Price, \$1.50.

In reviewing the fourth edition of this guide to the examination of urine, we had occasion to praise it for its excellence. The exhaustion of a large edition, within a very short time, has made necessary another, to which the author has given careful

attention. A number of new and delicate tests for albumin are described in this edition, and the class of proteids represented by the peptones and by mucin has received consideration. New plates have been added, and the former edition generally improved, so that at present it stands as a most useful and practical guide.

**A MANUAL OF AUSCULTATION AND PERCUSSION.** Embracing the Physical Diagnosis of Diseases of the Lungs and Heart, and of Thoracic Aneurism. By AUSTIN FLINT, M. D., LL.D. Fourth edition, thoroughly revised and enlarged, illustrated with fourteen wood cuts. Philadelphia: Lea Brothers & Co. San Francisco: Wm. S. Duncombe & Co.

This manual, which is so well known, will now be of special interest, as its thorough revision was almost the last medical literary work performed by the distinguished author. As the work of a master of the art of auscultation and percussion, it should be in the hands of every student of medicine.

**THE PRINCIPLES AND PRACTICE OF MEDICINE.** By the late CHARLES HILTON FAGGE, M. D., F. R. C. P. Vol. II. Philadelphia: P. Blakiston, Son & Co. San Francisco: Wm. S. Duncombe & Co.

In the April issue of this journal we noticed Vol. I. of this work. This, the second volume, contains: "Diseases of the Heart and Blood Vessels;" "Diseases of the Alimentary Tract;" "Diseases of the Liver Spleen and Lymph Glands;" "Affections of the Urinary Organs;" "General Diseases affecting the Joints;" "Diseases of the Bones and of the Blood."

The portion treating of Diseases of the Skin is written by Dr. Pye-Smith. Within this is a chapter upon Leprosy, treating of its history, geographical distribution, anatomy and histology, etc., and of the bacillus lepræ. Speaking of its aetiology, Dr. Pye-Smith says that it is unknown—that the disease has only disappeared from civilized Europe within the last 400 years, and that it is to be hoped that it is gradually becoming extinct in other regions. Notwithstanding the constant presence of the bacillus, the disease is non-contagious. Mr. Hutchinson's theory is mentioned that leprosy depends in some way upon the eating of fish, and probably of fish in a state of decomposition.

At the end of the volume is an index of authors, and also one of subjects, and finally there is a short memoir of the author.

As of the first, so of the second volume we can speak as a work worthy of the talented author.

**HOW TO CARE FOR THE INSANE.** A manual for attendants in Insane Asylums. By WM. D. GRANGER, M. D., First Assistant Physician in the Buffalo State Asylum for the Insane. New York and London: G. P. Putnam's Sons. 1886. San Francisco: Wm. S. Duncombe & Co.

The very excellent plan of giving the attendants of the Buffalo Asylum regular instruction, in fact, establishing a school within the asylum, was begun by Dr. Granger in 1883. Its usefulness and success was such that it became officially recognized by the managers in 1885, and has now become "a fixed part of the asylum life." The course of instruction is continued over the period of two full years, at the end of which time a diploma is given to those who have completed the course. The whole plan is so evidently for the good of both attendants and patients, and consequently for the asylum itself, that we shall expect to see the plan quickly followed in other institutions of the kind. This manual, which consists of the lectures much as they are given to the classes, is published with this end in view—that others may be encouraged to follow where Dr. Granger has led.

**A REFERENCE HANDBOOK OF THE MEDICAL SCIENCES**, embracing the entire range of scientific and practical medicine and allied sciences. By various writers. Illustrated by chromo lithographs and fine wood engravings. Edited by Albert H. Buck, M. D., New York City. Vol. II. New York: William Wood & Co., 1886. San Francisco: Wm. S. Duncombe & Co., 211 Post street. Imperial 8 vo., pp. 814. Price, half turkey, \$8; leather, \$7; cloth, \$6.

The subject-matter of this work being arranged alphabetically, the second volume opens with an article on catarrh (nasal) by Dr. D. Bryson Delavan of New York, and closes with quite a lengthy treatise on the eye by Dr. Adolf Alt of St. Louis, Mo., and, between these, articles on every conceivable subject that can be alphabetically wedged in, appear. Looking over the list of contributors to this volume we find the names of over a hundred representative medical men from different parts of the States. The numerous illustrations, both wood cuts and colored plates are well executed, and the general appearance of the work is good. The disadvantage of an alphabetical arrangement is that it separates the subjects which naturally belong together, but aside from this it has many advantages, and is the only one practical in a work of this kind. Those who have not yet subscribed for this very exhaustive work should do so without delay.

PACIFIC  
MEDICAL AND SURGICAL JOURNAL  
AND  
WESTERN LANCET.

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VOL. XXIX.

JULY, 1886.

No. 7.

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**Original Articles.**

**REPORT ON SURGERY.**

By G. L. SIMMONS, M. D., Sacramento, Chairman of Committee.

*Mr. President and Members of the Medical Society of the State of California:*

The duties of a Committee on Surgery as defined by our Constitution are, "to prepare an annual report on all important improvements in the management of surgical diseases effected in the State during the year, and, as far as can be ascertained, the number of capital operations performed, with their results."

Few of those who have preceded me, as Chairman of this Committee, have followed these instructions; preferring to take a wider range, and to embrace within their addresses such general observations as seemed worthy of particular mention. Indeed, were we confined to the question of important improvements in the management of surgical diseases effected in California during the year, we might find ourselves barren of a subject. Nor can this condition alone be said of California, for a glance at the surgical records reveals to us the fact that the last twelve months lie unmarked by any great discoveries or methods of surgical treatment in any of the great centers of the world. But while novelties and startling theories have not been advanced, the profession has been actively at work, and, if there is one subject more than another, upon which the minds of representative men have been fixed, it is that of local anæsthesia. So many have experimented in this field, and so great have been its attractions that personal experiences would

fill a volume, even excepting the writings of those who are engaged in the special branch of ophthalmology.

In his last report to this Society the late Dr. A. M. Wilder referred to the new discovery of cocaine applications to the eye as one of great interest; and it was generally supposed that about all that could be said upon the subject had been brought forward; but the field of minor surgery had scarcely been touched, and no State Report would be complete without some reference to the new facts demonstrated during the year in regard to the general use of cocaine as a possible substitute for ether and chloroform.

In our own State, in addition to the references already made by Dr. Wilder, Drs. Barkan, of San Francisco, and Huntington, of Sacramento, have published interesting articles upon this subject. And, in addition to these, we may refer to an able paper by Steele in the *PACIFIC MEDICAL AND SURGICAL JOURNAL*.

The subject of artificial anæsthesia is ever new to the surgeon, and all facts relating to its history should be carefully guarded and remembered. The relief of pain for those about to undergo surgical operations is a question as old as the art itself, and hundreds of methods have been attempted to mitigate or subdue this curse upon mankind. Philanthropy and science have been alike interested and foreshadowings of a great truth have come down to us, linked with the names of priests and orators as well as surgeons. It is only 40 years ago (Nov. 7th, 1846,) since anæsthesia, by the inhalation of sulphuric ether, sprang upon the world with startling completeness and dates its practical introduction from the time of the performance of the historic operation by Warren in the old amphitheater of the Massachusetts General Hospital, when Morton administered the ether. From this spot and at this time went forth the truth that the cries of the operating room were to be no more heard, and that the most sensitive nerves could be cut while the patient was safely insensible. Who can estimate the amount of human suffering saved by this discovery or the anguish relieved during these forty years?

It cannot be denied that many scientific men had, previous to Morton, made experiments in the same direction and had apparently succeeded. But from their efforts there was no succession, and artificial anæsthesia remained an open problem until the Boston dentist, with marvellous persistency showed to

the world its safety and utility, when produced under sulphuric ether.

The older members of this Society can well remember that up to the fall of 1846 no prominent surgeon throughout the world performed operations under anæsthesia and no medical journal adverted to the subject in any other way than as a boon which might at some time be vouchsafed to the race. Those needing capital operations were bound and strapped to operating tables until but few inches of the body were left untouched by bands. Then, amidst the shrieks of pain, that operator who was the most rapid received the most applause; and safety, cleanliness and perfect results were often jeopardized in order to hurry through an agonizing period.

A few weeks before this first public exhibition by Morton, a small boy was walking the streets of Boston, seeking for radical relief for an aching molar. Upon entering the dental office he was asked if he would not like to smell something to stop the pain. Of course the response was "yes." And as he seated himself in the operating chair he saw the dentist prepare a conical paper, insert a sponge inside the apex and pour upon it a light fluid. Then with a soft towel over all this hastily improvised apparatus he was requested to breathe the gas. And here came a blank, with snatches of delightful dreams, and a return to consciousness, with a mouth filled with blood and the tooth upon the floor. And thus, accidentally, the writer became one of the first subjects to prove the safety of anæsthesia by ether. Well does he remember the incredulity with which his statement of insensibility to pain was received by all who heard it; and the impressions of that period are so marked that he has ever felt a personal interest in the question of priority of introduction. A whole year passed after this first successful demonstration by Morton and anæsthesia by ether had been adopted by surgeons throughout the world when Simpson discovered the anæsthetic properties of chloroform and from that time these two agents have gone hand in hand, with some advantages on the side of ether. Admitting the correctness of the opinion that artificial anæsthesia, produced by either of these substances, has no element of great danger, we all agree they are not entirely safe, and that for many purposes it is desirable to avoid their use, provided a local agent could be found sufficiently active to enable surgeons to perform operations without pain. That this



agent was discovered by Koller there is no doubt. Eighteen months of experimentation by observers everywhere, has proved its claims and established its merits. The relations of Koller to the discovery of the local anæsthetic properties of cocaine are strikingly similar to those of Morton in his experiences with sulphuric ether. In both cases the articles themselves were well-known medical agents, open to all for experiment and research. In the case of ether, Morton, no doubt acting upon hints furnished by Wells, Jackson and others, pushed his experiments to the verge of danger, and risked his personal safety and that of his dental patients to prove the truth of his convictions. According to Koller, himself, he was led to experiment with cocaine by observing the wonderful effects of the drug upon the system generally, and taking a small quantity upon his tongue felt that benumbing influence, which led him to believe that the same effect would be produced upon the terminal nerves of the conjunctiva and cornea. Months before this same action on the tongue had been described in periodicals and yet it was reserved for Koller to reason and prove that the same effect upon the external tissues of the eye would render cocaine invaluable in ophthalmic surgery. As has always been the case with all powerful medicinal agents, we are beginning to realize that this new drug has its uses and its abuses, and that when introduced into the circulation, hypodermically, it may produce toxic effects.

By some operators, however, it is claimed that these hypodermic applications should always be made when the parts surrounding the diseased tissues, are guarded by elastic compression and that when such precautions are used no ill effects will follow, and the most serious operations under cocaine, with the Esmarch bandage, have been reported as having been done without pain.

In our own country, since the last meeting of the Society, its beneficial effects have been exhibited, in the epithelioma of Gen'l Grant, whose illness, watched by a nation of sympathizers, will ever stand as one of extraordinary interest. The internal administration of a preparation of coca and the local use of the hydro-chlorate of cocaine enabled the distinguished sufferer to carry on a literary work of an important public nature, and freed him from the acute pain which so often accompanies the ravages of epithelial cancer. Without attempting to refer to

the varied uses which have been reported as belonging to cocaine, we will say that in minor surgery its happiest effects are seen in the removal of small epithelial growths—in the radical cure of hemorrhoids by ligation—in genito-urinary surgery and in relieving the pains of uterine cancer.

Before closing this portion of my paper we will state that the benzoate of cocaine has been recently urged as a more reliable preparation for local anæsthesia than the hydrochlorate. (N. Y. *Medical Journal*, March 13, 1886, Ap. 3.)

#### EXTIRPATION OF MALIGNANT TUMORS BY CITRIC ACID.

In No. 8 of the *Journal American Medical Association* for 1885, we find a well written article upon the subject by Dr. C. M. Fenn of San Diego, a member of this Society.

The results of his treatment have been quite successful and are worthy the continued study of the profession. Dr. Fenn, with a hypodermic syringe, injects half a drachm of a saturated solution of citric acid into the base of epithelial tumors. This is repeated at intervals of from 2 to 5 days until a large zone is saturated with the solution. At first there is a blanched condition of the growth and then it gradually diminishes until as a small nodule it can be raised upon a tenaculum and excised. The philosophy of the action is based upon the known antagonism of citric acid to diseased tissue and its innocuousness to healthy cells.

#### LAPAROTOMY.

A review of the published work of the year stamps a few prominent subjects for our notice, and among these we may briefly mention the increased confidence in laparotomy after pistol shot wounds or other penetrating wounds of the abdomen and also for intestinal obstructions. After abdominal wounds the operation is a justifiable one, as stated by Stephen Smith, immediately after the accident, in order to find out and to remove from the cavity all the blood and extravasated abdominal contents, to check hemorrhage, and also to detect all points of injury for surgical treatment. Two very remarkable cases may be mentioned, in this connection, which reflect the highest credit upon the attending surgeons: Dr. Bull, of New York, and Dr. John B. Hamilton, of the Marine Hospital Service. In the pistol-shot wound case of Dr. Bull an abdominal incision revealed seven perforations of the bowel which were carefully

sewn together, and the patient made a good recovery. Dr. Hamilton's case is even more remarkable in that the laparotomy revealed thirteen wounds requiring suture, eleven of them being in the small intestine and two of them in the ascending colon. The omentum was also cut by the ball in several places which required ligation. All sutures and ligatures used were of the finest carbolized catgut, and a mild bi-chloride of mercury solution was applied by spray, to the abdominal cavity, which, after being dried, was closed by deep silver wire sutures, this patient was discharged well on the twenty-sixth day. In these cases no fœcal matter had escaped into the cavity; a condition mentioned by Gross as always followed by death.

In July last I assisted Dr. W. A. Briggs in a laparotomy following a small knife wound of the abdominal wall, in the right groin. Owing to the latency of the symptoms, the operation was not consented to until the fourth day when evidences of meteorism were extreme. As an opening was made through the peritoneum, the rush of fœtid gas, with shreds of decomposing material, mixed with traces of fœcal matter was overpowering. An examination showed that a portion of the cæcum was bound by adhesions to the abdominal wall, and, after thoroughly cleansing the cavity of the decomposing material, the case was dressed in the usual way. An immense amount of relief followed the operation, but the patient gradually sank and died on the next day. A post mortem examination revealed a small penetrating wound of the cæcum, which allowed portions of fœcal matter to pass into the peritoneal cavity. Although the unaided powers of nature had endeavored to repair this injury, enough fœcal matter had been carried to the sensitive peritoneum to excite the most violent inflammation. Had an early laparotomy been attempted and the cavity carefully cleansed after suturing the wounded intestines, there would have been a fair chance of recovery, particularly as the subject was very healthy and vigorous.

During my California experience I have, in common with most surgeons, in active practice, seen recoveries follow stabs or knife wounds in the walls of the abdomen, where there was protrusion of the intestine and in two cases with incisions in the small intestine which required suturing—but I have also seen a number die from the most insignificant pistol shot wounds in the same region which were let alone. Post mortems in these cases revealed the escape of a small quantity of fœcal matter and blood which set up a fatal peritonitis.

When we reflect how modern surgery has proven the comparative safety of opening the peritoneal cavity and of handling the intestines, it is curious to reflect upon the care with which we have observed the let-alone treatment of gun shot injuries in this same region, where fœcal matter, the most deadly of all foreign bodies, was allowed to remain and set up a fatal inflammation.

#### WHAT CALIFORNIA HAS DONE FOR SURGERY.

In reviewing the surgical literature of the year, we have been led to make comparisons of the past with the present and to regret that writers and practitioners do not familiarize themselves more with the labors of those who have preceded them, before claiming priority for an operation or invention. Justice to dead workers often requires us to recall the past and to point to reliable, though forgotten, records, to show what has been given to the world. A prominent instance of a want of this kind of knowledge may be found in the eastern and European discussions of what is called a new operation for the treatment of transverse fracture of the patella. And in connection with this subject, I propose to show, not only what California surgeons have accomplished in this particular operation, but to mention other truths having their origin on the Pacific Coast and worthy of continued remembrance.

In the *London Lancet* for Nov. 3d, 1883, Lister detailed seven cases of fractured patella in which he was uniformly successful in securing union and a good use of the joint, by approximating the fragments with silver wire. The operations were done under strict anti-septic precautions and he claims there was no risk, for, to use his words, "if there is in the whole body a situation which is well adapted to anti-septic treatment it is this." Following him as an originator of a new surgical procedure English and continental surgeons have continued to operate by what is called the invention of Lister, but the records show, with fair successes, a number of deaths, prominent among them being a recent report of two fatalities, one of which is reported in the *London Lancet* of Dec. 12, 1885, and the other in the *Hospital Gazette* of Jan. 14, 1886 by M. LeBec. In all the European articles upon this operation we have failed to find any credit given to Americans in the same field, or even a hint that the idea of bringing a transverse fractured patella together by wire was thought of before the recent operations of Lister.

Perhaps, however, we ought not to complain of injustice in England, when it can be shown that in our own land many writers speak of the wiring of the patella as originating with Lister in 1883. Even so noted a surgical author as Stephen Smith of Bellevue Hospital in a recent address, speaking of the treatment of simple fractures of the patella, is reported to have said: "It was eminently fitting that this operation, so novel and startling as to be received with unusual ridicule by older surgeons, should have first been proposed by the great apostle of anti-septic surgery. By proposing and successfully executing this operation he expressed his faith in his teaching, in form more emphatic and convincing than language could convey. This procedure does indeed embody the very spirit and genius of the surgery of to-day, viz.: boldness, to audacity, *in the conception of an operation.*"

In October of last year, at a stated meeting of the N. Y. Co. Medical Association, Dr. Frederick S. Dennis read a paper upon this subject in which he detailed his own and others' experiences, and brought forward a list of illustrative cases of an exceedingly interesting nature. In his historical statement, he mentions the single early performance of the operation by Barton, McClellan and Logan, of wiring the bones, but evidently has no knowledge as the extent of the practice in California, at a comparatively early date. He claims the operation to be a safe one and always justifiable, in the case of adults or where the patient is not debilitated by organic disease. But one death had resulted in his numerous cases and that did not occur as a result of the operation but from Bright's disease. He also endorses the methods of Lister in wiring the patella, and claims perfect results. As it is not my purpose to criticise methods, nothing more need be said on this branch of the subject. Enough has been stated to show that no full knowledge exists among representative men of what has been done in this field, and done so publicly that only a reference to files of medical journals and proceedings of our State Society will reveal the facts: that to a California surgeon is due the credit of a revival of the practice of wiring together the fragments of a transversely fractured patella and that under his methods and dressings, published twenty-five years ago, there were as many successes as can be shown by Lister or any of his disciples. Not only did this surgeon perform this single operation over

twenty times within a limited period, and with no failures, but within this same period, I have collected five additional cases in my own neighborhood which were done under the same methods and with equally good results. In 1872 Dr. Eph. Cutter, now of New York City, came to San Francisco as a delegate to the American Medical Association from Massachusetts. Finding him badly crippled from an imperfect result, following the usual methods of treatment for fractured patella, I told him, at that time, of our success with the silver wire, and at my suggestion, upon his return East, he talked with various surgeons of the operation, but no one cared to take the chances of a failure. I simply refer to this fact to show that a delegate to the American Medical Association at that time was aware of what had been done here.

The published accounts of the California operations may be found in the *Medical Press*, a journal published in San Francisco in Jan. 1861, page 14. In presenting his cases, the writer, the late Prof. E. D. Cooper, gives his methods of treating transverse fractures of the patella, and says they have thus far been invariably successful. Briefly stated they are: a longitudinal section to expose the fragments, a drilling of the anterior margins for the passage of a silver wire, and the perfect apposition of the bony parts by which union was favored. He always placed a long tent of lint in the wound to prevent union by first intention and to absorb whatever discharges might be present. He also insisted upon the application of a moderately tight roller of four or five thicknesses from the toes to the middle of the thigh, which was always to be kept wet with alcohol.

The lint and roller were recommended to be retained for a week without change, and the roller was to be kept in place until the treatment ceased. After the third week the lint could be discarded, and the wires were to be removed in from six to eight weeks. The secret of Dr. Cooper's success in these operations lay:

1. In his clean methods of operating, and the use of a tent of lint for drainage.
2. In the application of a firm bandage the whole length of the limb by which even pressure and perfect rest were maintained.
3. In the use of alcohol as a constant evaporating dressing which is not only one of the best anti-septics but also kept the parts at a low temperature.

4. In not disturbing the bandages or dressing for at least one week, so that recent adhesions were not broken up by frequent handling.

In no way could the genius of Dr. Cooper be reconciled to the idea that air should be excluded from a wound, or that the atmosphere carried germs against which it was necessary to seal the injured parts. A clean wound, good drainage and the external use of alcohol, with rest and perfect coaptation of the parts secured, in his practice, results as wonderful, not only in the operation for wiring the patella but in all others, as can be shown by the more modern methods of Lister.

#### SURGERY OF THE JOINTS.

The successes attending the wiring of the patella for transverse fractures by early California surgeons, naturally brings us to a consideration of the subject of surgery of the joints, and the efforts of these men to relieve diseased conditions by original methods. Dr. Thorne in his report to this Society last year, when speaking of this subject, said: "We have, heretofore regarded the opening of the large joints, whether by accident or by disease, as a proceeding fraught with the gravest consequences." And he quotes the President of the Hunterian Society as saying, "in no single class of cases have the advantages conferred by Lister's anti-septic system been more strikingly exemplified than in affections which render it necessary to cut into the knee-joint. Formerly the removal of a loose cartilage was often an anxious and even a hazardous operation whether it was performed by direct or subcutaneous incision."

Unquestionably these were the opinions of nearly all surgeons in the East and in Europe up to the time of Listerism; but we believe it can be shown by published records that in California as early as 1861 the opening of joints to relieve diseased conditions or for the removal of loose cartilages, by certain methods, was not considered a hazardous operation; and that the results were as favorable, as then performed, as can be shown by any more modern procedures. In the earlier proceedings of this Society, and also in repeated articles in the Medical Press, Dr. Cooper laid down certain propositions for the treatment of knee-joint cases, which were opposed to generally received opinions, but which have been often followed by California operators, with excellent results. Although not the first to adopt the prac-

tice of free incisions for suppurating joints, it is certain that all who recommend this practice up to the time of Cooper, insisted on the need of caution in the admission of air to the joint cavity. Cooper, on the contrary, not only practiced free incisions, in order to allow the escape of pus and debris from diseased articulating surfaces, but insisted that the free and regular admission of air was absolutely necessary to restore the parts to a healthy condition. In July, 1861, he published some propositions, a synopsis of which is as follows:

1. Atmosphere admitted into joints is not a source of irritation or injury.

2. Opening the joints early in case of matter burrowing in them, is far more imperatively demanded than opening other parts thus affected; and the operation produces no further pain or inconvenience to the patient in any respect than when performed on parts remote from the joints.

3. That after opening a large joint, such as the knee, by an incision, several inches long, the wound should be kept open by the introduction of lint, until the parts within the articulation become healthy.

In another article, he speaks of the need in these cases of firm bandaging from toes to groin, and the continued application of an alcoholic dressing. At this time he had a record of a large number of cases which had been successfully treated; and most of which were open for the inspection of visiting surgeons.

In the *Pacific Medical and Surgical Journal* for 1858, there is an interesting record of operations for the removal of loose cartilages from the knee joint by the late Dr. Toland. These cases are remarkable not only as successes, but for the size of the foreign bodies taken away.

A comparison of the modified Listerism now practiced in operations upon diseased joints, with the methods of the California surgeons of twenty-five years ago indicates the activity of surgical thought upon this Coast at that period, and shows that prominent operators were in advance of the times in which they lived. Free drainage by the introduction of tents of absorbent lint, the support of bandages, and the free use of alcohol, one of the best anti-septics, indicates a near approach to drainage tubes, anti-septic cotton and bi-chloride of mercury or carbolic dressings.



## SURGICAL TREATMENT OF EMPYÆMA.

In the treatment of pleural effusions by aspiration, Bowditch of Boston, first demonstrated that they could be removed at any stage of the disease.

His method, improved upon by Dieulefoy, was generally adopted, and was successful in all cases where the effusion was serous, but in purulent collections it was found to be of no permanent advantage, and for years surgeons were in doubt as to the best methods for relief in empyæma. Experiment finally demonstrated that these collections of pus must be treated as abscesses would be in other localities, by free incisions and thorough drainage. Although to Chassaignac is generally given the credit of first treating empyæma in this way, an inspection of the literature of this subject shows that to Dr. Toland, of San Francisco, rightfully belongs the credit of introducing this procedure, and his cases and the instrument used for drainage are a part of the records of the Marine Hospital Service in California. Dr. Toland also published some of his earlier cases with results which may be found in the *Pacific Medical and Surgical Journal* for January, 1858. In order to secure regular drainage Dr. Toland invented a short silver catheter with guard, for purposes of retention.

A résumé of his cases as reported in 1869 by Dr. Cameron, shows that in no single case treated did he fail to effect a cure.

In closing this reference to a small portion of the original work done by two of our deceased members, in order to secure if possible through the proceedings of the State Medical Society a more general recognition of their merits, we may express the hope that at some future time abler pens will review their entire surgical labors, and place upon record all that belongs to their self-sacrifice and devotion to the profession. Already the encyclopedias of Jaccoud and Dechambre in France, certify to the use of metallic sutures as originating with one of these California surgeons in cases of fractured inferior maxilla, fractured clavicle, pseudo-arthroses, and achromio-clavicular luxations. The generation which commenced with their labors, and the life of this Society shows also, the foundation work of the two medical schools of the metropolis of California laid by their hands upon enduring bases.

As this thirty years is about to close, let us insist that justice, even though tardy, be rendered to their earnest enthusiasm and intensified devotion to surgery.

**Things Old and New, with a Chapter from Caelius Aurelianus.**

By L. C. LANE, M. D.

(Read before the Medical Society of the State of California.)

It is the custom of men to boast much of the age in which they live, and to consider that they have been especially favored to belong to a generation which far surpasses all preceding ones in the progress which it makes in art, science, discovery and invention. And at no period has such boasting been more prevalent than in our own time. Sons, forgetting whence they derived their blood and inheritance, often mock at the simplicity of their fathers. And such a boast of the unprecedented advance of the present is nowhere more loudly heard than in the ranks of the medical profession. To determine whether such pretension is well founded, we do wisely to sometimes retrace the past and review our science in its youth. I will occupy your attention for a few minutes, in taking a glimpse or two into the past, when books were written with the style instead of type, and where each volume was a precious treasure, as it had cost years of work.

In the second, third and fourth centuries preceding the present one, we find the following great names of men who presided over the re-birth of medicine: Haller, Vesalius, Harvey and Paré. Vesalius, in replacing the inaccuracies of Galen learned from dissecting apes, by more accurate knowledge derived from dissecting human bodies earned for himself the name of reformer in anatomy. The definite solution of the problem of how the blood moves in the human body opened a new era in physiology, gave immortality to Wm. Harvey, and placed a wreath of laurel upon the brow of poor Michael Servetus, for, in the book that was snatched from the fagots which burned his body, one finds a record of his discovery of the pulmonic circulation. Paré, who awakened the ligature to use again, after it had rested in disuse for a thousand years, placed operative surgery on a basis where it could advance. And lastly Albert Haller, the poet, botanist and physiologist, besides his personal contributions to medical science, greatly enriched its domain by publishing amended and accurate editions of the works of the old masters.

Haller, as was the custom of his day of all who laid claims to medical scholarship, was thoroughly master of the Latin and

Greek tongues whence sprung our science in its infancy, and to which one must return if he would taste of its fountains in their purity; for some of the sentences of Hippocrates in the charming Ionic dialect in which he wrote, seem profaned when cast into the barbaric mould of modern tongues; and the incisive brevity of Celsus recoils from appearing in the unnatural dress of superfluous modern verbiage.

As said, Haller conceived and executed the important task of publishing the works of several of the best writers of antiquity, from which the profession of his period might find guidance in the practice of medicine and surgery. Prior to the time of Haller, Paracelsus, Van Helmont and other kindred spirits, had so beclouded medicine with their metaphysical obscurities that the period is aptly named the mystic age in medical history. If one has the curiosity to catch a few glimpses of that moonless and sunless time in our profession, let him read a few pages in Van Helmont; almost any one is surcharged with quaint mysteries, and none more so than that odd chapter in which he describes the twelve offices of the stomach, one of the most curious being that it is the seat of the soul. A chapter or two will suffice, for one only finds there the most frivolous scholastic learning, destitute even of syllogistic and logical sophistry with which that age usually sought to embellish and support its mental products. One gladly turns from such an age where no beam of true science illuminates the scene of night, mystery and gloomy superstition.

At the close of that dark period, which we may esteem it one of the greatest favors not to have been born within, when relief for the suffering sick was sought from sorcery, alchemy and astrology, there appeared the reformers of which mention has been made. Haller, to restore the lost oracles, published in eleven volumes, under the title of the "*Princes in Medicine*," the writings of Hippocrates, Aretaeus Cappadox, Alexander Trallianus, Rhazes, Celsus and Caelius Aurelianus. This list of authors commences with the sect of the Dogmatists of which Hippocrates was the chief, and ends with that of the methodists of which Caelius Aurelianus is the great exponent and mouth-piece.

From the principle of vanity that holds a prominent place in every man's heart, there is too great a tendency to dwarf the past of our science, to exaggerate its present, and to greatly

magnify its future. To correct this tendency to scoff at the ignorance of former times, it is well to sometimes betake ourselves to them, to sit down at the feet of the old masters, and listen to their teachings. Among the many assumptions of modern egotism to which reference might be made, I will cite that of our knowledge of disease of the urinary organs, and will offer a translated page or two of the old Methodist Caelius Aurelianus, who flourished, probably, in the second century. Before commencing this chapter let us listen to the words, with which Caelius commences his book: "They say that Ippalus, a Pythagorean philosopher, being asked what he was doing, replied; as yet, nothing, and therefore, as yet no one envies me; now if envy is an attendant upon those who are doing good, it will hereafter follow me, since we are doing a great work." And again, in tracing the qualifications proper for nurses for the sick, he says, "they should be especially fitted for their work; as a prime qualification they should be still-mouthed and not thrust (inject) stories into the sick; they should answer questions yieldingly, and should restrain the patient in such a way, that he shall not see that he is being controlled, and where the patient fancies he sees visions, the nurse should try to convince him that they are not real."

From the chapter which Caelius has written upon vesical or urinary disease the following extracts are translated and presented with little or no comment, as the reader cannot fail to see that the old fathers of medicine were far from being ignorant on this subject.

"Many special diseases occur in the bladder, viz.: Inflammation, collection of matter, ulceration, hardness, palsy, calculus, discharge of blood, tardiness or difficulty of micturition, or the passage of water only in drops. Lest the treatment may seem tedious from our diffuseness, we hasten to condense the whole in one teaching.

"Where the bladder is inflamed there is pain in the pubic, iliac and gluteal regions, and the pain is greater at the commencement than at the close of voiding the urine; there are, besides, pulsation and swelling of the diseased part, with a constant and frequent desire to pass water; there is a sudden cessation or interruption of the stream, with intolerable pain and discharge by single jets; meantime the straining patient passes wind per rectum, and the anus itself is forced outwards; sometimes the patient urinates more easily if he lies on his back.

“Some patients, again, who are affected with stone, when urged by extreme necessity, place themselves with head fixed downwards, and feet somewhat uplifted; thus the stone is made to quit its narrow places, and seeking the outlet of the bladder, it thus renders easier the discharge of urine.

“A sediment may be found in the urine, and this may be coarse and pale, and similar to sand and of stone-like hardness. Sometimes the stone is sharp, or it may be covered with blood or sanious material.

“There is a resemblance in the symptoms arising from stone, ulceration in the bladder, and blood clotted there, since these all interfere with micturition; the presence of the calculus can be distinguished by the introduction of a solid catheter. In another book this instrument has been fully described by us, both as to its method and use; in the same work we have described the manner of removing the stone from the bladder. [The book referred to has been lost.] In this matter of removing the calculus, the mind of physicians has been too much seduced and captivated; they should rather have looked at the vice of the body that produces the stone, and by an alterative diet tried to correct such vice.

“There may be a derangement in the discharge of urine in which the flow is retarded; this is named by the Greek physicians stranguy; if pain be joined to this, it is named dysury; and where there is a perfect negation of the function, it is called ischury. These conditions are the accompaniments of stricture, whether this may arise from inflammation, induration, or palsy of the bladder, or from the intrusion of some obstructing agent into the meatus of the bladder, such as a calculus, sand, hair, or scales similar to wheat bran.

“There may be a discharge of blood from the bladder; here concretions or clots of blood present themselves at the meatus of the urethra. Such blood may come from the kidneys, the surface of the bladder, the neck of the bladder, or from the urinary passage itself. When it comes from the kidneys there is pain in the lower part of the back; but if from the bladder, the pain is felt near the navel, and os pubis, and the urine is often mingled with the blood. But when the blood comes from the neck of the bladder, then the pain is felt in the perineum.

“When the trouble causing the hemorrhage is in the urethra, then there will be felt pain in that part, and the blood will be

characterized by its purity, and will be discharged constantly and without interruption, and will not be arrested by pressure on the commencement of the urethra. Such pressure, however, will check the bleeding, if it comes from other parts, namely, pressure on the perineum near the anus will restrain the flow of blood from parts above.

“ Defects of the bladder as well as its diseases, are generally hard to cure; the reasons are that the viscus is of a nervous structure, is situated and concealed in the deeper parts of the body, and is the receptacle of acrid superfluities.

“ Where there is structural solution of the bladder, the patient should be placed in a cool place with quiet abstinence and a tight ligation of the limbs; and if there be hemorrhage from the part the hips are to be elevated. Where there is a desire to pass water the patient should be told to let this escape without effort; it should not be accompanied by straining or holding of the breath. Sponges saturated with new vinegar should be placed on the lower part of the abdomen, and on the perineum; fomentation and cupping are to be resorted to. The drink should be cold and the food small in amount. As internal remedies, one may give the sediment of wine, and a tea made of roses and myrtle berries; one may also give decoctions of rabus and pomegranate. Injections may be made of constrictive remedies through an iron instrument which the Greeks name a catheter.

“ In the case of females thus affected, pessaries are to be used, similar to those used in flowings from the womb, and which we have described in another work where we treated of the diseases of females.

“ As about the anus, the female parts and the neck of the womb, hemorrhoidal tumors develop which furnish blood, so similar bleeding tumors appear in the bladder, which at varying intervals furnish blood.

“ When we have finished the course proper in the early stage of vesical disease, if the bladder is the site of stricture (contraction) then the patient should lie in a moderately warm room, that is well lighted, and he should be quiet and abstain from food until the third day. The parts, the site of pain, should be exposed to vapor and grasped with the warm hands, warm cloths should be applied to the pubis, perineum and hips, or vessels of warm water, or sacks of hot flour, or bladders filled with warm oil should be applied, and if the pain be great, let the

patient be bled. Besides, the affected parts may be covered with pure wool that is saturated with warm sweet oil; the whole body should be rubbed with oil. The use of diuretics must be avoided, as they disturb the bladder and create inflammation."

From old Caelius (or Soranus, if we adopt the opinion of certain archæologists concerning the authorship of the work), I will make no farther extracts, though tempted to the contrary, for the work of this, the last of Haller's Princes in Medicine, has given me many an interesting hour of reading, but the extracts given so richly laden with practical knowledge, furnish ample proof, that in the surgical diseases here treated of the physicians of two thousand years ago were well equipped both in knowledge and means of relief.

In the work quoted from, and which it should have been remarked, is but a fragmentary torso of the original, the writer has shown in certain chapters, an energy, vigor and clearness of intellect, which may well serve as examples to the modern medical writer, for with a few scratches of the pen he has drawn pictures of disease which will remain true for all time, for this old master, following as his pattern the artists of antiquity, has taken as models for his sketches the originals furnished by the hand of nature.

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### **The Country Doctor in Relation to Commitments of the Insane.**

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By C. M. FENN, M. D., San Diego.

#### *Members of the State Medical Society of California.*

FRATRES:—By reference to one of the very few reports upon mental diseases, submitted to this Society within the past six or eight years, it will be found that some of us are sharply, and perhaps justly, criticised for errors of diagnosis in cases "*de lunatico inquirendo*."

Now, to mistake the "delirium of pneumonia for acute mania," and "harmless idiocy for insanity," may be inexcusable at any time, and under all circumstances; but to expect diagnostic infallibility in such examinations is certainly unreasonable. Aside from the inherent difficulty of diagnosing those subtle diseases of the mind, and determining

just "where laughter ends and tears begin," the brief time allotted for these investigations, and the crude and insufficient data obtainable at them, might well embarrass even such experts in insanity as "Hammond and Spitka." (How often, after puzzling over the questions of the commitment blank, and appealing in vain to patient and witnesses for a solution thereof, have I been minded to write at the bottom of the page "insane according to the above directions.") And when it is further remembered that individuals, even after long residence and treatment at the asylums, have been known to attempt suicide, while en route homeward, or to become more violent than ever soon after their arrival, it is not strange that their mental condition should sometimes mislead the physician who meets the patient for the first and only time in Court.

The distinguished alienist, whose report is quoted above, has well said that "the welfare of the individual and the safety of the public are the two broad considerations that underlie every commitment of a person to an asylum for the insane, and \* \* it is due alike to the unfortunate patient and those who will be called upon to take care of and treat him, that every material fact should be clearly set forth in the commitment, or rather in the certificate of the physicians who examine him." I think none is disposed to deny this self-evident proposition, nor that the printed formula is admirably adapted to elicit such information, *if it is obtainable*. But the misfortune is, that at these preliminary examinations the "material facts" are strikingly "conspicuous by their absence," just as they are at the asylum, and the mental condition of the patient is certainly not improved by his environment.

It will illustrate our point, and, perhaps, may not be out of place to describe briefly one of these inquiries as to insanity. Once, or at most twice, within a twelvemonth the physician of an average town is hastily summoned before the Superior Court "to examine a crank." The suspect is usually found to belong to the nomadic type of crazy persons, whose restless proclivities have driven him from one State and county to another, until all reliable records of him are lost. "Nobody knows, and nobody cares" would become his fitting epitaph were he to die. Like the "Wandering Jew," a spirit of unrest has impelled him "on and on;" sometimes accompanying the tide of emigra-



tion; yet ever avoiding his fellowmen; until at last his wanderings and exposure precipitate an explosion of his madness. It may be discovered through some act of violence on his part, or from incoherent talk upon the street. In either event he is arrested and thrown into a noisy, if not noisome cell, where rough companions avoid him with fear and suspicion, or make themselves merry at his expense. Fortunately for his weak mind and shattered system his term of confinement in such an unsuitable place is measured by the desire to get him out of the way as soon as possible, and the early departure of train or steamer. Is it any marvel that when brought before the Court and attendants, he is suspicious and reticent, or nervous and voluble? He may readily, and perhaps truthfully, reply to all questions of "age, nativity," etc., which are chiefly important as a means of identification. But when it is desired to elicit essential and "material facts," such as "heredity," "first attack," "disposition," and "habits," neither the patient nor the witnesses can supply them. The prognosis may be ever so favorable in his case; it may be that rest, food, judicious restraint and treatment would render him a harmless imbecile again, or possibly restore him to friends and society. But "there is no friend to greet, no home to harbor him." He is practically an outcast, neither city nor county have places of refuge for such as he, nor do they feel bound in equity to care for him.

The question then becomes not so much a classification of insanity, as one of "responsibility" of the individual. Is he safe without restraint? And again, will not the "welfare" of all concerned be better promoted by sending him to the asylum? The State can better afford to pay expenses of a dozen erroneous commitments than to have the life and property of her citizens placed in jeopardy for an instant.

It is a melancholy fact that the great army of the insane is annually receiving large accessions, and especially from this coast; already larger, or more asylums are required, and one I believe is in process of erection at San Jose. In justice to the rapidly increasing population of Southern California, we think it should have been located in the southern part of the State. The hardship of sending patients four or five hundred miles to an asylum should receive the earnest consideration of our legislators and the medical profession.

**Report of the Committee on Medical Legislation.**

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By IRA E. OATMAN, M. D., Chairman.

*Mr. President and Members of the Medical Society of the State of California:*

Having consulted by letter with the other members of your Committee on Medical Legislation, as chairman of that committee I have decided to recommend that this Society will not ask for any amendment to, or substitute for, the existing law regulating the practice of Medicine and Surgery in California, at the next session of the Legislature. By reference to the Secretary's report of your Board of Examiners, you will perceive the extent of successful prosecutions under the present law during the past year—showing, evidently, the efficiency of that law, when enforced; and the wholesome progress made in public sentiment in appreciating the general benefits therein contemplated. In past Legislatures, unlicensed, irregular and incompetent practitioners of medicine, through hired attorneys, have exerted, and probably will exert in future, strenuous influence in favor of repealing the present law "regulating the practice of medicine and surgery," and of substituting therefor, a law, so loose in its provisions, as to admit almost anybody to the responsible position of medical practitioner.

I recommend that the combined efforts of this Society, and of its members individually, be invoked by all and every available means to defeat all such vicious legislation.

On account of sickness in my own family, it is with sincere regrets that I am unable to participate in the benefits and pleasures of your association. Believe me, I am ever faithfully, earnestly and fraternally your co-worker, in the interest of science, for the benefits of humanity.

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**Congenital Malformations of the Liver and their Relations to the Diagnosis of Abdominal Tumors.**

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By WM. F. McNUTT, M. D.

(Read before the Medical Society of the State of California.)

We are probably justified in believing that there is scarcely an organ in the body that is so seldom congenitally deformed as the liver, and we are probably justified in coming to this conclusion from the fact that anatomists and writers on disease of

the liver have given us almost nothing on the subject. On malformations of the heart, we have the classic work of Peacock, and most writers on the kidneys give us a detailed account of malformations of these organs, but I have failed to find in the literature to which I have had access anything on congenital malformations of the liver.

A very interesting case of this kind came into my hands a few months ago which impressed upon my mind the importance of the subject in its relation to the diagnosis of abdominal tumors.

About fifteen (15) years ago I was called by the late Dr. Maxwell to examine, with him, two large abdominal tumors. The patient was a rather slight young woman, age at that time about twenty-five years. Dr. Maxwell had discovered the tumors (two of them) about five years previous to that, when delivering her of her first child. He had never been able to make a satisfactory diagnosis of the tumors; the larger one was the furthest to the left and occupied the upper part of the abdominal cavity; its outer or left edge was on about a perpendicular line dropped from the left nipple and extended to about four (4) inches below the margin of the ribs, its lower end being rounded and smooth and nearly four (4) inches broad. It seemed to be rather narrower as it approached the lower margin of the ribs. The second tumor was smaller and projected directly from under the ensiform cartilage, extending down for about three (3) inches, or almost to the umbilicus; the lower margin of this tumor was round and smooth, its horizontal diameter seemed also to be a little less at the point of the ensiform cartilage than its lower margin.

On my first examinations of these tumors Dr. Maxwell assured me that he could find no change in their form or position or size since he had first discovered them five (5) years before; he had examined them many times in the interval; they were not tender on pressure or percussion, and gave the patient but little inconvenience beyond the fact that she was obliged always to wear her clothing very loose on account of the distress which she said she had always had and which distress she had always thought had come from her stomach. She had never been aware of the existence of the tumors. I had never examined the tumors again until about January, 1884, and I was called to take charge of the patient and found her with chronic tubular nephritis, chronic diarrhea and valvular disease of the heart. This was

about fifteen (15) years after the above mentioned examination. As near as I can remember, the tumors seemed to be about the same shape and size as when I had previously examined them. It became a question whether the tumors might not be renal, as the patient was then suffering from albuminaria. As she was growing worse slowly, had œdema and ascites coming on, I asked Dr. R. Beverly Cole to see her in consultation. I called his attention to the tumors, gave him a history of them; he examined them as carefully as was possible in the condition that she was then in. While we did not suspect congenital malformation of the liver, he came nearer it probably than any of the rest of us in making a diagnosis; he remarked that the tumors seemed to be pedunculated, but that they appeared to be attached by the pedicle to the upper part of the abdomen. Hence it could not possibly be fibroids. This is precisely what we did find on *post mortem* examination—two pedunculated tumors with their pedicle attached to the upper part of the abdomen; or, in other words, we found a congenital malformation of the left lobe of the liver. The organ was perfectly healthy throughout, and these tumors consisted of normal, healthy liver tissue.

As this is the only case of congenital malformation of the liver that I have ever met with, and as I have been able to find nothing on this subject in the literature upon the liver, I thought it of sufficient interest to report the case to the Society.

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MEDICAL COLLEGE GRADUATES.—Upon the motion of Dr. Mackenzie, seconded by Dr. Ludlam, the following preamble and resolution were adopted:

WHEREAS, The continuous graduation of forty-five (45) per cent. of the total number of matriculates of a medical college—due allowance being made for the average annual loss—must be accepted as *prima facie* evidence that, practically, every candidate is graduated without regard to competency or qualification; therefore, be it

*Resolved*, That no medical college be recognized as in good standing within the meaning and intent of the Act to Regulate the Practice of Medicine in the State of Illinois, the aggregate graduates of which college amount to forty-five (45) per cent. of its aggregate matriculates during the period of five (5) years ending with any session subsequent to the session of 1885–86.—*Illinois State Board of Health Report.*

## Proceedings of Societies.

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### Sacramento Society for Medical Improvement.

SACRAMENTO, May 18, 1886.

The Society met in regular session, the President, Dr. W H. Baldwin, in the chair.

The minutes of the previous meeting were read, corrected and approved.

Dr. Huntington reported at length a case of stricture of the urethra of long standing, complicated with urinary fistula. The treatment pursued was free, internal urethotomy. Convalescence had been tedious, but the result was now most satisfactory, a No. 30 sound (French scale) passing readily.

Dr. W. E. Briggs read a paper on Binocular Hemipopia.

After a brief discussion the Society adjourned to meet on the third Tuesday in June.

Subject of the evening's paper by Dr. A. E. Brune: " Congestion of the Uterus. "

JAMES H. PARKINSON,  
Secretary.

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DR. EDWARD G. JANEWAY has been appointed Professor of Principles and Practice of Medicine in Bellevue Hospital Medical College in the place of the late Dr. Austin Flint.

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DR. JOHN S. BILLINGS has accepted the invitation of the president of the British Medical Association, to deliver the address before the Association, which was to have been given by Dr. Austin Flint.—*St. Louis Courier of Med.*

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STATISTICS OF M. PASTEUR'S HYDROPHOBIA PRACTICE. —At a recent meeting of the Academy of Sciences, Paris, M. Pasteur announced that he had treated the following number of people from different countries for bites from mad dogs: France 505, Algeria 40, Russia 75, England 25, Italy 24, Austro-Hungary 13, Belgium 10, North America 9, Finland 6, Germany 5, Portugal 5, Spain 4, Greece 3, Switzerland 1, Brazil 1. This makes a total of 726.

**Licentiates of the California State Board of Examiners.**

At the special meeting of the Board of Examiners, held May 19, 1886, the following physicians, having complied with the law and all the requirements of this Board, were unanimously granted certificates to practice medicine and surgery in this State:

- J. L. BOND, Ukiah; Washington Univ. School of Med., Md., Feb. 22, 1869.  
EER S. CARLISLE, Los Angeles; Med. Dept. of the Univ. of Buffalo, N. Y., Feb. 25, 1868.  
JOSEPHINE A. DUPRE, Oakland; Woman's Med. Coll. of the N. Y. Infirmary, N. Y., May 30, 1880.  
JAMES H. GLASS, Saratoga; Coll. of Phys. and Surg. at Baltimore, Md., Mar. 4, 1884.  
JOSEPH E. HACKNEY, Traver; Missouri Med. Coll., Mo., Mar. 4, 1880.  
W. S. HICKMAN, Acampo; Vanderbilt Univ., Tenn., Mar. 1, 1886.  
BENNO A. HOLLENBERG, San Francisco; Memphis Hosp. Med. Coll., Tenn., Feb. 26, 1885.  
ADOLPH J. KAHN, San Francisco; Bellevue Hosp. Med. Coll., N. Y., Mar. 15, 1886.  
CHRISTOPHER A. KLEINEBERG, San Francisco; Georgia, Augusta, Univ., at Gottingen, Germany, Mar. 8, 1886.  
L. J. M. KORDS, Los Angeles; Rush Med. Coll., Ill., Feb. 5, 1868.  
MARY J. LAIRD, Fresno; Woman's Med. Coll. of N. Y. Infirmary, N. Y., May 29, 1885.  
CHARLES H. McCANN, Santa Cruz; Bellevue Hosp. Med. Coll., N. Y., Mar. 15, 1886.  
THOMAS J. McCARTY, Los Angeles; Kentucky School of Med., Ky., June 30, 1884.  
WM. J. McCRAIG, Lake Tahoe; McGill Univ., Canada, Mar. 29, 1886.  
CHAS. J. MCGOVERN, San Francisco; Med. Dept. of the State Univ. of Iowa, Ia., Mar. 3, 1886.  
AMOUR H. MCHATTON, San Diego; Missouri Med. Coll., Mo., Feb. 27, 1859; and Jefferson Med. Coll., Penn., Mar. 12, 1860; and Coll. of Guadalajara, Mexico, Dec. 23, 1869.  
JACOB W. MILLIKEN, Mendocino; Med. Dept. of the Univ. of the City of N. Y., N. Y., Feb. 19, 1877.  
JAMES J. MORRIS, Merced; Memphis Hosp. Med. Coll., Tenn., Feb. 29, 1884.  
WM. P. SPRAGUE, San Francisco; Bellevue Hosp. Med. Coll., N. Y., Mar. 15, 1882.  
WM. J. WIARD, Sacramento; Chicago Med. Coll., Ill., Mar. 13, 1873.  
ALICE M. WOODS, Fresno; Woman's Med. Coll. of the N. Y. Infirmary, N. Y., May 29, 1885.

At the regular meeting of the Board of Examiners, held June 2d, 1886, the following physicians were granted certificates to practice medicine in this State:

- HENRY CASE, San Jose; Coll. of Med. and Surg. of the Univ. of Michigan, Mich., Mar. 30, 1865.

CHAS. C. CHURCHILL, San Diego; Med. Dept. of the Univ. of Pennsylvania, Penn., Mar. 11, 1865.

CLARENCE D. DICKEY, San Bernardino; Jefferson Med. Coll., Penn., April 2, 1886.

JAMES A. HART, San Francisco; Coll. of Phys. and Surg. of New York, N. Y., Feb. 27, 1873.

CHAS. M. JOHNSON, San Diego; Jefferson Med. Coll., Penn., March 10, 1863.

THOS. M. MICHAELS, Los Angeles; Rush Med. Coll., Ill., Feb. 16, 1875.

HENRY N. MINER, Colfax; Chicago Med. Coll., Ill., Mar. 23, 1886.

FRANCIS A. SANBORN, Los Angeles; Med. Dept. Univ. of Vermont, Vt., June 7, 1859.

C. H. STEWART, Duarte; Cincinnati Coll. of Med. and Surg., O., June 21, 1877.

AUSTIN C. WRIGHT, Grizzly Flat; Coll. of Med. and Surg. of the Univ. of Michigan, Mich., June 30, 1881.

Dr. G. M. Baronidis of this city, who was convicted by a jury of practising medicine without a license, has been denied a new trial, and fined \$200.

J. H. Josselyn, some time since arrested for criminal malpractice, and Li Po Tai, the Chinese doctor, have both been arrested for the same cause, viz.: practicing medicine without a license.

The Board is working upon the certificates of membership of the State Society, but it will be some weeks before they will be ready for delivery.

R. H. PLUMMER,  
Secretary.

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**HYDROPHOBIA IN AUSTRIA.**—Dr. von Frisch, who was lately sent to Paris by a Vienna committee to inquire into Pasteur's system of inoculation against rabies, has given an account of his researches in a public meeting at the Town Hall. He unreservedly commended Pasteur's system, urging that it should at once be adopted by the medical profession in Austria. Giving some statistics on hydrophobia, he said that, in Austria, there had been 135 deaths from this cause in 1874, and 132 in 1875. In 1882, the mortality declined to 77, the lowest figure on record. Dr. von Frisch warmly advocated the compulsory muzzling of dogs in the streets, and thought it a matter for congratulation that the number of dogs should be decreasing. There was now, he said, but one dog in Austria for every section of 116 inhabitants.—*The British Med. Journal.*

## Health Reports.

### Report of the State Board of Health.

Reports received from ninety localities for the month of May continue to indicate a very favorable condition of the public health, and an absence of any severe epidemic disease. In the following cities and towns "*no deaths*" were reported: Bodie, Colton, Crescent City, Castroville, Fort Bidwell, Gonzales, Galt, Haywards, Knight's Ferry, Lincoln, Martinez, Merced, Monterey, New Castle, Sierra City, Tehama, Trinity, Wheatland, Williams, Yuba City, San Mateo. The advent of warm weather has had a favorable effect upon diseases of the lungs.

Consumption decreased its death rate from one hundred and thirty-two last month, to one hundred and twenty-three this month.

Pneumonia likewise shows a lessened mortality, the majority of deaths from this cause occurring in San Francisco.

Bronchitis occasioned fifteen deaths, eleven of which took place in San Francisco. In the interior the mortality was insignificant.

Congestion of the lungs caused two deaths only.

Diphtheria seems to cause more deaths than any other zymotic disease on the coast. Thirty-one deaths are recorded this month, an increase from last month of four. Twenty-two of these took place in San Francisco, one in Etna, one in Fresno, one in Los Gatos, one in Oakland, two in Petaluma, one in Stockton, one in Santa Maria, and one in Truckee.

Croup caused eight deaths, a decreased mortality from last month.

Whooping cough was fatal in sixteen instances, an increase of twelve from last report.

Scarlet fever caused seven deaths, which is a trifling mortality for so serious a disease. It indicates mildness of type.

Measles had a mortality of two this month.

Diarrhoea and dysentery caused eight deaths, which is double that of last report.

Cholera infantum shows a decidedly increased mortality, being credited with fourteen deaths, against six last month.

Typhoid fever caused thirteen deaths, a decrease of four from last report.



Typho-malarial fever was fatal in one case only.

Remittent and intermittent fevers are credited with five deaths, which is an increase of five from last report.

Cerebro-spinal fever had a mortality of ten, which is a slight decrease from last month. Three occurred in Los Angeles, three in Watsonville, one in Ventura, one in St. Helena, one in Shasta, and one in Elk Grove.

Cancer had a mortality of twenty-six.

Disease of the heart was fatal in thirty-one instances.

Erysipelas caused only one death.

Alcoholism was fatal in four instances.

Sunstroke or thermic fever. We have to report two cases of what is commonly called "sunstroke" this month, both happening within a few days of each other. One in Gridley, Butte County, for the particulars of which I am indebted to Dr. James R. Todd, of that town. The other happened in Sacramento County, and came under the notice of the writer. The case in Gridley was that of a stout, plethoric man, aged fifty-eight years, who was in the field, haying. He complained of the intense heat, said "he never was so hot in his life," lay down under a shade tree, and when his fellow-worker returned to him, in three-quarters of an hour, he was unconscious, and died within an hour from the time he was attacked. His death was undoubtedly due to apoplexy, induced by heat.

The second case was that of a young man eighteen years of age, who had just arrived from Norway and had only worked one day. On the second morning he drove a header wagon, and about noon complained of intense pain in the back of his neck and spine. He lay down in the wagon, was driven a very short distance to the farm house, and when removed was found to be insensible. He never recovered consciousness, and died convulsed before 6 P. M., evidently from thermic or heat fever. Sun stroke, according to Dr. H. C. Wood, is an acute inflammation of the brain, and *very rare*. Dr. Wood says: "There is no doubt that in exceptional cases an intense heat may cause a condition closely allied to concussion of the brain, death resulting from paralysis of the heart's action; or if that person be predisposed to apoplexy, or have a weak or diseased heart, he may die suddenly at the very outset. It is these exceptional cases that have given rise to the incorrect term "sun stroke." "It has been remarked that the *morning sun* is specially dangerous.

This has been accounted for by supposing that the injurious effects are chiefly due to the direct rays of the sun striking the nape of the neck." (Tidy, p. 76.)

As sun stroke or thermic fever is a very rare occurrence in this State, but does occasionally occur, it might be well to warn new comers to the country, that whatever induces nerve exhaustion, or checks perspiration, or embarrasses the circulation, predisposes to heat apoplexy. Beer or spirit drinking are inductive of sun stroke. Cold tea may be drank with impunity. The head covering should permit a free circulation of air beneath, and a wet handkerchief or piece of rag placed over the head and beneath the cap should always be used when the heat is excessive. Flannels should be worn next the person instead of cotton or linen, and some means adopted to keep the rays of the sun off the neck. Generally the first symptoms observed are headache, ringing in the ears, rapid beating of the heart, and vomiting; the skin ceases perspiring, and unconsciousness quickly supervenes. The person so attacked should be at once laid down in the shade, all clothing but one thin garment should be removed, ice applied to the head and body, or, where this cannot be obtained, cold water should be constantly dashed on the body, or it should be wrapped in a wet sheet and cold water applied. If he can swallow, and the pulse is *weak and rapid*, a little wine and water may be administered, or a little cold milk or beef tea, until a physician is summoned. Avoid giving whisky or brandy, as they are more apt to kill than to cure. As preventives, temperance, sobriety, and cleanliness are the chief points to be observed by residents in hot climates.

#### PREVAILING DISEASES.

The reports received of prevailing diseases indicate that up to the present time no severe zymotic sickness of any kind exists in the State, in fact it has rarely enjoyed so great and so general an immunity from all serious diseases as during the past few months. The advent of warm weather and the abundance of fruit have made their presence manifest by the increase of bowel disorders. This may be traced in a great measure to the high degree of temperature coincident with the quantity of moisture in the soil, which the unusually large rainfall of winter and spring had left in the ground, acting as an exciting cause—on the other hand, the quantity of fruit consumed may be looked

upon as a prominent factor. This is especially true as regards cherries, which seem to have had a very decided tendency this season to produce choleraic diarrhoea in most people. We find, in looking over our reports, that *diarrhoea and dysentery* are mentioned as noticeable in Pomona, Asuza, Maxwell, Galt, Sacramento, Salinas City, Red Bluff, Castroville, Hill's Ferry, Fort Bidwell, Merced, Shasta, Anderson, Rocklin, Saucelito, Lemoore, Calico, Angel's Camp, Ione, Modesto, and other places, showing a very general tendency to these complaints.

Cholera infantum likewise prevails generally among young children, but has not attained that degree of fatality so usual later in the season.

Measles prevail to a limited extent in Sacramento, Cloverdale, Hill's Ferry, Maxwell, Nicolaus, Modesto, Anderson, Susanville.

Scarlet fever still manifests itself in Modoc County, Pomona, Truckee, Sierra City, Anaheim, Los Angeles, Susanville, Elk Grove, Oakland, and Stockton. The type is very mild, as declared by the limited mortality.

Diphtheria. The reports mention this disease as prevailing in San Francisco, and as present in Salinas City, Hill's Ferry, Fort Bidwell, Etna Mills, Santa Cruz, Anderson, Livermore, Truckee, Petaluma, and Los Gatos.

Erysipelas has also been noticed as appearing in Salinas, Hill's Ferry, Maxwell, Santa Cruz, Millville, Livermore, Willits, Dansville, Angel's Camp, Truckee, Lincoln, and Lemoore. What relation this disease bears to diphtheria and scarlet fever has not yet been determined, but every precaution taken with the one should be taken with the other to isolate and prevent its spread.

Typhoid fever does not seem to prevail anywhere in the State, which indicates a fair sanitary condition. A few cases have been noticed in Modesto, Merced, and Igo.

Typho-malarial fever has also been observed, in a limited number of cases, in Anderson, Lincoln, Ione, and Anaheim.

Remittent and intermittent fevers are noticed as prevailing in many places, which might be expected as the rivers recede and the ponds dry up. Their fatality is exceedingly limited.

Cerebral fever is mentioned in many reports, and noticed in Mariposa, Davisville, St. Helena, Modesto, Fort Bidwell, Elk Grove, and Watsonville.

Pneumonia. Sporadic cases of this disease have occurred in

Merced, Martinez, Cottonwood, Visalia, Red Bluff, and Truckee.

Bronchitis is in Bodie, Rocklin, and Red Bluff.

Influenza prevails in Bodie, Alturas, Merced, Martinez, and Crescent City.

From the above extract it will be seen that the general health of the State is good. It must be borne in mind that as the summer advances the dangers from drinking impure water are enhanced; and in those places where water is procured from wells, the chances of contamination by surface drainage are manifoldly increased. It should also be generally known that the discharges from those suffering from dysentery are infectious, and if admitted into our drinking water, will in all probability communicate the disease.

GERRARD G. TYRRELL, M. D.,

Permanent Secretary California State Board of Health.

Sacramento, June 10, 1886.

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#### **San Francisco Health Report.**

San Francisco's death rate for the month of May is much less than for the corresponding month of last year, being only 435 against 511.

There has been no epidemic, but croup and diphtheria have been prevalent, there having been 10 deaths from the former and 22 from the latter disease.

Phthisis, as usual, claims a goodly number, viz.: 63; bronchitis and pneumonia, 37; heart disease, 16; infantile convulsions, 17.

There were 15 casualties, 10 suicides and 2 homicides.

The number of still births is large, viz.: 25.

The population of San Francisco, June 30th, 1884, was estimated to be 270,000.

In turning to the table of meteorological observations, we find that the highest maximum temperature was 96°, but that the same day the minimum was 69°; that the prevailing wind was west; it being only south on two days, while on every other day of the month it was either west or southwest. The weather was fair, only .37 inches of rain having fallen during the month.

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In Oakland for the same month, with an estimated population of 45,000, there were 47 deaths. As in San Francisco, consumption heads the list, there having been 10 deaths; there were

3 from cancer. From no other cause did the number of deaths reach over two.

The total number of births was 48, which is encouraging, and augurs well for a rapid increase in the census when we compare it with the number of deaths.

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#### **Ozoniferous Essences as Antiseptics.**

Listerine possesses essential properties analogous in their effects to the ozoniferous ethers so highly recommended by Dr. Benjamin Ward Richardson and others as deodorizers and disinfectants for the sick-room, and should be used in the same way—sprinkled over handkerchiefs, garments, and the bed-linen of fever cases. Mantegazza, “On the Action of Essences and Flowers in the Production of Atmospheric Ozone, and on their Hygienic Utility” (*Rendiconti del Reale Istituto Lombardo*, vol. iii., fasc. vi.), as quoted by Fox on Ozone, reports that the disciples of Empedocles were not in error when they planted aromatic and balsamic herbs as preventives of pestilence. He contends that a large quantity of ozone is discharged by odoriferous flowers, and that flowers destitute of perfume do not produce it. Cherry-laurel, clove, lavender, mint, lemon, fennel, etc., are plants which develop ozone largely on exposure to the sun’s rays. Among flowers, the narcissus, heliotrope, hyacinth, and mignonette are conspicuous; and of perfumes similarly exposed, eau-de-cologne, oil of bergamot, extract of millefleurs, essence of lavender, and some aromatic tinctures. He also points out that the oxidation of the essential oils, such as nutmeg, aniseed, thyme, peppermint, etc., are convenient sources of ozone, and concludes that the ozoniferous properties of flowers reside in their essences, the most ozoniferous yielding the largest amount of ozone. It is of such aromatic essences that Listerine is composed, and hence its efficacy under the circumstances indicated.—*The Sanitarian*, Nov., 1885.

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**M. PASTEUR’S WOLF-BITTEN PATIENTS.**—Dr. Davidoff has telegraphed from Smolensk to M. Pasteur that the sixteen survivors of the first wolf-bitten batch of Russians have returned home in perfect health. They are full of gratitude to the illustrious French savant.

## PACIFIC MEDICAL AND SURGICAL JOURNAL

AND

## WESTERN LANCET.

EDITORS:

WILLIAM S. WHITWELL, A. M., M. D.

WM. WATT KERR, M. B., C. M.

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*SAN FRANCISCO, JULY, 1886.*

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**Editorial.****Medical Licenses.**

The attention of many of our readers has doubtless been attracted to a paragraph in one of the daily papers reflecting upon our Board of Examiners for refusing a license to a homeopathic practitioner, Dr. E. N. Lowrey, who is a graduate of the Homeopathic Medical College in Cleveland, Ohio, and also of Bellevue College, New York.

The doctor based his claim for a license from our board upon his possession of the New York diploma, and not upon any intention to withdraw from the practice of homeopathy, and it was refused, not for the reasons set forth in the newspaper, but because he already held a license from the Homeopathic Board in this State. We are informed that he has applied to the Superior Court for a writ of mandate compelling the Board to grant his application.

There can be no doubt that the board acted wisely in refusing the petition, as no one is entitled to two licenses to practice in the same State.

The object of the medical law is to regulate the practice of medicine in California, it is to ascertain that each practitioner is duly qualified to discharge the duties of his profession irrespective of whether he be old school, homeopathic or eclectic. When the medical law was passed it provided for the appoint-

ment of three examining boards, old school, homeopathic and eclectic, under the impression that greater impartiality would be shown to the different applicants by each board examining its own graduates. There are thus three boards, but all of them are governed by and acting under one and the same law, and therefore a license issued by any one of these boards is intended to show that the person designated thereon has complied with the *law of the State* and not that he has subscribed to the tenets of the Medical Society from which the board of examiners granting the license were appointed. The licenses come from the *State*, the boards issuing them are only the mediums; but as there is only one act to be complied with so there can only be one license issued to each person under that act, and all others are merely duplicates. It therefore remains for Dr. Lowrey to show why he should receive a duplicate while the original license is still in existence: he might as well take out two licenses for one dog.

We are not surprised, however, that there should be some confusion while a plurality of boards exists. On former occasions we have urged the substitution of one board appointed by the Governor, as in the case of the State Board of Health, that might fix a minimum standard to which all applicants must attain whether they be regular, homeopathic or eclectic. Such a board would have the dignity of a State institution which would give it greater weight with the public and command more respect in the courts of law. Under the present arrangement the public regards medical legislation as a squabble between rival factions, culprits avail themselves of the prevailing belief and obtain public sympathy by claiming connection with an opposing school, and prosecutions are looked upon as efforts to further private prejudice rather than to advance public interest. With a combined board all this will be at an end, prosecutions will no longer be conducted by the Board of Examiners of a Medical Society, but by the Medical Board of the State of California, and the public will recognize the fact that it is no fight

of factions, but an honest and united endeavor to suppress quackery and charlatanry.

To some people this may savor of new code doctrines; we have simply to say that it has nothing to do with the code question. The medical law does not define the relations between conflicting schools but between the *the whole medical profession and the State*; it already has decreed that equal privileges shall be granted to all parties alike, and these privileges will remain equal whether there be three boards or one.

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#### **Winters v. Graves, Malpractice Suit.**

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This case has been decided at last, and Dr. Graves acquitted after his third trial.

It is now nine months since the matter was first brought before the profession, but the miscarriage of justice was so great that it is fresh in the memories of every one. No one can have forgotten the suit brought by an aged and rheumatic woman to recover fourteen thousand dollars as damages for a stiff joint that followed a badly sprained ankle; nor can they fail to remember the incidents connected with the first trial, such as the fact that this patient had not paid Dr. Graves ten dollars for his attendance upon her and her family during sixteen years, or that the physicians for the prosecution attempted to demonstrate shortening of the injured leg to the jury by taking a carpenter's rectangular metal rule and measuring her limbs while she was seated on a chair in open Court, and that the jury awarded eight thousand dollars damages, probably as a solace for such useless and indecent exposure.

When the case came up for trial a second time Drs. Ivancovich and Wells, the expert testimony for the prosecution, still maintained the theory that the tibia had been broken just above the malleolus while the fibula remained intact, that the fracture had been badly treated, and consequently there was shortening



of the whole limb by three-quarters of an inch, and nevertheless, Dr. Ivancovich in another part of the evidence testified that the amount of overlapping was only one-eighth of an inch. Of course we are not surprised at the discrepancies between the various measurements, when we remember that every precaution to obtain an accurate result by using a suitable instrument and putting the patient in proper position was neglected; indeed, the fallacy of the method adopted in court to demonstrate the injury to the jurymen was clearly brought out when, three days before the second trial, Dr. Wells for the prosecution and Dr. Stuart for the defense, conjointly made a private examination of the patient and found that there was only one-eighth of an inch difference between the two limbs; but how a shortening of the entire limb could take place when, as they say, only one bone was broken, or how an overlapping of one-eighth of an inch could produce a shortening of three-quarters of an inch, are enigmas, which the prosecution alone can explain; evidently the jury was puzzled, for it disagreed, and a third trial was held, the particulars of which we have not yet received, but we know that it terminated in the acquittal of Dr. Graves.

The profession in California is to be congratulated for the ready way in which it responded to the request for funds to fight the case, about eighteen hundred dollars having been collected without any difficulty. Dr. Graves has also our sincere congratulations and thanks for his refusal to compromise, and his willingness to sacrifice the earnings of a life-time rather than do anything that would encourage such blackmail proceedings. At such a time as this Dr. Stuart's suggestion in the State Medical Society to form a protective union for the purpose of contesting malpractice suits when the physician is innocent of the charges brought against him, comes with peculiar fitness, because we have just seen how liable we all are to be attacked at any moment, and how necessary it is that some common mode of defense should be arranged.

WE REGRET to be obliged to chronicle the death of Henry G. Landis, M. D., professor of obstetrics in the Starling Medical College, Columbus, Ohio, at the early age of thirty-eight. He was the author of an ingenious essay, "How to Use the Forceps," which we read and studied with much pleasure and profit. This was published in 1880. Within the past year another instructive work from his pen was published, entitled, "Management of Labor," a book written for the practitioner, and which contained many useful hints on apparently well-worn subjects. Both books show the originality of the author, and make it evident that he did not accept anything as proven because others had said it. In the death of Dr. Landis the school in which he was professor, has suffered a severe loss, and the profession at large has lost an earnest worker.

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ANY member of the State Society who has not received the May and June Nos., may obtain the same by addressing Dr. W. S. Whitwell, 620 Folsom street.

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A SUBSTITUTE FOR FEHLING'S SOLUTION.—Prof. Holland gives the following as a test for sugar; it is very efficient, easily prepared, and is not spoiled by keeping:

Cupric sulphate .....	3i
Glycerine .....	3i

To make the test, add five drops of this solution to one drachm of liquor potassæ in a test-tube. Boil a few minutes to test the purity of the fluid. Should it remain clear, then add a few drops of urine. If glucose be present in quantity there is at once thrown down a red precipitate, just as in the ordinary Fehling test. To detect minute amounts of sugar, not shown by the above procedure, after making the test as above, add half a drachm of urine; boil and set aside. If the sugar be present even in very minute quantities, the liquid as it cools will turn of an olive green color and become turbid.—*Canadian Practitioner*.

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VEHICLE FOR QUININE.—R. C. Kenner commends the syrup of yerba santa as the best vehicle for the administration of quinine. He says that five grains of quinine is effectually disguised in a dram of the syrup.—*N. Eng. Med. Mo.*, Feb. '86.

## Notices of Books, Pamphlets, etc.

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**THE PRINCIPLES AND PRACTICE OF SURGERY.** By FRANK HASTINGS HAMILTON, A. M., LL.D. Illustrated with 472 engravings on wood. Third edition, revised and corrected. New York: Wm. Wood & Co., 1886. San Francisco: Wm. S. Duncombe & Co.

In the preface to this third edition of his work the author states that his original intention has been strictly adhered to of giving merely those methods which have in his experience proved of practical use. He has merely endeavored to reproduce the lessons which, during forty years of public teaching, he has striven to impress upon the many thousands who have listened to him.

The day has gone by when any one man should try to treat of such a variety of subjects as the author has done in the present volume. We find that it includes eye and ear diseases, diseases of the uterus and of its appendages. Few would consult Hamilton as the authority on any of these branches, which must necessarily be treated in a cursory manner. It is interesting, however, and instructive to know in what light an oldtime surgeon views the many new operations and methods of treating wounds which have of late years come into vogue.

His comment, for instance, on Alexander's operation for shortening the round ligaments is probably just. "It seems to me incredible that any person who has acquired even the rudiments of surgical science should perform an operation so unsound in theory and plainly so unsafe in practice." He is not yet ready to give Lister full credit for all he has done, for while he acknowledges that a great advance has been made in the treatment of wounds, still he attributes the results to other causes and denies the baneful action of the aerial infusoria.

The high standing of the author renders an opinion as to the value of the work entirely unnecessary.

**MILK ANALYSIS AND INFANT FEEDING.** A Practical Treatise on Examination of Human and Cow's Milk, Cream, Condensed Milk, etc., and directions as to the diet of young infants. By ARTHUR V. MEIGS, M. D. Phila.: P. Blakiston, Son & Co. San Francisco: Wm. S. Duncombe & Co.

A subject of truly great importance, and one of almost constant debate. This little book gives the results of the author's long and careful study.

The chief result arrived at appears to be that human milk

contains much less casein than is generally supposed, namely, about 17.

On the question of condensed milk the opinion is expressed that it cannot continue very long to be used as an article of diet, for "there appear only two possible reasons why condensed milk should be better than fresh milk as a food for infants—one, that it has been cooked, and the other, that there has been a large amount of cane sugar added." The author thinks that it holds its high reputation from the fact that it contains so little casein.

The book is most worthy of the attention of the general practitioner, or of any one who has the directing of the food of the artificially-fed babe.

**A MANUAL OF SURGERY.** In Treatises by Various Authors. In three volumes edited by FREDERICK TREVES, F. R. C. S., Surgeon to and Lecturer on Anatomy at the London Hospital. Vol. I., General Surgical Affections, the Blood-vessels, the Nerves, the Skin. Vol. II., the Thorax, the Organs of Digestion, the Genito-Urinary Organs. Vol. III., the Organs of Locomotion and of Special Sense, the Respiratory Passages, the Head, the Spine. Duodecimos, 1866 pages, 213 engravings. Per volume, cloth, \$2. Philadelphia: Lea Brothers & Co., 1886.

Because of their small size, these volumes form very convenient pocket companions both for students and practitioners, and, the list of authors comprising many of the most eminent surgeons of the British Isle, we have no hesitation in recommending the work to our American brethren. It treats concisely, but clearly, of the clinical, diagnostic and therapeutic aspects of surgery. The general principles of operative surgery are dealt with, but the technical details of the various procedures, except such as concern special operations, are omitted. It cannot take the place of larger treatises, but, with them, it will be found very valuable.

**ACNE, ITS ETIOLOGY, PATHOLOGY, AND TREATMENT.** By L. DUNCAN BULKLEY, A. M., M. D. Physician to the New York Skin and Cancer Hospital; attending physician for skin and venereal diseases at the New York Hospital, Out-patient Department, etc. New York: G. P. Putnam's Sons. San Francisco: Wm. S. Duncombe & Co.

The large experience of the author both in the dispensary and in private practice, and also his previous contributions to the literature of skin diseases are, of themselves, almost enough to recommend the above mentioned treatise. The introduction of illustrative cases is a marked improvement on the author's treatise on eczema. The treatment of the several forms of acne is given with the utmost attention to detail. The author view-

ing the disease as being often the expression of a constitutional taint, or an error in function of some distant organ, as for instance the alimentary or genito-urinary systems, has regulated his treatment to meet these cases.

We would here like to draw attention to the treatment of acne instituted by Dr. Sherwell of Brooklyn, by means of the cold urethral sound. Dr. Mahlon Hutchinson of Chicago reports in the *Medical Record*, N. Y., of May 29th, 1886, a number of cases of acne successfully treated by this method.

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THE TREATMENT OF FISSURE OF THE ANUS WITHOUT OPERATION.—Mr. A. D. MacGregor ("Brit. Med. Jour.," Feb. 27, 1886) states that he has had perfect success with the following treatment: He first moves the bowels thoroughly with castor oil and rhubarb, and then gives an enema of Condy's fluid. The anal speculum is now introduced, and the fissure painted with a solution of chloride of zinc, twenty grains to the ounce. A piece of lint covered with boric acid ointment is next introduced within the anus, and the patient's bowels are confined, only liquid food being given. The after-treatment is equally simple, consisting of occasional applications to the anus of lint covered with a powder composed of half a drachm of boric acid and an ounce of violet powder. There is said to be but little pain during this treatment.

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ALBERT, of Vienna, reports two cases of transplantation of nerves:

Case I. Woman, aged 40, a piece of the entire thickness of the median nerve excised on account of sarcoma, which was immediately replaced by a piece of nerve  $1\frac{1}{4}$  inches long from the lower extremity of a man in whom amputation was performed at the same time. Wound healed by first intention; patient discharged on the tenth day. Does not know if conduction was re-established, as patient has not been seen since.

Case II. Male, aged 61; a four-inch defect of the ulnaris was replaced by a similar piece from tibialis posticus, which, during translation, was kept in  $\frac{1}{2}$  per cent. sol. of sod. chlor. kept at blood heat. On sixth day nerve became necrotic, and was discharged from wound.—*Centralblatt für Chirurgie*.

## Extracts.

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### **Report of Dr. Edward Arning to the Board of Health.**

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HONOLULU, H. I., November 14th, 1885.

*To His Excellency W. M. Gibson,*

*President, and the Members of the Board of Health.*

SIRs:—At the request of the President of the Board I furnish you with a report as to the course of investigation carried on by me with regard to leprosy.

The general headings under which the work is being conducted may be classified thus:

- I. Clinical.
- II. Pathologic—Anatomical.
- III. Special bacterial research.
- IV. Therapeutic.
- V. Hygienic.

All these different classes of work have had an even amount of attention bestowed on them, which I will try to outline in the following, without of course going into details, which have found and will find their place in medical publications.

I. The clinical work embraces:

Inquiry into the general historical features of the disease and into the history of the disease in the individual. I have here encountered great difficulties, and am afraid have wasted time and patience in trying to derive reliable information from the Hawaiians. Lack of observation of their personal health and willful deceit are so mingled with truth in their statements, that I defy anybody to collect reliable statistics, such as on which it might be possible to base proofs for hereditary or congenital transmission of leprosy on these Islands. Of course I do not deny that good anamneses may be obtained in some cases, but to base theories on this kind of evidence alone must assuredly lead to fallacy.

The second part of the clinical work pertains to the symptoms of leprosy as we find them on these Islands, and their similarity or dissimilarity to the symptoms described in the accounts of the observers at other times and in other localities. The practical drift of this comparative symptomology, as I may term it, is perhaps not quite obvious, although none the less important.

All endemic and epidemic diseases are apt to modify their character and appearance with time and circumstance. General experience goes to show, that milder forms follow the more malignant type and may be welcomed as indications that the disease has reached its acme. Certainly this applies more strictly to epidemics of acute character, but due allowance being given for time it holds good also for the chronic infectious type of disease.

Now there seems to me to be no doubt that a great number of cases are to be found on the Islands, which present and often have presented for years only one or two symptoms of leprosy, mostly belonging to the group of leprous nerve lesions. I style these cases *abortive leprosy* and I venture to hope that they may be hailed as signs of a decrease of virulence of the disease in general.

I have bestowed particular attention on the symptoms of these initial and abortive cases, as the diagnosis of leprosy is of course a terribly severe one and more liable to be disputed in these cases than in the advanced stages. Full notes have been taken of all these cases and will be of importance in a number of years hence, when I shall try to gain new information about them and see whether the leprous virus was only dormant in them or actually exhausted.

Of the value of these cases for therapeutic action I shall have to say more hereafter.

A great number of lepers was examined as to the presence or absence of the *bacillus lepræ*. The results I summarize as follows:

1. The bacillus is found plentifully in all nodules of the tubercular cases, and likewise in the diffused swellings of the skin in the tubercular cases.

2. It is found in similar quantity in the nodules and diffused infiltrations of the mucous membranes of the mouth, throat, nose, rectum, and large intestine.

3. In cases of softening and breaking of these nodules the bacillus is mixed with the discharge in great quantities. The presence of sores in the mouth, throat and nose causes large numbers of bacilli to be contained in the saliva and the mucous discharge from the nose. In leprous diarrhœa, which closely simulates dysentery, but which I have been able to trace to leprous, not dysenteric ulcerations of the bowels, I have been able to detect the bacillus in the fœces.

4. In the so-called anæsthetic cases the bacillus is not found in the anæsthetic patches nor in the chronic sores of necrotic parts of skin, tissue, and bone, but, as nerve excisions have proved to me, in the nerves supplying these mutilated parts with vitality.

5. The bacillus can not be found in the bright red patches so frequently ushering in the first formidable attack of the disease and mostly occurring on the face. These patches are always located in the distribution of some larger nerve and are seats of local vasomotoric congestion based on leprous disease of this nerve.

6. The bacillus can not be found in the urine of lepers, which is accredited by the Chinese to be the infection-carrier *par excellence*.

7. The bacillus as such can not be found in the blood, not even during the febrile attacks marking the progress of the disease. As it has of late been asserted by different observers that the blood contains the germ, particular care has been bestowed on this point. Their statement must be due to the fact that in obtaining a drop of blood for examination, the bacilli have got into the blood by not carefully selecting a healthy spot of the skin in pricking for blood, but going through diseased tissue and getting some of the bacilli contained in this tissue mixed with the blood.

For all that, the germ may be contained in the blood, more especially during the febrile attacks, possibly in some hitherto unknown but suspected form of spore-condition, a stage of the life of a bacillus. These suspected spores may not be visible either on account of their minuteness, or which is more likely on account of our inability to make them visible by the staining methods we use in searching for bacteria.

As this is a most important point for the whole question of the spread of the germ, I have applied myself most assiduously to its investigation by devising new staining methods and employing the highest magnifying powers at our command, also by culture experiments with blood, taken from lepers during their febrile attacks, with the idea of making the spores, which I consider it likely to contain, grow into fully developed bacilli and become visible as such.

At present I must confine myself to the statement, that the blood of lepers, if taken with all due precaution, does not contain the bacillus.



8. It has been noted before by Danielson and Boeck, the Norwegian observers, that leprous ulcerations of the nose occur in anæsthetic cases, which otherwise present no ulcerations. I have met with this peculiar condition in two cases; one that of a Portuguese, who had brought the disease with him from the Azores, and the other that of a young Hawaiian girl. These cases being otherwise not very advanced and decidedly not repulsive looking, were discharged from the Branch Hospital. But I must consider these cases a great deal more dangerous than their general appearance would lead to believe. I was surprised to find in both cases the discharge from the nasal sores full of the bacillus.

Next to this microscopical work in relation to the clinical aspect of leprosy, my attention was directed to the peculiar features of *leprous anæsthesia and paralysis*.

They have been examined under the heads of distribution, intensity, and mode of progress, and as to their spinal or peripheral origin. For these particulars we have to rely mainly on the modern teachings of electro-diagnosis. Let it suffice to say here that I consider all these troubles due to leprous diseases of peripheral nerves, and that I believe the distinctions found in this respect between leprosy and the great number of other diseases of the nerves, spinal chord and brain will enable us to pronounce with more confidence on the nature of what it is here customary to call suspicious cases.

The different appearances of *muscular wasting and contraction* have been studied in comparison to similar symptoms of other neurotic diseases. The advanced or I may say completed stage of this muscular derangement is not so very far different from similar troubles due to other nervous lesions, such as rheumatic, diphtheritic, traumatic, etc., whereas the beginning presents more salient features, which will, with due regard to accompanying symptoms, enable us to specify the particular disease as leprous or not.

But this muscular crippling being largely due to mechanical causes is decidedly not as characteristic as the *bone disease* of leprous origin. The mode of attack, the privileged seats of caries and necrosis and the resulting crippling are decidedly one of the most peculiar features of leprosy, and most strikingly different from bone disease due to osteomyelitis, syphilis, and tuberculosis. As such they claim a particular share of our attention, more than they have hitherto found.

A large number of photographs and plaster-casts have been taken of cases selected at Kakaako and the Molokai settlement to substantiate these experiences and to serve as illustrations for future publications.

A certain amount of attention and study has furthermore been accorded to *diseases of more external nature*, presenting any resemblance to leprous lesions and occurring both independently and in company with leprosy. As such I mention *pigmentary and parasitic skin diseases*. A very troublesome affliction of this nature, unknown to the Hawaiians, has been introduced by the Gilbert Islanders, among whom it is quite common. I have seen a pure Hawaiian, who is married to a Gilbert Island woman, suffering with it. He had been subject to it for years and was looked upon by some as a suspicious case of leprosy, but I have since been able to cure him entirely with simple applications of chrysophanic acid. The true scabies or itch, due to the insect *Sarcoptes hominis*, is exceedingly prevalent at Molokai and will be hard to eradicate there under existing conditions, just as we are not able to eradicate it in large cities. I have successfully stamped out a small epidemic of it at Kakaako, and great watchfulness will be further needed. Only quite recently a hideous looking case of tubercular leprosy in a 7 year old boy was brought to the Branch Hospital. A great part of his hideousness was due to inveterate itch, and this trouble caused him a great deal more pain and discomforture than his leprosy. It was of course easily cured and had to be done so at once on account of its eminent contagiousness.

In the foregoing I have attempted to outline the clinical part of my work. In case the board desires it I will condense the results into the form of a schedule which may serve as a guide for examination of doubtful cases.

## II. Pathologic-anatomical work:

Here I can confine myself to closer limits. I have been able to make seventeen post mortems of lepers which have given me much valuable opportunity to study the anatomy of the disease and have enabled me to make some important discoveries regarding the diffusion of leprosy through the internal organs. For this reason I deeply deplore that lack of support by the board has put a stop to this most intrinsic part of my work since last spring.

In all advanced tubercular cases I was struck with the ex-

treme frequency of grave changes in the larger viscera, more especially in the lungs, liver, spleen and bowels. These organs presented an aspect quite new to me, and closer examination of their tissues has enabled me to prove that we have been mistaken in attributing deaths of lepers to intercurrent pneumonia, tubercular phthisis and dysentery, which were simulated by the clinical symptoms. The ulcerations of the bowels and the breaking down of lung tissue are due to leprosy infiltrations, and we shall have to modify our opinion of leprosy, being mainly a disease of the cutis and peripheral-nerves, and introduce terms such as phthisis leprosa and enteritis leprosa, etc.

As far as the brain and spinal chord were examined I found them unaffected, but they will yet have to find a very close and searching microscopical scrutiny. This applies generally to the material collected from the post mortems and preserved in different ways.

III. The *bacterial research*, i. e., the question of etiology of leprosy, is another most essential part of my investigation, and at the same time the most subtle and delicate. No one who has not tried himself at this particular kind of modern research is able to judge of its many disappointments, its dependency on apparently insignificant particulars, and the difficulties which crowd upon you when you are working outside of the accustomed laboratory with its always handy intelligent help and never failing supply of requisites.

The line of experiments embraces:

1. Search for the germ of leprosy in the air, water and food.
2. Attempts to breed it outside of the living organism on artificial soils, employing the greatest variety of composition of soil and different grades of constant temperature.

Of soils I have used:

1. Koch's meatpeptonegelatines of varying strengths.
2. Gelatines made of seaweed and meat.
3. Gelatines made of seaweed and fish.
4. Bouillons of meat and fish.
5. Sterilized and solidified serum of blood taken direct from the carotid artery of bullocks and sheep.
6. Vegetables, solid and in decoctions.
7. Poi.

After being sterilized, i. e., freed by high temperature (steam and dry heat) of any germs they may accidentally contain, these

soils are implanted in sterilized containers with the leprous germ and kept for weeks together at constant temperature in the incubator and carefully watched day by day.

Until now the results of this work are altogether negative. Under all the varied conditions I have not once succeeded in obtaining an independent and pure growth of the bacillus lepræ.

Parallel with these culture-experiments on artificial soils, a large number of experiments were conducted to grow the germ in living tissue. For this purpose I have procured and inoculated a variety of animals at ages ranging from a few days old to grown up beasts, rabbits, guinea-pigs, rats, hogs, pigeons and a monkey. They were inoculated in and under the skin, in the cavity of the abdomen, under the conjunctiva of the eye, in the anterior chamber of the eye, and in the ulnar nerve, mostly with small pieces of leprous tubercle excised under antiseptic precautions.

I have been able to follow up microscopically the presence of the bacillus lepræ at the spot of inoculation for months after the introduction, but have not in a single instance been able to observe any general symptom of leprosy.

The negative results of all this work are not valueless and discouraging. On the contrary, they act as a stimulus for further research. I am not in the habit of drawing hasty conclusions, especially from negative evidence, but as from well proven analogy with kindred diseases we know that the bacillus lepræ is the etiological factor of the malady and as we find it impossible to discover or grow this bacillus outside of the human body, but find it in immense numbers and rapidly increasing in the human body, we are naturally driven to the following conclusions:

1. The bacillus lepræ is a parasite limited to the human race.

2. It must be transmitted either directly from individual to individual, or

3. Run through a stage of intermediate life (spore condition) which we are at present unable to detect for reasons given above (on page 6 of this report), but which may be present in the soil, water or food, but can only get into them from the diseased tissue of a leper.

4. Accepting either theory, the direct or indirect transmission, we must look upon every individual leper, whether in the

incipient or advanced stage of the disease, as a dangerous focus of the malady, he multiplying and nursing the germ in his tissues.

5. As every seed requires its peculiar conditions of soil, atmosphere, etc., to allow it to strike, and when struck to grow up to be itself a seed-bearing plant, so does the leprous germ require a certain disposition of the human soil to strike and thrive. What this peculiar disposition may be, we are at present unable to define. It is evidently a disposition which may exist concurrently with apparent good health, as many examples of strong, robust men developing leprosy show us. This disposition may possibly be transmitted by heredity. I desire not to be misunderstood on this particular point. I do not believe that leprosy itself is in any case congenital, but I do believe that a certain weakness to resist its attacks may be transmitted.

I have hinted at similar ideas in the motives accompanying my application to His Majesty's Privy Council to be allowed to perform some *inoculation experiments on the condemned convict Keanu*. The application I made resulted in the sentence of death passed on the murderer being commuted to penal servitude for life. With the prisoner's written permission I commenced operations on the last day of September, 1884, after having previously made a most searching inquiry as to any leprous taint in his family and a close examination of his own body. This examination satisfied me that, as far as I am able to judge, no trace of the disease could be found in him at that time. A further step was to ensure that the prisoner would not be employed at work outside of the prison walls.

As stated above, I inoculated Keanu on the 30th of September, and for the four weeks following I saw him daily, and after that once a week for several months, a microscopic examination of his inoculation spot being made every time. After that period the convict has been examined by me regularly one or twice a month. The microscope revealed the presence of the bacillus lepræ in large numbers until the middle of March, 1885. They have since gradually diminished in number, but a recent excision of a small part of the scar shows them present even yet, *i. e.*, nearly 14 months after the inoculation.

At the same time there is nothing in the general appearance of the convict which would denote any development of leprosy. Pains in the joints of the inoculated arm, from which Keanu

suffered in January and February last, have since disappeared. To the foregoing I wish to add the following remarks:

1. I do not consider my experiment with Keanu concluded or mature for scientific publication.

2. Even if future observation should show us no trace of leprosy developing, we would not be able to infer more from the experiment than that in this case inoculation proved ineffectual.

3. I have given this account of the experiment to Your Excellency and the Members of the Board of Health to allow you to judge of the spirit in which it is being conducted.

4. Moreover I have been induced to do so by recent perfectly unauthorized publications of Dr. Fitch in a California medical journal, as a protest against the thoroughly unprofessional conduct, with which this author, who could only gain knowledge of my doings in an underhand manner, has brought my name and work forward in support of his own unproven assertions.

5. I take the same opportunity to protest against the narrow arguments used by the same author as far as this subject of inoculation goes. He cites my name and an ordinary post mortem blood poisoning which I acquired at the post mortem of a leper, as a proof of the non-possibility of inoculation of leprosy. It would be a very bad thing indeed if all the cases of common, local or general septic poisoning at a post mortem should result in our acquiring the disease the patient was subject to.

Vague statements of this nature do not deserve and would not find an answer from me in a scientific publication, but as they are put forward with the intention of captivating the mind of the general public, and are, as bold and positive assertions, more apt to do so than the often restricted and guarded utterances of calm independent observation, I have given them this brief consideration in my report.

Closely allied to the inoculation question is the subject of vaccination. You are doubtless aware of the very prevalent opinion among medical men that the unusually rapid spread of the disease may be attributed to the great amount of indiscriminate vaccination which has been carried on in these Islands. There have been, if my information is correct, unquestionably new centers of leprosy developed after vaccination was practiced and several old inhabitants have told me, how they themselves used no precaution whatever in vaccinating during a small-pox scare, but brought the lymph directly from one arm to another, without even wiping either points or lancet.

To bring some light on this moot point, I vaccinated a number of lepers. The vaccination only took in three cases, one tubercular and two anæsthetic. Both the lymph and crust of the tubercular case contained the bacillus lepræ. In the anæsthetic cases I could not detect it. As the vaccinations are now conducted by medical men and with bovine virus it may seem to be perfectly superfluous to dwell any further on this point, it apparently only presenting historical interest. But recent experience causes me to advise the Board not only to supply its medical officers with animal vaccine and points, but also to issue strict regulations as to the manner how this virus is to be used. If the lancet is dipped into the virus, then into the arm, then again into the virus and the next arm, or if points used for one vaccination are recoated for further use, as physicians of the other Islands have at my special inquiry owned to do, then the use of bovine virus gives us no safe-guard whatever against the propagation of constitutional disease by vaccination. The main point is the thorough disinfection of the lancet after making one vaccination and before dipping it into the lymph for the next arm. This is easily obtained by heating the point of the lancet in a spirit-flame to a dull red heat, and it forms a main part of the instructions issued to the Government physicians in Germany.

Another point which has been raised is the possibility of the leprous virus being conveyed by mosquitoes. I am at present occupied with investigating this subject. The elephantiasis of the tropics, a disease which is happily unknown here, has lately been traced to propagation by mosquitoes and by these solely.

#### IV The next of my headings is that relating to therapeutics.

As this is one of the practical sides of the question and one in which the general public naturally takes the greatest interest, as it considers it more within its scope than the rather distant etiological and pathological studies relating to leprosy, I beg to be permitted to begin with some general remarks on this subject.

All our therapeutic action may be classed either as *specific* or *symptomatic*. Looking on disease as a weed which grows in the fertile soil of the body, we may say that with the former we aim to strike at the root of the weed, whilst with the latter we only lop its branches and keep its growth in check.

There are very few diseases where we can rely entirely on

specific treatment, the most notable being syphilis, malaria and acute rheumatic fever. For these three diseases we possess in mercury and iodine, quinine and salicylic acid, respectively, real specific medicines, and if by their aid we have been able to restore a patient suffering from either of these troubles, we may say he has been cured by these medicines.

On the other hand we have a vast number of diseases where we have to rely on symptomatic treatment, *i. e.*, mainly alleviate pain, ward off external danger and keep up the power of the body, so that it may rally to healthy reaction and cast off the disease by its own efforts. This applies to all our acute zymotic diseases, the eruptive fevers, smallpox, scarlatina, measles, etc., to the various typhoid fevers, to cholera, dysentery, etc., and very nearly to all chronic diseases, foremost to consumption, the scourge of our age, and as yet to leprosy.

We have no specific for leprosy, nor has any man of any other country or nationality. Scientific medical information reaches too far now-a-days, than that any agent of this kind should be known by an individual and kept as a secret. Anything put forward in that way without being published through the regular channels must be regarded as quackery and nothing else.

Anybody who is read in the subject of leprosy, in fact any remoter medical literature, will be struck with the amount of attention bestowed on the therapeutic portion in those writings. The tendency of our age is to simplify therapeutic action as much as possible, and not experiment empirically, but bring therapeutics within the rational limits of physiology, etiology, and pathology. There is scarcely a drug in the pharmacopœia, at least scarcely a class of drugs, that has not been most systematically tried in the treatment of leprosy. Over and over again men of sanguine temperament have found what they called a *specific* cure, but in every instance calm and unbiased judgment has afterwards pronounced a verdict of uselessness.

How is it that these facts are not accepted, and a different line of therapeutic attack inaugurated?

Let us pay more attention to careful *symptomatic* treatment of leprosy.

Even the advanced cases we can help and benefit a great deal more than is generally believed. The great number of incipient cases will furnish us opportunity enough to try new lines of *specific* treatment.



Let the scourge this nation is subject to be turned into as much good as possible, and let arrangements be made (for it is not feasible under the present circumstances) to let at least a limited number of advanced patients be benefited by modern medical and surgical progress. On the other side let the incipient cases be divided into classes, and treated systematically on different principles, but under one general management and observation.

I beg to refer you to my first report, written for the session of the Legislature of 1884, I have already there dwelt on this point, and I am happy to say not without results. My suggestions of a home for suspected and incipient cases and of regular medical school examinations have been carried out and order and cleanliness prevails where there was an acknowledged bad state of affairs before 1884. But if you ask me whether enough has been done to be able to say to the world that all is being done for the lepers that can be expected and in a model way for other nations looking with fervent interest to Hawaii's fight with leprosy, I must say no. The therapeutic side, the treatment, is neglected. I have been told that my views are too advanced; I answer, that I am proud of it and that I consider nothing can be too advanced in the treatment of a question which has been grappled with for centuries in the old style of isolation and feeding.

What I have repeatedly applied for is a small hospital ward within the Kakaako enclosure, with, say, no more than six or ten beds, but managed separately from the general settlement. This hospital should have a nurse and a servant attached to it, and to it exclusively, have arrangements for hot and cold and permanent baths, steam bath, etc., and ought to be fitted with all the necessities of clinical research and medical, surgical and electrical treatment. The patients would be selected from the general flock according to the wishes of the physician put in charge of this trial station. Then the journals which would have to be strictly kept of every case would be able to contain all that accurate information without which modern clinical work is considered incomplete, and which it is impossible to gain under existing circumstances. Then electrical treatment, which is undoubtedly of great, even surprising, benefit, could be carried on, and surgical operations, such as removal of necrosed bone, stretching of nerves, cutting and stretching of contracted muscles

and sinews and operations on the eye and other important organs be carried on with more view to success than is possible at present, where no arrangements of any kind are made for all this at the Branch Hospital.

Therapeutic results I have achieved, under less favorable circumstances than those enumerated would offer, urge me to renew this request.

After these general remarks I will in a cursory way state the methods of treatment I have adopted for different classes of lepers, native and foreign, some treated at Kakaako, some as outside patients. Some 60 cases I find in my private books which I look upon as either fully developed and progressive, or abortive, or incipient, or suspicious cases of leprosy. A number of them have since been received at the Branch Hospital, a number of foreigners have left the country, others I have lost sight of, and some few I consider so far benefited by continuous treatment, that I might doubt their being afflicted if I did not find the record of their previous state in my books.

Since about a year I have found in the external use of salicylic and pyrogallic acid agents of undoubted value for symptomatic local treatment. With them it is possible to destroy leprous tubercles and soften diffused leprous infiltrations, sometimes even to restore a portion of the feeling lost over these infiltrated patches. Especially the conspicuous red patches which usher in the commencement of tubercular leprosy, and often stand for years without fading, subside readily under local treatment with an ointment or paste containing 10 per cent of salicylic acid. Isolated tubercles and serpiginous leprous papules have been entirely removed with a strong solution of pyrogallic acid. For the diffused leprous infiltrations, I use a 10 per cent solution of salicylic acid in oleic acid. Internally I have used either nothing, so as to be sure that the disappearance of the symptoms was due to the local applications alone, or salicylic acid in large continued doses. I have certainly seen fresh febrile eruptions occurring during this treatment, but in several cases a decided improvement, even when used without any local treatment.

Special reasons induced me to try a very active *sulfur* treatment in one case. Sulfur was administered internally as hyposulfite of soda, and the patient was subjected to a sulphurous acid gas bath every day for one hour. The more pronounced

tubercles of the face were at the same time treated with compression and deep local injections of absolute alcohol, which caused prompt breaking down and cicatrization of the tubercles. This method I have since discarded for the more efficient and less painful pyrogallic acid treatment. I am sorry to say that this patient whom I had under perpetual treatment for a full year, and who was one of those put under my special charge by the Board of Health, was, like two other patients of this particular lot, removed from the Branch Hospital without my knowledge. Such steps are naturally not inclined to promote scientific work.

In deciding the advisability of their removal I might at least have been asked, and my reasons for retaining them weighed with those which prompted the action of the Board.

The much abused *mercurial* treatment has been used both as a general and local application. For the general treatment I have relied chiefly on hypodermic injections of corrosive sublimate, a centigramme of the drug being injected daily. In one case of a well educated native man, who has been under my treatment for nearly two years, I have given two courses of these injections, one of a hundred, and the next of sixty, without any trouble, although the injections are a little painful. His enlarged ears were treated with excisions, and deep scarifications, and an anæsthetic spot on the back and the anæsthetic big toe of his left foot were successfully treated with electricity. The patient now feels that he has regained his lost strength and mental activity, looks hale and hearty, and would pass very close scrutiny without being considered in any way suspicious. For all that I do not for a moment pretend to have effected a lasting cure, that remains for time to prove, nor do I feel inclined to let the patient go without further treatment, though he is apparently in vigorous health. He is at regular periods taking small doses of mercurials and should go on with this for a number of years.

In another case of a rapidly progressing mixed form, the quick course of the disease has changed to a slow progress after eighty hypodermic injections of corrosive sublimate. I am sorry to say that this is one of the cases taken out of my observations at the Branch Hospital. The anæsthetic and contracted hand was steadily improving when I was treating it electrically at my office. This had to be discontinued when the patient was re-

moved to the Branch Hospital, no appliances for this purpose being provided for there. Since her dismissal, she is under no treatment whatever, but as I hear in the family way, and losing the improvement she had gained in her hand. In other outside cases I have used *creosote* and *carbolic acid* treatment, the former in pills, of which Dr. Hillebrand speaks very highly, the latter as hypodermic injection. In only one case did I see marked effects. In this local injections of a 5 per cent. carbolic acid solution were used and restored color and feeling in a white anæsthetic spot on the cheek. *Iodide of potassium* failed entirely at my hands.

*Electrical treatment* was used in quite a number of anæsthetic cases, and when persevered in long enough, proved very efficient. One patient especially, a white man, who had several anæsthetic patches on the arms, has recovered entirely. He has at the same time been taking from  $1\frac{1}{2}$  to 3 grammes of salicylate of soda daily for a whole year. Another patient, a native woman, who had, besides other symptoms, a nearly complete anæsthesia of the left arm and contracted useless hand, for over 10 years, is now enabled to stretch her fingers and use them for needlework, the feeling being completely restored in two of the fingers. The treatment in her case has extended over nearly 18 months, and very high doses of *arsenious acid*, up to 9 centigrammes daily, have been taken internally, the patient standing this drug extremely well, whilst from some other experiences I have learned to be extremely cautious with this drug in the treatment of leprosy.

The very distressing symptoms on part of the nose, mouth and throat, which are in the general run of the treatment of leprosy all helped to a gargle and nothing more, deserve especial attention for several reasons:

1. There is nothing so apt to run down the appetite, and with it the general health of the patients, as the continual swallowing of putrid matter from festering sores of these parts.

2. The discharge from these sores, containing the bacillus in great numbers, as stated above, there is sufficient ground to believe that like in similar cases of tuberculosis the above specified leprosy ulcerations of the bowels are caused by self-infection from swallowing the pus secreted from these sores.

3. The heavy breathing and hoarseness, the disgusting smell and the ever abundant secretion, make these patients doubly loathsome and dangerous.

My experience teaches me that these ulcerations are especially uncurable to local treatment. The daily application of antiseptics, caustics, and astringents, as the case may require, the fixing of ointment tampons, the use of medicated sprays and steam inhalations, all this can be used with much success and ought to be used in a hospital for lepers.

Similar arguments relate to the treatment of the diseases of the *eye*, so common in leprosy. I firmly believe that early operations for leprous nodules on the conjunctiva and for leprous iritis will rescue a large number of the unfortunates from inevitable blindness, and the paralytic dropping of the lower eyelid, which so commonly leads to loss of vision in leprosy, may just as well be benefited by plastic operation as it is in facial paralysis from other causes.

But to effect all this, and a great deal more which I will not detail, there is required good will on all sides. On the part of the physician it must be brought, and on the part of the patients it will have to be courted and enforced by more vigorous support of the medical work by the Hospital Board, working in concord and with the advice of the hospital physician.

I now draw to the close of this report with a few remarks as to

#### V. *Hygienic measures.*

I will skip the commonplace, but, nevertheless, all important subject of general sanitation and improving the social habits of the people, and try to give some more definite points.

Traveling round these Islands to gain information on these subjects I found in some parts, especially so in parts of Kauai and Maui, more lepers at large and in unconstrained intercourse with the healthy population than ought to be under the present laws. Now I do not think it possible for the Government to take charge of all the lepers, but as long as the powerful law of segregation is in force let it be brought to bear on cases which are really complained of as public nuisances. I have intentionally visited the remotest gulches and corners where but few white men penetrate, and have found more bad cases of leprosy than I expected. Perhaps it may be just as well to leave these poor wretches in their homes where they are just as much or more out of the way than at Kakaako or Kalaupapa, but there is an important point to consider. Pent up with these bad cases in their squalid huts and houses are apparently

healthy children. These ought to be removed, for they are the future and hope of the Nation. And not alone the girls, but also the boys should be removed, especially so as old and new statistics point to a prevalence of leprosy among the male sex.

But one thing must be avoided, if we accept the theory of disposition in children of leprous parents. We must keep these out of harm's way even more carefully than other children whose families are free from the taint.

I know that it is acknowledged by Your Excellency and the members of the Board that the Kapiolani Home is not in its proper position, and that only the most pressing circumstances have necessitated the selection of the present site.

From my point of view, I must stand by my original proposal to have the Home out of sight and reach of the Leper Asylum. If we want to keep the possibly disposed systems of the children free from the disease, the first step should be to remove them as far as possible from it and not to taboo them within the walls of a Lazaretto.

The next point touches the vaccination question, with which I have dealt at length under the heading of experimental work, I would further urge that the *medical examinations of school children* which has led to the elimination of quite a number of cases, should be kept up regularly and carefully. As an instance of their necessity, I may quote a case which has quite recently come under my observation. A little girl (native) belonging to one of our large schools passed my close examination a year and a half ago as healthy, but now presents initial symptoms of leprosy. We must not rely on general healthy appearance in these examinations, and on a furtive glance at face and arms. I have found unmistakable marks of leprosy on the back of a child that held a recent health certificate. Moreover, we shall have to extend our examination even to very young children, in spite of Dr. Fitch's assertion that leprosy does not make its appearance before the period of second dentition. I have seen a child with clear signs of leprosy at 3½ years of age, and know of another boy who was a marked case at four years old.

As this country has to rely on *immigration*, mainly coming from countries where leprosy is endemic, *i. e.*, China, the Azores and Japan, considerable care ought to be exercised in guarding against new cases of the disease being imported from there. I

know of two unquestionable cases of leprosy having come here from the Azores, the one was the Portuguese man mentioned above, the other a young Portuguese girl who immediately after her arrival, half a year before I was asked to examine her, obtained a position as nurse in one of our best families.

Altogether it is deplorable, though perhaps inevitable, that these Islands, with their terrible abundance of leprosy, should be repopulated by the very nationalities who seem to have not yet overcome a disposition to the disease as much as other races.

There are two more points I wish to bring again before you, one of more local, the other of general and scientific importance. Both have been subjects of previous memoranda to the President of the Board.

The first applies to the necessity of furnishing a *wash-house* at the Kakaako Hospital to obviate the certainly unpermissible practice of some of the lepers sending their soiled clothing out to be washed.

The other relates to the *disposal of the dead bodies of lepers*. To make this report complete, I shall here insert the text of my previous communication, sent to the President of the Board in June last. Copy:

*To his Excellency W. M. Gibson, President of the Board of Health.*

SIR.—I beg to submit to your Excellency's consideration the following facts which I have recently discovered with regard to the power of resistance of the leprosy germs to putrefaction. I communicate this result of my work immediately to you, because it seems to me to have a direct practical bearing toward public sanitation.

A series of experiments in this line were commenced in October, 1884. Leprous tissue and matter was set aside under conditions of temperature and moisture, most conducive to slow and thorough putrefaction, whilst the growth of the larger fungi was at the same time carefully excluded. From time to time a microscopical examination was made, and the characteristic bacillus lepræ was not only found to hold its own against the germs of dissolution and putrefaction of albuminous matter, but met with so abundantly and laden with spores that the idea suggested itself, there might be actual increase. An examination made a few days ago of the remains of this leprosy tissue set aside fully eight months ago, shows it to consist nearly entirely of swarms of the bacillus lepræ, closely packed. Every

vestige of the cellular and fibrous structure of the tissue has disappeared, even the bacteria of putrefaction have crumbled up into a mass of detritus, but the bacillus lepræ is there with all its peculiar micro-chemical reactions.

The discovery prompted me to examine dead bodies of lepers under the ordinary and natural influence of decomposition. Not being able to acquire the desired corpse here, I went to Molokai and succeeded in procuring parts of the body of a tubercular case which had been buried for nearly three months and was in the most active state of putrefaction. After what I had learned from my experiments, I was not surprised to find the leprous germ present in large numbers.

I candidly admit that I am not yet able to give a decisive answer to the question whether these germs are alive and capable of reproducing the disease. This final question will not be solved till we have been successful in artificially cultivating the germ, a result which none of us who are engaged in this question, have as yet achieved. However I feel personally confident, from the microscopical evidence alone, that they have not lost their power of germinating under the above named conditions. At any rate it seems to me desirable to effectually bar even the possibility of a spread of the disease through the slow decomposition of the dead bodies of lepers in the grave yards surrounding the town. Cremation would certainly be the surest safeguard, but as that can hardly be achieved, I suggest the compulsory filling up of the coffins containing the corpses of lepers with quicklime. To secure this end, I deem it necessary to stop the practice of letting friends and relatives take away the dying lepers to their homes, as has recently been done in several cases.

ED. ARNING, M. D.

Thus far goes my previous communication on this subject. Let me close these observations and suggestions relative to the hygienic side of the question with the following general appeal:

Increasing familiarity with a signal danger, lessens our fear of it, but not the danger itself. This applies most pointedly to our relations to leprosy. We live amongst it, and there are many of us, not only Hawaiians, but also foreigners, who have grown so accustomed to it that they not only do not heed it themselves, but by word and deed try to dispel the fear of others. This is all very well, and has its good side when it be-



comes necessary to dissipate a scare. But as long as this is absent it will be a good thing to sound a warning note from time to time, so that carelessness on the part of the population may not be the outcome of assurances of safety. Examples like those of Father Damien, who has now himself become a leper, and as such a veritable martyr to his cause, and of other worthy and pure members of the community whose names I am not authorized to mention, should teach us a lesson, and cause us all to work harmoniously and united for the one good end, to confine the dreaded leprosy to its closest limits and to help and support the poor afflicted ones with the best of our will and skill.

I remain, yours most respectfully,

ED. ARNING, M. D.

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#### **Albuminuria Treatment.**

There is good reason to believe that sometimes the access of interstitial nephritis is marked by an attack of acute renal dropsy, in the same way that fibroid phthisis may begin with an interstitial pneumonia, and osteo-arthritis with an acute illness very closely resembling ordinary rheumatic fever. But I know no means by which a certain diagnosis can be made in the acute stage, nor, supposing this to be possible, any indication for a line of treatment differing from that of acute parenchymatous nephritis, although of course the issue of the case would be much less satisfactory.

Chronic albuminuria (interstitial nephritis) is essentially a chronic disease. For many months, sometimes even years, it is often difficult to persuade the patient that his condition is one of serious, though it may be remote, danger. The indications for treatment, so far as the kidneys are concerned, are practically the same as in the acute forms of nephritis; but in fulfilling them we have a slightly different end in view, and there are certain special complications, particularly the vascular changes, against which we have it in our power to take certain special precautions.

In the earlier stages we have, not to relieve our patient from urgent though temporary symptoms, but to enable him to live with as little strain as possible upon the excretory functions of the kidneys. Diaphoretics, purgatives, and a carefully-regulated diet, especially as regards the amount of albumen con-

tained in it, are still the chief factors in our treatment; but they have to be employed continuously for long periods, and consequently their activity must be carefully adjusted, so as not to be followed by the exhaustion of the organs to which they are directed. It is impossible to lay down any rules equally applicable to all cases, or even to the same case at different periods. Each must be carefully studied, and the details of treatment directed by the individual peculiarities of his constitution. One may get more relief from judicious use of purgatives, another from that of diaphoretics. In fact we have to ascertain on what organ or function we can best rely for the discharge of an extra amount of daily work supplementary to that of the kidneys. Hot air baths, or Turkish baths, must be employed, but not very frequently; and the use of purgatives must not be such as to be followed by constipation. If the liver, as often happens, is involved in the same fibroid change, a five or six weeks' course of ammonii chloridum, provided always that it does not set up gastric trouble, is often of great service. I believe, indeed, that it is well worth while to try it, even when no change in the liver can be detected. We have to keep the general health as perfect as possible, but to do so without losing sight of the damaged state of the kidneys. Change of air, if possible to the sea-side, or a sea voyage, are potent for good, if the patient has sufficient self-control to avoid their special risks. The vascular and cardiac changes require treatment of a different kind, which, however, must not be pushed so as to endanger the general health. We have it in our power to diminish the intra-arterial tension from time to time, and in proportion to the degree in which this is accomplished we shall retard the development of that arterial degeneration and left ventricle hypertrophy which are such fatal elements in the disease.

On the whole nitro-glycerine seems to be the best drug to employ for this purpose, but in the dose and in the frequency of its repetition we must be guided by the effect. Perhaps nitrite of potassium in small doses might also be given, but I have no experience of its use in chronic Bright's disease. There is one drug which demands special mention, for it is sometimes most valuable, sometimes most dangerous, viz., iron. One of the best cardiac tonics—I had almost said cardiac foods—it finds its proper place in the earlier periods of the disease. Then, by improving the nutrition, and thus increasing the vigor of the heart, it

enables a comparatively small amount of muscular tissue to exert a large amount of force, and thus delays the advent of serious hypertrophy, and the greater the degree of hypertrophy the nearer is degeneration, with all its hopeless consequences. But toward the end of the disease, when the heart is already greatly hypertrophied, and the arteries degenerated and brittle, the incautious administration of iron gives to the contraction of the heart a power which the weakened vessels are unable to resist, and thus directly brings about cerebral hemorrhage, one of the most frequent terminations of chronic albuminuria.

Albuminuria dependent upon lardaceous disease of the kidneys may unfortunately be dismissed in very few words. Whatever be the case with interstitial nephritis, lardaceous change is always secondary to some pre-existing malady, and, except so far as it embarrasses the management of that malady, admits of no special treatment. Further, the change generally involves many other organs, some of them not less vital than the kidneys. Whatever its cause may be—syphilis, protracted suppuration, malaria, or exhausting discharges of almost every kind—it is that cause which we have to treat. The most hopeful form is the syphilitic, and in that I have seen great temporary improvement follow upon the use of perchloride of mercury and iodide of potassium, but I have never seen cure. Perhaps I might have believed that some did recover, had they passed sooner from under my observation. Most reluctantly I am compelled to place it in the class of diseases tersely described by a friend to whom, some years ago, I uncautiously disclosed my then unbounded faith in therapeutics. “Yes, these cases often get well, but the patients always die.”—*American Practitioner*.

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#### **Medical Education.**

This is the third year of the enforcement of the Board's Schedule of Requirements of Medical Colleges—compliance with which is necessary to entitle a school to “good standing” for the purposes of the Medical-Practice Act. The general results of this enforcement have already been set forth, and are claimed to be fairly satisfactory. It seems necessary, however, to call attention to a feature only incidentally alluded to in the following phrase from my last quarterly report: “A marked reduction [is shown] in the percentage of the graduates to matriculates in

some colleges where the proportion was formerly very high." This reduction is believed to be the logical result of an honest attempt by such colleges to exact a higher standard of attainments in those aspiring to their diplomas. Unfortunately it is only in "some" colleges that this attempt has been made, and last year the percentage of graduates to matriculates rose as high in individual cases as 52 for regular, 57.7 for homeopathic and 58.3 for eclectic colleges—the average of all schools being 33.3 for regular, 32.6 for homeopathic and 33.9 for eclectic, and the minimum 10.5, 17.6 and 15, respectively. It is obvious that, deducting the annual losses, a two-year school whose average percentage of graduates for a series of years is as high as 45 must practically grant its diplomas to candidates for graduation without due regard to competency or qualification. Such an average percentage must be held to be *prima facie* evidence of the worthlessness of the diploma as a proof of fitness to practice medicine, no matter what the claims of the college may be on paper. The subject is one to which I have given much thought and study, and as it has heretofore been informally discussed by the members it is suggested that it be taken up for action at the present meeting.—*Illinois State Board of Health Report.*

#### **Constitution of the Pathology of Leprosy.**

By D. VAN NOMAN.

N. treated a case of leprosy in which the period of incubation, reckoned from the probable infection in India till the appearance of a copper-colored exanthema, lasted  $3\frac{1}{2}$  years. Three years earlier, however, the patient had a morphœa spot on the right thigh, which, however, disappeared entirely. The author thinks that this morphœa was a manifestation of the lepra-infection, and thinks it to be owing to trophic disturbance of the nerves and analogous to the pemphigus leprosus.

A piece of excised skin showed large numbers of lepra-bacilli in the lymph cells as well as in the lymph capillaries.

Contrary to Neisser's assertion, that the lepra-bacilli are never seen in the thin sub-epidermal zone immediately under the rete Malpighii and over the superficial leprous infiltrations, nor between and in the epidermal cells, he found the bacilli in both these situations, although in less number, which is explained by the less active lymph circulation in these situations. The author

did not find any bacilli in the blood. He thinks, however, that new eruptions occurring far from the seat of earlier eruptions are only to be explained by supposing that the bacilli have been swept away and deposited by the bloodstream. He thinks that in the prodromal stage, when the patients have fever, the micro-organisms are in greater numbers in the blood. It were desirable, according to the author, to examine the blood during a feverish attack. Up to the present this patient has not given an opportunity for such an examination.—*Centralblatt für Chirurgie*.

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#### Public Health.

Early in March a tramp in the eruptive stage of small-pox made his appearance in the town of Carmi, White County, but the case seems to have been diagnosed as chicken-pox. A photograph of one of seven resulting cases was sent me, on receipt of which vaccine virus was ordered from Chicago, by telegram, to be sent to the Mayor, and the printed instructions of the Board concerning small-pox were forwarded. On the 7th of April, being advised that there were still doubts as to the character of the disease, Dr. Utley was dispatched to the locality. He reports three deaths and seven cases of small-pox. The town board of health, at a meeting on the 8th instant, took the necessary steps to enforce the precautions directed by the Board in Preventable-Disease Circular No. 1. The schools were ordered closed; every house in which there was a case was directed to be strictly quarantined, together with the inmates; vaccination was to be thoroughly carried out, not only in the case of all persons suspected of having been exposed, but of all those in Carmi and vicinity not successfully vaccinated within the last twelve months; and the city physician was required to make frequent house-to-house inspections in order to discover any new cases that might occur.—*Illinois State Board of Health Report*.

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THE German Government has just delegated Dr. Usselman to study the antirabietic inoculations of M. Pasteur. The *Journal Officiel* has published the 14th list of subscriptions to Pasteur's Institute. It amounts to \$4,350.55. The total amount up to date is \$113,719.13. The Sultan of Turkey has himself decided to send a commission to Paris for the purpose of studying the methods of Pasteur. M. Pasteur is to be presented with the Grand Order of Medjidie, and the sum of \$2,000, this being the Sultan's private subscription to the Institute of Pasteur.

PACIFIC  
MEDICAL AND SURGICAL JOURNAL  
AND  
WESTERN LANCET.

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VOL. XXIX.

AUGUST, 1886.

No. 8.

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*Original Articles.*

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**SUPPLEMENTAL REPORT ON PRACTICAL MEDICINE.**

**Diseases of the Hematopoietic and Circulatory Systems.**

By G. W. DAVIS, M. D., San Francisco.

(Read before the Medical Society of the State of California.)

In accordance with the prerogative of our worthy President, and the request of the honored and courteous Chairman of the Committee on Practical Medicine and Medical Literature, I have been seduced into consenting to offer a supplemental report in this department of medical science. Thus, Mr. President, largely casting upon you the responsibility, both for my appearance and my topic, I enter upon my task, with the full consciousness of my inability to a successful and complete attempt to lay before the members of this Society a review of the advances made, the new discoveries announced during the past year, adding, in passing, a few personal opinions and deductions in the etiology, pathology and treatment of a few of the important diseases of the blood, blood-making organs and the circulatory apparatus. This paper must necessarily be restricted to the review and discussion of the important, and in a few instances, at least, not generally well understood affections of these systems of practical medicine.

For your Committee to acquaint you with the progress made, in the past year, in the entire range of Practical Medicine, would subject you to a wearisome recital of facts and theories which have been garnered already by enterprising medical journals,

and scattered broadcast throughout our State and country. In view of the numerous investigations and the important discoveries by members of the medical profession throughout the civilized world, and the rapidly increasing volume of medical literature, renders the task of unbiased gleanings more and more difficult with each succeeding year. To bring prominently to view all the salient and practical points in a paper of this kind is a feat of no mean proportion; and if I should not do full justice, or fail to make myself clear upon all or any subject, I beg your indulgence in advance.

By a full and complete knowledge of the etiological factor in the production of disease, the physician is far more competent to administer proper remedies and suggest such hygienic and sanitary measures as will neutralize or suspend their further action, very much to the physical and mental wellbeing of his patient.

The marked and decided advance in a knowledge of the morbid processes constituting a disease, and of the tendency of those processes in developing the changes which mark the different stages of the disease, and in secondarily perverting other important functions, enables the physician more accurately and effectually to select and apply his therapeutic agents for arresting or modifying those processes.

The means for making medicine more thoroughly comprehended through the conditions of the wide development of medical literature has a very happy tendency to elevate itself beyond the limited sphere occupied by it years ago.

It is to the eager and restless investigator, who, with untiring zeal and devotion, has honestly employed his time in the profound study of health, disease and remedial measures that practical medicine has to thank for its chief advancement during the past year. The worker in the laboratory, at the microscope, and in the arduous field of devastating epidemics, is the benefactor of whom too much cannot be said in praise and honor.

All along the line, and in the field of pathology and pathological research, the study of individual diseases attracted great attention, both in their grosser and minute or infinitesimal lesions.

The knowledge of the disease of the blood and its remoter effects has kept pace with other disorders, and yet the affections of the blood-making organs, and also a few of the diseases of

the organs of circulation have not progressed with the same giant strides; they are, however, steadily advancing and emerging from their mysterious enfoldings.

It is obvious that no adequate idea can be had of the progress made in the etiology, pathology, and treatment of the diseases to which I shall briefly invite your attention without taking a broad and comprehensive view regarding the evidences of improvement throughout the entire department of practical medicine. The active investigators in this department have been chiefly in two directions, viz., the revelations of the microscope in studying the blood, the structures, secretions, growths, and the like, have been in the discovery of some form of bacterial development in the blood especially, and this bearing a causative relation to almost every kind of morbid product.

Hence, how important the blood and especially its sources of supply should be carefully presented, and rigidly and logically investigated, so that the real *established* facts should be separated from incomplete observations, and the true relations of cause and effect maintained, as distinguished from mere coincidences. It has been well said that the blood "is the mart into which is poured from the alimentary canal the commodities needed in nutrition," and I may add, giving in exchange those wonderful chemical combinations which result from the metabolism of the tissues. Notwithstanding this important and almost grand relation it bears to the life-giving and life-sustaining act I have not, so far as I have been able to extend my researches, discovered any new facts, prominently announced, during the past year, as to the histological elements or properties of this life-diffusing fluid.

Two forms of corpuscles have been generally taught us; but we are now able to clearly distinguish four varieties of blood corpuscles in the human body, red, white, nucleated red and hematoblast. The nucleated red are not found in the blood of adults in health, but are said to be a normal constituent of the red marrow of short bones. This histological character of the blood performs an important part in embryonic development. Bizzozzero holds that these nucleated red corpuscles are independent elements in early life, subsequently multiplying by fission and develop into the ordinary red forms, with a disappearance of the nuclei. A few recent investigations support this view. Of the origin of the hematoblast or blood plates of



Bizzozero, nothing of an absolute certainty has been discovered. Indeed, of the origin, and especially of the life history of the ordinary red corpuscles, we have still much to learn, and there exist a wide field for earnest workers to discover the true relation between the corpuscles and the adenoid or cytogenous tissue. Recent investigations, however, go far towards establishing the fact, that the lymphatic glandular system is chiefly concerned in blood formation, and that the spleen possesses to a large degree the function of hemotogenesis.

Tauber, after practicing excision of the spleen on a number of animals, and the performance of splenectomy a few times in human beings, draws from the experiments and clinical observation the following deductions:

“That the spleen must be regarded as one of the main reservoirs of the blood; and that its removal exerts a great influence on the circulation, as seen in the occurrence, shortly after the excision, of congestion of the liver, kidneys, and especially of the lymphatic glands. After the removal of the spleen the subject tends to become anemic; the relative and positive number of the white corpuscles notably increases, whilst the size and number of the red corpuscles diminish.”

The pathology or diseases of the blood is exciting the highest degree of interest especially in the direction of the relation of micro-organisms to this highly important fluid as ferments. The knowledge of these factors in the production of disease is not universally accepted, but sufficiently to incontrovertably establish the claim as a morbid agent.

Before calling your attention to a few of the blood diseases, permit me to notice a few of the means that have been recently and prominently brought forward, for the purpose of more accurately ascertaining the true condition of the blood in disease. The measurement of the specific gravity, which, through carefully recorded observations, shows that the density of the blood may undergo very great changes as a result of various morbid conditions. The normal average in man is 1055, and it has been found in a few diseases so low as 1038, 1035. I have but little doubt that not long hence we will be able to put in practice this means of diagnosis, as we can now so accurately do, in estimating the specific gravity of urine.

In cases of anemia or chlorosis the diminution in the number of red blood corpuscles can be determined, and an apparatus

—the hemacytometer—invented by Hayem, modified by Gowers, Abbe and Thoma, is regarded as the best.

In addition to a decrease in red corpuscles in the different phases of anemia, a diminution in amount of an important constituent of the blood, hemoglobin, relative as well as an absolute loss, also occurs, and the amount of this diminution can be determined by Hayem's hemochromometer, and doubtless will soon become instruments of accuracy and precision, as are the very many that have been given to the profession in the last few years.

Coming to a consideration of a few of the diseases of the blood, we will notice first the very important conditions known as anemias. The term anemia—meaning lack of blood—is now regarded in its fullest sense not only absolute quantitative alterations in blood volume and elements, but in a more restricted sense it designates those qualitative changes that have been found to occur in these morbid conditions.

Acute anemia, as is well known, is the result of a severe hemorrhage from any cause. The immediate effect of a profuse hemorrhage on the circulation itself may be very slight, but upon the system at large the result is very different, and this condition should be at once recognized in order to be able to promptly meet the exigencies that present themselves in each case, besides the self-evident fact of stanching the flow of blood, whether traumatic or spontaneous.

After a copious loss of blood, it is now a well conceded fact, as demonstrated by Cohnheim, Lyon, Osler and others, that the functional activity of the body generally, with the exception of the hematogenetic functions, will necessarily be in abeyance. In any or all of the anemias it is essential that no diminished activity of the blood-making organs be allowed. Several recent French writers support the view that a rapid or progressive increase in the cytogenic tissues, local or general, results in disturbances of the process of blood formation; or, to be more explicit, the progressive enlargement of the spleen, or of the lymph glands, or decided hyperplasia of the bone marrow, either singly or collectively, invariably affects the constituents or character of the blood.

Thus we have a secondary etiological factor in the entire group of this class of peculiarly interesting affections, whether the primary cause be from a copious and repeated loss of blood,

traumatic or spontaneous, or inanition, or toxic action of certain poisons in the blood.

The question of anemias induced by disturbances in the blood making organs presents difficulties proportionate to the imperfect knowledge that we have of the details of blood formation, and while my rather extensive research has led me to detect that the greatest differences of opinion have been held in regard to the pathogeny of this class of diseases; but as above stated, the weight of opinion pretty clearly regards the spleen, the lymphatic tissues and the marrow as the sites especially involved in these morbid conditions.

In passing to the consideration of Progressive Pernicious Anemia, of which idiopathic anemia, essential anemia, anematoses, are synonyms, we are met with the stern fact that there is much to be learned regarding the causes of this important and grave affection.

It is claimed that previous to 1872 Addison had observed and taught the clinical course of this disease and made inquiries into its pathology. Wholly to his satisfaction he seems to have clearly established that idiopathic anemia was an independent disease and this view has been adopted by recent observers. I cannot satisfactorily to myself fully concur in this view. And as a result of considerable study devoted to all the different phases of anemia, I am inclined to think, that the relation of all the anemias are so intimately blended that the boundary line is exceedingly difficult, sometimes, to define, or that there can be shown a tolerably close clinical resemblance of the various kinds of anemias, including chlorosis, leukemia and pseudo-leukemia or Hodgkin's disease. In the entire group of anemias the most striking pathological feature is the bloodlessness of all the tissues, and this condition has been found to be dependent upon hyperplasia of the lymph-glands especially, and quite generally an enlargement of the spleen and hyperplasia of the bone marrow.

Pepper, Tyson and others, assert that hyperplasia of bone marrow alone is sufficient to produce a severe form or degree of anemia, called anemia medullaris.

Two facts have recently come to light that go far towards opposing the pretty generally accepted view of the pathology of idiopathic anemia. A hyperplasia, through the observation of Orth, Curtin, Neuman and Osler, of the marrow was found in

the cases of chronic wasting disease; and cases of idiopathic anemia where the marrow was absolutely normal.

The direct causes of the pernicious variety or degree of anemia are in many cases only conjectural if not entirely unknown. Age has a predisposing effect as it occurs usually between twenty and forty; this is one distinguishing feature from chlorosis. Sex is thought by a few writers, but denied by others, to have a great influence.

Immerman uses the pronoun "she" for the patients all through his classic descriptions of the disease. Bad hygiene, debilitating habits, and repeated hemorrhages operate largely as a remote cause in all forms and varieties of blood dyscrasia. Nervous shock, mental worry, grief and fright, have especially been noted by Wilks and Howard, and more recently by Curtin, as being decided etiological factors in the production of this class of diseases. The different diseases of the hematopoietic system, are generally amenable to the same remedies, in same state or degree of involvement. When simple anemia, leucocythemia chlorosis, and Addison's disease, have passed into the pernicious form or degree, the treatment is almost entirely unsuccessful, and, therefore, unsatisfactory. The term pernicious as applied by an eminent writer to this stage of anemias, clearly indicates its hopeless character in a large percentage of cases. The recent medical literature upon the treatment of anemias, including chlorosis, leukemia and Hodgkin's disease has very rapidly accumulated, and the record points to a satisfactory progress in the early treatment or treatment in the early stages of this interesting class of affections.

In chlorosis, and the simple or acute anemia, the preparations of iron are essential, and do good, but in the pernicious form these preparations are useless, and in many cases absolutely harmful. Arsenic, the value of which in these affections, first discovered by Bramwell, is regarded as very important in all degrees of anemia, especially in the pernicious form. Padley has recently, in the *London Lancet*, observed that the use of arsenic in these cases show a large per cent of recoveries.

Hygienic regulations are of the first importance, accompanied with massage. A liberal nutritious diet, cheerful surroundings, and, in some cases of pernicious anemia, phosphorus and cod liver oil in connection with arsenic.

The symptomatic indications for treatment are met on general

principles. In marked cardiac debility I have received prompt and satisfactory benefit from the administration of caffein, in from four to five grains at a dose, thrice daily. In ending a review, and the consideration of the diseases of the blood, and in a general way the blood-making organs, I am apprehensive that I have not made myself clear upon all points, and that I have not elaborated others to the extent their importance and interest demanded. If I have largely, or altogether failed in either of these particulars, may I not hope that I shall have impressed upon those who have heard, and who may hereafter read, the prime necessity of a thorough study and investigation of this class of affections, and thus the profession will become more generally familiar with the etiology, symptomatology, pathology, and treatment of a class of disorders that are receiving much attention by the leading minds of this and other countries, in an idiopathic sense, as well as their relation, as the sequela, to many of the febrile and other debilitating diseases.

We are now approaching nearer to the end of this paper, and I find I must very materially contract my original plan, or this supplemental report will be entirely too long and tedious. To attempt to cover the entire field of cardiac lesions, say nothing regarding those of other parts of the circulatory apparatus, in a single paper, would be an impossible task, and therefore I must confine myself to a few of the more important, and yet, not in all cases, the most serious affections of the heart.

Cardiac lesions are, by all physicians, more perfectly understood than are hematopoietic diseases, to which consideration has just been given; but I trust I shall be able, concisely as possible, to bring more prominently to view some of the advances and discoveries that have been announced during the past year, that will be of interest to even those who are the most thorough in this class of intensely interesting affections, and which every year are becoming more common, either as functional troubles—primary organic lesions—or the result and complications of other diseases.

During the year the contributions to neurotic troubles and organic affections of the heart, by such men as Flint, Loomis, Davis, Da Costa, Longstreet and others of this country—Reynolds, Bramwell, Fothergill, Balfour, Parrot, Ortel and many others in foreign lands, have been prodigious. We can but be impressed with the enormous accumulation of the litera-

ture upon this subject, and I shall endeavor, as a contribution from the fruits of my researches, to indicate a few of the facts that have been developed, that possess peculiar interest together with practical utility.

To assist in more positively and accurately diagnosing any or all of the diseases of the entire circulatory system, the sphygmograph has been more thoroughly perfected, at least, is being more extensively used in recording the cardiac and arterial conditions, and as more completely than in any other way, illustrating the cardiac impulse and the arterial wave, as regards their variations and velocity.

Cardiography is less known and practiced than sphygmography, nevertheless it is not unworthy of attention. The cardiography has been recently and very prominently noticed by Dr. Keyt of this country, and he strenuously advocates its use as a reliable means of recording the true condition of the heart's action.

The graphic line produced by this instrument is called the cardiogram, and it is a faithful representation of the heart's pulsation, and to satisfactorily interpret these we have only to study the cardiac traces, in which the cycles and phases are shown in their true limits and relations. It seems to me that these instruments should favorably commend themselves for their positiveness and precision, and as supplying a help to increase our knowledge of the finer {normal and abnormal condition of the heart's movements.

We now take up for consideration the neurosal affections of the heart, which have received very large attention during even the past few months, and I know of no class of disorders, whether of the circulatory system, or any other system, that should command more our intense interest and knowledge. Neurosal diseases of the heart are sudden in their attack and often frightful in their manifestations, and call forth at once all the presence of mind and skill of the attending physician.

An eminent practitioner and medical author of this country, says: "Within the last few months our land has been startled by the sudden death of many of our great public men. Such men as Hendricks, McClellan, Vanderbilt, Storrs, the remarkable lawyer and wit, and the humorous Josh Billings, were stricken down while enjoying, at least, ordinary health, and in the case of Vanderbilt he was in the midst of apparently vigorous health

and while engaged in an earnest business conversation." In the last case death was presumed to be from apoplexy, but it is believed by many medical men that it was the result of a neurosis of the heart, a type of angina pectoris, and the belief largely prevails that this also caused the deaths of McClellan, Hendricks and Billings. In the case of Storrs it is the opinion of, at least, a few of the Chicago physicians that he died of an anginous attack of that form which Heberden characterized as *angina sine dolore*, and that the history so far as attainable in nearly all the cases of these distinguished men, points pretty strongly to that of angina pectoris or of symptoms allied to it. The etiology of this painful and often suddenly fatal affection is not clearly defined.

Parry was the first to recognize degenerative changes in the coronary arteries, in cases, in which there was a manifest angina; but in the early part of the present century this view was opposed by many observers.

For a long time the theory prevailed, especially in Europe, that the pain of angina pectoris was wholly nervous in character, independent of any organic changes of the muscles or arteries of the heart.

Recently there is a manifest tendency to the opinion that this disease is largely dependent upon degenerative changes in the heart muscles; and this the result of imperfect nutrition, and this due to atheroma of the coronary vessels or lesion of the valves. Leyden, of Berlin, Bramwell and Fothergill, have within a short time advocated this view.

Huchard, who published in the latter part of last year a valuable essay on angina pectoris, says: "In a series of autopsies upon patients dead from this disease, the pathological appearances were such as to convince the author that the views of Parry and others were correct, and that the paroxysm is the result not of a neuropathic condition but of an arterial affection. In every case he found ossification and occasional obliteration of the coronary arteries, causing cardiac ischemia."

The late lamented Dr. Flint, Sr., has recently stated, that angina as a purely functional affection, "occurs in cases that are few in number," and that "its pathology and etiology is very obscure." As angina is associated with different lesions, I think, its pathological connection is exceedingly difficult to clearly and satisfactorily define.

Flint, also, in a recent article on angina pectoris, as the result of organic changes, says: "I submit as the most rational theory that the pathological condition on which angina depends, is ischemia of the heart." And is illustrated by the following pathological fact, "that the sudden withdrawal of a supply of blood to a part may occasion neuralgic pains, is shown by the intense suffering in the limb which directly follows embolism of the femoral artery."

The liability to a sudden death in this disease is an important point to be kept in view, especially by younger members of the profession. Death may occur in the first paroxysm. A person who is the victim of this affection must be considered in constant danger of sudden death in each attack or paroxysm, and this fact should always be communicated to some sensible relative or friend, and when judicious the patient should be apprised of the danger. This duty the physician certainly owes to himself, and if omitted he renders himself open to censure should immediate death unexpectedly occur. The great significance of angina pectoris in individuals past middle life is apparent to all, and a correct ante mortem opinion of the cause of death is rendered more easy and possible.

In the treatment of this dangerous affection, it is of course important that the paroxysm receive immediate attention, not only to ameliorate the pain, but to prevent, if possible, immediate fatal results. An opiate in some form, and hypodermically administered, should be promptly given. If there exist evidences of cardiac weakness and irregularity, a diffusive stimulant is clearly indicated. The amyl nitrite, first recommended in this disease by Brunton, has gained in reputation as a remedy of wonderful benefit in most cases. Electricity, either the induced or constant current, has proven exceedingly beneficial in the hands of Rockwell, of New York, and also others.

The observations of Huchard, the brilliant observer already referred to, "demonstrates the uselessness of remedies which act simply upon the nervous system for the treatment of true angina." He says "that bromides have never cured any but false anginas, and which often disappear without any treatment." His treatment of true angina consist principally in the administration of iodides, which are so effective in the treatment of the affections of the arterial system. He gives preferably the iodide of sodium, in doses of fifteen to thirty grains daily for months,



with the effect of diminishing the frequency and intensity of the original paroxysms, and finally of causing their entire disappearance. He records the cure of twenty cases, a larger number of cures of true angina than ever reported before by any clinician.

Associated cardiac lesions are to be treated according to symptomatic indications, as in cases in which angina does not occur.

Regarding other neurosial affections of the heart there have been many essays, monographs, and articles written and published upon sympathetic troubles of the heart, but in all of them I have been unable to find anything especially new or practical.

Da Costa has described a condition he calls an "irritable heart," which is a mixture of neurosis with atony. It is stated by Fothergill that this affection is becoming quite common, and it often unfits the patient for hard mental and manual labor, and hence should be promptly recognized, so that the patient's mind may be put at rest regarding the possibility of a true heart disease.

Roberts Bartholow has quite recently written, in his usual force and style, regarding this condition of the heart, and records many cases in which the possessor of such a cardiac condition lives in constant dread of sudden death, afraid to go to sleep, afraid to leave home, and life otherwise a burden. Such patients have a pronounced neurotic temperament. There is generally some hypertrophy which is due to the excessive action of the heart; this is compensatory, and cannot be considered as constituting a disease. So far, experience has clearly taught that an irritable heart rarely, if ever, passes on to structural change.

The nervous system must have good food, and to be supplied with this a well-regulated and generous diet must be prescribed. Rest is an essential factor of such cases, which finally recover, but often very slowly.

Through the contributions of Leyden and Ostler, especially, a cause of intermittent fever, other than malaria, has been announced.

Intermittent fever of malarial origin is so common that the very humblest physician considers himself capable of recognizing it, and indeed it is quite the habit of, at least most of us, to call any fever having an intermittency or accompanied by chilliness, as complicated with, or entirely due to malaria. These and other observers claim that there are intermittent fevers of a

very different origin. They assert that such a fever is also due to endocarditis. This certainly is to very many of us a new cause of intermittent fever, and while references to it in medical literature are very limited, yet the views and observations that have been recorded are worthy of consideration and study. In cases of intermittent fever that will not, after a thorough use of quinine or other anti-periodic remedies, yield or give signs of improvement, it may be well to look to the heart as the origin and seat of difficulty.

Pericarditis is a disease that has received much attention during the past year by eminent and trustworthy observers, especially the pathogenesis, an etiology of an affection that is of greater frequency than is generally believed. The dependence of pericarditis upon rheumatism has been recognized since the time of Pitcairn (1788). And many of the medical teachers and clinicians so often emphasize the fact that pericarditis is a sequel to rheumatism, that in the absence of rheumatism the existence of pericarditis is not even suspected, and hence the reason that this affection is so often regarded as a rheumatic complication. Rheumatism must certainly be regarded as the most frequent of any one cause of pericarditis, largely on account of the frequency of rheumatism.

This disease occurs quite frequently in the course of pyemic and septicemic processes as typically represented by traumata; and puerperal fever, with its frequent associate endo-carditis, is the complication which often is, directly or indirectly, the immediate cause of death. It occurs occasionally also, in the course of all infectious diseases, is sometimes the accompaniment of tuberculosis, and often is the sequela of pneumonia and pleurisy, particularly the latter.

A well known author on practical medicine has recently said: "The failure to recognize pericarditis depends largely upon the fact that so few of the symptoms of the disease are local." It is only in the face of effusions, and mostly of some magnitude, that signs pertaining to the heart are manifest, or lesion of the pericardium is suspected. It is important to consider well and bear in mind all the etiological factors in the production of this disease, and to recognize its existence as early as possible; because the long pressure and maceration due to the effusion into the pericardium may weaken the walls of the heart to such an extent as to prevent a satisfactory recovery.

When extensive effusion is detected and the usual remedies, in the text books on practical medicine, have been fairly tried and no special relief obtained, then aspiration with its efficient aids, so clearly defined in surgical works, must be adopted.

The etiology and treatment of the different organic lesions and muscular changes of the heart, also the various diseases of the arteries and veins have received a very large degree of attention from many eminent writers of this and other countries. Valvitis, acute and chronic, endocarditis, myocarditis, hypertrophy, dilatation, atrophy and fatty degeneration, together with congenital disease of the heart, have been ably reviewed and treated. Many new theories have been advanced, regarding the etiology, pathology, and treatment of these interesting and important diseases. Time will not permit a notice of all, and it must suffice for this time to briefly call your attention to but one, and this is fatty degeneration of the heart. To many, this may seem the most unimportant of all the heart affections, but the eminent thinker and writer, Fothergill, says: "It is not, and that it is the cause of sudden death may be laid down as an axiom."

The etiology of this form of structural change of the heart is, I presume, pretty well understood, and as nothing special new on the cause or treatment, beyond that already laid down in standard medical works, having been announced, we will not dwell on these, but pass on to the consideration of the symptomatology of this disease. A few new signs have been discovered to aid in more fully recognizing this obscure affection.

It must be evident to all that it is highly necessary to be able to detect this condition as soon as possible and prepare the relatives or friends, if not the patient, for the inevitable, and preserve our reputation, at least, ourselves from censure, if the possessor of such a heart should suddenly die of a spontaneous rupture, a sequence of fatty degeneration.

We are indebted to Harvey for the first observation of a rupture of the heart from this cause. Morgagni wrote at much length concerning ruptures, and it was his view they could only occur when the heart walls were diseased. It is recorded as a singular fact that he himself passed away by this very fatal accident. And it is also written that the celebrated anatomist John Hunter came to his end from fatty degeneration and consequent rup-

ture of the heart. In cases of progressive pernicious anemia, in which fatty degeneration is regarded as more marked than in any other condition, except phosphorus poisoning, the pulse is generally full, though soft and regular, so long as the patient is at rest.

When the process of structural change is extensive the cardiac impulse is weakened and the pulse comparatively small. An increased area of dullness over the heart is observed, especially when attended by dilatation which is often a sequel of fatty metamorphosis. Allusion has been recently made to a systolic murmur which is thought to be occasioned by imperfect contraction of the papillary muscles, the result of the structural change. Frequently the patient experiences a feeling of distress or constriction in the chest and of pain extending down the arms, thus simulating angina pectoris. While the Cheyne-Stokes respiration is more often the concomitant of uremic conditions, it is also recently and frequently referred to as prominently associated with fatty heart and in many cases is the precursor of the fatal event.

These are a few of the most recent additions to the signs to assist in diagnosis of this form of heart trouble which is at best surrounded with difficulties.

Permit me in conclusion to consider as concisely as possible, a review of what has been accomplished and announced, in the clinical study of heart sounds and murmurs, which has been prosecuted with remarkable assiduity by many eminent workers in our grand profession. Briefly as to the sounds of the heart, the late Dr. Austin Flint says: "It is customary to consider the heart sounds as two in number, to wit: The first or systolic, and the second or diastolic sound. To facilitate clinical study it seems to me desirable to recognize five distinct sounds, two of which are diastolic, and three systolic. The two diastolic sounds are referable, respectively, to the aortic and the pulmonic orifices of the heart.

"These two sounds may be called simply the aortic and the pulmonic. Of the three systolic sounds, one emanates from the mitral, or the left auriculo-ventricular, and another from the tricuspid, or the right auriculo-ventricular orifice. The third has no connection with the orifices, but is produced by the impulsion of the heart against the thoracic wall. These three sounds may be designated the mitral, tricuspid and the sound

of impulsion." It seems to me that a careful and separate study of these three additional sounds as designated by the late lamented and eminent clinician would aid very much in more accurately locating, especially valvular, and other cardiac lesions. In the auscultatory observations or clinical study of the heart attention is directed to the importance of clearly distinguishing the difference between heart sounds and heart murmurs. An eminent observer has declared, that the time will come when all clinical workers will consider the practical information to be derived from heart sounds as not less essential than that furnished by the murmurs, taken in connection with the signs obtained by percussion and palpation.

The old theory, that murmurs are produced on the rough surfaces of the valves and vessels by friction with the blood, has long since been held as untenable. The etiology of murmurs, especially those which are located at the mitral orifice when there is no organic lesion of the valve segment, has given rise to an endless amount of discussion *pro et con*.

Rosenstein, Ziemssen Cyclopaedia, says: "The mode of origin is probably the same for all murmurs; they originate by oscillations in the blood itself the (so-called 'eddies')." "

This view is not sustained by the more recent ones advanced as to the mode of producing endo-cardial murmurs. According to Bramwell, "these murmurs are due to vibrations which can be perceived by the ear of the observer, which many authorities agree is the result of the production of sonorous fluid veins in the blood itself." "Other authorities suppose that the blood current, in its passage through the heart, may throw the tissues itself over which it passes into vibration."

Organic endo-cardial murmurs usually depend upon some defect in the valvular mechanism of the heart, either acquired or congenital. I think there can be no question that they are exceptionally due to the presence of clots or vibrating filaments of lymph in the cardiac cavities.

It is important to remember, that the composition and quality of the blood seem to exercise some influence in the production of murmurs. Whatever may be the organic lesion of the heart and arterial outlets, it is clearly demonstrated that a certain intensity of the blood current is necessary for the production of a murmur, a point of considerable practical importance.

Quite recently a large amount of attention has been devoted

to the clinical study and elucidation of mitral cardiac murmurs and mitral stenosis. The former have been especially noticed by Dr. Flint in his happiest style, and the latter by Dr. Broadbent, with equal force and intelligence. I will only request the time to notice briefly the views advanced regarding mitral murmurs. The special claim of this condition upon our attention, arises from the fact that it presents difficulties in diagnosis, and the same can be said of mitral stenosis had we the time to review it. A full acquaintance with the etiology and pathology of mitral murmurs is of supreme importance to every medical practitioner, as well as to those devoting especial attention to diseases of the heart. In 1830 a mitral regurgitant murmur was described by Elliottson, and was the only one recognized for a considerable period, or till 1843, another was discovered and distinctly described by Fauvel, and named by him the mitral presystolic murmur.

To these Dr. Flint has added two other, viz.: the mitral non-regurgitant and mitral diastolic. Dr. Flint says: "that each of these four murmurs has distinctive characters which individualize it." "Two, three, and even all four may be combined in the same case."

In attempting to consider this subject comprehensively, our knowledge of the significance of cardiac murmurs cannot depend on our ability to explain satisfactorily the mechanism of their production. This is the ultimate and conscientious aim of all clinicians but, at present, a considerable difference of opinion is found to exist as to the etiology of these signs, and are subordinate to the clinical observation and experience of many worthy observers, that they are present in certain cardiac affections, and hence a clear and satisfactory knowledge of them is of inestimable value in differential diagnosis.

After an extensive research and study of the literature of cardiac diseases, especially with regard to the physical signs by which they are thought to be recognized, I cannot express more clearly my conviction that we have very much to learn, than by quoting the words of an eminent medical writer and thinker: "Much as we flatter ourselves we know of the physical diagnosis and of the pathological conditions of the heart we are yet woefully ignorant of many things which more extended clinical observations, supported by post-mortem examinations, will probably reveal to the ken of future generations."

I will no longer trespass on your patience. Very much more might be said, and better arranged and said than I have or could, but leave to those who follow me in the discussion, to indicate what I leave untouched. The effort is tendered with much distrust, but with a genuine feeling of good will and desire to aid in our common work of promoting the happiness and abating the misfortunes of our fellow beings.

Would that the effort were more worthy of your acceptance.

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### **A NEW INSTRUMENT FOR REMOVING FRAGMENTS IN LITHOLAPAXY.**

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By GEORGE CHISMORE, M. D.

(Read before the Medical Society of the State of California.)

While the removal of the last piece in litholapaxy is of the utmost importance, it is, at the same time, the most difficult and dangerous part of Bigelow's operation. To consider the causes that lead to this difficulty, and to suggest a means whereby the danger can be lessened or avoided, is the purpose of this paper.

When a stone has been crushed the fragments almost invariably gravitate to the most dependent part of the bladder—the posterior inferior region—and here, in the usual method of operating, they must be sought. Now, this portion of the organ is surrounded by the pelvic wall in such proximity that, when the beak of the lithotrite is lateralized 45° or more, the points of the blades may be readily brought in contact with the bones, only separated by the coats of the bladder and a thin layer of soft tissues; under these conditions when closing the instrument in search of pieces—the ends of the jaws gliding over the smooth bony walls—any inequalities in the thickness of the viscus, or local restriction of its mobility, tends to form folds in its inner surface that crowd into the bite. When no fragment is caught the sense of touch will warn the operator that he has grasped the soft parts, but when a piece of considerable size is included with a fold it is very easy to inflict serious damage.

If we examine the bladder in this region we will find, internally, the well known ridges extending from the vesicular orifice of the urethra to the mouths of the ureters, and can feel apparent inequalities in the walls due to the cord-like bodies of the

vesiculae seminales and vasa deferentia, which lie externally and form the lateral boundaries of the trigone. The recto-vesical fold crosses from near the orifice of one ureter to the other, and restricts somewhat the mobility of that part of the viscus along the line of its course, and the lateral ligaments do the same, in a lesser degree, for the tracts to which they are attached.

When it is remembered that in the tedious groping for an elusive piece, this dangerous locality must be swept over again and again with the jaws of the lithotrite, it will be admitted, that, if this part of the operation can be avoided, the mortality should be diminished. Through the kindness of Dr. C. E. Farnum, Demonstrator of Anatomy, Cooper Medical College, an opportunity was afforded the author to thoroughly verify the foregoing observations. With the assistance of Dr. H. M. Sherman, a series of experiments was made on the bladders of six subjects, who had died at ages varying from 30 to 60 years. The plan pursued was as follows: In each case repeated trials were made with the lithotrite to pick up the whole, or part of the bladder walls, varying the amount of fluid injected into the viscus from 4 to 16 ounces. When a fold was caught it was strongly pinched so as to leave a mark for subsequent examination. There was a marked difference in different subjects as to the ease with which the entire thickness of the bladder could be grasped, depending apparently on the varying degree of tension exerted by the vesico-rectal fold and the lateral ligaments; in all cases it was extremely easy to pinch the mucous coat.

The bladders were then opened at the apex, and the injured points scanned, and the experiments repeated, observing the action of the instrument through the incisions. The points liable to the greatest injury were along the line of the margin of the vesico-rectal fold, near the mouth of the ureter on each side, and over the vesiculae seminales and vasa deferentia, but the mucosa could be seized in any portion of the fundus.

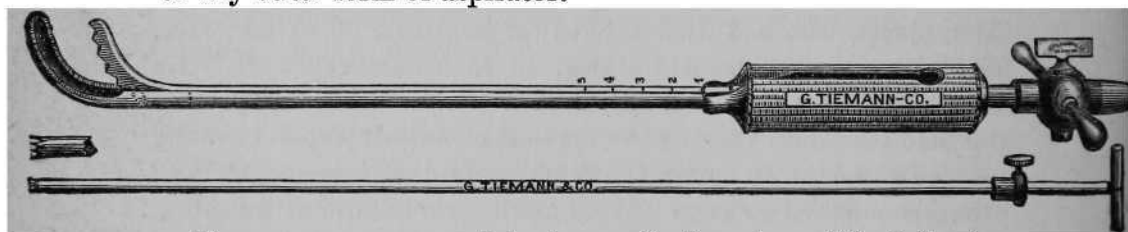
The conclusions reached were that it is almost, if not quite, impossible to perform lithotripsy in the usual manner without pinching the mucous coat and endangering the deeper structures, and that doubtless a portion of the fatal cases are due to this cause.

Another source of danger is found in the violence inflicted on the deep urethra and its surrounding parts by the repeated insertion and removal of such large instruments as are needed in the ordinary methods of procedure in litholapaxy.



Although great improvement has been made by Professor F. N. Otis, of New York, in the shape of the catheters, still anyone who has had a practical experience of the operation can easily appreciate the amount of risk and danger due to this cause alone. We all know how resentful the membranous and prostatic urethra is at times, and anything that tends to simplify the operation in this respect will be recognized as a step in the right direction.

I take pleasure in presenting to the profession through this society an instrument which I have devised; by the use of which it is hoped that a considerable part of the difficulties and dangers described may be avoided. It will be perceived that it is a lithotrite and evacuating tube combined, and so made as to be readily connected with Bigelow's, Otis's, Sir Henry Thompson's, or any other form of aspirator.



The screw power and lock usually found on lithotrites has been omitted, as it is not intended for use in the beginning of operations on stones of considerable size or unusual hardness; in such cases the first crushing and aspiration should be made with the ordinary instruments; after this it will be found that the hands of the operator are quite powerful enough to crush even large fragments without difficulty. For small and soft stones no other instrument will be required. No credit for the principle—a combined crusher and evacuator—is claimed; there have been many instruments, some more than twenty years ago, put forth based on this idea; but it is believed that the one now brought before you is an improvement on its predecessors in the following particulars, viz.:

1st. A larger caliber of the catheter, circular in form, consequently admitting the freer passage of fragments.

2nd. Merit as a searcher in cases of stones that evade detection by the usual methods of exploration.

3rd. Simplicity of construction and the ease with which it can be taken apart to clean, an important point in instruments designed for use in lithotrity.

4th. Enabling the operator to proceed, after the first crushing and aspiration, uninterruptedly with the operation, without the necessity of the repeated introduction and removal of different instruments, thus diminishing the danger of injury to the deep urethra and lessening the time required.

5th. Enabling the operator to avoid working with the beak reversed, thus avoiding the most dangerous region, the fundus of the bladder, the only part where it can be easily grasped by the lithotrite.

To illustrate the method of using this instrument, the following case is reported:

MR. S. AET. 47. GERMAN. MARRIED.

*History.*—Has suffered for several years from repeated attacks of nephritic colic, and has voided per urethram, a number of small calculi. In October last I removed by Bigelow's method an oxalate of lime calculus, weighing, dry, 219 grains. He made a good recovery, and was soon able to attend to his business. Early in January he had a severe attack of nephritic colic, and was confined to his bed for several days with high temperature, and great pain in the region of the right kidney and ureter. The pain ceased suddenly, and he again got about. After a few days he began to complain of uneasiness in the bladder, frequent and painful micturition, and the urine became loaded with pus.

He felt certain that there was "another stone," although I was not able to detect one after very thorough search in the usual manner on two separate occasions.

About this time I received my new instrument from the well-known makers, Geo. Tiemann & Co., 67 Chatham street, New York, and proposed to my patient to make a trial of it in his case. He consented gladly. On the 10th of February last, with the assistance of Dr. Harry M. Sherman, I proceeded to operate. The patient was a very nervous man, intolerant of pain, but I decided to try without ether, and therefore injected an ounce of a four per cent solution of muriate of cocaine into the bladder through a silver catheter, having first drawn the urine. *During this proceeding no stone was felt.* First soaping the tube of the male blade to make the joint air-tight, the instrument was put together, and easily passed into the bladder, about ten minutes after the cocaine injection. Keeping the blades vertical—the patient in the usual lithotomy position—the

jaws were opened an inch or more, Otis's aspirator coupled on, and about four ounces of a warm solution of biborate of soda injected into the bladder, in addition to the solution of cocaine already there. The solution of cocaine was not removed during the operation, but remained mixed with the other fluid, passing in and out of aspirator and bladder until the stone was removed. Three or four compressions of the bulb were then made, and on relaxing it the last time the jaws were gently closed, without being lateralized at all. Imagine my pleasure on finding a calculus of about two centimetres in diameter within its grasp; this was easily crushed, and on resuming aspiration pieces at once began to appear in the reservoir; when they ceased to come the instrument was again closed, and a fragment caught and crushed; this was repeated three or four times, until no more could be found.

There was not the least pain, not a drop of blood was drawn from the bladder, the whole operation of finding, crushing and aspirating did not occupy more than ten minutes, and he suffered no more after effects than would ordinarily follow the passage of a large sized sound.

He did not pass a single grain of sand afterwards, and has had no symptoms of calculus since.

Once during the operation the catheter was closed by a fragment jammed into its mouth, necessitating the removal of the instrument. I have provided for such an accident in the future by having a stylet constructed by which such a piece can be crushed and the tube cleared in a moment without withdrawing the lithotrite.

The calculus proved to be pure oxalate of lime, and weighed, dry, 27 grains.

The action of the instrument may be clearly demonstrated in the following manner. Take a strong rubber toy balloon, introduce fragments of coal, brick, or other similar substance—soap well the shaft of the male blade to prevent the ingress of air between the outer and inner tubes during aspiration (Packer's Tar Soap is excellent for this purpose)—put the instrument together, insert the beak into the balloon, wrap the shaft with a strip of rubber dam to represent the urethra, and we are ready to begin. Attach the aspirating apparatus and pump in as much fluid as required, open the jaws of the lithotrite and compress and relax the bulb. Looking through the semi-trans-

parent walls of the balloon, the fragments will be seen to fly about in all directions with the incoming current, while the outflow tends to suck them into the open jaws. Sometimes a piece is caught between the female blade, or the shaft, and the wall of the bladder, but it is soon dislodged, and sooner or later makes its way into the jaws.

I will not take up the time of the Society with a demonstration, but it will afford me pleasure to show the action of the instrument to such of the members as may be interested in litholapaxy, at my office. The combined crusher and evacuator may be procured of Tiemann & Co., and a wood cut and description of its use will appear in their forthcoming catalogue.

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## **REPORT OF COMMITTEE ON OBSTETRICS.**

### **The Third Stage of Labor.**

By A. H. PRATT, M. D., Chairman.

(Read before the Medical Society of the State of California.)

One year ago when our President asked of me the acceptance of the chairmanship of your Committee on Obstetrics, gratified pride dictated acceptance of the same, and also the wonder that the peculiar fitness of the selection had not been recognized by his predecessors. However, as time with its revolutions brought me face to face with the results of my inconsiderate acceptance, I found my selfgratulations had evaporated into thin air. Willingly could I have sent in my resignation but I lacked the moral courage so to do. Probably one year hence some of you will know more of the situation than you do at present.

Some members of the association may wonder at the selection of a subject so trite as the Third Stage of Labor. But the reader of recent obstetrical literature is well aware of the fact, that its theoretical and practical consideration is just now a somewhat heated one. American literature has given to it distinguished attention, and at the last meeting of the International Medical Congress at Copenhagen the subject was thought worthy the attention of the Solons there assembled. Scientific Germany is the seat of the revival of the subject. For some thirty years it was thought that truth had been evolved from error. But some five years ago Kabiersky, Ahlfeld, Dorhn and others began to sound loud

notes of attack upon established custom, and that custom is to-day shaking in its strongest citadel; therefore, can it be said that the subject, trite and old as it may be, is worthy the attention of the California State Medical Society.

The Third Stage of Labor may be conveniently considered under two heads.

1st. Non-interference. 2d. Interference.

Non-interference was the method in vogue for many years and ruled obstetrical practice until replaced by the Dublin method. During the middle ages, however, a superstition prevailed, that the retention of the afterbirth portended evil to the parturient woman, and undue violence was used to hasten its expulsion. This brought with it its own reaction, and Raysch, Smellie, Denman and Hunter were instrumental in bringing about the practice of non-interference. Hunter, it is said, in his latter years, departed somewhat from his earlier teachings.

A normal third stage of labor is described by Leishman as follows: The child being expelled and the cord severed, there is usually a period of quiescence. This period varies from a few minutes to several hours, but in the majority of cases pains occur during the first half hour. In a few cases the placenta is expelled with the child, but this is not common. When pains do set in they are of a true expulsive character, though usually mild, and may or may not be followed or accompanied by an escape of blood. A very few pains usually suffice to expel the secundines into the vagina, from which they are soon dislodged spontaneously.

The mechanism of delivery of the placenta, as given by Baudelocque, is pretty generally accepted and is as follows. As the womb contracts, the uterine surface of the placenta separates from the uterus; as this separation increases it becomes with respect to the membranes invaginated and at last inverted, and so passes into the vagina. The membranous shell of the fetus is turned inside out.

Leishman says that so far as the natural process is concerned, this is quite incorrect, the inversion being caused by the general process of pulling on the cord. He says that if Baudelocque was correct, it is rational to pull on the cord and thus start toward the ostium vagina, the portion nature intended should be born first. But, says Leishman, in cases left entirely to nature, it will almost invariably be found that it is not the fetal

surface but the edge of the placenta which presents, overlapped, it may be, by the membranes. And this part it is first to pass into the vagina and through the vulva. Leishman sustains himself by high authority. He thinks Mathews Duncan has put the thing in a perfectly clear light, and he himself is fully persuaded that the observation of a half dozen cases, in which no interference of the cord is permitted, will convince anyone of the truth of these assertions. To show how observers differ, let me add as follows: In Strasburg, absolute non-interference is the rule, not even removing the placenta from the vagina. The rule is absolute to keep the hands off. In one hundred cases thus treated there, the fetal surface of the secundines first appeared in the os and vulva, the membranes forming a bag filled with rather a large quantity of blood.

Baruch, of New York, quoting from Teufel, states, "as is usual in these spontaneous extrusions, the placenta appeared at the vulva with few exceptions by its fetal surface, and not with its edge as Spiegelberg, Duncan, and Crede assert."

Thus it is shown that attentive and intelligent observers of nature's methods differ materially in their statement of observed facts. And if this difference exists in the observation and statement of purely natural results, how much more may they be expected to differ in the statement of artificial results and their accompaniments.

The course pursued at Strasburg, with its results, may be taken as a fair sample of the results of non-interference. And this course may be regarded as nature's own course, modified by the effects of civilization. It certainly teaches the natural course of the third stage in a modern hospital. In one hundred cases: the placenta came away in a half hour in twenty-four cases, twenty times during the second half hour, twenty-five times during the second hour, eleven times during the third hour, nine times during the fourth hour, five times during the fifth hour, three times during the sixth, twice during the eighth, and once in the twelfth. In every case the fetal surface appeared first at os and vulva, thus confirming Baudelocque. Twice there was hour-glass contraction, and once there was a putrid odor.

If there is anyone here who can see anything in this report to recommend it to his favor, he can certainly see what I fail to see. To throw more light on the results of this method, let us turn to Ahlfeld's book. His cases numbered about 275.

Among these he had thirteen hemorrhages, one of them fatal, and three severe enough to threaten life. Breisky, in three thousand four hundred cases, by Crede's method, had not a fatal case, and only 3.5 per cent of minor cases. Ahlfeld removed the placenta once in 300 cases, while Breisky removed it once in 3,300.

Kabiersky allows an hour to elapse ere the placenta is removed, even if it be lodged in the vagina. He claims for the method greater freedom from retention of membranes, hemorrhage, and fever, but this statistics fail to prove.

Hilderbrandt does not allow a woman to be touched for two hours after the child is born; if in two hours the secundines are not extracted, he then resorts to Crede's method.

Enough has been said at this point to emphasize the fact, that this method cannot be practiced without calling largely on the physician's time. Grant all as true that is claimed for it, and how stands the question?

The requisite time may be given in hospital practice where there is a physician in chief with subordinates to do his bidding. Not so is it with us and the class we represent.

Is there a physician present who, if his judgment even approved the method, would be able or willing to adopt it practically? who, after sitting up with a case and waiting for hours for the birth of a child, is prepared to sit quietly by and wait another hour, or more, for the slow discharge of a placenta which is perhaps already within the vagina. Pressed by other calls, tired, sleepy and hungry, and longing for a breath of fresh air, the practice of non-interference is an impossibility to the general practitioner. And just here let me add that too much medical controversy is carried on within the confines of hospital practice, for instance, Dr. T. G. Thomas said recently: "In all cases of midwifery, whether in hospital or private practice, the floor and ceiling of the room in which the patient is to be confined should be thoroughly washed with a ten per cent solution of carbolic acid, or bichloride of mercury solution 1 to 1,000. The bedstead and mattress should be sponged with the same, all curtains and upholstery should be dispensed with." Is it possible to formulate as many practical impossibilities in so few words as we find here formulated by one of our masters. How long will it be before writers will learn to consider the limitations of private practice as com-

pared to the practice in hospitals, almost without limitations? What would the average American woman say to the doctor who should prepare to sit quietly by for a few hours until tardy nature should get ready to relieve her of the last of her parturient encumbrances? I confess I would not like to be that doctor.

If, as I conclude, this method is impracticable, at once comes up the second method, that of interference.

Without preliminary remarks let us at once plunge into the subject and consider the modes of interference of to-day.

To the Dublin school belongs the credit of establishing the practice of interference. This so-called Dublin method was the precursor of the method of Crede, and by many they are supposed to be the same thing under different names. The Dublin method employed pressure for the purpose of ensuring contractions and preventing hemorrhage. It also involved "putting the cord on the stretch, hooking the finger into the rugosities formed by the umbilical vessels, and drawing on the funis."

Crede's method forbids interference with the cord on the external genitals, and employs pressure for the purpose of squeezing out the placenta. Let me repeat. The Dublin method promotes contractions and prevents hemorrhage by means of pressure, and includes pulling on the cord. Crede's method looks to placental delivery by means of pressure, and forbids pulling on the cord. The Dublin method came first to give way to the method of Crede. If the student endeavors to ascertain just what this method is he may find some difficulty and inasmuch as it dominated practice for many years, only to be attacked by the let-alone method which had previously given way to the Dublin plan, it may not be inappropriate to consider it somewhat.

Stadtfeldt says: "Vigorous circular frictions of the fundus uteri are to be made immediately after the birth of the child, and during a strong pain, generally the third, the placenta is expelled from the uterus and generally from the vagina."

Garrigues says: "After the expulsion of the child, the accoucheur lays the whole hand gently on the region of the womb, and makes slight friction on as large a surface of the womb as possible; when contractions are felt, he seizes it with one, or preferably, with both hands, spreading out the fingers over the



posterior surface, the thumbs in front, and, when the contraction reaches its maximum, he presses the whole organ into the cavity of the sacrum. To press on the uterus when it is not contracted is a fault, and has not the desired effect. The hand is kept on the womb, and if another contraction does not quickly follow, it is made to again gently rub the organ." Here the one describing a method speaks of "vigorous circular friction," and the other speaks of slightly or gently rubbing over the fundus uteri. The first is a European writer, the other is American.

Crede's own individual pupils also seem rarely to describe his method correctly; hence it is not strange that the profession generally, while knowing of a method bearing his name, is not familiar with its essential features.

Baruch says: "I have discovered that Crede's method is rarely understood. Pressure from above, aided by squeezing, is regarded as the chief principle, some resorting to immediate and continuous downward pressure, others waiting a longer or shorter time, and some even supposing that this method is carried out when, after prolonged retention, violent pressure from above is brought to bear on the inert uterus."

Max Runge (*Arch. of Gyn.*, 1883-4) says: "Upon the more or less greater interval of time I would not lay great weight, if the expression is not resorted to immediately after the expulsion of the child, and before the occurrence of after pains."

Crede says, that if the placenta is not expelled within a half hour, he regards the case as pathological. In his earlier writings he thus describes the method to which his name is attached:

"It is chiefly important to utilize exactly the proper point of time for pressure with the hand. The hand should be laid gently over the uterine region; at first very gentle stroking movements over the largest possible surface of the uterus are made, until a contraction is felt under the hand; next grasp with the outstretched fingers and hand, or, if one hand is insufficient, with both hands, the uterus, and at the moment when the contraction seems to have reached its height, press boldly on the fundus and wall of the uterus, in the direction of the hollow of the sacrum. To press during the absence of a contraction, in order to remove the afterbirth, is wrong, and does not fulfill the object." In another article he writes: "In innumerable cases I invariably succeeded, even if the contractions were ever so feeble, in exciting them by gentle and gradually increased friction of

the fundus uteri, through the abdominal wall. And when the contractions reached their maximum I so grasped the entire uterus that the fundus lay in the hand, and the five fingers adapted themselves to all sides of the body, and from these points exercised *gentle* pressure. I always felt the placenta slip out of the uterus under my fingers."

In an article by Baruch, of New York (Amer. Jour. Ob., 1885), is quoted from a very recent writing of Crede the full minor details of his method, and this is the principal method that is now so hardly assailed in the land of its birth; and this is so because the principle attacked is more thoroughly embodied in this method than in any other.

The object of this paper has been to, if possible, direct the attention of the profession here to the fact that there is a controversy on this subject. This I more especially desired, as I was confident that the great majority of us were urging some method of interference. If the new putting forth of old doctrines and practices is correct, then is our practice wrong. Another object was to stimulate inquiry into exactness of knowledge. The American Journal of Ob., for 1884-5, will, if consulted, reveal an infinity of confusion in facts, statements and practices in high quarters where usually we are wont to look for accuracy and reliability of knowledge and statement.

My own method of procedure has no originality in it, and none is claimed. But inasmuch as no paper seems complete unless the writer states how he does it himself, I will be excused, I trust, for briefly detailing it.

As soon as convenient in each case, after the child is born and separated from its mother, as a rule, I place my left hand over the uterus and make gentle friction in any way that the position of the mother, or the general condition of clothing or bed-covering may suggest. If contractions do not very soon start up *and the womb is not relaxed*, the cord is taken hold of and gentle traction is added to the friction, which has now somewhat increased in vigor. If things continue sluggish, I may or may not add pressure to the friction. After thus continuing for a few minutes without success, as will sometimes be the case, I cease all interference and allow the woman to rest another few minutes, and then begin as before. Often after a rest this way have I seen a womb respond to almost the first touch of abdominal friction that had previously refused response to vig-

orous friction, aided by gentle traction. If after, say fifteen minutes, there is no response, I do not hesitate to explore the vagina with the finger and titillate the uterine mouth.

If this also fails, and after about a half hour the *statu quo* is preserved, unless the condition of the mother forbids, I do not hesitate to introduce the hand, well cleansed, into the vagina, and if necessary into the uterus, and complete the delivery.

In all manual manipulations the physician should never forget that strength and gentleness are to go hand in hand. My own justification to myself of this course of procedure is the fact that I have never had a case of post-partum hemorrhage, cellulitis, or septic poisoning in my practice; in fact, I have never seen a case of post-partum hemorrhage.

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## SUPPLEMENTAL REPORT ON OBSTETRICS.

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By T. J. LETOURNEUX, M. D., San Francisco.

(Read before the Medical Society of the State of California.)

*Mr. Chairman.*—In reviewing the literature of Obstetrics of the past one or two years, we find but little new brought to surface, yet judging from practical, general observation, much of interest can be adduced within scope of its particular domain. It is not my purpose, nor is it within my province, to present an elaborate supplementary in connection with the subject in hand, but merely to offer account of cases coming from personal observation, and also the consideration of special few facts appertaining to the question of antiseptic midwifery. The following brief report of a few cases may be of some interest.

CASE I.—Mrs. V——, aet. 31, primipara. Short, very stout, plethoric and healthy woman. Married on the 13th day of July, 1884. Menstruation always very regular. Last menstruated July 5th, and as will be observed about one week prior to her marriage. The three following months elapsing and no sign of the catamenia, concluded conception had taken place from the first, and figured accordingly. Subjective symptoms being nil and the woman enjoying excellent health, the supposed *interesting condition* was based solely upon the fact of the complete cessation of menstruation. Basing the duration of pregnancy on the regular usual calculation, the termination should have taken

place the forepart of April following. Did not know the patient, nor was I engaged to attend her until March. About the expected time of confinement was called to see her, and found her in somewhat severe pains, apparently of labor. An examination revealed no perceptible indication of approaching labor and so informed the patient and friends. Called the following day and was informed by herself that after passing a miserable day and night was again free of pain and comfortable. One week following was again sent for, and found the patient once more in very severe, "hard bearing-down pains," as expressed by herself. An examination revealed nothing different than before. In a few hours the pains subsided in force, finally ceased altogether, and thus the month of April passed; hence concluded an error in time had been made of one month, as is so frequently the case with primiparae particularly. About the expected time (now positive) in May, the same phenomenal characteristics of labor were experienced, lasting several hours and with every subjective indication of termination. The forepart of June passed with no change of condition; it was but natural that some anxiety was manifested by all concerned. I must confess to some uneasiness as it appeared somewhat out of the ordinary, yet fully relied upon the probability of error in calculation, for I was fully convinced and satisfied the woman *was with child*.

Early Saturday morning, June 20th, was sent for post-haste to Mrs. V.; arriving found her in bed, undergoing agonizing labor pains. Examination revealed the os dilated sufficiently to admit the tip of index finger freely, and every condition indicating that labor proper had set in, and so informed the patient. Continued strong pains seemingly exerted but little influence on the os until about 9 o'clock in the evening, when more active impression manifested itself; the os speedily dilated, membranes still intact, but through them could discern imperfectly by touch two prominences and unable to distinguish the contours or outlines of the face, concluded a breach presentation. Labor progressing fairly and no urgent requirements for interference demanded, I patiently waited. About midnight the pains lagging in force and frequency, ruptured the membranes and in a short time the head partially presented. It was a right occipito-anterior position. I was non-plused at the supposed sudden changed presenting parts as I deemed *spontaneous*

version absolutely impossible from the time of supposed breach presentation. There was at once absence of the hard, bony substance so familiar of the head, and also that of breach formation and instead was distinguished a peculiar, soft, patulous placental like mass with two somewhat sharp rounded prominences posteriorly in lieu of the hard rounded cranium. Absence complete of hemorrhage and other usual conditions excluded placenta previa. Introducing my hand well into the uterine cavity, I easily and distinctly solved the true condition and diagnosed *Acrania Monster*. Administered 3i fl. ext. ergot and in a short time, slight contractions again setting in, applied forceps and promptly delivered the child, which was of course dead, though evidently but a short time, as the mother informed me she distinctly felt its movements just prior to its birth. The mother made a rapid and complete recovery and at present writing is again enceinte.

The child's body was fully developed, with notable exception of the almost entire absence or formation of the genital organs. The head was smaller perhaps in proportion to the body. The face bore a most idiotic expression, resembling somewhat the once noted Aztec children, only made more hideous by the extreme protruding of the upper eye-lids. There was entire absence of the cranial vault, viz., the entire frontal bone from the upper eye-lids and superior portion of the nose, both parietals, and the occiput from its protuberance. The floor or base of the cranium was occupied by this brain-like mass or vascular tumor. Besides the peculiar characteristics of this form of monstrosities there is also in this case, as noted, the phenomenal features of the entire conduct of the term of gestation. The cessation of menstruation in July giving thus the most positive evidence of pregnancy; the continuation of the same until the termination of labor, which occurred only the following and latter part of June, nearly twelve months; the three latter of which, at stated time for a few hours, the patient manifestly experienced all the true characteristics of labor.

The causes of such monstrosities are obscure. Histories of such are uncommon, though Burrows, Vrolik, Purple, Forrester, and a few others, have enlightened obstetrical literature with valuable and interesting reports. Authors and researchers advance various theories. Geddings states that it is an arrest of development of the brain and its bony coverings, while Vrolik

advances the theory of the existence of hydrocephalus which was followed by rupture. The claim of Gedding certainly seems more rational, and should be advocated as the more important. The somewhat general belief among the laity, and I may say frequently met with in the profession, of the influence of parents through disease or physical impression upon the offspring, have much weight. Maternal impression, as fright, excitements of any character, and also not the least, uterine diseases particularly, are among the many supposed causes of monstrosities. It is well known that some of these forms of monsters have lived for some time.

I was permitted the possession of this one, intending to present it to the Cooper Medical Museum, after exhibiting before the County Medical Society; but the Society not convening that month, and the curator of the Museum (Dr. Abrams) being absent from the city, had it properly buried after showing it to several physicians here.

CASE II.—Mrs. O'N——, age 34, October 12th, 1883, was delivered of her fifth child at full term after a comparatively easy labor. There being tendency to excessive post-partum hemorrhage, administered as is my invariable custom under all circumstances, ʒi fl. extract ergot after birth of child. Remained and watched the conditions for nearly two hours after all was over, finally leaving, and the patient feeling quite comfortable. Returned in the evening; found her suffering very severe after-pains and a flow of more than ordinary quantity. Gave another dose of ergot, also 1 gr. opium. Was sent for during the night-morning hours; found patient looking very pale and somewhat prostrated. She had expelled from the uterus a short time before my arrival, after a very severe pain and considerable hemorrhage, a fleshy mass resembling a fibroid growth of about the size of an egg, which had evidently escaped my detection, owing no doubt to its small size. The pains afterwards ceased, the hemorrhage assumed natural condition, and the patient made an uninterrupted and rapid recovery, but has since died from other natural causes.

I had ascertained that upon several occasions for a little over one year and even during pregnancy she had experienced slight uterine hemorrhages, and the last few months prior to her confinement complained continually of pain in the left iliac region but attributed it to the movements of the child. I will state

that nearly five years elapsed between births of the last two children and she denied miscarriages in the meantime.

This case presents unusual features. It is a well established and recognized theory that conception is almost invariably impossible, and is an exception other than a rule when intramural abnormalities exist, whether fibroid, polypoid or of any other character. True, the growth in this case could not have been so large if it existed at all at time of conception, hence the probability of non-interference with gestation. In growths of fibroid character, the tumor generally increases in size very rapidly as the uterus undergoes the same change during gestation. My belief is that the growth in this instance had doubtless but recently formed, and soon would have undergone the usual changes peculiar to such, had it not been expelled with and by the same force and causes which labor contractions of the uterus gave to fetal expulsion. The mass was not sufficiently large to force the placenta out of place, and hence favor abortion or placenta-*previa*.

I desired possession of the specimen, but the family being devout Irish Catholics, ignorant and superstitious, believing the trouble was their (wife and husband) own fault, denied the request and had it buried.

CASE III.—MRS. L. AET. 26. MULTIPARA. (SECOND CHILD.)

Experienced annoying, spurious pains daily for two or three weeks prior to termination of labor, which occurred March 30th last. Labor normal until head engaged. Bearing down with head was felt the feet or footling presentation of as I supposed another child, and also with it all one hand. After some little effort passed my hand upward and found there was only one child, but both legs of which were anti-flexed upon the body, and thus coming down with the head and one hand. Experienced no difficulty in keeping the hand back, but met with considerable resistance in the efforts to keep the presenting feet out of the way, when a sudden, strong pain brought the head alone down and out, and in a few moments the child was safely delivered. Simultaneously with birth, the legs again flexed in the same position as discovered in utero. Pressing back the limbs with little difficulty of resistance, saving perhaps causing the little one pain, as it would so evince by its sharp cry, and relaxing the pressure, the legs would fly back into the same position as described. The child is perfect in every other re-

spect. This anterior flexion so acute and resisting I cannot account for, unless it is the contraction of the quadriceps extensor tendon, the spinal column being in no way involved. Treatment now as followed consist of porterior straight splint and bandaging. The little patient is doing well, is in good health, and no doubt will be cured of the abnormal condition without other surgical interference. The only principal feature in this case is of course the extreme flexion of the limbs and its cause. The presentation of the head, together with that of hand and footling, certainly rendered it a strong if not serious complication, which unquestionably would materially interfere with natural result of labor had not the course mentioned been pursued in its management.

The consideration of the proper management of labor involves so much in detail that I will merely attempt to outline one of its principal features—*anti-septic* midwifery. It is of the utmost importance to those who have charge of a parturient woman to so conduct her through the trying ordeal she must undergo in a manner if not truly scientific, yet replete with *savoir-faire* and without ostentation or carelessness. The accoucheur can avoid or mitigate evils which so frequently occur in parturition by adhering to strict discipline of entire cleanliness, care and good judgment, paramount requisites to counter-balance defects in management, and thereby lessen at least the frequent average life sacrifices of both mother and child.

Antiseptic midwifery has of late years received particular attention from the medical world, and its characteristics thoroughly ventilated. Undoubtedly the great percentage of loss of life occurring in confinements is due to puerperal fever, and this fact being recognized has given good cause for reflection, and also engaged the serious attention of the medical profession, and of the obstetrician in particular. Puerperal fever is a source of much anxiety and annoyance to the practitioner. The cause, in a large proportion of this distressing disease, is due mainly to carelessness or mismanagement on the part of the attendants.

The Académie de Paris, discussing the subject of antiseptic midwifery and puerperal fever, considered the uterus, after expulsion of the child and secundines, as an open wound, subject to the absorption of all and every discharges, which easily set up putrefaction, and being reabsorbed by the open vessels originates fever. It recommends that after expulsion of the child and placenta remove the discharges, after which use antiseptic



injections. These are also the views of the faculty of Italy, Belgium and Germany.

The precautions I invariably follow, are in a measure the same, save perhaps in a more fixed and rigid manner. When making digital examination during the course of labor, I never introduce the hand or fingers without first immersing them in a two per cent. solution of carbolic acid, after which I smear well the fingers with carbolized sweet oil or glycerine. After each examination I wash the hands in a two per cent carbolized solution. Immediately after expulsion of child, administer to the patient 3i fluid ergot, to favor contraction of uterus and as a hemorrhage preventive. Secondly, after removal of placenta and discharges, a luke-warm two and a half per cent carbolic acid solution is used as an injection, thoroughly washing out the vaginal tract. The same strength solution I order used daily as an injection, so long as the patient remains in bed, or at least until the danger of septic infection is passed, which is indicated by the natural changes in the sanguinary flow. Since the adoption of this plan of precaution, I have not experienced a single case of puerperal fever or poisoning.

Prof. Weber Ritter von Ebonhof, in Prague in an admirable and interesting obstetrical clinique report, describes at length the precaution taken for avoiding septic infection during labor and in the lying-in state. Among other things he says: "No student is allowed to make an examination who has any sort of sores on his hands or has dirty long finger nails. The hands must first be rinsed in a two per cent solution of carbolic acid after which again in a solution of permanganate of potash and weak hydrochloric acid. The fingers are then emersed in carbolized glycerine. After expulsion of the child and placenta, the vagina is thoroughly washed with a carbolic solution, and if the labour has been a protracted one, the foetus decomposed or any operation undertaken, the uterus is well washed out with a three per cent solution of carbolic acid. In all natural labour the child is born invariably under hand spray. The nurses are made to wash their hands in carbolic solution after having come in contact with the vaginal tract of a lying-in woman. It is of great importance to treat the first indication of fever promptly by injections of three per cent solution of carbolic acid in the uterus and the administration of purgatives. Of 925 cases thus treated only nine died, being a mortality of less than one per cent."

When symptoms of putrefaction set in accompanied with all its characteristics, the greater portion of such cases invariably end in death. Stande claims that over 90 per cent die. Of 27 cases reported by him where septicemic symptoms were of the gravest, with an average temperature of 106° F. and pulse 144, and treated postpartum with a five per cent carbolic solution, only six died or 22 per cent, and 18 or 60 per cent made a complete recovery. These are practical illustrations of the undeniable, invaluable, and almost radical preventive of puerperal fever or septic poisoning.

Although arguments have arisen against the use of vaginal injections after labour, whether of only simple hot water or prepared anti-septically, my own experience is that in every case thus treated by me as described, has vaginal irrigation resulted but in the most satisfactory manner.

Anti-septicism in midwifery as at present advocated, in my opinion based upon somewhat of an extended experience, both in hospital and private practice, is of sound and rational principle. I firmly believe that disinfecting irrigation of the vaginal tract following delivery is as important, essential and necessary as is indicated in any surgical operation where an open wound or surface becomes subjected to absorption of septic irritants. It is conclusive that vaginal injections used as prophylaxis in uterine and pelvic inflammation are most estimated and on the same principle can be safely resorted to following delivery.

The cleansing out by irrigation of all bad smelling discharges or any other poison infecting material from an abraded or irritated surface, vagina and uterus calculated to inoculate elements dangerous to life, is certainly rational, practical and humane.

It must not be omitted that in conjunction with the use of anti-septic methods and procedure there are other important safeguards. Ventilation, or the pure atmosphere of the lying-in room—the frequent change of bed accompaniments and avoidance of such other accidents about the premises conducive to generating disease.

In conclusion I venture to assert that were the rules governing cleanliness, care and good judgment, as well as the essential requirements of attention to diverse minutiae in the proper management of the parturient woman, carefully and strictly carried out it would greatly mitigate at least if not cut short the evils resulting from such lack of attention.

**REPORT OF COMMITTEE ON MEDICAL TOPOGRAPHY,  
METEOROLOGY, ENDEMICS AND EPIDEMICS.****Topography and Meteorology of California, and their Therapeutical  
Relation to Disease.**

By J. B. TREMBLY, M. D., Oakland, Chairman.

(Read before the Medical Society of the State of California.)

One of the great inquiries of invalids at the present time, as they turn their attention to a change of climate in seeking relief and cure from their sufferings and illness, is "Where shall we go?" and "What kind of climatic change is wanted to be of the greatest benefit?" To the medical profession, more than to any other source, ignorance looks for instruction on this subject, and wonders at the small amount of positive knowledge that has been acquired where so much literature on the subject is to be found.

Centuries have rolled their time into the great past, but as yet they have left nothing recorded, only isolated statements and experiences of individuals who have written their own impressions, in nearly every case, without any corroborating testimony from scientific or instrumental observations. So far all seems to have been suggestive, and no positive knowledge given of the causes which exist in certain localities that produce a prejudicial or beneficial effect on the animal economy, as far as it relates to man, his health, and the diseases which afflict him in every land where he resides.

It has long been known that, to a certain extent, man can become acclimated to some of the diseases of a country, so that he can remain there with comparative impunity, and even infectious and contagious diseases which are incidental to all countries are greatly modified in their severity. But this climatic modification of disease seems to depend on other agencies besides those which heretofore have been claimed to produce endemic influences.

In order to obtain a knowledge of any reliable accuracy of the therapeutical influence of any section of country as a place of abode for the invalid many things and conditions must be most thoroughly investigated in relation to its topography and meteorology. When this is satisfactorily done and fully demonstrated by time and experience, then comes the true

diagnosis of disease, to know what places in the medical geography of a country that has been mapped out, are fitted by their combined cosmical relations for the various diseases that may be benefited thereby. Slowly but surely we are arriving to a more positive and scientific knowledge or solution of the heretofore unknown subtle influences, that act upon the complex organism of man in various places where he may live, aside from the visible causes of disease which surround him. Their meteorological influences have been overlooked or much underrated in their sanitary relations by medical writers, either from ignorance, want of data or excused from their writings because they would conflict with some of their preconceived theories of the causes which go to produce functional and pathological conditions which are known to exist or are experienced by the sufferer. One writer will tell us it is an "epidemic influence" or "epidemic constitution of atmospherical relations;" another that it is a "malarious influence," and more recently we are told that it is a "microscopical germ" which produces these physiological results or changes in the health of man while residing in specific localities or only as a transient visitor. While each theory of modern times has its advocates, saying nothing of those theories that lie buried in the past, medical investigation has progressed step by step until it seems to have wrought out truths belonging to organic life and the influences both external and internal irrefutably related thereto. These axiomatic truths and laws of physical existences, are a basis on which the present and future medical man must build, regardless of modern or ancient teachings. He must have facts not theories from which to form his opinions. To meet with success in combating disease, he must reason inductively from what is presented for his consideration, in order to arrive at truthful conclusions; preconceived ideas and dogmas taught, he must set aside in the diagnosis of disease, and also learn that therapeutic experience of the action of medical remedies that have come down to us through the past, with scarcely a failure of success, is ever a potent factor in giving relief and curing disease. But as he looks out upon the medical world at the close of the nineteenth century and sees the vast multitudes of workers, zealous each in their department of investigation, accumulating facts, filling volumes with their generalizations, he is lost with amazement at the apparent failure to develop that which the

medical world has so long wanted,—more precision and less doubt in medical science.

But to return to the original idea of this paper is to open a vast field for reflection and investigation, and begin with what might justly be called opening of the gate, to explore heretofore an unknown region. The simple contemplation of the extent and greatness of the limpid aerial ocean that surrounds the earth on which we live and move strikes us with awe, and seems to baffle our thoughts of investigation at the very threshold, so unconscious are we as we look up through the air out into unbounded space and behold other worlds and systems of worlds, that we never stop to think that we reside at the bottom of an ocean of matter so light and so impalpable as to nearly escape detection by our senses. We forget that this element is possessed of enormous weight, rolling up in one region mountains great in height; in others, leaving extended plateaus and deep valleys over which and through which the vast unseen currents flow and reflow, producing results often of such remarkable character that we wonder how it is that this atmosphere in which we live can be so potent a factor in many of the great phenomena which we experience and see around us.

To confine our thoughts and abbreviate our ideas to the climatic therapeutics of our State, it seems to be necessary to reproduce much that has been written and said upon its topography, embracing the trend and height of its mountain ranges; the extent and locality of its valleys; the course of its watersheds; the flowing of its rivers; its inland bays and lakes; its forests and its plains; its surface that is subject to artificial influence, and its relative position to receive the climatic effects to a greater or less extent from the surrounding or contiguous territory.

While there is a great similarity in topographical appearances of the Pacific Slope of the North American Continent, California has a peculiarity in all her physical aspects not found in any other portion of the earth, in her mountain ranges, deep canyons, large inland basins, arid deserts and fertile valleys, which mark it as almost a phenomenon in geological upheavals.

The range known as the Sierra Nevada, in the eastern portion of the State, is the principal one which influences and controls to a great extent the climate we have. This barrier, or high wall, runs northwest and southeast for a distance of nearly 500

miles, parallel with the ocean shore on the west, and from 120 to 125 miles inland to the east. Its crest is from 6000 to 8000 feet above the level of the sea, with many of its peaks towering high up into the region of perpetual snow. The east side of this high mountain boundary is precipitous in many places like a steep wall, as it descends into a vast arid plateau from 2000 to 5000 feet in altitude. To the west the slope is gradual for many miles, as it descends to near the level of the sea in the great interior basin, embracing the Sacramento, San Joaquin and Tulare valleys. Between the Sierra Nevada Range and the ocean are several mountain ranges nearly parallel, but of a slightly different trend, bearing with a sub-acute angle to the eastward, as they pass inland from the ocean shore.

In Northern California, the high Sierras in meeting the Cascade Range of mountains of Oregon throw off to the westward and south-westward ranges known as the Siskiyou, Scotts Mountains and Shasta Butte. Mt. Shasta is the grandest peak of the State, standing as a lone sentinel, with its hoary crest always glittering with eternal snow, guarding the rich valley to the south, and throwing out arms in several directions in mountain ranges which go to inclose the Sacramento Valley on the west and make up the coast ranges which extend southward to the Golden Gate.

The Diablo Range, trending to the south of east from the Bay of San Francisco, forming the western boundary of the San Joaquin and Tulare valleys, meets the Sierra Nevada Range at the Cajon Pass coming down to the east side, completely inclosing the southern portion of the valley into a grand amphitheatre some 2600 feet in altitude below the Mojave Desert, a short distance away to the east. This peculiar feature of physical topography is one of the most interesting in the State, and second to none bearing on the climatic conditions of the valleys to the north.

What are called the Coast Ranges have all their main axes nearly parallel, and trend away from the coast line to the south-eastward, resting on the Santa Inez Range, that runs from Point Conception through Santa Barbara and Ventura Counties, joining with other ranges in the southern portion of the State, which go to make up the Cordilleras of Mexico.

Between each of these ranges are fertile valleys of greater or less extent, through which streams of water make their way and

find an outlet at the sea shore. These valleys begin their foundations in the canyons and deep gorges of the high ranges. As they descend they widen out, until they are many miles in extent, where they meet the shore line of the ocean. Each of these coast valleys have a climate that is similar, if not identical—at least in the causes which go to produce diseases or the therapeutical effects of giving relief. To return to the Sierra Range of mountains, we find as we descend to the westward from the highest portions, two well-defined plateaus, in altitude from 1,000 to 4,000 feet; from 300 to 400 miles in length, and from 20 to 50 miles in width. This territory is designated as the lower and higher foothills of the Sierra. The higher plateau possesses the characteristic of mountains, in many places, by the high undulations and deep gorges which mountain streams have cut in the long process of time, in discharging the water of melted ice and snow which covered the high peaks to be seen in the distance. These Sierra foothills gradually descend to the westward until they reach and disappear in the great valleys lying at their base.

There are many places of small area in the State which correspond to a great or less extent to this belt of the Sierra in altitude, productions, and similarity of climate. The great valley which lies at the base of the foothills of the Sierra Nevada on the west, has not its counterpart in peculiarity of location on the earth. It is an immense inland basin, some 400 miles in length, and an average width of 40 miles, with an area of 17,000 square miles. Its dimensions and location give it a climate peculiar to itself, in temperature, precipitation, course of winds, productions, and disease.

The declivity of the Sierra Nevada Range on the east is very abrupt, descending in many places 1,000 feet per mile, down to a desert region, embracing an area of 35,000 square miles, with an altitude from 1,000 to 2,000 feet above the sea, with the exception of what is called "Death Valley," a long, low piece of land, 45 miles in length, 15 miles in widest place, its surface depressed 175 feet below the surface of the sea, and with the exception of worthless shrubs, it is destitute of the slightest trace of vegetable life. In mid-summer it is said to have a temperature ranging from 110° to 140° Fahr. On the southern border of this great desert, rises a high chain of mountain ranges which become the northern boundary of the great region

known as "Southern California," embracing the plains of San Bernardino, Los Angeles, and all the slope from the mountains on the south and west to the ocean. These high ranges form almost an unbroken semicircle around this portion of the State, walling it in to such an extent as to give it a local peculiarity, topography and climate.

In writing up the topography of the State to the extent which is done in this paper will seem unnecessary and perhaps wearisome to the reader; but to arrive at any definite conclusion relative to the Medical Geography, its surface must be thoroughly understood, and all correlations appertaining thereto. It is the sum total of all the influences of temperature, altitude, humidity, cloudiness, prevailing winds, sheltered conditions, drainage, character of soil, light, cultivation, growth of vegetation and extremes in every way which go to make the climate of any particular locality; otherwise the meteorological reports will be misleading, and the generalizations drawn by physicians or patients who are seeking climate to relieve and cure disease will be met by disappointment. Without this knowledge, beyond dispute, the recommendation of climate will prove unsatisfactory as a therapeutical agent, often to the chagrin of the physician and injury to the patient.

How to overcome this great difficulty and gain the desired information is a question for meteorology to decide, or at least how it must be used as a potent adjunct to determine the question which presents itself for our consideration. To obtain this knowledge, and make it of utility, we must be patient, toil hard and long, for Nature will give up her secrets only as they are wrested from her laboratory by those who search deep and diligently for what is sought; even then she is arbitrary, and places conditions upon what she reveals. She commands in all her ways; her despotism is irrevocable, although she speaks so gently in so many ways.

Notwithstanding science, in modern times, has done so much to instruct and point out the way to enter every department of investigation, it seems, in looking ahead, that we only see the gateway of the vast temple, wherein lie infinite mysteries for us to study.

In the meteorological report of the City of Oakland, California, for the year 1881, a climatological map was published, on which the various climates found in the State were marked out,



based on isothermal lines of temperature. These lines were formed from the most reliable data which then could be obtained, and which succeeding observations have so far sustained. They represent temperature only, but there is hardly a doubt but that the isobars of atmospherical pressure, as well as hyetal lines of humidity, will be found to correspond. This mapping out of the State by climatic boundaries, as presented in the accompanying maps of this paper, is quite a curiosity to the meteorologist, who sees the various climates of the earth here in epitome. We have a southern and northern coast climate, a great interior or valley climate, a mountain and desert climate, each definitely represented in all their general aspects. Still, within each of these climatic boundaries are to be found sheltered nooks, apparently possessing climates differing from that surrounding them, and seemingly contradictory to the classification which has been given. If this really is so, it cannot be known for a certainty without close instrumental observation, time and much labor. The following abbreviated meteorological statement of observations taken in the City of Oakland, California, extending through a period of ten years, is perhaps as reliable in its bearing on the northern coast climate, from Cape Mendocino to Point Conception, as anything that can be found from which to obtain data relative to the therapeutical factors that enter into the climate of the above region:

## TABLE

SHOWING THE COMPARATIVE ANNUAL METEOROLOGY OF 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884 and 1885.

	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885
Mean temperature of the year...	55.09	56.29	55.28	55.11	53.89	55.62	54.49	54.06	55.85	57.71
Mean temperature, warmest day...	74.	76.	69.33	75.33	70.66	70.	69.33	84.66	72.66	70.
Mean temperature of coldest day...	36.	41.63	37.	33.66	41.	42.	35.	32.33	36.	46.
Maximum temperature for the year...	97.	96.	84.	93.	89.	87.	84.	103.	88.	89.
Minimum temperature for the year...	30.	30.	27.	27.	29.	31.	30.	25.	28.	27.
Greatest daily variation of temperature...	33.	38.	33.	46.	36.	35.	31.	38.	30.	36.
Least daily variation of temperature...	2.	1.	2.	.....	1.	1.	1.	1.	1.	00.
Greatest monthly range of temperature...	49.	47.	46.	46.	48.	40.	42.	50.	45.	38.
Least monthly range of temperature...	19.	25.	23.	30.	28.	21.	19.	29.	19.	19.
Average daily range temperature for year...	14.91	14.61	13.65	12.96	14.10	13.40	12.80	12.81	11.64	11.44
Average monthly range of temperature for year...	34.92	35.5	32.5	38.	34.91	32.	31.16	37.58	30.	29.16
Yearly range of temperature...	67.	66.	57.	66.	60.	56.	54.	65.	60.	52.
Mean relative humidity for year...	83.	83.11	84.71	85.29	83.70	83.25	82.57	83.71	85.39	86.74
Highest relative humidity for year...	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
Least relative humidity for year...	40.	34.40	38.60	39.	27.	29.	28.7	33.9	38.1	41.5
Greatest variation humidity in 24 hours...	49.09	51.20	45.06	58.	54.40	37.40	65.7	48.8	41.	43.8
Least variation humidity in 24 hours...	06.	01.	02.	30.	20.	30.	4.	3.	3.	3.
Rainfall in inches during the year...	21.56	11.09	31.71	28.91	28.07	26.07	18.87	15.76	38.20	22.58
Rainfall in inches in agricultural years from July 1, 1816, to July 1, 1885...	28.53	12.33	32.32	23.55	23.84	31.24	18.03	20.22	31.10	17.95
Number clear and fair days during year...	268	300	255	266	258	276	276	266	260	238
Number cloudy days during year...	98	64	110	99	108	89	89	99	106	127
Number days in which rain fell...	63	58	78	89	53	67	72	53	85	67
Number foggy mornings...	23	8	17	19	27	28	15	21	19	20
Number mornings overcast...	51	44	64	63	86	52	77	105	77	118
Number mornings frost was seen...	35	35	36	46	62	47	50	58	39	27
Wind, direction from S W and W...	342	364	311	355	346	402	345	428	382	426
Wind, direction from N W and W...	210	150	173	150	136	136	150	119	128	112
Wind, direction from N E and N...	34	63	45	50	59	56	53	29	62	53
Wind, direction from S E and S...	163	150	164	126	172	138	143	91	151	142
Calms...	340	265	402	372	385	331	404	438	375	362
SEASONS.										
Mean temperature of Spring ....	54.46	55.18	55.73	56.15	52.97	56.35	54.12	54.63	55.59	58.08
Mean temperature of Summer...	60.40	61.17	59.36	60.07	58.95	60.27	60.06	61.16	61.89	61.23
Mean temperature of Autumn...	57.75	57.67	56.92	56.73	55.86	54.78	56.44	54.25	57.07	59.52
Mean temperature of Winter...	48.20	50.39	50.12	47.60	45.38	51.10	46.80	46.20	47.38	51.69
Difference between the warmest and coldest months of Spring...	4.40	1.49	3.68	.70	9.91	5.12	5.77	5.60	6.16	2.04
Difference between the warmest and coldest months of Summer...	1.99	1.10	.35	1.26	1.88	1.55	1.13	2.78	2.60	3.25
Difference between the warmest and coldest months of Autumn...	6.13	7.76	5.93	9.14	7.70	8.79	9.68	10.64	3.99	5.05
Difference between the warmest and coldest months of Winter...	5.00	6.09	1.28	5.13	2.37	5.34	2.33	5.98	1.56	4.38
Difference between the warmest and coldest months of the year...	16.20	12.25	13.06	15.68	15.78	12.38	14.77	19.26	16.38	13.33

## FOR TEN YEARS.

Mean difference between the coldest and warmest months for ten years .....	19.67
Mean temperature for ten years .....	55.37
Mean barometer for ten years .....	29.94
Mean relative humidity for ten years .....	84.24
Mean annual rainfall in inches for ten years .....	24.28
Mean clear and fair days for ten years .....	266.4
Mean cloudy days for ten years .....	98.85
Twenty-five per cent of the clear and fair days the horizon was obscured by overcasts or clouds making the absolute per cent of cloudiness .....	.45
And the absolute per cent of clearness .....	.55

From the above synopsis it will be observed that these meteorological factors which have a bearing on the salubrity of any climate, in the City of Oakland are represented as follows:

## MEANS FOR TEN SUCCESSIVE YEARS.

Mean barometer (elevation above the sea 24 feet). . . . .	29.94
Mean relative humidity.. . . .	84.24
Mean absolute humidity, in grs. to cubic foot, troy weight. . . . .	4.09
Mean annual rainfall in inches.. . . .	24.28
Per cent of cloudiness. . . . .	45
Mean temperature.. . . .	55.24
Mean daily average temperature. . . . .	13.23
Mean yearly average temperature. . . . .	33.57

Prevailing winds, southwest and westerly. Diathermancy of the atmosphere, much obstructed by continued moisture in the air.

The means of meteorological observations become the zero of the climate of the place in which they are taken, although subjected to many influences which change them for a short time to maximum and minimum extremes.

It may be asked: What has all this which has been written to do with therapeutical climatology? To the ordinary observer, this would appear as a reasonable interrogatory, but as one begins to investigate sanitary meteorology it will be found necessary to ascertain positively what the atmospherical elements are and what relation they sustain to each other, in order to know the salubrity of any locality. When this is known, and the elementals are reduced to a mathematical certainty, all that will be required to make therapeutical climatology available, will be to turn to the topographical and climatological tables of the place which it is desired that the invalid should visit, after a correct diagnosis of the case is made.

This may all seem Utopian—a subject built up from the fancies of an enthusiast—or, in modern parlance, “a crank.” But the world moves—knowledge is widening—highways are opening in every direction where the human mind can travel—explore new fields which lie wide open, inviting scientific investigation and research. Cool, collected, critical and truthful must be those who go down into Nature’s secrets, unfolding her wonderful forces, and their adaptation to human needs.

These elementals of climate must be thoroughly known before any locality can be recommended for its climato-therapeutics. They must have their marking of zero, to which the physician can refer when he has examined his case and made his diagnosis; otherwise, his reference to climatic benefit, or cure of disease,

will be nothing more than mere guess-work, and in what he most desires for his patient, will be disappointed.

To accurately establish this zero will be the most difficult task in arriving at a satisfactory result, in the investigation of climatic values; but this must be done before any results can be realized which the scientific spirit of the age will accept. The ordinary observer looks with much credulity, even on the attempt, to arrange and classify these elementals, which are subject to almost constant change, and susceptible to disturbance from so many causes, that anything like stability in their action appears impossible, notwithstanding they all have a mathematical mean, and positive exponent of expression.

To arrange these principal factors of climate, which are so dependent and interwoven into each other, in their manifestation, and still have distinct physiological action on man, is a very difficult task, but the following classification, gives the most reliable data, and one from which can be obtained the sum total, either single or complex, of their physical manifestation.

- 1st. Barometrical pressure, and changes expressed in *altitude*.
- 2nd. Thermometrical changes, expressed in *temperature*.
- 3rd. Hygrometrical readings, expressed in *humidity*.
- 4th. Cloudiness of the horizon, expressed in *per centages*.
- 6th. Force, direction and velocity of the *prevailing winds*.
- 5th. Density and rarity of the air expressed in *diathermancy*.
- 6th. Light and ozone.

#### ALTITUDE.

It is well known that the barometrical pressure at the level of the sea, equals fifteen pounds to the square inch of atmospheric weight, or in other words, a column of mercury one inch square, thirty inches in height, weighing fifteen pounds, will balance a column of air one inch square, extending upwards to the height from forty-five to fifty miles, weighing fifteen pounds avoirdupois.

The estimated surface of an ordinary sized man is about fifteen square feet, therefore, he sustains the enormous pressure, or weight, of 32,400 pounds; but in the economies of nature, the elasticity of the air within the body, balances the great pressure on the outside, so exactly, that he is not sensible of it; so well is he adapted to his surroundings.

This, from all experiments that have been made, would make the most probable point, or zero of barometrical pressure, at the level of the sea, or thirty pounds to the square inch of surface. Therefore, it might be said, when the barometer reads 30.00 it is the normal condition, for normal physiological action, the climatico-therapeutical *norme*.

#### TEMPERATURE.

To arrive at a *zero* of health temperature is a subject of many different opinions, as all bodies have a temperature, not only peculiar to themselves, but in common to all other surrounding bodies; either receiving or imparting constantly degrees of heat or cold, to keep the equilibrium, which is necessary in the organic and inorganic world. But the question is, what is this temperature, as it regards man and the relations with which he comes in contact?

It is a well established fact that the normal temperature of a perfectly well human being is 98.<sup>o</sup>6 degrees Fahr. This is the physiological zero of man's healthy action and existence. It is within a very few degrees of this *norme* that all the physiological phenomena of his organic life is manifested. This physiological *norme*, however, is not the climato-therapeutical, which stands in direct relation to the individual as being the temperature most conducive to health and life; but to a point much lower on the thermometrical scale. It is found by frequent experiments in various ways, and under many varying circumstances, that the organic powers are capable, through their peculiar functions, of resisting many degrees of heat and cold; either above or below the normal animal temperature. Sir David Brewster many years ago, reports a case of a distinguished sculptor by the name of Chantry who exposed himself in his furnace, used in drying his moulds, to a temperature of 350<sup>o</sup> Fahr. His workmen often entered it at a temperature of 320<sup>o</sup>, walking over the iron floor with wooden clogs which were charred on the surface. On one occasion Mr. Chantry, accompanied by five or six of his friends, entered the furnace, and after remaining two minutes they brought out a thermometer which stood at 320<sup>o</sup>.

In 1774 Sir Charles Blagden and Doctor Geo. Fordyce instituted some important trials relative to heated air. The rooms in which these experiments were made were heated by flues in

the floor. Having taken off his coat, waistcoat and shirt, and being provided with wooded shoes, tied on with list, Dr. Fordyce went into one of the rooms, as soon as the thermometer indicated a degree of heat above that of boiling water. The first impression of this heated air upon his body was exceedingly disagreeable; but in a few minutes all consciousness of uneasiness was removed by copious perspiration. At the end of twelve minutes he left the room very much fatigued, but not otherwise disordered. The thermometer had risen to  $220^{\circ}$ . In other experiments it was found that a heat of even  $260^{\circ}$  could be borne with tolerable ease. At this temperature every piece of metal was intolerably hot; small quantities of water in a metallic vessel quickly boiled, and streams of moisture poured down over the whole surface of the body. That this was merely the vapor of the room, condensed by the cooler skin, was proved by the fact that when a flask filled with water, of the same temperature as the body, was placed in the room the vapor condensed in like manner upon its surface, and ran down in streams. Whenever the thermometer was breathed upon, the mercury sank several degrees; every expiration communicated a pleasant impression of coolness to the nostrils, scorched immediately before, by the hot air rushing against them when they inspired. In the same manner their comparatively cool breath cooled their fingers whenever it reached them (Vol. II Carpenter's Physiology).

On the other extreme of temperature, in the Arctic regions where intense cold in winter prevails, the different voyagers who have made record of their explorations, we find temperatures to which they were exposed  $-40^{\circ}$ ,  $-50^{\circ}$ ,  $-55^{\circ}$ ,  $-64^{\circ}$ , and one of January 17th, 1834, of  $-70^{\circ}$  Fahr. The wonderful extremes of temperature that the physical organism of man can resist, and endure, is hardly possible to credit, had not each person during their lives experienced, to some extent, what these explorers have recorded.

To take the extreme above mentioned which have creditable endorsement, we find  $260^{\circ}$  above zero for one extreme, and  $70^{\circ}$  below zero for the other. If the normal temperature of man,  $98.6^{\circ}$  Fahr., be taken from  $260^{\circ}$ , it leaves a product of  $161.4^{\circ}$  which the vital force is able to resist of heat; and by reversing the process  $98.6^{\circ}$  ( $70^{\circ}$ ), a product is obtained of  $168.6^{\circ}$  of cold which it can also resist.

This represents a range of temperature of  $330^{\circ}$  that the vital

force of man, in health, can sustain, when brought into relation with that outside the body.

This seems to be a strange phenomenon, when the whole range of vital force or action in the body is confined to  $12^{\circ}$  and to exceed this a little, but for a short time, death ensues. As strange as this may be, there is another normal condition of temperature, to which the human system responds, in its environment with climatic conditions surrounding it, working a *norme*, or point on the thermometrical scale; that gives the greatest perfection of health and least annoyance from either heat or cold.

The students of hygiene and meteorology have occasionally intimated that a temperature from  $60^{\circ}$  to  $65^{\circ}$  Fahr. represented as nearly as possible an equitable, salubrious climate; one that was least productive of disease, and in harmony with a healthy action of all the functions of the human body.

This *norme* will become a permanent factor in climato-therapeutics, and from the most reliable data that can be obtained is about  $63^{\circ}$  Fahr.

#### HUMIDITY.

The humidity of the atmosphere is the amount of moisture which it contains, and is known as Relative and Absolute Humidity. In comparing the temperature of the *dry bulb* with the *wet bulb* thermometer hanging near each other, exposed from all sources to the same atmospherical impression is obtained a data, or exponent, from which tables have been formulated, known as Guzot and Glaisher's Tables of Relative and Absolute Humidity. From this known exponent two distinct factors are evolved; one, the positive amount of vapor in the air by weight; the other, the ratio of moisture of saturation, or the point of absorption of moisture by the air where it would cease to hold any more.

It is this relative humidity that gives the sensation of the atmosphere being dry or wet, and in reducing it to a mathematical factor is expressed by a percentage to the weight of the vapor, or, in other words, if the weight of vapor in the air is eight-tenths of saturation the relative humidity is said to be eighty per cent. The aqueous vapor contained in the air varies much under changeable atmospheric conditions, and locality, and the impression that is often obtained by the sensations are far from being true.

To make humidity available as it regards health, the average amount of vapor in a cubic foot of air must be positively known as one of the conditions of the climatic tables of the locality. The norme of absolute and relative humidity to compare with the norme of temperature of physiological resistance should average not far from sixty per cent of saturation, from all experiments and observations that have been made regarding relative humidity as a factor when used in relation to health.

#### CLOUDINESS.

The rapid variation of temperature when the sun is obscured for a few minutes during a warm day, demonstrates the physiological effects of the interception of the sun's ray, by the physical sensations that are quickly preceived in the transpiratory functions of the organism, more especially the cutaneous and pulmonary surfaces, which readily respond to this slight change in temperature.

No doubt a locality that has the minimum amount of cloudiness possesses one of the elements which is conducive to health, without reaching that extreme which would exclude other conditions that are essential to the welfare of the animal economy.

#### WINDS.

The atmospherical currents that blow over the different portions of the earth's surface, contain suspended matter, in condensed vapor, or deleterious miasms which affect frequently the salubrity of large areas, impressing on the inhabitants residing therein an influence inducing or relieving disease. This fact which is almost axiomatic, the climate seeker for lost health must not overlook. The winds that come up from over the surface of pure water, either salt or fresh, in a light breeze, are the purest, genial and most invigorating. Still the air that flows down the mountain sides from their snowy peaks, and becomes modified by the warmth of the valleys below possesses a vitalizing influence over wasted tissues of organic structures, and reinvigorates lost enervation.

#### DIATHERMANCY.

This is that property or condition of the atmosphere capable of transmitting radiant heat, and is determined by comparing the difference of temperature between two thermometers, one exposed to the direct rays of the sun; the other the temperature



in the shade at the same time. Dr. Chas. Denison, of Denver, Colorado, has deduced what he thinks is a physical truth, or rule, on this point: "That the difference of temperature in the sun from that in the shade is one degree for every 235 feet in elevation, with the exception of some peculiar characteristics of arid climate found in deserts and great plains." He also says: "The effect of diathermancy of high altitude on solar and terrestrial radiation is wonderful. The solar radiation is rapid, and soon after sunrise the temperature rises because of the slight resistance which rarified and dry air offers to the sun's rays; while after sunset the terrestrial radiation is also rapid because there is no envelope shrouding the face of the earth to prevent the natural cooling of the dry ground."

Prof. S. P. Langley, in his researches on solar heat, fully proves the above assertions in his experiments on the absorbant powers of the atmosphere under different conditions. Therefore diathermancy becomes a factor of unknown value to the invalid, and that will have to be taken into consideration by future observers.

#### LIGHT.

Its great source is from the sun, and fixed stars; also from substances in a state of combustion and chemical action. It is very important in every condition of health; its free access where insidious poison of disease exists, proves it to be antiseptic. It aids assimilation of food and increases nutrition; it acts as a stimulant and tonic on organic structures; its absence is quickly shown in the structural changes that take place both in animals and plants; tissues become weakened, anemia, dropsies, hemorrhages and many kindred ailments are the consequences of too long deprivation. What light is will be left to the discussions of those engaged in the study of physics.

#### OZONE.

The physiologic action of this allotropic form of oxygen is not satisfactorily determined, but enough has been learned to know that its presence in almost any appreciable amount will produce a deleterious effect upon the nasal, laryngeal and pulmonary organs.

Heat-rays from the sun, passing in direct lines through a clear atmosphere, bright sunshine and glass windows at times will generate ozone in rooms and dwellings, as tests show.

With this knowledge the invalid who is predisposed to irritations of these members, or suffering from diseased conditions of them, had better investigate this element of the air he breathes, before he feels sure of his place of abode for health, even if all other conditions are favorable.

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### **MEMORIAL WREATH FOR THE PROSECUTION IN THE GRAVES MALPRACTICE SUIT.**

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By LEVI C. LANE, M. D., Professor of Surgery in Cooper Medical  
College, San Francisco.

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*"Quod medicina non sanat, ferrum sanat; quod ferrum non sanat, ignis sanat."*—  
*Aphorism of Hippocrates.*

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The medical profession of California have watched with special interest the case in which Dr. G. W. Graves, of Petaluma, was sued, over a year ago, for alleged malpractice. The cause of action was based on the charge of improper treatment of an injury to the ankle of an old woman—one of those injuries where, despite the utmost care and skill on the part of the surgeon, the perfect use of the joint can never be regained. Though it was proven by written authority, as well as by prominent expert evidence, that the doctor had treated the case properly, and had obtained as good results as are ever gotten in such injury; yet the legal managers of the prosecution, uninfluenced by these facts, of which they became cognizant at the very commencement of the trial, have waged against the defendant during this long period a most merciless legal warfare, and one that has had but one parallel in the medical annals of this coast. And the outrage was further intensified by the fact that the plaintiff's family had received unremunerated services, during many years, from Dr. Graves.

Early in the case a compromise could have been effected, but the defendant, with more regard for his professional honor than for his purse, refused every overture of the kind; and, aided by the moral as well as the financial support of the profession, and inspired by the principle which guided our forefathers in their struggle, viz., *millions for defense, but not a cent for tribute*, he has made a resistance that deserves all praise, for a compromise, though it would have saved him money, would have been the signal for many similar suits against others.

The case has been tried three times, the first trial resulting in a verdict for eight thousand dollars against the defendant. This verdict, so at variance with what should have resulted from the evidence, awakened in the mind of almost every physician in this State a feeling of intense indignation and the determined resolve, that the outrage should not be submitted to. At once, contributions were freely offered for the defense, amounting in the aggregate to nearly two thousand dollars. With this money additional legal counsel was employed, viz.: Hall McAllister, Esq., and Dr. E. R. Taylor of this city; and, after no slight effort, the shameful verdict was set aside, and the case re-opened for trial.

At the second trial no decision was arrived at, the jury being divided; but at the third trial justice was triumphant, and victory crowned the side of right in a full acquittal of Dr. Graves.

This verdict, so gratifying to the defendant, is almost as much so to the general profession, of which several of the leading members, besides liberally contributing money, spent some days of precious time in attendance at court, to reach which, the most of them were compelled to travel long distances. But all will now feel more than repaid in the consciousness of having aided in rolling back the flood of injustice which was threatening to engulf in ruin a professional brother. And besides this feeling of happiness, their united action has taught the lesson, that should a like instance recur, they will be quite as ready for concerted defense again; for, though the lance which they have lately so successfully wielded is laid in its rest, yet all will see to it, that its point is kept sharp, and ready for action. All may be assured that this serpent, the foul offspring of communism, as often as it may be evoked from its slimy pool by legal incantations, will be returned again to its festering home without doing other violence than leaving its fangs in those who may conjure it forth. Whenever this Hercules, in the form of a mal-practice suit, is sent forth in quest of golden apples, the profession are determined that he shall return, as on this occasion, laden only with apples of Sodom, whose bitterness will leave an interminable writhing in the mouths of those who sent him on such mission.

The fancy of Schiller has painted a strange scene, in which a young Moor is studying how he may shorten the life of his father; he decides the surest plan would be to suddenly fill the old man's heart with intense happiness, and then, in a moment,

to overwhelm him with grief and despair; in the course of this suit, this experiment, instead of in fancy, has been exhibited in reality. What wild joy the actors in this prosecution must have tasted when they obtained a verdict for eight thousand dollars; and with what heart-aches they must have been tortured when they saw the last glitter of those ducats returning to the pocket of their rightful owner! Some curious psychologist would do well to chronicle how much their life-span has been shortened at its distal end by such experience.

Great praise is due to the attorneys who aided in the defense: Mr. McAllister, too long ago recognized as *facile princeps* at the bar of California, that any new salutations of praise can touch his ear, deserves thanks for snatching some time from his overworked hours, and ably co-operating in the management which led the way to final victory in the case; and, especially, is high credit due to Edward R. Taylor, who, though a graduate in medicine, has chosen the law as his profession; to his untiring work the final result is mainly due; for, besides bringing that special knowledge, which is so valuable in such a case, he threw his heart and soul into the matter, and worked with the zeal and enthusiasm of a personal friend of the medical profession.

The history of this case would be more satisfactory if it could close without reference to certain medical men who allied themselves with the plaintiff, and, as far as it was possible, aided in the prosecution. Some of these men are residents of San Francisco, and gave their evidence by deposition; but the two who were especially active in this work—unnatural as throwing stones at a mother—were present at the trial, and mingled in their evidence an amount of malevolence which has brought on them the universal contempt of the medical profession. Their position now finds a proper parallel in the case of the traitor Benedict Arnold, who, after the close of our Colonial war, being asked by some European for introductory letters to the New World, replied, that he was the only man in Europe who had no friends in America. As Ulysses, in his visit to Hades, being repelled by his old enemy Ajax, learned that the resentments of the dead are eternal, so these men will find that those of the living are no less so. Should they desire to return to the profession, whose altar they have sullied, ignominy, as a flaming sword, will forever prevent them. Such action, whithersoever it may turn, will find no rest; for should it think to find a screen for its

offences in the flight of years, it will search in vain, since in the untrodden labyrinths of futurity, there will be found no hidden recess where the finger of infamy will not follow it; nay, more, death itself will give such action no refuge, since DISGRACE and DISHONOR will carve their initials upon its grave-stone as an unfading epitaph.

#### SUPPLEMENT.

The above was written and intended as a memorial offering to the defeated in this important trial; but while it was in the hands of the printer, and on the eve of appearing, information was received that the plaintiff had asked for a new trial. But as a pleasure deferred is not a pleasure lost, so the solace which might have been theirs at an earlier hour, has been but briefly deferred.

Not content with a verdict which has given satisfaction to all fair-minded persons, not satisfied with the unmerited scourging with which they have tortured the defendant for many months, yet unconvinced that the support which the profession had given the defense was founded on the knowledge that he was wholly innocent of any neglect of duty to the patient, the prosecution, finding it hard to relinquish a prize, which at one time seemed plainly to be theirs, have asked for a re-opening of the case. And thus they would add another scene to this merciless drama, in which honest thrift and prudent industry have so long been held the counterpoise in the scales of justice, of dissipation and improvidence. But this last menace must expire as a menace, for death has too effectually touched the vital centers of this many headed serpent to admit of resuscitation, in fact, this final effort has evidently been made, more for the purpose of annoyance than with any hope of success, since it has been the boast of, at least, one member of the prosecution, that a purpose of the suit was to humiliate the profession which had so persistently defended one of its members. To what a depth of moral degradation the spirit must have fallen, that can indulge in such fiendish malice. The espousal of the cause of Dr. Graves by the profession was, without doubt, the most praise-worthy movement which can be found in the medical history of the Pacific Coast. Men who have repeatedly declined tempting fees to make professional visits in the country, on this occasion, forgetting every selfish interest, abandoned their business, and made great personal sacrifices. And for what object?

To defeat justice as the prosecution cunningly put it in their argument? No, it was to promote justice and prevent its miscarriage. And all this was done without a single hope of reward, either direct or contingent. In fact, the thought of profit and gain entered the minds of the medical witnesses who testified in behalf of the defense, quite as little as it did the head of Dr. Graves, when he went to the house of this misguided woman to treat her injury. And were those witnesses now sued for their pains, the outrage would find a parallel in the treatment which the physician has received from the hands of this woman.

Indeed, the errands of mercy and charity in which the physician's feet are daily wearied tend to banish from his heart that selfishness which is so prominent an element in human nature; nay, more, to lift and place him on a plane of self-abnegation, quite unknown to those who have not been so tutored. To support this assertion by pertinent proof, what greater example of altruism and extinction of self can be found than the fact that no physician is permitted to conceal or patent any discovery in medicine, and if he does so, he is guilty of an ethical offence which excludes him from all association with his fellows. Adherence to this rule, which goes a step beyond the golden, has cost many a medical inventor and discoverer a prospective fortune. Had Jenner patented vaccination, to-day his heirs would have the wealth of Rothschilds. And yet of this profession, whose cardinal principle has ever been to work for the world rather than for itself, a member has been singled out whose excellent attainments and skill, acquired in civil and military practice, have never been questioned, and were especially illustrated in the good results obtained in the treatment of this woman; and because he sought to vindicate his honor as a physician and refused to surrender his purse when parties, brigand-like, were seeking, under guise of law, to wrest it from him, he has been pursued with fell diligence, and, for month after month, scourged with a whip of scorpions. Unmoved by the sight of this "man of unsubdued spirit, bravely struggling against adversity, a spectacle in which God himself takes delight," to quote the words of Eugene Sue, the prosecution have added to the enormity of their offence by declaring that they intended to humiliate the profession who, at the call of their victim, came to his aid. They have probably learned that the seeds of humiliation, if they would flourish, must be planted in far other soil.

As the parties of the prosecution have failed in every object for which they contended, the question arises, what have they done for themselves? If historic indifference, under the guidance of impartial criticism, cast its eye on the disconsolate group, and indulge in a few observations, the following facts will be learned. The plaintiff, no longer needing her crutch or malposition of the limbs, has won something, but her attorneys, after having worked with the energy that is inspired by empty maws and empty purses, and having seen the prize that was once won fall from their grasp, now stand as "men who have had their losses." Nay, more, the hostility which their envenomed action has awakened in the mind of every honorable physician in this state, has projected a long penumbral shadow athwart the orbit of their future lives.

As to the medical prosecutors, who listened to the temptation to gratify local envy and personal hate, and to do so, like the young of the spider, turned on and devoured their mother, but little additional need be entwined in the wreath already woven for them. None will envy them the satisfaction they have had in torturing a professional brother. To mitigate the bitterness of the cup, which the hand of retributive justice surely lifts to the lips of him who unjustly injures, they should hasten their repentance, and as visible evidence of the same, they should sprinkle their heads with the ashes of their burnt honor, and clothe themselves in sackcloth woven from the tattered remains of that once spotless robe with which they were invested when they were admitted to the profession of medicine, and took on themselves its vows.

How different in contrast stands the defendant! With arms well tutored in the practice of defense, with patience begotten of prolonged discipline, gladdened by the approval of friends, and the encouraging salutation of every upright member of the medical profession, with heart full of content, and warmed with emotions of triumph in a just cause, he now, with fearless spirit and armor well tried at every point, stands erect, and, come what may, he will go forth an assured victor in the struggles of life.

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TO DISGUISE THE ODOR OF IODOFORM.—Kriegar makes use of the ethereal oil of sassafras. The addition of a few drops, he says, suffices to remove entirely the offensive odor.

## Proceedings of Societies.

### Sacramento Society For Medical Improvement.

SACRAMENTO, June 16th, 1886.

The Society met in regular session, the President, Dr. W. H. Baldwin, in the chair.

The minutes of the previous meeting were approved as read.

Dr. A. E. Brune read a paper on "Congestion of the Uterus."

After a brief discussion the Society adjourned to meet on the third Tuesday in July. Subject of the evening's paper, by Dr. W. R. Cluness, "Syphilis."

JAMES H. PARKINSON, Secretary.

**THE TREATMENT OF BURNS.**—Altschul ("Monatsheft f. prakt. Dermat.," "Therap. Gaz.," April, 1886) reviews the treatment of burns, and gives the results of his own experience. Iodoform he regards as the application *par excellence* for burns of the second and third degrees; he prefers an iodoform-gelatin of the strength of ten per cent, or, better still, an iodoform-paste, of which the following is the formula:

White bole.....	.....	$\frac{1}{2}$ drachm;
Olive oil.....	.....	1 ounce;
Solution of subacetate of lead. . . . .	6 drachms;	
Iodoform.....	from 2 to 4 drachms.	

**AN ECONOMICAL WAY OF MAKING KUMYSS FROM COWS' MILK.**—M. Dujardin-Beaumetz ("Bull. et mém. de la soc. de thérap.," March 30, 1886) offers the following simple process:

Yeast-grains,	} each . . . . . 2 drachms.
Powdered sugar,	
Warm water (25° C.),	

At the expiration of an hour or two this mixture undergoes violent fermentation; it is then poured into the milk, which is raised to a temperature of from 14° to 17° C., being at the same time stirred. The fermentation of the lactose occurs rather slowly, and is complete in about forty-eight hours. By this process the cost of preparing a litre of fermented milk is reduced to about half a cent.



PACIFIC MEDICAL AND SURGICAL JOURNAL  
AND  
WESTERN LANCET.

EDITORS:

WILLIAM S. WHITWELL, A. M., M. D.

WM. WATT KERR, M. B., C. M.

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SAN FRANCISCO, AUGUST, 1886.

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Editorial.

Physicians' Prescriptions.

Within the last few weeks a physician of this city, who was called to see a child suffering from infantile diarrhoea, prescribed a mixture containing *decoct. salep.* and simple syrup; but the druggist, either from inability to decipher the prescription or his ignorance of the drug, which is not very common among American practitioners, dispensed jalap instead of salep and the child's diarrhoea went on to a fatal termination.

Naturally the matter has attracted considerable attention, the newspapers have written both good and bad articles regarding it, and the whole subject of prescription writing has been discussed, one of the more enterprising papers having published wood-cuts of several prescriptions which, it must be confessed are not in any way exaggerated, and resemble Egyptian hieroglyphics rather than the writing of an intelligent physician.

In the case above referred to there have not been any charges of illegibility; the only accusation against the physician being use of the contractions *syr. spl.* for simple syrup, which on two occasions was mistaken for syrup of sarsaparilla.

We have spent some time in examining the prescription books in different drug stores, and are surprised at the amount of slovenliness exhibited in prescribing. The hand writing in some cases is simply execrable, while in others the contractions used are

such as to constitute a cipher that can be read only by some particular druggist. There are other evidences of carelessness more frequently seen in the prescriptions of younger physicians. We mention particularly the habit of writing for a solution of certain strength, say one per cent or five per cent, instead of designating the exact amount of the salt to be dissolved, and venture to say that in nine out of every ten such cases the medical attendant does not know the amount of the drug used; he is aware that his patient is taking two or three drops of a five per cent solution, but he is ignorant of what these two or three drops represent. Reference might also be made to the more common and much less pernicious custom of ordering the amount of each ingredient in one pill or powder and leaving the druggist to calculate the total quantity for the mass, a practice that is objectionable only because it gives the latter an opportunity of making a mistake.

We do not deny that all these are recognized methods of prescribing, and therefore they can hardly be classed as erroneous, but their legitimacy is based upon habit, not upon principles which tend to secure accuracy in dispensing, for there is just as much reason in ordering the ingredients in one tablespoonful of a mixture and telling the druggist to make six ounces of the same. It is true that a dispenser should be qualified to make these calculations, but a doctor in deputing this work to a second person is shirking his own responsibilities, he is incurring a risk that the serious nature of his profession forbids, as it demands the use of every precaution against the possibility of error and deprives him of the right of entrusting to another work so peculiarly his own and which he himself can so readily perform. We are reminded here of the advice given by an experienced practitioner to a younger member of the profession who was fretting over some neglected details for the performance of which he had trusted to the common sense of the patient's nurse, it was this: "My dear sir, in the practice of medicine give all directions as minutely as if you believed your patient to be a damned fool."

There is another bad but rapidly increasing custom that should be brought before the profession. It consists in the use of those combinations put on the market by enterprising chemists. We refer to compound rather than simple preparations. These are kept in stock for a long time, and in many cases undergo decomposition. The various ingredients are mixed with due regard to chemistry and elegant pharmacy, but almost as frequently with an utter disregard of physiology. The fatal objection lies in the fact that no physician can remember all the ingredients and the respective quantities contained in one of these preparations; consequently he may unwittingly give some drugs that are not called for by the condition of the patient, but are swallowed by him simply because they happen to be constituents of some cordial, elixir, mixture or pill turned out in bulk from an Eastern factory. Furthermore, the relative proportions of the drugs in these combinations are fixed and cannot be altered to meet the demands of each individual case.

It is urged by the agents for these preparations that their use promotes "simplicity in prescribing." Now, if this simplicity consist in enabling the physician to include under one name a lot of drugs of whose existence and proportions he has a very indefinite idea, and all of which are not necessary to his patient, then the drummer who invades our office is right; but we confess that such has not been our opinion, for we have always understood that the simplicity referred to consists in ordering only those drugs and doses that are absolutely demanded by the exigencies of the case.

We believe that physician will meet with most success who makes his own combinations, selects his own doses, and leaves as little as possible to the dispenser's discretion.

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We are sure that the physicians of the State will be pleased to know that work upon the third edition of the Official Register has already begun, and that it is hoped that it will be ready by the first of the year. The publication of a register of this kind

entails an immense amount of work upon the editor, but this may be very greatly lightened if every member of the profession will not only send promptly the required facts about himself, but will also inform the Secretary of any mistakes which may have been noticed in the present register. The Secretary is anxious to obtain the correct name and address of every practicing physician, irrespective of schools. All physicians are therefore asked to send in their names, addresses and office hours, and those of their fellow practitioners who are near them, to the Secretary of the Board of Examiners, 652 Mission Street, San Francisco.

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**"The Annals of Hygiene."**

This is the title of a new journal devoted to the interests of sanitary science, and having for its object the promulgation of information upon this subject throughout the United States. The present number contains articles of considerable practical value, and, as it is the official organ of the Pennsylvania Board of Health, we are justified in expecting that all contributions will continue to be of a high order of merit. This fact, together with the low price, should insure a large subscription list.

The price is two dollars per annum, and all communications are to be addressed to 224 S. Sixteenth Street, Philadelphia.

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**LOTION FOR BALDNESS—LAILLER.**

R	Sulphate of quinine.....	1	gramme.
	Essence of bergamot ..	10	grammes.
	"    wintergreen....	2	"
	Alcohol 90°.....	100	"

Rub the scalp daily with flannel soaked with the solution until the skin becomes tender. The head should be shaved occasionally.—*L'Union Medicale*.

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An autopsy was made by Drs. Cornil and Roux on the body of the Russian patient of Pasteur, who died of rabies in the Hotel Dieu. The bites on the face were very extensive in two places, the upper lip was pierced through and torn aside, leaving the gum exposed as far as the first molars. Another wound in the temporal region, just above the zygoma, was also very deep, and in it was found a fragment of a canine tooth of the wolf. The brain, medulla and spinal cord presented no abnormal appearance.—*Progres Medical*.

## Health Reports.

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### Report of the State Board of Health.

It has been remarked that the death-rate of a community indicates with unfailing certainty its sanitary condition. We may, therefore, be justified, from the reports received for June, in drawing the inference that the situation of the State, in a sanitary point of view, is in a favorable condition. The deaths reported for the past month number seven hundred and fifty-one, in a population estimated at five hundred and eighty-two thousand and four hundred and fifty; a percentage of one and three-tenths decedents per thousand, which is a much smaller percentage than is usually found at this season of the year. Although this mortality indicates that the conditions are favorable to health at the present time, it gives us no guarantee of continuance. As the summer advances we must expect an increase of sickness; therefore this is the time for all sanitary officers to see that the water supply is kept free from pollution, that all sources likely to develop disease are removed, and general cleanliness adopted. The towns reporting *no deaths* this month are Bodie, Camptonville, Elk Grove, Forest Hill, Fort Bidwell, Hanford, Haywards, Igo, Lemoore, Merced, Newcastle, Nicolaus, Ontario, Roseville, Santa Maria, Tehama, Willits, Yuba City, Susanville, Amador City, and Shasta.

Consumption still continues to diminish its death-rate, the decedents numbering only one hundred and fifteen—a decrease of ten.

Pneumonia likewise has reduced its death from forty-four last month, to twenty-eight this month.

Bronchitis is reported to have caused but six deaths—five of these occurred in San Francisco.

Congestion of the lungs caused three deaths.

Diphtheria has also lessened its mortality, seventeen deaths occurring this month against thirty-one last month. Nine of these deaths occurred in San Francisco, three in Napa, two in Etna Mills, one in Watsonville, one in Oakland, and one in Livermore. The disease is evidently on the wane.

Croup.—Three deaths only are reported from this disease, which seems to decrease in proportion as diphtheria lessens.

Whooping cough was fatal in three instances, quite a decrease from last report.

Scarlet fever caused but one death.

Measles is credited with four deaths.

Diarrhoea and dysentery were fatal in eight instances, the same number as last month.

Cholera infantum shows a very largely increased mortality, causing thirty-one deaths, which may in part be attributed to the warm weather, but chiefly to the abundance of fruit and vegetables consumed. Among bottle-fed infants it has been observed that the milk of cows fed upon fresh alfalfa is particularly apt to produce a severe form of choleraic diarrhoea, which is quickly fatal if the cause is not removed and other food substituted.

Typhoid fever is credited with twenty deaths, which indicates a slight increase in the frequency of the disease.

Typho-malarial fever had only one death.

Remittent and intermittent fevers caused five deaths, according to the reports received.

Cerebro-spinal fever is credited with six deaths, three of which occurred in Los Angeles, one in Sacramento, one in Marysville, and one in Selma.

Cancer caused twenty deaths.

Diseases of the heart were fatal in thirty-eight instances.

Erysipelas is reported to have caused four deaths; and

Alcoholism six deaths. In connection with alcohol as producing a tendency to death, we have to record this month another case of

Thermic fever or "sunstroke," which has been reported by Dr. May Gydison, of Salinas City, who says that the man so stricken "was an apparently stout, healthy fellow, but a *hard drinker*, aged 27 or 28 years. He went to work in the field in the morning feeling quite well. About 10 a. m. complained of great thirst and dizziness in the head, and immediately became unconscious, and died within three-quarters of an hour from the time of seizure." As sunstroke is very uncommon in California, it is of great interest to collect all available and undoubted cases, that a record may be kept to ascertain whether the affection is only an exceptional occurrence, due to the habits of the victim, or is taking its place among the regular disorders incident to the climate and independent of personal habits or pursuits.

## PREVAILING DISEASES.

Reports received from every county in the State agree that no serious sickness prevails. As might be expected, disorders of the bowels are very frequently experienced in many places, and if cholera had invaded our coast would be the cause of very serious alarm. We can, however, trace it to the prevailing Summer heat, the consumption of fruit, and perhaps it may be an indication that the water supply of those towns, where the disease is common, has become polluted from surface or sewer drainage.

Cholera infantum is noticed as of unusual frequency in Lemoore, Sacramento, Dixon, Monterey, Davis, Mariposa, Martinez, Wheatland, and Salinas City.

Diarrhoea and dysentery prevail to some extent in Merced, Tehama, Millville, Etna, Red Bluff, Lakeport, Willits, Castroville, Anderson, Sierra Valley, Pomona, Lincoln, Colfax, Gridley, Camptonville, Sonora, Davis, Martinez, Salinas, Cloverdale, Anaheim, Calistoga, Angels Camp, Galt, Hill's Ferry, Fall City, which show how extensively the disease has been noticed. The type is evidently mild, as the mortality is exceedingly limited.

Measles have appeared at Gridley, Dixon, and Wheatland. It is not reported elsewhere.

Scarlet fever prevails to some extent in Truckee, Pomona, Downieville, and Williams.

Diphtheria is still found in San Francisco, Amador City, Livermore, Monterey, Anderson, Etna Mills, Napa, Oakland, Watsonville, and Santa Cruz.

Croup is noticed wherever diphtheria prevails.

Whooping cough is prevalent in Millville, Colton, San Mateo, Anaheim, Colfax, Amador, Gridley, Live Oak, Galt, Jolon, and San Francisco. Dr. M. F. Price, of Colton, writes "that the disease is epidemic there, but of such a mild type that a physician's services are seldom needed." From the mortality record we may judge that the disease is mild wherever it prevails in the State.

Erysipelas has been noticed in Lemoore, San Francisco, Willits, Igo, Anderson, Jolon, Sonora, Davis, Camptonville, Gridley, Truckee, and Livermore. The cases are all sporadic and mild in type. The mortality is very limited.

Typhoid fever. Sporadic cases of this disease have been noticed in San Francisco, Oakland, Martinez, Williams, Fall

River, and Sacramento. We may look for an increase of this disease as the ground water falls.

Typho-malarial fever has been observed in Martinez, Amador City, Lemoore, Igo, Jolon, Anderson, and Millville.

Intermittent and remittent fevers are prevalent in the lowlands and marshy bottoms.

Cerebral fever has not been observed in any of the reports received this month.

Pneumonia exists only in sporadic form, and the number of cases noticed are very limited. The same remarks apply to

Bronchitis, which occasionally is mentioned, but does not prevail in any part of the State heard from.

Influenza has almost totally disappeared.

With the exception of the prevalence of bowel disorders, the health of the community is excellent.

GERRARD G. TYRRELL, M. D.,

Permanent Sec'y Cal. State Board of Health.

Sacramento, July 10, 1886.

### San Francisco Health Report.

#### ABSTRACT.

	Jan.	Feb	Mar.	Apl.	May	Jun.
Total, 1885.....	438	468	502	468	512	516
Total, 1886.....	519	382	479	418	435	397
Phthisis.....	91	67	67	77	63	39
Pneumonia.....	66	28	34	29	26	18
Bronchitis.....	23	13	12	11	11	5
Heart Disease.....	31	22	23	15	16	21
Aneurism.....	2	1	—	—	1	1
Apoplexy.....	16	12	8	8	9	11
Typhoid.....	5	9	7	12	7	6
Paralysis (Hemipleg, etc.).....	4	8	10	9	8	12
Cancer.....	16	9	15	6	15	12
Diphtheria.....	13	14	14	16	22	9
Croup.....	15	7	13	8	10	1
Infant Convulsions.....	16	10	18	14	17	11
Meningitis.....	17	9	10	16	5	—
Casualties.....	12	21	13	10	15	17
Suicides.....	5	4	9	8	10	6
Homicides.....	3	3	2	1	2	1



## Notices of Books, Pamphlets, etc.

**DISEASES OF THE SPINAL CORD.** By BYROM BRAMWELL, M. D., F.R. C. P., etc.

**INSANITY AND ITS TREATMENT.** By G. FIELDING BLANDFORD, M. D. Together with TYPES OF INSANITY, an illustrated guide in the practical diagnosis of mental disease. By ALLEN McLANE HAMILTON, M. D.

**HAND-BOOK OF PRACTICAL MEDICINE.** By Dr. HERMAN EICHHORST. Vol. i. Diseases of the circulatory and respiratory apparatus.

**THE GENUINE WORKS OF HIPPOCRATES.** Translated from the Greek by Francis Adams, LL. D., surgeon. Vol. i.

The above named four volumes constitute the January, February, March and April issues of Wood's Library of Standard Medical Authors, published by William Wood & Co. of New York. To attempt anything like a critical review of these works would not only consume more time than we have at our command, but would leave space for little else in our journal. Suffice it to say that if the volumes yet to come are of the same high order as those before us, this year's library will far eclipse all previous efforts of the publishers. Dr. Bramwell's work, which is based on a portion of his lectures on medicine, is most profusely illustrated both with wood cuts and chromo-lithographs, mostly executed by himself. The other volumes, except, of course, the one last mentioned, also contain numerous illustrations. The physiognomy of various types of insanity are most strikingly illustrated by lithographs appended to Dr. Blandford's work. As to the works of the immortal Hippocrates, the father of medicine, at whose feet we may all sit and learn wisdom, we need say nothing; they alone are worth the price of the twelve volumes which are issued annually. It is difficult in this age of rapid bookmaking for a physician to decide what to buy; but in no other way can he better secure his money's worth of first-class medical literature than by subscribing for WOOD'S LIBRARY OF STANDARD MEDICAL AUTHORS at the well known publishing house of Wm. S. Duncombe & Co., 211 Post Street, San Francisco.

**THE YEAR BOOK TREATMENT FOR 1885.** Price \$1.50. Lea Bros. & Co. Philadelphia. Wm. S. Duncombe & Co., San Francisco.

In our notice of the Year Book for 1884, we described fully the nature of this work. It is a synopsis of the advance in med-

ical science during the year, culled from the medical literature of all countries, by the most prominent British physicians, such as Savage, Brunton, Bryant, Treves, and many others equally well known to the profession.

The volume is, therefore, a valuable one, and is more useful to the physician than the files of many journals which he has to wade through in the hope of finding something that he wants, because it contains the notes on each system by themselves, and at the same time gives a reference to the journal or book in which the topic is fully discussed.

We again heartily recommend this book to such of our readers as have not already purchased it, because we feel certain that it, more than any other volume of its size, will enable them to keep abreast of the times.

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**TREATMENT OF ALOPECIA.**—The following treatment has been successful in Lassar's practice in over 50 cases. It should be persevered in for at least two months in spite of amelioration. Each day the head is vigorously rubbed for a quarter of an hour with tar or glycerine soap. 2nd. Affusions at first hot, then cold, are practised. 3rd. A lotion of sublimate, 2 grammes in a thousand, is applied. 4th. The head is dried and rubbed with a solution of naphthol, 0 gr. 50 per cent. 5th. Twenty-five grammes of carbolated or salicylated oil of 2 per cent strength is applied.—*Berlin. Klin. Wochenschrift.*—*Jour. de Med. de Paris.*—*Canad. Pract.*

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**INDICATIONS FOR CHLORAL IN HEART DISEASE.**—M. Germain-Sée holds that hydrate of chloral is efficacious in cardiac affections which are characterized by increased vascular tension, or by an energetic cardiac impulse, and more particularly in cardiac dyspnea, with or without insomnia. When there is enfeeblement of the heart and fatty degeneration, one should withhold it or use it in small doses, for fear of provoking a veritable collapse. Hydrate of chloral acts, first, as a hypnotic; second, as a modifier of reflex power of the spinal cord; third, as a regulator of the action of the heart, both as to frequency and force; fourth, as a depressor of vascular tension; fifth, as a refrigerant and modifier of the respiration.—*L'Union Med.*

## **Extracts.**

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### **Medical Education in America.**

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[Translated from *Le Progrès Medical*, by Drs. A. and I. LOWRY.]

The medical schools of the United States are independent; that is to say, the different States do not concern themselves with higher instruction. Individual enterprise builds the schools, and undertakes alone the production of doctors, lawyers, engineers, etc. The government does not interfere except to inscribe in the official registers, the diplomas which are presented. The administration never refuses to do this; nevertheless, of late years, some Boards of Health have shown themselves tolerably severe toward certain diplomas obtained in a manner a trifle too irregular.

The students abandoned by the government are attracted by innumerable unrestricted schools, there being at least one in each of the principal cities of the United States. The larger cities, such as New York, Philadelphia, Boston, Chicago, and San Francisco, have each three or four schools, without mentioning the Homeopathic, and Eclectic institutions, and the Women's Colleges.

These schools are generally annexed to a hospital which furnishes a sufficiency of clinical material. Instruction is given in anatomy, physiology, pathological anatomy, medical chemistry, and a vast number of specialties, and accessory sciences. The programme seems to be most complete, but this is only a mirage, and in spite of appearances the organization of these schools is still extremely rudimentary.

American students are always in a hurry to obtain their degree. They have no idea of lounging away their time upon the academic benches. They make an exact budget of their time and money, and address themselves to the college which will best economize their efforts. The studies last three years, preliminary examinations do not exist or are reduced to a sort of certificate of common school studies; the final examinations guarantee but little. The expenses of the course are about three hundred dollars for the three years of the regular course. If the school is too exacting, the students are not slow to abandon their too severe professors, and go over to the rival school.

Such is the result of too great a competition, and of the complete indifference of the government. The colleges, forced to meet their expenses with the returns from the student, are, in a manner, obliged to lower their standards sufficiently to obtain the matriculation of the necessary number of pupils to assure the maintenance of the institutions.

We should, however, mention a certain number of measures conducive to the elevation of medical study in the United States. In the first place, most of the colleges have decided to add a fourth year to the course of study; it is true that this fourth year is not obligatory, and that the students rarely elect to profit by it, but it is to become obligatory in certain schools, such as the John Hopkins University in Baltimore, which possesses large revenues and eminent professors, and has no need of the students' fees to live, and prosper. Some reformers propose to raise the standard of medical study by increasing the difficulties of the entrance examination. It is with this view that Latin, or at least a knowledge of the Natural Sciences, has commenced to be one of the requirements. Dr. Pepper, the well-known physician of Philadelphia, has had the happy thought to fill this breach in general knowledge, in the following manner: He has instituted lectures in the Natural Sciences, algebra, and literature, and the students following them receive a special diploma, advantageous to them in their future career. Professors and students rival each other in zeal to render the three collegiate years, as fruitful as possible. The student's day is thoroughly regulated and well filled; numerous quiz-masters attract the students, and render their tasks more easy. In some colleges the students take their meals in the establishment, and arrangements are made by which they can lodge outside in an economical manner. Once provided with their diplomas, the new doctors do not forever turn their backs on the Alma Mater, when possible they return from time to time, and follow six-week's lecture courses which are specially arranged to enlarge the restricted limits of their knowledge. These post-graduate courses are imitations of those found in the German Universities; they are extremely useful, and our sole regret is, that no analogous arrangement is found in France.

Finally, there exists no American physician who does not dream of a voyage in Europe, where he can see for himself the grand masters, the Listers, Lawson Tait, Charcots, Pasteurs,

Kochs, Schroeders, and Billroths, and there are few among them, who, sooner or later, in their medical career, do not realize this dream. Most of them make the voyage immediately after leaving college, and come to Europe to live for six months or a year in a university town. We regret to say that Paris is no longer the favorite rendezvous of our trans-Atlantic confreres. Most of them go to Vienna, where they live unrestrictedly and find an enormous amount of instructive material concentrated in a single establishment, the Allgemeine Krankenhaus, and above all they profit by an instruction extremely practical and striking, given in the numerous polyclinics and dispensaries by eminent specialists.

En résumé, the organization of medical studies in the United States is very imperfect and rudimentary, nevertheless, all is not to be despised nor criticised, and we remark certain things worthy of imitation. These are, the methodical distribution of the student's time, the weekly quizzes directed by the under professors, and the six weeks' lecture courses for doctors desirous of increasing their scientific attainments.

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The opportunity now presents itself to notice in a few words, an excellent institution founded at New York, only two years ago, the utility of which has been demonstrated by its complete success. We refer to the Post Graduate Medical School and Hospital. This institution does not confer degrees, and admits only medical graduates. Its design is to complete the education of the student by allowing him to study special branches neglected by him during his college life. Another object not less useful, is to familiarize older practitioners with new methods and discoveries unknown or not understood at the epoch of their studies, as well as to acquaint them with any specialty toward which they find themselves drawn by their particular line of practice. This already flourishing school is excellently equipped for the instruction it has in view. It numbers among its professors, Drs. James Little, Wm. Hammond, F. Sturgis, E. Spitzka, E. Partridge, C. Dana, Ambrose Ranney and Mrs. Mary Putnam Jacobi.

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PACIFIC  
MEDICAL AND SURGICAL JOURNAL  
AND  
WESTERN LANCET.

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VOL. XXIX.

SEPTEMBER, 1886.

No. 9.

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Original Articles.

REPORT OF COMMITTEE ON PUBLIC HEALTH.

By WM. WATT KERR, M.A., M.B., C. M., Chairman.

(Read before the Medical Society of the State of California.)

During the past year so much has been done in the field of Public Medicine that a complete report of the progress in this department is impossible in the time at our disposal, and we must therefore content ourselves with a very brief *resume* of one or two topics that are particularly interesting and important to the profession in general, among which pre-eminence may justly be given to the investigation of disinfectants conducted both by the American and International Committees.

DISINFECTANTS.

At the annual meeting of the American Public Health Convention held in October, 1884, a committee was appointed "to examine the subject of disinfectants, antiseptics and germicides in their relation to preventive medicine and sanitation." One year later this committee, of which our esteemed member Dr. Geo. M. Sternberg was the chairman, handed in a report that for thoroughness cannot be surpassed, while its practical character renders it of the greatest value both to the profession and the general public.

The committee did not possess sufficient time to investigate all disinfectants or antiseptics and therefore confined its attention to those agents which are capable of destroying the infecting power of infectious material, namely to those substances known as germicides, and for this reason all the experiments depended upon biological tests. The germ theory of disease is

so universally believed that to most minds this method would be the most satisfactory, but even those who have not accepted the germ theory need have no hesitation in accepting the conclusions of the committee, since, as a matter of fact, those agents which by laboratory experiments have been proved to be the most potent germicides have, by the experience of sanitarians, by tests upon vaccine virus, septicæmic blood, etc., been shown to be the most reliable disinfectants. The committee deserves further commendation for selecting for experiment those agents that are most practical, and have been most relied upon by sanitarians for disinfecting purposes. There is no greater reproach against modern hygiene than the impracticable nature of many measures suggested for improving the condition of the masses; thus it is very true that cubic space should never be less than 600 cub. ft. per head, that every man should have his 2000 cub. ft. of fresh air per hour, that a family never should eat and sleep in the same apartment, but it is a very difficult matter to show how the average working man who has to support himself, a wife, and four children upon a wage of three dollars per day is to procure all these luxuries, and the problem for the hygienist is to devise some cheaper method by which the benefits derived from such sanitary measures as above described may be supplied to the poor. Therefore, in our opinion, the committee did well in allowing the question of expense to influence them in the selection of their agents, so that all classes might reap the benefit of their experiments.

The material used for testing was culture fluids of the bacillus subtilis, and bacillus anthracis, because it is a well-known fact that the spores of these bacilli constitute one of the most difficult tests of germicidal power, and it may, therefore, be assumed that an agent which will destroy these spores will also destroy all known disease germs, and probably all other organisms of this class. The method adopted was to expose for two hours equal portions of the material to be disinfected and the disinfecting agent of known strength, and those which failed in the proportion of 50 per cent were at once dropped without farther trial. Many of the commercial disinfectants were used and some of them found to possess considerable efficacy while others were worthless as germicides, nevertheless it is advisable to avoid disinfectants whose composition is not known, as they may be entirely neutralized by the chemical action of other substances; thus most of the active germicides contain mercuric

chloride which is decomposed by contact with copper, lead, or tin and is also destructive to lead pipes. The presence of this metal may be detected by adding a small piece of copper to the solution, when metallic mercury will be deposited upon it.

Many germicides which are fatal to micro-organisms are inert as regards spores; carbolic acid and sulphur dioxide belong to this class, and hence it will be seen that the common custom of using these substances for disinfecting fecal matter containing the spores of disease is utterly useless. Dr. Sternberg also calls special attention to the fact that the efficacy of those agents which are valuable as oxidisers is often diminished by the amount of organic matter present in addition to the infective material; thus, it requires a much larger amount of permanganate of potash to destroy the micrococci in septicæmic blood than in an equal volume of culture fluid, for the reason that there is so much additional organic matter in the blood. "The fact that the oxidizing disinfectants are destroyed in the reaction to which their disinfecting power is due, makes it necessary to use them in excess of the amount of organic material to be destroyed, otherwise germs included in masses of material not acted upon would be left intact in a fluid which is no longer of any value for their destruction, and as a few germs may be as potent for mischief as a large number, there would be a complete failure to accomplish the object in view. For this reason the metallic salts, such as mercuric chloride, which are not destroyed by contact with organic material, have a superior value for the disinfection of masses of material left *in situ*, such as the contents of privy vaults and cess-pools.

The committee found that heat, chloride of lime, and mercuric chloride were the best and most practical disinfectants. Experiments with both dry and moist heat showed the latter to be far more effective than the former, as it is more penetrating. Goods that would be injured by moisture must be spread out as much as possible, and exposed to a dry temperature of 230° F. for three or four hours, to destroy disease germs which do not form spores, and there is reason to believe that this class includes small-pox, cholera, yellow fever, diphtheria, erysipelas, puerperal and possibly scarlet fever. But in those diseases such as anthrax, where we have spore formation, any attempt at disinfection by dry heat must end in disappointment, because the necessary temperature is so high as to destroy textile fabrics, and in such cases moist heat may be used with great advantage,



as it has been demonstrated that exposure to *steam* at 230° F. will destroy even the most refractory spores. Heat is especially useful as a disinfectant for clothing and bedding.

The value of chloride of lime depends upon the amount of free chlorine it contains, the usual quantity being from twenty-five to forty per cent. A solution containing one part of bleaching powder in one hundred parts of water is sufficiently strong for most purposes, and, as it is not poisonous nor injurious to clothing, bedding or wood, it is probably the best household disinfectant. For the purification of clothing, wood, leather or sick rooms, it may be used as a 1 per cent solution, for cleansing dead bodies 4 per cent is recommended, and for disinfecting excreta 5 per cent is found to be necessary.

Mercuric chloride has been the favorite disinfectant during the last four or five years. An aqueous solution in the proportion of one in ten thousand kills micrococci and bacilli, while in the proportion of one to one thousand it destroys the spores of bacilli, provided the exposure be sufficiently long. At the recent cholera conference in Rome, Dr. Koch doubted the efficacy of this salt as a germicide, under a belief that it entered into combination with albuminous material and thereby failed to come in contact with germs enclosed in albuminous masses. Dr. Vaughan shows that such a chemical change does take place, but suggests that the resulting mercuric albuminate forms the powerful germicide, as it is freely soluble, diffuses readily through organic mater, and is probably the shape in which the mercury is most likely to be taken up by those lower forms of life that feed upon albuminous material.

Mercuric chloride may be used in the proportion of 1 to 500 for disinfecting fresh excreta, privies and dead bodies; 1 to 1,000 for cleansing furniture, walls or floors, and surgical purposes; 1 to 2,000 for washing clothes and other drygoods.

The above is only a brief summary of the conclusions arrived at by the committee upon this very important subject, but we would recommend every practitioner to obtain a copy of the report, as it contains one of the best examples of the relation between biological studies and practical medicine.

#### INOCULATION.

It is not the intention of your committee to narrate the history of this operation, but merely to call attention to what has been done during the past year to establish its position with regard

to small-pox, and to extend the process as a preventive measure against other diseases, such as hydrophobia.

There are three theories that endeavor to explain the immunity acquired from infectious diseases through a previous attack or inoculation with an attenuated virus. 1st. The exhaustive theory advocated by Pasteur, which supposes the presence of some pabulum necessary to the development of the germ in the bodies of persons susceptible to the disease, and the exhaustion of this pabulum, either by a former attack, or the inoculated virus. 2nd. The antidote theory of Klein and Klebs, which supposes that a previous attack or preventive inoculation produces some chemical agent poisonous to the specific germ, and thereby prevents its development. 3d. The vital resistance theory, advanced independently by Sternberg and Grawitz, supposes that immunity is due to an acquired tolerance on the part of the living cellular elements of the body to the poisonous products evolved by disease germs, to which they probably owe their pathogenic power, and a consequent ability to resist invasion by them.

The exhaustion theory has been disproved by Klein and Salmon, who show that germs can be cultivated in bouillon made from the flesh of a protected animal, and hence that the pabulum for such germs is not exhausted by protective attack or inoculation.

In our opinion this experiment of Klein's cuts both ways, and demolishes his own theory by the same blow with which it overthrows Pasteur's, for if the development of microbes in the blood or in culture mediums made from the flesh of protected animals proves that the pabulum for these germs has not been exhausted by the protective attack or virus, it as conclusively proves that the same protective measures have not produced in the tissues any chemical agent or poison that will arrest the further or future development of these germs.

The theory of vital resistance still remains *sub-judice* and will be hard to disprove as it cannot be subjected to experimental tests such as were employed in the two former cases. It is based upon the natural antagonism that exists between the living tissue and disease, on that same power which preserves the tissue while living but leaves it open to the ravages of decomposition when dead; indeed the very experiments quoted above which showed that tissues rendered impregnable against the

attacks of germs during life became a ready pabulum for these same microbes after death proves conclusively that vitality of the cellular elements is a very great factor in production of immunity. There are many difficulties in the way of a full acceptance of this theory for it may be asked why does vitality protect a man against one disease such as small-pox and leave him susceptible to scarlet fever, why does it make such nice discrimination instead of rendering him proof against all forms of disease? No explanation can be given, but the fact remains. Thus every one knows, from his own experience, the varying degree with which different men tolerate drugs; nothing is more common than to narcotise one man with a dose of opium that would hardly affect another, or to salivate one man with a dose of mercury that another man can take with impunity, and we explain this difference by the bald statement that this one is very susceptible to opium and that one to mercury. In the same inexplicable manner we find diseases affecting different races of men with a marked difference in the decree of severity. Although sneers at this theory as being fanciful and metaphysical, are not to be mistaken for its reputation, it must be admitted that it leaves a feeling of dissatisfaction and a desire to search still farther for the fundamental causes.

In former years inoculation was limited to the practice of vaccination as a preventive against small-pox, but progress of science, and especially the impetus given to biology by the enunciation of the germ theory of disease, has opened up for it a wider field and suggested its application as a preventive against other maladies.

Pasteur has used it with marked success in the treatment of rabies; he does not claim that he can cure the disease, but from numerous experiments upon animals he believes that its *development can be prevented* even after the person or animal has been bitten by a rabid dog. His method is to commence with a virus so far reduced, by exposing it for fifteen days to dry air, as to render it harmless when introduced into the human system; next day he uses a stronger virus and so on until he introduces that which has been exposed only for one day and which is so strong that had it been used in the first instance it would have produced the most violent form of hydrophobia, but when injected in the gradual series is perfectly harmless.

As was mentioned in last year's report upon microscopy, Fer-

ran had gained considerable notoriety by endeavoring to introduce inoculation as a preventive against cholera. His results were anything but encouraging and it is doubtful whether the operation is justifiable in such diseases as this where it is well known that one attack is not preventive against a second.

But it is in relation to small-pox that inoculation, or as we may here call it vaccination, has achieved its greatest triumphs, and during the last year these have been rendered doubly secure by the reports of the German Vaccination Committee and that of Dr. Buchanan to the Local Government Board in London.

The German Commission submitted the following conclusions in the form of eight answers to as many questions that had been propounded:

"1. With rare exceptions one survived attack of small-pox confers immunity against subsequent attacks.

"2. Vaccination exerts a similar influence.

"3. The duration of the protection afforded by vaccination is for about ten years.

"4. At least two well developed vaccine vesicles are necessary to insure a sufficient protection.

"5. Re-vaccination is necessary ten years after primary vaccination.

"6. A vaccinated condition of the community increases the protection of the individual, and hence general vaccination is beneficial.

"7. Vaccination may have an injurious effect under certain circumstances. In the use of human lymph, the danger of transferring syphilis, although extremely slight, cannot be entirely excluded. Any other bad effects are apparently due only to accidental wound diseases. All these dangers may, by precautions in the performance of vaccination, be reduced to such a minimum as to make the benefit of vaccination infinitely outweigh any possible injurious effects.

"8. Since the introduction of vaccination, no scientifically provable increase of any particular disease or of the general mortality has occurred, such as might be looked upon as a consequence of vaccination."

These conclusions are based upon a careful inquiry into the death-rate from small-pox in these countries into which vaccination has been introduced, and also by drawing comparisons be-

tween the countries where it is vigorously enforced and practiced and those where law is less stringent or inoperative. There can be no doubt that there is not one-tenth the amount of small-pox that there was in any of the European countries prior to the introduction of vaccination, yet even this is not what its originator hoped for it or its earliest advocates expected.

Dr. Buchanan in his report has brought out some interesting facts regarding the age at which deaths from small-pox occur. In England before the year 1857 the proportion of children below the age of five years dying from small-pox, was seven hundred in every thousand deaths from that disease, but since that time it has steadily decreased until 1884 it reached two hundred and forty, or if we look at it in another way, the death rate from small-pox among children under five years of age fell from about 1,200 per million of persons living at their age to 323. It is otherwise with adults for "People aged between fifteen and twenty-five years, the Registrar General goes on to say, used thirty or forty years ago to die at the rate of 109 per million, and now under the system designed for the protection of their juniors they are dying at the rate of 173. Adults between twenty-five and forty-five years, who thirty or forty years ago died at the rate of 66 per million are now dying at the rate of 141; and persons over forty-five years old, instead of dying at the rate of 22 are dying at the rate of 58 per million of their number."

Those statistics show a decrease in the total mortality from small-pox, and also in the mortality of children under ten years of age, but an increase in the mortality among adolescents, adults and the aged. This change must have some significance, and no doubt the chief cause is to be found in the neglect of re-vaccination. It is very evident that before vaccination of infants became compulsory many of them suffered from small-pox, which destroyed some and left others with a life-long immunity, and when vaccination became general the prevalence among children became less, and many of them grew up without suffering from the disease. But the protective influence of vaccination is only temporary, whereas that of an early attack of small-pox is almost permanent, and hence, as the children grew up, the former disappeared and left them unprotected against the disease; in other words, the adults exchanged a permanent for a temporary protection.

Recent reports have furnished abundant evidence regarding the benefits of re-vaccination. Thus, during the years 1871-72 an epidemic of small-pox attacked the French, Austrian and German troops; it was most severe in the Austrian army, and hence it might have been expected that they would have enjoyed the longest period of immunity. On the contrary, small-pox within three years of the epidemic rose as high as ever it had done, and also appeared in the French army, while not a single death from small-pox has occurred in the German army since 1874. No reason can be made to account for the striking difference than the rigidly conducted vaccination and re-vaccination. In March, 1884, there was a threatened prevalence of small-pox in the district of St. Pancras, London, and with the assent of the local Government Board, nine gentlemen were selected from University College Hospital to make a house-to-house visitation and act as assistant vaccination officers under the superintendence of Mr. Collins, L. R. C. P. Mr. Collins has now made his report, and the last paragraph is so significant and important to every one interested in the prevention of disease that we do not hesitate to quote it at length:

“Amongst the children under ten years of age the number marked with small-pox is so small that it may be disregarded, but among persons over ten years the protective influence of vaccination is very clearly shown, thus:

	Number Examined.	Number Marked with Small-pox.
Re-vaccinated. . . .	39,835	29, or .08 per cent.
Vaccinated . . . . .	71,213	2,013, or 2.8 per cent.
Un-vaccinated. . . . .	1,377	857, or 62.2 per cent.
	<hr/> 112,425	

“The above figures are very striking and conclusive, and show clearly enough that but for vaccination more than half the people in St. Pancras, over ten years of age, would be disfigured by small-pox.”

These few lines contain a more forcible argument for compulsory vaccination and re-vaccination than could be embodied in a whole treatise upon the subject. When we find 62.15 per cent of an un-vaccinated population marked with small-pox, and make allowance for the number of deaths from this disease that must have taken place, we are appalled at the severity with

which it must have raged among them; and then, as we notice that only 2 2-5 per cent of a vaccinated population, living under the same conditions, are marked by the disease, we are conscience-stricken that among us, who are so much exposed to this loathsome pestilence, so little has been done to render regular and systematic vaccination compulsory. The protection afforded by vaccination, while its influence lasts, is almost equal to that acquired by an attack of small-pox. "Of 5,774 boys admitted into the Royal Military Asylum at Chelsea, England, in forty-eight years, 1,950 had, on admission, marks of small-pox, and 3,824 either had marks of vaccination or they were at once vaccinated. Of the former 6.15 per 1,000, and of the latter 7.6 per 1,000 contracted small-pox subsequently during their residence in the asylum." These statistics, by Dr. Balfour, show that the protection afforded by small-pox is only about one per cent greater than that conferred by vaccination.

We have already referred to the benefits following re-vaccination, but these are even more prominently brought forward in the St. Pancras statistics, above quoted, where we find only 1-25 per cent of those re-vaccinated were marked with small-pox, against 2½ per cent, with primary vaccination only, and 62½ per cent without vaccination.

Such reports as these demand legislation that will render not only vaccination but re-vaccination compulsory. There can be no question that a vaccinated condition of the community increases the protection of the individual, and the strong arm of the law should be invoked to constrain those obstructionists who, from lack of sense or knowledge, endanger the welfare of the whole community by neglecting a precaution so necessary.

Every parent should be compelled, on penalty of certain punishment, to leave at the Health Office the certificate of a physician stating that his child had been successfully vaccinated before it was six months old. We are aware that this age is earlier than that generally adopted in this country, but originally the disease was most prevalent among children younger than five years, and has only changed its period of incidence on account of the preventive measures adopted; hence the necessity for early vaccination. Moreover, in England the legal age is three months, and in Scotland six months; yet in neither of these countries has there been any reason to warrant a change. It is difficult to insure re-vaccination; but it might be accomplished by each man

filing a certificate of his last vaccination at the City Hall, the date of which could be recorded on the poll-tax roll, and entered on his tax-paper every year. By this means a complete record of all males requiring re-vaccination would be kept, and all evasion of the law prevented. With the males secured, there is little chance but that the women will follow; indeed we have rarely experienced any difficulty with them, as the dread of anything that will mar their personal appearance is a sufficiently strong incentive to procure compliance with the law.

It was our intention to bring under the notice of the Society several abuses which demand reformation, but the allotted time is now spent, and we would close our report with the fervent wish that your committee for next session will give some attention to the public schools in California, which certainly require investigation. As an example of the condition that exists, let me read you the following extract from the *Chicago Sanitary News*:

“There are unsanitary school buildings in San Francisco, as well as in some eastern cities. The following is a description of the West Mission street primary school. The region is settled quite thickly with people in humble circumstances, but that is no excuse for the abominable educational facilities afforded them. If there is any unsanitary evil which *The Sanitary News* feels called upon to protest against, at all times and in all places, it is the miserable quarters in which the school children of our country have to pass eight hours of five days in the week. The structure of the school referred to cannot be seen from the street, and the visitor is informed of his proximity to the school by a sign over a gate in a high board fence. The gate leads into a passage-way from the street to a building. On the left hand side of the passage is a door in the fence, which resembles the entrance to a wood-shed. This is the door to Miss Keady's class-room. The door had no lock, and the visitor was obliged to wait while a scholar untied the pieces of string which fastened it. The construction of this school-room could have been forgiven in the days of '49, but for wealthy San Francisco, it seems a little parsimonious. The eastern and southern walls are formed by the fence of the school-yard; the western wall is made of rough redwood boards, and the roof is peaked, and shingled so badly that when it rains the children keep their umbrellas up during school hours. The ventilation is perfect, but is accompanied with some disadvantages. It is accomplished



through cracks, caused by the shrinkage of the boards. In fine weather, it is agreeable, but when the west wind blows, the scholars have great difficulty in keeping warm, and in preventing blindness from drifting sands. The room is well-lighted by three windows, which fit badly, and keep up a constant tattoo. The shed is neither lined nor plastered. This room contains fifty-one little girls. Such a thing is a shame and a disgrace to any age or government. Another school of the grammar grade, is held in a dismantled liquor store, neither adapted to nor fit for such a purpose. In another case, forty-six little children are taught in a cold loft over a stable surrounded by manure dumps, and a few yards from an open sewer. The odor was that which always accompanies such conditions. In another shed in which there is a class of fifty-five scholars; two of the windows open into a hen-house and another one faces a row of water-closets. These are given as fair samples of the sheds in which the poor children of San Francisco are taught. Is ignorance with health more to be desired than knowledge with disease? Although the sanitary conditions of the Chicago schools is not such as is considered to be standard, yet the thought arises, even at the expense of being termed Pharisaical, 'thank God, we are not as they.' Replying to an anticipated question from persons who read the above, *The Sanitary News* will state that there is a health department in San Francisco."

We have not been able to find just exactly the state of things described by *The Sanitary News*, but we would not venture to contradict their statement as we have seen much that requires improvement. In nearly every case the school-rooms are overcrowded so that it is utterly impossible to maintain ventilation, and the teachers have to choose between suffocation and catching cold; as a rule the latter alternative is preferred, the windows are thrown open to admit fresh air, the wind blows down upon the children and in wet weather the rain entering at the same time compels the children to vacate the desks near the window. In other schools the surplus pupils are taught in out houses in the yards. Fortunately the mild climate of San Francisco prevents evil results which would be almost sure to follow in any other city, but even this is no reason why such a condition of affairs should be allowed to continue.

In addition to an examination of the school buildings, we would recommend an investigation into the present system

of education, especially that of the girls in the higher grades. According to the present system of education a girl's greatest mental strain comes between the ages of fourteen and eighteen years, just at the very time when the development of her body renders her least fit to bear it. Her school work at this time is far more severe than a boy's; her life is one continuous piece of drudgery, beginning with school from 9 A. M. to 3 P. M., then return home and practice music until supper time, after which there is preparation of lessons until bedtime. It is not that we advocate a lower grade of education in woman, on the contrary we would recommend them to concentrate their energies on fewer things, so that they may know them better and devote more attention to the development of their bodies. At present their time is occupied and their strength spent in acquiring a smattering of different subjects which they have completely forgotten two years after graduation, and all they have to show for their years of study are empty heads and poorly developed bodies. Unfortunately it is fashionable at the present time to strain after accomplishments and ignore the more practical walks of life, but as every sanitarian knows, the great question with 95 per cent of our population is, How shall we obtain our bread and butter? and the best education is that which will obtain the truest answer to this question. There is also a tendency to look upon the body as a sad encumbrance to mind, and a vain attempt to treat it as such, which only produces the most unfortunate results. Four hours' faithful study per diem are sufficient for any young woman, both to become better accomplished and better educated than the average girl of to-day, and this, with more vigorous exercise, would give us healthier mothers and happier homes.

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### **REPORT ON HISTOLOGY.**

By PROF. J. H. WYTHE, M. D., F. R. M. S.

(Read before the Medical Society of the State of California.)

The nature of the subject, and the time at my disposal, allow me to aim at little more than to indicate the trend of thought and discovery, and to point out such evidences of local progress as have come to my notice.

Whoever has carefully observed the history of medical microscopy, will not fail to realize that the most prominent teaching of true science is to avoid dogmatism. In all speculations, especially in those pertaining to atomic and molecular physics and to cellular growth, the dogma of to-day may be the disbelief of to-morrow, and the eccentricities of one period of study may be regarded as the wisdom of another. This is plainly illustrated in the history of the cell-doctrine. The discovery of the cell as the biological unit caused a large advance in physiological and pathological research, but it would be hasty and unphilosophic to claim for it the motto of *ne plus ultra*. Fresh problems are presenting themselves for solution with every improvement in our instruments, and one discovery is but an introduction to many others. Almost every decade of our century has made a new epoch in science, from the optical perfection attained by art, and the increased skill of observers. The microscopes of Chevalier and Oberhauser and Hartnack were followed by the improved stands of English and American opticians, and these by the wide-angled objectives of more recent date. Then came water-immersion lenses, wonderfully enlarging our sphere of vision, and after these homogeneous immersion lenses, giving us still finer definitions, and visually separating particles which our theories of light deemed impossible. With such increase of powers it was natural that histology should reap a large harvest, not only in the knowledge of methods of arrangement of elementary parts, but also of the constitution of these elementary parts themselves.

A brief review of histological history will sufficiently indicate how gradually our knowledge of cell life has been unfolded.

The present century opened with Bichat's great work on General Anatomy, in which the complex structure of the organism was reduced to the simple or elementary tissues. In 1825 Purkinje discovered the germinal vesicle in the ovarian ova of birds. In 1831 R. Brown discovered the nucleus of the vegetable cell. In 1835 Dujardin found sarcode in the lower animals, having contractile movements, which was afterwards termed by Max Schultze, protoplasm, and Muller in the same year showed analogy between the chorda dorsalis and vegetable cells. In 1838 Schleiden and Schwann taught the origin of all tissues in cells, a truth since known as the cell-doctrine, and which has been to biology what the Copernican system has been to as-

tronomy, or the atomic theory to chemistry. The views then prevalent as to the formation and exact relationship of cells have been greatly changed, but the principal fact of cell-development yet remains unchallenged. In 1842 Goodsir called attention to the existence of centers of force connected with the nutritive and pathological processes, and regarded the organism as subdivided into a number of departments, each containing a number of cells which hold certain relations to one central cell around which they are grouped. This idea was elaborated by Virchow in 1858 under the term cell-territories. In 1859 Beale showed from the staining of germinal matter by carminate of ammonia, that every living tissue contains bioplasm, or living matter, formed material and pabulum. In 1861 Max Schultze and Brucke showed that the cell was essentially a protoplasmic mass, without wall or nucleus. In 1873 Heitzman described a reticular structure in protoplasm, and claimed that the reticulum of each particle, or cell, is connected by projecting filaments with its neighboring cells, so that we can no longer regard the living organism as a colony of amœbæ, or a community of independent cells, but as a network of living matter. The acceptance of this view was hindered by certain eccentricities which attracted the attention of reviewers, yet the progress of discovery constantly tends in this direction. The reticulation of cells and nuclei is figured by Klein and all modern writers, and is matter of observation, while the arrangement of fibres into radiating stars in nuclear division, as shown by Fleming and others, is not otherwise explicable. In 1878 Hassloch showed a protoplasmic network in some forms of mildew, and in 1883 Elsberg communicated his observations on the protoplasmic continuity of cells in other plants. The *Quarterly Journal of Microscopic Science* for July, 1885, contains an article by Melland, demonstrating an intra-cellular network in striped muscle fibre, which fully explains and harmonizes the views of preceding histologists respecting this structure.

It is not surprising that the more recent views should be combatted by those whose ideas were crystalized in earlier forms, since much of the philosophy taught in popular science, so called, will be ruled out, and such a revolution will occur in physiological and pathological thought as will compel the Cæsarism of special centers of force to abdicate in favor of a more universal, and at the same time a more unified vitality. It is the province of true science to watch and wait.

With regard to bacteria as causes of disease, but little new material has been furnished during the past year. A large committee of most prominent medical gentlemen was appointed by the English Secretary of State for India, to consider the theory of Dr. Koch as to the common bacillus being the cause of cholera, and their report shows that comma-shaped organisms are usually present in the alimentary canal in health, and that the comma-shaped bacilli ordinarily found in cholera do not induce that disease.

When the microscope and laboratory experiments show the presence of specific micro-organisms in certain diseases, we are still very far from comprehending the rationale of the process. In the biological laboratory of Dr. Cheyne in London, the writer had abundant opportunity to see that special forms of bacteria produced special results. The various colors of the colonies in the cultivation tubes—black, red, yellow, or green, is proof enough of this, and the production of certain diseases by special bacilli cannot be denied. Some imagine that the effect is produced by the simple multiplication of these micro-organisms in the tissues, but the more probable opinion is that the *materies morbi* is not the organism itself, but its product, which originates some direct or indirect chemical alteration in the tissues. If this be so, the particular organism may not be an essential, although a real cause, since the virus may result from chemical alteration of other organized products. The discovery of ptomaines, or the poisonous alkaloids resulting from decay of organized bodies, has an important relation to this subject. It may yet be proved that the non-elimination of decaying organic matter, whether introduced into the economy from without or originating by insufficient oxidation of effete matter within, is the principal source of disease. Without some such modification no microbe theory can explain why, if four persons are exposed to the same rain-storm, one may escape with impunity, while another contracts pneumonia, a third pleurisy, and the fourth dysentery.

As to the progress of microscopy in our own State, it is a pleasure to report a considerable advance over former years. The San Francisco Microscopical Society is doing much to spread general information on this subject and the reports of its meetings are quoted in foreign journals. A large number of good instruments are in the hands of physicians, many of whom con-

stantly use them in diagnosis. The Cooper Medical College makes three years attendance upon lectures on Physiological and Pathological Histology essential to the degree of Doctor of Medicine, and its laboratory is well furnished with excellent microscopes.

The only report of personal work in this department for the present year, relates to the confirmation of Melland's observations on the intracellular network in voluntary muscle, and to the finding of ova in a specimen of Rokitansky's tumor of the ovaries. The latter was a rare example. It was my thirty-eighth ovariectomy, and unlike any I had seen. I find but four similar cases on record, two of Spencer Wells, and two of Tait. Instead of the ordinary multilocular form enclosed in a common membrane, there were hundreds of cysts varying from the size of a pea to that of a child's head, and interwoven with the attenuated and altered omentum. The finding of ova in some of the cysts by microscopic examination proves that their origin was the Graafian vesicles. The patient rallied from the operation but four hours after sank from exhaustion through the officiousness of an ignorant nurse.

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### **RECENT PROGRESS IN MENTAL DISEASE.**

By WM. H. MAYS, M. D., Chairman of Committee on Mental Disease ;  
Superintendent of the Stockton State Insane Asylum.

(Read before the Medical Society of the State of California.)

This paper lays no claim to completeness. It consists merely of some notes of what has struck me as new or interesting in the course of my reading,—some gleanings from the current literature of the past year. To present a complete conspectus of the multitude of facts and theories cast up by the intense intellectual activity that pervades the medical profession, even in one branch of our science, would entail great, and in some sense, profitless labor. It will be seen that the therapeutics of mental disease are not touched on at all.

#### **THE POSTERIOR COMMISSURE OF THE BRAIN.**

Meynert's theory that what is known as the posterior commissure is not really a commissure, but a decussation, has received strength from some recent experiments of Dr. Spitzka of New

York. A needle was introduced into a kitten's skull and a downward movement made, which severed the lateral part of the left thalamo-crural region. The needle was then withdrawn. On killing the animal three months later, the left cerebral hemisphere and left thalamos were found to be entirely absent. In the nucleus of the column of Burdach, crossed atrophy was plainly demonstrated, and it was also seen that fibres from the thalamos to the commissure were present on the right side and absent on the left. Dr. Spitzka claims, as proven by these experiments, that there is a crossed connection between the thalamos and the anterior column of the oblongata, by means of the internal fibres of the reticular field.

#### FUNCTION OF THE CEREBELLUM.

Professor Luciani denies to this organ the function of co-ordination of movements. After a minute series of experiments on dogs, he ascribes to this great nerve mass the function of the origination of continuous tonic action, which gives force and energy to the other centers. It is, he claims, a tonic center, on which depend all muscular and motor energy. The long prevalent theory, however, is still held by recent writers, namely, that the cerebellum is the seat of muscular co-ordination, as evinced by the unsteady movements and reeling gait characteristic of cerebellar disease. The middle lobe of the cerebellum, says Gowers, is in some way concerned with the maintenance of equilibrium. It also arranges the harmony of movements.

#### ATROPHY OF HEMISPHERE FROM ARREST OF FUNCTION.

In epileptic imbeciles, one cerebral hemisphere is sometimes only one-half the size of the other. This seems to contradict the well-known law that want of symmetry between the two hemispheres is peculiar to the more intelligent races of men. The cerebrums of all vertebrate animals, and of savages and congenital idiots, present a complete symmetry, one half being the exact counterpart of the other; while in the higher races of man a lack of symmetrical arrangement of the convolutions is manifest, increasing with the increase in intelligence. But the contradiction is more apparent than real. It is loss of function that produces shrinkage or atrophy. In the congenital idiot there is a primarily defective brain, unfitted from the start for any higher duties. In the epileptic imbecile the brain was fitted

for its loftier function, had it not been destroyed by the epileptic shocks.

The effect of arrest of functions in changing the shape of the brain has been vividly attested in the case of the celebrated mathematician, De Morgan, whose brain was preserved and described by Wagner the pathologist. De Morgan lost an eye in early childhood. In consequence of the loss of the right eye, the left hemisphere became much smaller than the right, both in length and breadth. The region of the supramarginal lobe and angular convolution was much less developed on the left side. The belief that the occipital region bears a distinct relation to the function of vision was not substantiated by Wagner's examination of the brain in question. Professor Pace of Palermo, however, has recently examined post-mortem, a case of right-eye blindness in which he found considerable degenerative atrophy of the opposite occipital lobe. He holds that the localization of the visional center in the occipital lobe is a scientific fact.

#### GENERAL PARALYSIS.

This fatal disease seems to be on the increase, particularly in France, according to Dr. Sanze. This writer ascribes its prevalence to the habitual use of alcoholics, not in markedly excessive quantities, but in regular daily potations. The constant cerebral congestion which is thus produced, brings about, he claims, the characteristic degeneration of the layer of brain-cells closest in contact with the vessels of the pia mater. While few will disagree with Dr. Sanze as to the evil of over-stimulating, it seems to me that no one form of excess alone can rightly be held responsible for the spread of general paralysis. It is a disease of a worn-out brain, forced into abnormal activity, and driven beyond the point of exhaustion. The life that is led by so many of our business men to-day, a life of incessant anxiety, of forced energizing, *plus* sexual and alcoholic excesses, is what causes the wreck of the brain.

#### ASTHMA AND INSANITY.

The association of spasmodic asthma with insanity has attracted much attention from alienists. The two diseases will often alternate. Dr. Conolly Norman describes several cases of insanity in which asthma would recur as a metastasis or



alternation, the one disease, for the time, completely replacing the other. Savage also mentions some instances occurring in his asylum where, as long as the asthmatic attack lasted, the patient would be perfectly sane. At the Stockton asylum some ten or twelve cases have come under my notice in which asthma co-exists with insanity; and in two of these I have found that the onset of an asthmatic paroxysm alleviates the mental symptoms materially. When we consider the distinctly nervous origin of spasmodic asthma, its association with insanity need not surprise us, although the tendency to alternation is not so easily understood. The generally received theory of spasmodic asthma is that propounded by Weber and Reigel, namely, that it is due to enlargement of the bronchial mucous membrane in consequence of dilatation of the blood-vessels through vaso-motor influence. It is in the experience of many of us that an attack of asthma may be produced by emotion. This goes to prove that a disturbance originating in the higher centers may influence the vaso-motor and respiratory functions, and explains the connection between the mental and pulmonary symptoms. But why should they alternate?

#### PERCUSSION OF THE CRANIUM.

To Dr. B. Silva belongs the credit of discovering that, on percussing the cranium over the motor centers that border the fissure of Rolando, contraction is excited in the limb over which the center presides. For example, by tapping over the left temporal region, corresponding with the arm center, there will be produced a slight movement of the right forearm upon the arm, and slight pronation of the forearm with adduction of the thumb. If, again, the skull be percussed a little higher up, over the leg centre, there will be a contraction of the quadriceps femoris, the tibialis anticus and the gastrocnemius. Dr. Silva uses a pleximeter and a small hammer. The amount of movement, he adds, is in proportion to the force of the blow.

Who shall say that this discovery, if confirmed, may not contain the germ of a new basis for cerebral diagnosis, perhaps treatment? After other psycho-motor and sensory areas shall have been localized, and a later and more scientific "phrenology" shall have mapped out the skull in accordance with the function of each underlying knuckle of cortex, the percussion

of the cranium will become an important feature in clinical teaching. The day will arrive when the physician will be able to determine the nature and seat of brain lesions with as much accuracy as he now determines the nature and seat of heart lesions. And when we have learned to readily locate a cerebral lesion, what next? When we can say "Here, within half an inch of the tip of my finger, lie the disordered brain-cells," shall we stop there? Is there something so terrible in the idea of the local treatment of the brain? Fifty years ago the uterus was similarly a *terra incognita* to surgeons, being regarded with a sanctity approaching to awe. The surgery of the brain awaits its Marion Sims.

Take hemiplegia for instance. It may be caused by a slight hemorrhage. A mere speck of blood, a little blot on the fair surface of the brain, and the man is changed in a moment from a bright intelligent being to a half-witted imbecile. If there be no destruction of brain tissue, the removal of the pressure of this hemorrhage before secondary degeneration set in might bring about the recovery of the patient. Or, hemiplegia may result from anemia of a small portion of brain surface. If the blood supply could be restored within twenty-four hours the function would return almost unimpaired. The direct treatment of hemiplegia will, some day, be considered within the legitimate compass of the surgeon's art.

In the late number of the PACIFIC MEDICAL AND SURGICAL JOURNAL, I read with feelings of admiration, an account of the successful locating of a cerebral tumor by Professor Hirschfelder of this city, and its removal. Such operations are worthy of imitation.

#### THE "NOBLE FOREHEAD" FALLACY.

A high forehead has from time immemorial been looked upon as a mark of intellectual superiority. Shakespeare voiced this popular belief, or rather its obverse, in his phrase "A forehead villanous low." But the size of the forehead depends much on the line of growth of the hair that limits it. A man may have what is called a low forehead, but if the hair could be removed to a height of four to five inches, the same individual would present as fine a specimen of the traditional "noble forehead" as could be wished, a perfect "dome of thought," particularly if the frontal sinuses

happened to be large or protuberant. Again, a low forehead has ever been held a sign of beauty in woman, and has certainly never been regarded as an impeachment of her mental capacity. The truth is, the front part of the brain has very little to do with the intellectual process. It is the posterior lobes of the brain with which the higher faculties of the mind are associated. Gowers assigns to the frontal lobes, excepting their lower and hinder portions, a negative position as regards psychical importance. Only man possesses posterior or occipital lobes; they are the latest achievement in the long line of cerebral development. In the higher apes they may be found in a very rudimentary condition; the lower mammals possess frontal or anterior lobes only. In the lower savages and in congenital idiots, the occipital lobes are often ill-developed, approaching the brute type, giving a flattened appearance to the back of the head. In the Stockton Asylum are several interesting idiots, some of whom, while possessing quite respectable foreheads, show a striking deficiency of back-head. The neck and back of the head are in one line, and it is worth remarking what a foolish appearance such a contour gives an individual. When you see a lack of the rounded sweep or projection of the back of the head above the neck, you will generally find with it a low order of intellect. The idea that a high forehead is, taken alone, the index of mental superiority is as baseless as any of the exploded propositions of phrenology, with which pseudo-science it deserves to be classed.

#### OVER-PRESSURE IN SCHOOLS.

So much has been said lately on the danger of over-taxing the brains of school children that, before closing, a reference to the subject may not be misplaced. There can be no doubt that the tendency of the age is towards over-educating our children. In the early years of a child's life the brain and nervous system should not be stimulated, but on the contrary should be carefully and persistently guarded, and their development repressed. A child under seven years of age should be taught nothing but morals and good manners. Then as to sex: a boy and girl of the same age usually receive the same education. This is wrong. The organism of a girl is, before puberty, being prepared for functions of such overweening importance as to demand all the energy and capability her sys-

tem can muster. The endeavor seems to be, says Clouston, to make our young men and women alike in all respects—to turn out mental hermaphrodites. In young people, the physical growth is of first importance. As Herbert Spencer remarks, a man to amount to anything must be a good animal. If the immature nervous system is subjected to prolonged strain the nutrition of the body suffers, and the seed is sown for a crop of nervous disorders. One medical writer states from his own observation that the health of more than half the school children drops below the level when attending school.

The higher functions of the brain, imagination and ideation, should not be brought into play too early. The brain-cells which subserve them are finer and more complex in structure than any others, and are no doubt more delicate. To subject them in early years to over-strain is liable to be followed by disastrous effects. Cases are not wanting where, in young people, intense study has produced epileptic fits; in other cases, persistent nervous exhaustion; in others, what Dr. Tuke aptly calls “brain-fog.” Pupils who have been crammed and stuffed preparatory for an examination will sometimes pass it successfully, and then stagnate. They are mentally crippled for life.

In this prevailing tendency to force the infantile mind, home lessons play a baleful part. Not content with working the tender brain throughout a great portion of the day, tasks are set, often long ones, to be done after school hours. Dr. Brudenell Carter speaks of a large public school in London from which boys of ten or twelve carry home tasks which would occupy them till midnight. A youth, after poring over his or her lessons two or three hours in the evening, injuring his eyesight by artificial light, goes to bed tired and anxious, the cerebral vessels turgid and throbbing. This is how delicate constitutions are formed. It is the wholesale manufacture of invalids, of neurotic diatheses, of lunatics.

It is no uncommon thing for physicians to take a prominent part in educational matters. For many years the Board of Education of this city has not been without its medical member or members. I wish they could be prevailed on to raise their voice against this abuse of home lessons. Country physicians are often chosen as School Trustees in their district. Let them endeavor to abolish home lessons altogether. When the school for the day is dismissed there should be an end of study till next

day. But in many schools the greater part of the time is taken up in hearing or receiving the lessons prepared the previous night, and in setting tasks for the ensuing evening. By abolishing home-lessons the present system of education would become a less serious menace to the mental health of our children and of our children's children.

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## **REPORT OF THE COMMITTEE ON MEDICAL EDUCATION.**

By J. O. HIRSCHFELDER, M. D., Chairman.

(Read before the Medical Society of the State of California.)

Your Committee takes pleasure in reporting that the status of medical education in this State during the past year has been preserved at the high standard that has prevailed during the preceding. The number of students of medicine has been steadily increasing, and it is especially gratifying to note that nearly all the candidates now enter the colleges with required certificates of previous education, so that in but very few cases is the preliminary examination necessary. This is a very gratifying result of the labors made in this direction, and there is no doubt that improvements will be effected with each year.

Your Committee furthermore reports that a medical department of the University of Southern California has been inaugurated, and that its requirements are as rigid as those of any first-class medical school. It has begun its existence as a three-course college, and enters upon its career with every assurance of success.

There is no doubt in the world that the medical profession in the United States does not occupy the high social position that it is honored with in the older countries of Europe; that the name of a doctor of medicine does not carry with it the title of nobility that is the case elsewhere. In part, this is due to the fact that veneration is rather an undeveloped factor of the American mind, that each individual must earn his own social standing, and can depend upon no inheritance for his position. But another and far more serious reason for this state of affairs exists, and its remedy lies in the hands of the present and the future generations of physicians. It is an unfortunate fact that few of our physicians have passed through the preliminary train-

ing that is required in the older communities. In Europe, before a student is permitted to enter upon his medical career, he is required by law to have gone through a preparatory school which stands on a par with our collegiate course. The result is that he comes ready equipped with the literary training of a scholar, and brings with him habits of industry and the knowledge of how to study that many of our students unfortunately never acquire. With us, on the other hand, but a small proportion of students enter their medical school from the college or the university; the majority come from the plow or the counter without preliminary training, and without those habits of study that are so necessary to the medical student. Our medical schools are doing good work in this respect; they require the student to pass a preliminary examination before being admitted to the curriculum, an examination which suffices to prove that the candidate is acquainted with the ordinary elements of knowledge, and which is a decided improvement upon the course previously adopted of admitting all who applied, whether they could read and write or not, but which still falls far short of the ideal. It must be borne in mind, however, that innovations cannot be too rapidly introduced, and that any change that would be permanent must be gradual. We must call upon the medical practitioners throughout our fair State for aid in the efforts that our schools have made to elevate the standard of education; and I am proud to say that the colleges upon this coast have been among the foremost in the land to lengthen the term of study from two years to three.

Medicine, it is true, is a practical art more than a pure science, but with each year it is progressing towards its goal, with each investigation of the cause of disease and the normal and pathological function of the body, it takes a step onward from the empirical towards the scientific stage. It is our medical colleges that must be the nurses of the growing sciences and from them must it derive its impetus. It is therefore most desirable that our schools should be endowed with professorships such that original work may become possible.

The advantages of such endowed chairs would be two fold. In the first place the professors occupying them would be enabled to give up the practice of their professions and devote themselves to the more theoretical branches of science, and to investigations that require time and money. In this manner the

cause of science could be most decidedly furthered, and I have no doubt that the clear inventive mind of the American physician would soon enable the medicine of the Western Continent to outrank that of the Eastern. Here and there the work has already begun, and in Philadelphia, Harvard, Baltimore, and Washington, investigations are being carried on and results attained worthy of the oldest laboratory of Europe. More is required. A chain of such institutions should extend throughout our land, and each medical school should be a center from whence a current of original thought should extend to every city and village of the country. Such a community of scientific workers would breed a love for science, for there is no doubt that each student requires the encouragement and stimulus of his fellow students. A glance at the history of medicine will show that the practice of to-day is the child of the science of yesterday, however much we may shrug our shoulders at the so-called theories and hypotheses of the closet.

A second advantage of such original investigation would be that our students would see how science is made; they would be taught how to value medical investigations, how to recognize the correct and the faulty methods, and at the same time they would learn how to investigate for themselves. Through such a course of training they would become scientific physicians without losing any of that practical skill which makes the doctor the helper in sickness and the master of disease.

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#### **REPORT OF COMMITTEE ON PUBLICATION.**

(Read before the Medical Society of the State of California.)

In presenting its report, your Committee is well aware of the responsibility which has been thrown upon it, when taking charge of the publication of the Society's transactions for 1884 and 1885. There has been much dissatisfaction in this connection, some of which was due to avoidable causes, and some inseparably connected with the radical change which had been adopted. Your Committee, therefore, feel that a brief outline of its course and action is desirable.

In pursuance with a resolution introduced at the last session of the Society, a committee was appointed by the chair, to consider the advisability of accepting a proposal of Dr. Whitwell:

that for the sum of \$700 he would publish the transactions in the *Pacific Medical and Surgical Journal*, furnishing the same free to members, exchanges and libraries for the term of one year.

Subsequently the Doctor made a second offer, to the effect that in return for the privilege of using the transactions in his journal, and in consideration of the sum of \$500, he would, when the publication had been completed, furnish said transactions in volume form to members, exchanges, and libraries.

This Committee having made a report in favor of adopting Dr. Whitwell's first proposition, the whole matter was, on motion, referred to the Committee on Publication, with full power to act.

The Committee held its first meeting on April 20, 1885, Dr. Whitwell being present; and having discussed the question from every point, decided to publish the transactions in journal form, accepting Dr. Whitwell's first proposition. It was desirable that a sufficient number of copies should be available for dilatory exchanges; and also for members then in arrears, whose subsequent payment would entitle them to receive the transactions.

Suggestions had been made to the Committee by influential members of the Society at San Francisco, that Dr. Whitwell's connection with the Cooper School would, in the event of his proposition being adopted, impart an element which could not fail to be insidious, and even harmful in its influence.

The sentiment on this matter appearing to be very decided, and having regard to the number and weight of these representations, your Committee deemed it best that the name of a representative from the Medical Department of the University of California, and that of the Secretary of the Society, should appear on the cover of the journal as collaborators, in order to obviate any possible misconception. The following contract was then draughted and unanimously adopted:

This contract made April 20th, 1885, between the Medical Society of the State of California, acting through its Committee on Publication, on the one part and W. S. Whitwell, M. D., of the other part, witnesseth said Medical Society of California hereby contracts with and employs said W. S. Whitwell to publish its proceedings and transactions under the terms herewith annexed, for the term of one year ending at the meeting of said Society in the year 1886. In consideration of which said



Society agrees to pay to said W. S. Whitwell the sum of \$700 (seven hundred dollars), payable in advance in quarterly instalments of \$175 (one hundred and seventy-five).

Said W. S. Whitwell accepts said contract, and agrees:

1. To publish the proceedings and transactions of the Medical Society of the State of California, as furnished to him by the Committee on Publication of said Society in the journal known as the *Pacific Medical and Surgical Journal and Western Lancet*, published monthly in the city of San Francisco. Said proceedings and transactions in quantity not to exceed 300 (three hundred) pages of said journal.

2. To have published and distributed the whole of said proceedings and transactions within the period of 9 (nine) months from the signing of this contract, provided always that said proceedings and transactions shall be forwarded and furnished by the Committee on Publication within said period.

3. To furnish extra copies of reports or papers to members of said Society, at a fair valuation, provided always that requests for such extra copies are sent in with the manuscript of said reports or papers.

4. To furnish a copy of the *Pacific Medical and Surgical Journal and Western Lancet* monthly for the term of one year before mentioned free of charge to each active member of the Medical Society of the State of California, 25 (twenty-five) copies of said journal for the use of said Society to be placed at the disposal of its Secretary, copies of said journal not to exceed 20 (twenty) for Libraries and further copies to be sent to State Medical Societies. The list of Members, Libraries, and State Medical Societies, to be furnished by Secretary of the Medical Society of the State of California.

5. To put on the cover of the journal as collaborators the names of the Secretary of the Medical Society of the State of California, and one representative from the Medical Department of the University of California.

Signed by Committee on Publication for Medical Society of the State of California.

A. B. NIXON, M. D.,  
G. L. SIMMONS, M. D.,  
JAMES H. PARKINSON,  
WALLACE A. BRIGGS,  
G. G. TYRRELL.

WM. S. WHITWELL,

Editor of P. M. S. J. and W. L.

June 9th, 1885.

It was estimated that 285 copies would be required each month, and the matter was so understood by the Committee and Dr. Whitwell.

There was some delay in the signing of this contract by both parties, owing to objections subsequently taken by Dr. Whitwell, to the clause relating to collaborators.

It had, however, meanwhile, been adopted in effect, and publication was proceeding. The minutes of the session appeared in the number for June, and with the December issue the work was completed.

Some misapprehension seems to have existed, with regard to the number of copies required for the different purposes specified in the contract, as well as the manner of their disposal.

In consequence of this, it has not been possible in every case to furnish members in arrears who have since paid, with a complete file of the journal, and it is to be feared that several of our exchanges have been similarly situated.

Considerable dissatisfaction has been expressed with respect to reprints of papers, or reports, and it is to be regretted that the clause relating to this matter was not made more definite.

The contract with Dr. Whitwell having expired, the question again arises: shall the transactions of the Society be published as a volume, or in journal form?

Your committee is fully cognizant of the many and grave defects which have existed during the past year, yet it believes that these defects can be remedied, and that errors in the future will be more readily avoided.

Your committee is of opinion that the change has on the whole been productive of benefit to the Society, and recommends:

1. That the publication of the transactions in journal form be continued.
2. That measures be taken to obtain a complete volume, to interchange with State societies and libraries, as has been customary.
3. That a rate shall be fixed, by which contributors can ascertain the cost of reprints, uninfluenced by fortuitous circumstances.

JAMES H. PARKINSON, Chairman,  
G. L. SIMMONS,  
WALLACE A. BRIGGS,  
G. G. TYRRELL,  
A. B. NIXON.

**REPORT OF THE COMMITTEE ON GYNECOLOGY.**

By F. WALTON TODD, M. D., Chairman.

The literature of medicine has become so abundant, and is so generally diffused, that those engaged in original research find the results of their investigations speedily brought to the crucial tests of analysts and clinicians, and the difficulties of chairmen of committees of our societies in making satisfactory reports are much enhanced by the full and free discussion of all new discoveries before they can be heard by the respective bodies whose partiality has assigned them to such duties, and therefore they should be pardoned if they take a wider range than seems contemplated in the by-laws which require them to limit their reports to the progress made in their several departments for the current year.

I shall have to crave the indulgence of the section in what I have to say of the progress of gynecology, if I take a greater latitude than is prescribed by the written letter or the usage of the precedents.

It is not an unwarrantable assumption to claim that, to the industry and genius of our countrymen, is due the merit of discoveries of scientific principles which have grown into systems for the cure of what, within my day, have been regarded as the opprobria of medicine in relation to the diseases of women, but are we not losing the eclat, which is ours of right, by the overshadowing success of our contemporaries in England and Scotland? The brilliant, indeed marvelous, results of the operations of Keith and Sir Lawson Tait have almost made the world forget that a countryman of ours in an obscure backwoods village, in spite of the clamors of medical men, his contemporaries of narrow views, not only asserted the practicability of ovariectomy but demonstrated it by thirteen successful cases out of seventeen, without any of those aids or safeguards which now so materially lessen the dangers of this great operation. It is not pleasant to see the credit of its initiation claimed, as it has been, by a European, and Americans see, with illy-disguised irritation, on the monument of Sir Jas. Y. Simpson, the claim recorded for the discovery by this great specialist of the use of chloroform, which he was too great and true a man to have asserted when living.

Sir Lawson, by great skill and experience, without Listerism,

but not without those precautions which Listerism has suggested, has been able to report his *consecutive* one hundred and ninth successful operation in ovariectomy.

So to Sir James, perhaps more than to all other men, is due the successful adaptation of chloroform to gynecological practice. But I must insist upon the rightful claims of our own countrymen to discoveries which have revolutionized the treatment of diseases of women, thereby saving thousands of lives, and establishing a system upon rational and scientific principles, the benefits of which will be incalculable in the future. We can congratulate ourselves, not only upon these grand achievements in the progress of gynecology, by which lives are saved, but upon the alleviation of untold suffering by simpler methods of treatment of diseases, not in themselves fatal, yet rendering life a painful burden. These methods have not all passed into the domain of fixed rules, for the restless ingenuity of the age is constantly discovering defects, and substituting newer revelations, which relegate them to a place among—not the rubbish of scientific discovery—but the inchoate and incomplete, showing that they are not the goals, but the milestones on the way to great general principles. And so I find, after a few years of absence, that different views obtain among our teachers with regard to the operation for lacerations of the os uteri; of the propriety of hysterectomy in uterine epithelioma; in methods for rectifying perverted positions of the uterus, and retaining that organ when properly adjusted. In respect to the first, no one doubts that Emmet's operation is a *sine qua non* where lacerations of the os extend to the vaginal intersection, or are even somewhat less extensive, or when the ectropion is great. In these cases it seems to be an agreed fact, that the lacerations alone do not cause the distressing reflex symptoms of this lesion, they are caused by the *resultant cicatricial tissue*, which discloses the important clinical necessity of removing all of this tissue, and so closing the pared edges that the sutures will not reproduce it. The operation is not necessary for all slight lacerations, for many may be treated successfully by simpler methods, if stenosis does not exist.

Much was expected by sanguine surgeons from the extirpation of the uterus for epithelioma, the operation being not difficult of accomplishment, with a few satisfactory results. If, as seems likely, it shall be found that peptones is a constant principle in

the blood of those affected with malignant disease, it will very materially facilitate their early diagnosis; and if it should not suggest some competent therapeutic remedy (it will be remembered that Dr. Washington Atler was sanguine in the belief that he had discovered such a remedy in arsenic, and a new remedy called alveloz is now attracting attention), it will certainly take away from a surgical procedure the greatest obstacle to success, by the removal of a local disease of fatal import, before the general health has become contaminated, and hysterectomy, it is to be hoped, become as justifiable in this dreadful scourge of women, so common amongst us, as has ovariectomy.

The many and novel methods that are being constantly put forward by the profession for the correction of uterine displacements, show that we are still in the presence of a subject difficult to deal with. I have, for many years, as this Society knows, entertained the belief that many cases of prolapsus, anteversion, ante flexion and retroversion are caused by morbid conditions of the uterus, and that their proper remedy is to be found in the rational treatment of the latter, and not by the temporary expedients of pessaries, or supports of any kind, not but that the latter may be useful adjuvants, I only maintain that they are of secondary importance.

Strong testimony is adduced in favor of the knee, chest and elbow position for reduction of retroversions, the cervix to be strongly drawn downwards, while pressure is made by the rectum. Alexander proposes, however, to cut down upon the inguinal ring, draw up the uterus by the round ligament, cut it off and secure it to the abdominal parietes, to keep in place.

The profession has never been quite satisfied with incisions of the posterior cervix in dysmenorrheas arising from anteversion, so as to overcome the extreme curve upon which this painful condition depends, and it has recently been proposed to substitute for it a post-cervical section, by which the cervix is carried back to a straight line, conforming to its normal axis, and the mechanical obstruction obviated, I regret that I cannot give the Society some satisfactory report of cases, establishing the value of the procedure.

The operation which Dr. Battey has done so much to popularize, has been productive of so much good, that it would be strange if it was sometimes resorted to hastily, and in cases

where less dangerous methods would have been advisable. A conservative course, while not diminishing its value, is defining more clearly the conditions when oophorectomy is indispensably necessary, as in carcinomas, exhausting menorrhagias, dysmenorrhea and hysterical epilepsy, depending on chronic inflammations of the ovaries, some of which, I do not doubt, result in melancholia.

I cannot but ascribe the rapidly increasing dysmenorrhea of school girls to too close application to their studies at home, as well as in the school room. The defective physique, pallid lips and face, indigestion, insomnia and nervousness, tell plainly that the mind is overtaxed, at the expense of the body, at that most interesting period of development to womanhood. In some cases the development is abnormal, in others partially arrested, and in all an amount of structural incompetency is induced, which defy our therapeutic resources, and tax our surgical ingenuity to its utmost limit. Fennor's mixture of bichloride of mercury, and Duvees' famous compound tincture of guaiacum, utterly fail us in these cases, and the poor suffering girl whose constitution is giving way at these monthly recurring periods of agonizing suffering, is fortunate whose doctor finds in rapid dilatation of the cervix an escape from the more serious oophorectomy.

Laparotomy for pyosalpingitis, and other purulent collections of the pelvis, not readily accessible through the vagina or rectum, would seem to be a corollary to this successful procedure of the distinguished Georgian. But the profession seems to be not yet agreed upon the conditions when it has become imperative, which is likely to be a difficult point to determine with positiveness, since so many recoveries take place spontaneously, or by the gravitation of pus to parts whence it can be evacuated with greater safety than by a laparotomy, robbed as the latter may be of much of its terrors by modern methods of operating, for the prudent surgeon, with these advantages, will hesitate to wound the peritoneum when his object can be accomplished through the walls of the vagina, or through the rectum, when the collection can be thus reached.

I desire to call the attention of the section to a hyperplasia of the cervix uteri, sometimes the result of ulceration of the uteri and glands of nabothus, but more frequently one of the sequelae of laceration during labor. It is seen, most often, occupying the anterior surface of the cervix, but not invariably, and its promi-

nence might well mislead one into the belief that he had an incipient, malignant tumor to deal with. I have found the different sorbifacients of no value whatever to reduce these tumors, for such they are, but, after treating the cause, whether ulceration or laceration, they melt away speedily and effectually upon the application of potassa cum calce.

With no desire to trespass upon the province of another and allied section, I would call attention here to new views which prevail in regard to the cause and treatment of the obstinate vomiting of pregnancy. The several conditions of the gravid uterus, of which this is a reflex, may be set down as ulceration or erosion of the os cervicis, of greater or less severity, and demanding such treatment as would be applicable to such cases in the non gravido, not the least valuable of which is a strong solution of nitrate of silver; or, as Mr. Graily Hewitt believes, in the more severe cases, to malpositions, which rectified, relieve this dangerous and distressing symptom; and Dr. Copeman, of England, has demonstrated that some of the most intractable cases are due to rigidity or stenosis of the cervix uteri, which are promptly relieved by digital dilatation, first of the external os and cervix, which failing, he carries the dilatation through the internal os. The conscientious practitioner will find in some one of these methods a happy escape from his former *ressort dernier* of emptying the uterus to save the life of his patient.

The agency which habitual and obstinate constipation exerts upon women is so frequent a cause of disease, uterine and otherwise, that I feel that I cannot close my report better than by giving the following extracts from a paper recently published by Dr. Harriman of Massachusetts. He says, "The physiological functions of the body are wonderfully interdependent, not one can fail to act in its normal way without influencing, either directly or indirectly, the action of every other. The influence may be exerted through the general system, through a reflex nervous influence, or mechanically. In the case of failure to empty the lower bowel with normal frequency, we find the pernicious influences of such a state exerted in each of these three ways." "When the excrement is retained for days, and it may be for weeks, the functions of the colon are so perverted as to give rise to pathological processes." "The effect of such a state can be seen in the slow toxemia which exerts a benumbing influence on the nervous system, and depresses every function in the body." "This state of the general health opens

wide the door to all local troubles in the active organs of generation; ovulation and menstruation, which nature intended should be painless processes, become sources of anxiety and distress. Nearly all writers on diseases of women agree that flexions and versions of the uterus may be due, in part at least, to habitual constipation." "Fæcal impaction may cause, or at least aggravate, menorrhagia, and metrorrhagia, by interfering with the portal circulation, and producing congestion of the pelvic viscera." "Leucorrhœa may be produced by the same cause." "Vaso motor disturbances are very frequent." "Gastralgia, ovarian neuralgia, together with various hysterical manifestations are often the result of a loaded colon, and are cured by its relief." These constitute but a part of the evils which flow from a condition too often caused by false modesty, indolence or procrastination, to point out the dangers of which should engage the attention of the physician, the teacher and the mother.

Dr. O. O. Burgess of San Francisco, reports a case of ovariotomy in a tuberculous subject. He states that in the consideration of the question of operation in this case a most interesting query was as to what would be the probable effect of the operation upon the existing tubercular disease of the lung. Hitherto the progress of that disease had been remarkably slow. Would the effect of the operation—necessarily a severe one—be to light up increased activity in the diseased lung and speedily carry the patient off with pulmonary consumption? If so, it would hardly be worth while to subject her to the risks of an operation for the removal of the ovarian cystoma. No precedent could be found in the experience of himself or his colleagues, nor in the literature of the subject at his command.

The patient, a young lady of 26, had become very weak and emaciated—in fact, had been confined to her room for nearly two months—and it was evident that she could survive but a few days longer unless the tumor was removed. This was accordingly done on the 3d of January, 1885—fifteen months ago. Although the operation was very severe and prolonged, and recovery slow, painful and tedious, no ill effect upon the lung condition has followed. The patient has gained twenty-five pounds in weight, and is now in better condition as regards health and strength than she has been at any time since the lung trouble began four years ago. The lesion of the lung has extended but little, and occupies the apex of the right lung extending downward to about the second rib.



## **Proceedings of Societies.**

### **San Francisco County Medical Society.**

TUESDAY, May 11th, 1886.

President Taylor in the chair. The minutes of the previous meeting were read and approved.

The following, having been favorably reported upon by the Committee on Admissions, were elected members of this Society: R. F. Verrinder, E. B. Harris, J. E. Kunkler, J. Montgomery, W. D. Johnston, Dreisbach Smith, C. E. Farnum, A. E. Verrinder, J. H. Healy, C. F. Buckley, N. E. Hoy, W. H. McLaughlin.

The following were proposed for membership, and referred to the Committee on Admissions: Julius Boushey, Ohio Medical College, 1874; James Frost, University of California, 1877.

Dr. Fitch read a paper on "Leprosy," and exhibited three cases now under his care.

After the reading of the paper a discussion followed.

Dr. Sundberg, speaking of the natives of Norway who are affected with leprosy, said it is supposed that their liking for decayed fish might have some influence in producing the disease. It is noted that in one district where leprosy prevails, food is scarce and of poor quality. He had observed many cases in India, where it is not believed to be due to syphilis. It is not considered contagious.

In answer to Dr. Hirschfelder's question as to the etiology of the disease, Dr. Fitch said he believed leprosy "to be a specific scrofula."

Dr. Donnelly did not think it proved that syphilis is the cause of leprosy. It is unknown in Mexico, although syphilis was introduced there by the Spanish invaders. He believed the disease to be endemic and due in great measure to the nature of the surroundings and want of good food.

Dr. Whittell called attention to the fact that in the State of Guerrero, in Mexico, and extending westerly from it to the Pacific, a class of people exist who are called "Pintos." He believed it to be a modified and very mild form of leprosy. The disease is not considered contagious by the natives, but it is well known to be hereditary. It may be a relic of the syphilis introduced by the Spanish.

A motion for the Society to take a recess during the months of June and July was carried.

There being no further business the Society adjourned.

A. P. WHITTELL,  
Assistant Secretary.

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May 25, 1886.

President Taylor in the chair. The minutes of the previous meeting were read and approved.

Proposed for membership: Dr. Julius Rosenstirn, a graduate of University of Wurzburg, Germany. Referred to Committee on Admissions.

The following names have been favorably reported upon by the Committee on Admissions were duly elected members of the Society: Julius Boushey, James Frost.

A paper was read by Dr. Winslow Anderson. Subject: Report of a case of convulsions in a female of 26 years, lasting eight days, followed by death. Discussion.

Dr. Taylor was of opinion that death was due to the fatty degeneration of the heart, discovered after death, which had probably existed for a long time.

Dr. J. Simon exhibited specimens of urine, one of them being bluish black. An analysis by Thomas Price showed the black color to be due to indigo.

Dr. Abrams exhibited specimen of about two ounces of vomited saliva. An equal quantity having been thrown up by his patient every morning for a number of years.

The Committee on Prosecutions reported the following arrests for practicing medicine without a license; "Dr." Li Po Tai, "Dr." Allen, "Dr." Fish, "Dr." Josselyn.

"Dr." G. M. Baronidi was fined \$200 for practicing without a license. The case was appealed to the Supreme Court.

Upon motion of Dr. Whittell, the Society adjourned until August 10th.

A. P. WHITTELL,  
Assistant Secretary.

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**Sacramento Society for Medical Improvement.**

SACRAMENTO, July 20, 1886.

The Society met in regular session, the President Dr. W. H. Baldwin, in the chair.

The minutes of the previous meeting having been approved, Dr. Cluness read a paper on "Syphilis."

The author reviewed the literature of the subject at considerable length. The appearance of primary lesions, duration of period of incubation, the degree of infectiousness of different stages, and the question of its self limitation were dwelt on and numerous authorities cited. With regard to treatment, prominence was given to the use of potassium iodide in full doses. The author believed in the continued use of mercury but deprecated the production of toxic symptoms as tending to aggravate morbid process. He advocated prolonged medical supervision and believed in the curability of this disease which was demonstrated by re-inspection and a fresh attack. In this connection the question of inheritance and transmission with the duration of infectiveness was discussed from its social aspect.

Dr. Oatman, referring to the heredity of syphilis, expressed the opinion that underlying many cases of scrofula was the specific taint derived from a remote ancestor. He did not believe in the excision of primary sores after induration had taken place, and advocated the adoption of constitutional treatment from the first in every case. Believed in the absolute curability of syphilis and relied on mercury as the principal agent.

Dr. Nixon believed in mercury properly administered and would give it in every case whether the primary sore was chancre or chancroid. Preferred the proto and bin-iodides to other preparations, as being more easily borne.

He believed in continuing treatment for an extended period but thought that where symptoms had not been severe one year was sufficient.

Dr. Briggs thought that syphilis had been considerably modified since that period when it was first recognized as a specific disease. Those very severe cases which were formerly recorded are not now seen, and while this may in part be due to improved treatment and hygienic surroundings, he believed that continued attenuation of the virus may have modified its effect. He did not think that any connection could be traced between syphilis and "scrofula," for if such a connection existed a chancroid in a strenuous subject would be less severe, which was not the case. With regard to treatment he believed in mercurials, not from any incontrovertible evidence, but because it was the universal verdict of the profession. He was satisfied that, like other specific diseases, syphilis was self limited, in support of which he referred to cases which frequently escaped treatment and those

in which it had only been adopted during the first four or six months. In the later stages of the disease he relied on iodine alone and preferred the iodine to the potassium iodide.

Dr. Snider did not believe in the excision of primary sores, as the period of incubation must have been gone through before operation would be justified. He advocated mercurial treatment and its continuance throughout the entire course of the disease. Preferred the proto iodide; had used mercurial vapor baths with advantage. Believed that the disease should be watched for at least two years.

Dr. W. E. Briggs did not believe in the absolute curability of syphilis, having so often seen late secondary and tertiary symptoms follow, and thought that a positive statement as to curability was an injustice to the patient. He did not think that the virus had been attenuated by transmission, the milder type of the disease now existent being, in his opinion, due to hygienic conditions. He used mercury and favored its energetic administration. During the later stages the use of iodides was advantageous.

Dr. Simmons had been, during the last ten years, struck by the change in the characters of the specific lesions which had come under his notice. In early days he had seen most severe manifestations, and how to explain this change, except in the way mentioned by Dr. W. E. Briggs, appeared impossible. In those days poor food was the rule, and a large maritime and floating population was centered in Sacramento; this element was rough and unclean, so that every existing condition tended to aggravate the lesions.

It was most important to impress upon the patient at the outset the length of time that he would require to remain under treatment; and it was extremely difficult to convey this fact where the disease is apparently trivial. During the use of mercurials it was often advisable to omit them for even a month, as the system undoubtedly acquired a tolerance of the drug.

In administering potassium iodide, he believed in large doses (thirty grains three times a day), *well diluted*, which greatly favored absorption.

Dr. Huntington thought that many cases diagnosed as chancre were really chancroids; the accurate diagnosis of a primary sore was extremely difficult. Few persons had had their cases under observation for a sufficient length of time to say whether or not

they were cured. We were, therefore, wrong in drawing conclusions from the experience of any individual, the aggregated experience of many should be our guide. He doubted whether it was justifiable, until secondary symptoms were evident, to put a patient well under the influence of mercury. Good authorities agree with this, on the ground that a true primary lesion must be followed by secondary symptoms, and that subsequent successful treatment is impaired by the administration of mercury during the incubative stage. In the employment of remedies no fixed rule could be laid down. He believed that in the tertiary stages potassium iodide had not been given a fair trial, owing to the doses being too small; he advised large doses (up to sixty grains three times a day) as beneficial when well borne.

Dr. Lainé commented on the fact that all primitive races suffered more severely from this disease than those who were highly civilized. He thought with Dr. Briggs that the routine administration of mercury was very much a habit. In its use he was guided by the amount of induration of the primary sore.

Dr. Baldwin, while believing in the use of mercurials and iodides, had at times found much benefit in the change to vegetable compounds.

Dr. Cluness, in replying, stated that he had not advocated pushing the mercurial to pyæmia but only until its effects were apparent. The principle of mercurial administration consisted in the elimination of the syphilitic virus from the system. Secondary and tertiary symptoms were all identical in so far as they were the product of the original germ. The histological elements of these growths was in no way distinguishable from normal cells, and it was only by the constitutional disturbance that they could be differentiated. These morbid products are absorbed by fatty degeneration, and mercury hastens this process. With regard to the question of self-limitation, it was no doubt true in some cases, but in many the disease was simply dormant. Excision of a primary sore did not remove the disease, but the weight of testimony was to the effect that it greatly modified it, and this seemed rational, as the nidus or focus of infection was removed.

The Society, on motion, adjourned at a late hour, to meet on the third Tuesday in August. Subject of the evening's paper by Dr. Huntington, "Gonorrhœa."

JAMES H. PARKINSON,  
Secretary.

**San Diego County Medical Society.**

A meeting to organize the San Diego County Medical Society was held lately at Monument Hall, San Diego. The meeting was called to order by Dr. P. C. Remondino. Dr. W. A. Winder was elected Chairman, Dr. H. T. Risdon, Secretary.

The report of the committee on credentials showed the following physicians present: W. A. Winder, C. M. Fenn, C. M. Johnson, H. B. Woodward, J. F. Escher, D. B. Hoffman, J. A. Sturges of Encinitas, D. McSwegan, P. C. Remondino, E. Nugent, D. B. Northrop, J. L. Teed, H. T. Risdon, A. H. McHatton, D. Burroughs.

A committee of five was appointed on organization to report at 7:30, as follows: Doctors Teed, McSwegan, Hoffman, Johnson and Risdon.

A committee of three was appointed on constitution and by-laws as follows: Doctors Fenn, Escher and Sturges.

At the evening session Drs. C. C. Churchill and Geo. H. Schmitt were admitted to membership. The committee on organization reported a constitution, which was debated, amended and adopted. By-laws were also reported and adopted. The time of the annual meeting was fixed on the first Thursday in August of each year. The regular meetings will be held on the first Thursday of each month at 7:30 P. M. Special meetings may be called by the request of four members. All regular physicians in the county may become members by signifying their desire to do so.

Drs. R. J. Gregg and T. C. Stockton were admitted to membership.

Permanent officers were elected as follows: President, Dr. R. J. Gregg; Vice Presidents, Drs. Escher, McSwegan and Northrop; Secretary, Dr. H. T. Risdon; Treasurer, Dr. Geo. H. Schmitt.

The election of a Board of Censors was deferred until the next meeting.

Adjourned to meet on the first Thursday in September at 7:30 P. M.

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**Licentiates of the California State Board of Examiners.**

SAN FRANCISCO, August 12, 1886.

At the regular meeting of the Board of Examiners, held July 7th, 1886, the following physicians, having complied with the law and all the requirements of the Board, were granted certificates to practice medicine and surgery in this state:

OLIVER P. ASKAM, Mountain View; The Kentucky School of Med., Ky., June 30, 1884.

AMOS E. BALDWIN, San Mateo; Chicago Med. Col., Ill., Mar. 29, 1881.

DAVID C. BARBER, Los Angeles; Miami Med. Coll., O., Mar. 11, 1886.

JULIAN G. BLANCO, San Francisco; Frederick William Univ., Germany, Jan. 30, 1879.

JOHN LINDSAY DAVIS, Los Angeles; Miami Med. Coll., O., Feb. 28, 1881.

WILLIAM S. DAVIS, San Antonio, Miami Med. Coll., O., Mar. 10, 1885.

CYRUS F. DEMSEY, Oakland; Rush Med. Coll., Ill., Feb. 26, 1878.

ARTHUR E. GRESHAM, Ontario; Cooper Med. Coll., Cal., Nov. 11, 1885.

ALLEN W. HAGENBUCH, Red Bluff; Rush Med. Coll., Ill., Feb. 15, 1876.

JOHN INGRAM, Colton; Starling Med. Coll., O., Feb. 25, 1850.

WM. H. PAGE, Los Angeles; Harvard Med. Coll., Mass., July 20, 1853.

P. JAMES PARKER, Colton; Jefferson Med. Coll., Penn., Mar. 13, 1871.

ROBERT T. STRATTON, Oakland; Jefferson Med. Coll., Penn., April 2, 1886.

GEO. P. THOMAS, Alameda; Coll. of Phys. and Surg., N. Y., May 12, 1885.

GEO. A. WOOD, Los Angeles; Long Island Coll. Hosp., June 24, 1875.

JOHN H. WADE, Los Angeles; Louisville Med. Coll., Ky., Feb. 29, 1872.

At the regular meeting of the Board, held August 4, 1886, the following physicians received certificates to practice medicine and surgery in this State:

JESSE C. ANTHONY, San Francisco; Bellevue Hosp. Med. Coll., N. Y., Mar. 15, 1886.

MURDOCH A. CRAIG, Capay; McGill Univ., Canada, Mar. 29, 1886.

ALBERT G. DEARDORFF, Fresno; Coll. of Phys. and Surg., at Keokuk, Iowa, Feb. 28, 1882.

LAUREN T. HOLLAND, Visalia; Coll. of Phys. and Surg. at St. Joseph, Mo., Feb. 23, 1882.

JAMES W. MULVEY, Stockton; Med. Dept. of Bowdoin Coll., Me., May 20, 1854.

JOHN S. PARSON, San Francisco; Jefferson Med. Coll., Penn., Mar. 8, 1873.

ROSE TALBOTT, Los Angeles; Woman's Hosp. Med. Coll., Ill., Apr. 6, 1886.

FREDERIK WESTERBERG, San Francisco; Med. Dep. Univ. of Vermont, Vt., June 25, 1883.

TOMAS DE YBARRANDO, Los Angeles; The Central Univ. of Madrid, June 21, 1873.

G. P. Allen of this city, whose certificate to practice medicine was revoked by this Board last year—mention of which was made in the *Medical Journal*—was recently arrested for practicing medicine without a license.

When his case was called in the Police Court on the 26th ult. he pleaded guilty as charged, and paid a nominal fine of \$50.

The doctor has now withdrawn his unprofessional advertisements, and states that he will hereafter comply with the requirements of the law.

R. H. PLUMMER,  
Secretary.

## PACIFIC MEDICAL AND SURGICAL JOURNAL

AND

## WESTERN LANCET.

EDITORS:

WILLIAM S. WHITWELL, A. M., M. D.

WM. WATT KERR, M. B., C. M.

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*SAN FRANCISCO, SEPTEMBER, 1886.*

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**Editorial.****Medical Education.**

We have published a letter, received from Dr. Overend, relating to the novel method adopted by the Illinois State Board of Health to insure a higher standard of medical education. We cannot help regretting that such a resolution has been passed, because, like him, we believe that the number of graduates is not a fair criterion of the efficiency of any school, nor is it probable that a regulation which refuses to recognize a college because it graduates more than forty-five per cent of its matriculates, will stand the test of judicial proceedings.

Such a regulation, besides being practically useless, casts a slur upon many teachers, and insinuates that they pass students who are unqualified for the duties of their profession; moreover, it takes no notice of the reputation of certain schools for greater advantages, which attract to them a much larger number of students, of more than ordinary ability, who desire to avail themselves of the greater facilities there offered; and finally it fixes no standard of education.

We have written so much on this subject that an apology is almost demanded for referring to it again at this time, but it is our intention to keep hammering away until, in California, some step is made in the right direction. This will only be when the Board of Examiners ceases to be a committee of experts on the



authenticity of diplomas, and undertakes an investigation of the knowledge possessed by each applicant for a license. It is true that the State Medical Society has taken some steps in this direction by sending a representative to the graduation examinations at the different schools, but he is only a figure-head who is present through the courtesy of the faculty. He has absolutely no power, and invariably makes a favorable annual report, because he has not had an opportunity to find out anything bad.

No applicant should have a license until the Board has practically satisfied itself of his ability to practice, and this could be done by the representative setting a certain proportion of the questions and examining all the answers, or by subjecting to examination all graduates coming to this State. The Board by thus refusing to recognize the possession of credentials from any school as entitling the holder to a license, would free itself from many difficulties, and demolish all the diploma mills. The sooner it limits itself to making the possession of special knowledge the requisite for a license, and leaves out of consideration all questions referring to medical ethics, the sooner will it attain to efficiency and make itself a power felt in the community.

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#### **Hospital for Women and Children.**

It is with pleasure we learn that the Pacific Dispensary is about to assume a more pretentious form and have a permanent location. Some time ago a lot was secured on the corner of California street and Maple avenue, and building operations have been commenced, but the scarcity of funds threatens to leave the hospital unfinished, as the trustees have formed the very laudable resolution of building as they can afford, rather than encumbering the institution with debt.

According to the present arrangement, the hospital will consist of an English basement, two middle floors and attics, so that the accommodation will be for about one hundred persons;

but unless more subscriptions are obtained at a very early date, it will be impossible to carry the building to its full height, and consequently the roof will need to be put over one of the lower floors and raised at some future period.

It is very sad that such a good work should be retarded for want of funds when money is foolishly lavished over many less worthy objects that call forth a burst of public sentiment, but die forever after a few days excitement. This institution is entirely charitable, none of the medical staff receiving remuneration for cases treated in the wards, and even the resident physician gives her time for a most insignificant compensation. Any one who has taken the trouble to visit the present dispensary, must be convinced of the faithful discharge of the work undertaken and the endeavors to perform all duties, on humane as well as scientific principles. The nurses are well trained, and undergo a course of instruction during two years that is well calculated to qualify them for attending the sick in private families. Indeed, so far as we are aware, this is the only place on the Pacific Coast where nurses go through a thorough system of training.

It has been urged against this Hospital that it is run for the benefit of "the women physicians," but we hope that the profession will not be so narrow minded as to let this prevent them encouraging a good work. We admit that our own inclinations or prejudices do not lead us to regard medicine as a suitable avocation for ladies, but at the same time we recognize the fact that this is a point for the public to decide, and not the profession. If people are willing to employ lady physicians, then there is a work for them to do, and it is better that every facility should be offered to make them perfect in their duties, than that barriers should be thrown in their way. One great objection to the medical education of women has been the want of separate clinical instruction, but by such an institution as the Hospital for Women and Children this could be removed and a thorough course of clinical instruction given to all female students.

As already stated, the great difficulty with which the trustees have to contend is scarcity of money to furnish the necessary accomodation, there being a deficit of nearly twelve thousand dollars, a sum that should be raised with very little difficulty, but unfortunately the response has not been at all encouraging. We feel sure that were the profession to take the matter in hand and bring it before their friends, sufficient money could be obtained, not only to carry out the present design, but to construct separate buildings for the maternity wards, and also for the treatment of infectious diseases.

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#### **New Medical Register.**

The third edition of the *California Medical Register*, revised and corrected, with the addition of all Licentiates of the Examining Boards to date, will be issued in November, if physicians in the different parts of the State send the required information to the Secretary Dr. R. H. Plummer, with sufficient promptness. Physicians are requested to notify Dr. Plummer of any errors they may have noticed in the former edition, and of any changes they may be aware of in location of either regulars or irregulars. Matters would also be facilitated if each physician would send Dr. Plummer one of their business cards giving hours for consultation.

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**ANILINE DYES USED IN COLORING WINES.**—Cazeneuve in a communication before the Academie de Medicine drew attention to the number of aniline dyes used in the manufacture of wines. He mentions fuchsine, purple red, Bordeaux red, orange, yellow, and blue. According to the experiments of Cazeneuve and Lépine, some of these coloring matters are active and some are indifferent, but as they are all used indiscriminately it follows that all coloring of wines is dangerous and destructive to the public health.—*Le Progres Medical*.

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**LEGRAND DU SAULLE** the eminent alienist of the Salpetriere at Paris died on the 6th of May, 1886, at the early age of 56 years, after an illness of but two days duration.

## Health Reports.

### Report of the State Board of Health.

From the reports received this month it will be seen at a glance that the rate of mortality continues exceptionally small. There has been a slight increase in the death rate of San Francisco and Oakland, but nothing to excite remark. Death from zymotic or preventable diseases are remarkable for the limited number that have occurred from these causes. The following towns report no deaths: Lincoln, Martinez, Cottonwood, Susanville, Downieville, Willits, Gonzales, Alturas, Fort Bidwell, Shasta, Ontario, Anaheim, Roseville, Forest Hill, Monterey, Los Gatos, America, Azusa, Colfax.

Consumption continues to be the most constant factor in increasing our mortality returns. This month we have to record but one hundred and two deaths from this cause, which is less than our former report.

Pneumonia caused twenty-two deaths—fourteen of these occurred in San Francisco, the remaining six were scattered throughout the State.

Bronchitis was the occasion of seven deaths in San Francisco and four elsewhere.

Congestion of the lungs was fatal in six cases—four in San Francisco, one in Oakland, and one in Eureka.

Diphtheria shows a very remarked decrease in mortality returns, claiming only eleven deaths from this cause—three of which occurred in San Francisco—the smallest number in many months—two in Los Angeles, one in Truckee, four in Oakland, and one in San Benito.

Croup—Seven deaths are reported from this disease—five of which occurred in San Francisco, one in Oakland, and one in Santa Cruz.

Whooping-cough has again increased its mortality to eight this month. The deaths being, with one exception, confined to those cities on the coast where the temperature is much below that experienced in the interior, and consequently more likely to induce fatal complications than in the warmer and more equable climates.

Scarlet fever caused no deaths.

Measles caused no deaths.

Smallpox—No case reported on the coast.

Diarrhoea and dysentery show an increased mortality over last report of eleven; there being nineteen deaths from these diseases, which prevail extensively.

Cholera infantum likewise show a very marked increase, there being forty-seven deaths reported. The temperature of last month being unusually high, may, in a great measure, account for it. We may reasonably expect a decrease of deaths from this disease in our next report.

Typhoid fever—As was expected, the mortality from this disease has not decreased, there being twenty-one deaths, the same as last month. We may confidently look for an increase in the death rate from this fever for the next few months, and every precaution ought to be taken to prevent its spread.

Typho-malarial fever caused three deaths.

Remittent and intermittent fevers are credited with four deaths.

Cerebro-spinal fever is said to have caused six deaths.

Erysipelas has a mortality of six, which is a slight increase over the deaths from this cause reported last month. The cases were sporadic and occurred in different parts of the State.

Alcoholism caused nine deaths.

Thermic fever or "sunstroke"—We have to report three deaths from heat apoplexy this month. All of these occurred about the seventeenth of July, during the extremely hot weather. One death occurred in Sacramento, in the person of a man who in the army had had a sunstroke years before. The second case occurred in Oroville, in the practice of Dr. J. H. M. Karsner, who reports that the man, aged thirty-six years, had walked a mile in the sun, and on returning home laid down in the cellar, complained of great heat and thirst, became unconscious, and died in two hours after seizure. The third case is reported by Dr. A. P. Tartar, of Tehama, in the person of a man aged seventy-two years, of temperate habits. He was a bridge tender, and obliged every morning to inspect the bridge as the trains passed over. As he was making his inspection he was stricken down on the bridge, and when found conveyed to his home, where he soon became unconscious, and died in about two hours. Dr. Tartar is of the opinion that the unusual moisture in the ground from the abundant and late rains of winter, had produced that degree of humidity in the atmosphere which makes sunstroke

possible. He remarks that sloughs and ponds usually dry at this season are still holding water, and their evaporation must add something to the cause. The cases of sunstroke reported this year have exceeded in number those of any previous year in the history of California, whether owing to the increased humidity from said saturation, or from the exceptionally high temperature prevailing at the time, or as the result of personal habits, is still a problem to be solved.

#### PREVAILING DISEASES.

Reports received from eighty-four towns agree in their estimate of the general healthfulness of their several localities, and that no epidemic disease anywhere prevails.

Cholera infantum has been quite a frequent cause of death in San Francisco, and has been noticed as prevailing in San Jose, Benicia, Ione, Williams, Gridley, Napa, Mariposa, and Oakland.

Diarrhœa and dysentery prevail extensively over the State. The type is mild and not attended with any unusual mortality. Some limited cases of cholera morbus have been noted in a few localities, caused mostly by the indiscriminate use of green fruit.

Diphtheria has been noticed as present in Santa Cruz, San Francisco, Etna Mills, Truckee, Fall River, Oakland, Napa, Hill's Ferry, and Los Angeles.

Croup has also prevailed in these places to a limited extent.

Whooping-cough at present prevails in Nicolaus, Jolon, Anaheim, Napa, Grass Valley, Modesto, Ione, and Martinez.

Erysipelas has appeared in Nicolaus, Willits, Truckee, Millville, Anderson, Los Angeles, and Grass Valley. It is sporadic in form and not epidemic.

Typhoid fever—This preventable disease is again noticed in our sickness reports as becoming more frequent in Santa Cruz, Salinas, Sacramento, Alturas, San Francisco, Jolon, Anaheim, Lincoln, Elk Grove, Fort Bidwell, Cottonwood, and other places.

Typho-malarial fever is also prevailing more or less extensively wherever malaria is an additional factor to the fever.

Remittent and intermittent fevers, as is usual at this season of the year, are observed everywhere in the lowlands and along the river marshes.

Cerebro-spinal fever is occasionally noticed in our reports for last month, but does not prevail anywhere.

Pneumonia is seldom noticed in our last report.

Bronchitis seems to prevail in Etna, San Francisco, Azusa, Dixon, and Modesto.

Scarlet fever is noticed in Susanville, Truckee, Alturas, Napa, and Shasta. The type is very mild, with no mortality from it during the month.

Measles are not noted as prevailing in any locality.

The general health of the State is remarkably good, and the absence of any epidemic disease within our borders is a subject for congratulation among all sanitarians.

GERRARD G. TYRRELL, M. D.,

Permanent Secretary California State Board of Health.

SACRAMENTO, August 10, 1886.

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NOTE SUR UNE APPLICATION DE LA BANDE D'ESMARCH.—Take a rubber bandage and apply it to the limb from below upwards in the ordinary way. Having reached the point where you wish to make pressure on the principal vessel of the limb, take a couple of tight turns with the bandage. Have an assistant place his closed hand on these turns just over the artery. Then take still a couple of turns with the bandage, which turns pass over the fist of the assistant, and then replace the fist of the assistant by the roller of bandage which remains over. This roller of bandage is tightly squeezed between the turns of the bandage, and if care be taken to place its long axis parallel to the artery, the circulation will be powerfully interrupted.

The advantages of this method are—

1. Simplicity of apparatus, which consists of a single bandage.
2. Ease in keeping the bandage antiseptic.
3. Rapidity of removal, which is done by simply disengaging the roller.
4. Cheapness of apparatus.—*Gazette des Hopitaux.*

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Some urethane of English manufacture, which is now being sold, has a most offensive mousy smell, resembling that of acetamide. Dissolved in water a solution nauseous, both in taste and smell, is produced. When properly made, urethane has no unpleasant smell or taste. The English urethane seems as effective, but until it is more carefully prepared, the more agreeable German drug should alone be used.

## Communications.

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### Instructions of the Court in the Malpractice Suit of Winters v. Graves.

A physician or surgeon engages that he possesses that reasonable degree of learning, skill and experience which is ordinarily possessed by the members of his profession, and that he will use reasonable and ordinary care and diligence in the exertion of his skill and the application of his knowledge to accomplish the purpose for which he is employed, such skill and diligence being that which is ordinarily exercised in his profession. If the defendant in the present case has failed to exercise such reasonable and ordinary care and diligence in regard to the limb of the plaintiff, Mrs. Ellen Winters, to her injury, then he is liable for his negligence, and it is your duty to render a verdict against him in damages not exceeding, in all, the amount prayed for—fourteen thousand dollars.

If you should find from the evidence that the defendant, G. W. Graves, has failed to exercise in his treatment of the plaintiff, Mrs. Ellen Winters, this ordinary care and diligence, then he has been guilty of negligence; and if, by reason of such negligence, Mrs. Ellen Winters has lost the use of her foot and leg, and has become deformed and crippled, the defendant is liable to her in damages for such condition of her foot and leg, and it is your duty so to find by your verdict. For the condition of the foot and leg the complaint alleges the damages at ten thousand dollars, and in fixing the amount of damages for the condition of the foot and leg (should you decide to award damages), you must not exceed that amount.

You may award further damages, however, under these circumstances: If you should find from the evidence that the defendant, Graves, has been guilty of negligence as explained, and that by reason thereof the plaintiff, Ellen Winters, has further sustained injury in the shape of mental and physical suffering, then she is entitled to damages against Graves for this suffering, such damages to be not greater than two thousand dollars.

And you may award damages still further as follows: If from the evidence you find that the defendant, Graves, has been negligent as explained, and that, by reason of such negligence, the plaintiff's, Ellen Winters', health has been impaired, then I



instruct you, she is entitled to damages for such impairment of her health, and you must so find by your verdict. Such damages must not exceed two thousand dollars.

Should you determine in this case to award damages to the plaintiff, Ellen Winters, then I instruct you that the amount of such damages is a matter entirely with you. It is your province and duty to say how much the damages shall be, with this qualification, that the amount must not exceed, in all, the sum of fourteen thousand dollars.

You are the judges, gentlemen, of the credibility of witnesses. You have a right to consider their manner upon the stand, their interest, if any, in the case; the motives, whether of friendship, or interest, or otherwise, that actuate them; and their relations, of interest or of friendship, with the party who calls them. You have the right to weigh their testimony, and it is for you to say just how much of it you will accept.

If a surgeon is called in to attend in the usual manner, and undertakes to do so by word or act, nothing being said or done to modify the undertaking, then not only must he exercise reasonable care and skill, but he must give the patient continued attention so long as his or her condition requires it, in the exercise of the usual and ordinary judgment of the profession.

But if you believe from the evidence that plaintiff, Ellen Winters, withdrew herself from the care of the defendant, or refused to be treated by him or follow his directions, or refused to procure and use such appliances as he recommended (if any were recommended by him), then she can not recover in this case unless she suffered injury by reason of defendant's want of ordinary skill or care before such withdrawal or refusal.

A physician of ordinary skill, exercising ordinary skill and care in his diagnosis, is never liable for any injurious consequences which may result from mere errors of judgment, if he has honestly and carefully used such means as in his best judgment are deemed necessary, then, although he may have made a mistake, the consequences of which are hurtful to the patient, he will not be held responsible.

To charge a physician or surgeon, therefore, with damages, on the ground of unskillful and negligent treatment of his patient's case, it is never enough to show that he has not treated his patient in that mode, nor used those measures, which in the opinion of others, even medical men, the case re-

quired; because such evidence tends to prove errors of judgment, for which the defendant is not responsible, as much as the want of reasonable care and skill, for which he may be responsible.

Alone, it is not evidence of the latter, and hence the plaintiffs must go further, and prove by other evidence that the defendant neglected to apply his knowledge and skill with such care and diligence as in his judgment, properly exercised, the case must have appeared to require.

It is not enough that the plaintiff shall satisfy you that Mrs. Winters has received an injury from which she has suffered damage.

The injury must be connected with some unskillfulness or negligence on the part of defendant, in order that plaintiffs shall be entitled to your verdict. It must be shown by plaintiffs, and that, too, by a preponderance of the evidence, that the present condition of Mrs. Winters' leg, if you should deem that condition to be an unhealthy one, is due to the unskillfulness or negligence of defendant.

Defendant only bound himself to bring to the performance of his undertaking a reasonable degree of care and skill; but in the absence of a special agreement to do so, he did not undertake to perform a cure.

Nor will you be justified in implying negligence from the failure of defendant to effect a cure, if no cure has been effected.

It is for you to determine whether such failure, if failure there has been, has arisen from the unskillfulness or negligence of defendant, or whether it has arisen from causes which were beyond his control. If, therefore, you should find that the present condition of the leg is such as might naturally have resulted from the original injury, and is in nowise connected with or due to any want of ordinary care or skill on the part of defendant, you must find a verdict in his favor.

The professional man only contracts, in the absence of special agreement, that he will use reasonable and ordinary care and diligence in the exertion of his skill and the application of his knowledge to accomplish the purpose for which he is employed.

He does not undertake for extraordinary care, or for extraordinary diligence, or for uncommon skill. The rule as to this is not different in the case of the physician or surgeon from that in the case of any other person holding himself out as hav-

ing special knowledge or skill in any department of life. His liability is not greater and no less than theirs. Each of such persons, including the physician and surgeon, agrees only to exert such care and diligence in his employment as men of common care and common prudence usually exert in their own business of a similar kind.

He agrees to be responsible for the want of such care and attention, and he stipulates in no event, without an express contract for that purpose, for any further or greater liability. There is, of course, a difference in different cases, as to what constitutes ordinary care, dependent upon the importance or delicacy or difficulty of the thing to be done; and whether or not such ordinary care was used by defendant in his treatment of Mrs. Winters' case, is a question entirely for you. If in his treatment he exercised such ordinary care, and used his best judgment, plaintiffs cannot recover.

It is claimed, among other things, by counsel for the plaintiffs that the injury to Mrs. Winters consisted in a fracture of the shaft of the tibia above the ankle joint; that this fracture ought to have been discovered by the defendant, and that it would have been so discovered had he exercised the proper care and skill; and that by failure to make such discovery, injuries resulted to Mrs. Winters that otherwise would not have resulted.

On this point I instruct you, that a physician or surgeon is not liable for any loss, injury or damage to his patient, no matter how great, merely because he has mistaken the complaint under which the patient is suffering, if the case is one of reasonable doubt and uncertainty. It is only when he has not used due care, diligence and skill, and has not taken the proper steps to ascertain the nature of the complaint, that he becomes liable by reason of a mistaken diagnosis.

If he carefully uses the methods which are ordinarily used, according to his best judgment, and yet notwithstanding the use of these methods, he fails to ascertain the nature of the complaint or injury, and by reason thereof, acting diligently, he makes an honest mistake of treatment (thus mistakenly treating one disease or injury when the patient is suffering under another), he will not be liable for any damage which may result to his patient by reason merely of such mistake.

If, therefore, the defendant in the present case carefully, diligently and skillfully used the methods ordinarily used in his

profession for the purpose of determining the nature of the injury received by Mrs. Winters, and after such use of such methods, he honestly arrived at the conclusion that the shaft of the tibia was not fractured, or that there was no fracture of any kind, he will be absolved from liability, so far as any mistaken diagnosis is concerned, although you may be of the opinion that there was such fracture as is claimed by counsel for plaintiffs, and although you may be also of opinion that by reason of the fracture not having been discovered by defendant, plaintiffs have sustained all the damage alleged in the complaint.

If you shall find from the evidence that the defendant in the diagnosis and treatment of Mrs. Winters' case exercised an ordinary and reasonable degree of skill, such as is ordinarily possessed by others of reasonable learning and experience in his profession, and that he used ordinary care and diligence in these respects, even though a man of much greater experience or ability might have used a greater degree of skill or care, then I instruct you that his failure to use such greater degree of skill or care, if such failure there was, did not constitute malpractice or negligence for which he can be held legally liable. The law does not require that the physician or surgeon have the highest degree of skill or largest experience, or most thorough education, equal to the most eminent of the profession in the whole country, but only that reasonable degree of learning, skill and experience possessed by those of ordinary experience, learning and skill in the same profession.

In civil cases the affirmative of the issue must be proved, and when the evidence is contradictory, the decision must be made according to the preponderance of evidence.

The burden is upon plaintiffs to prove the negligence alleged in their complaint: that is, they must satisfy you by a preponderance of the evidence that the injury and damage complained of by plaintiffs, in whole or in part, are due to the negligence or unskillfulness of the defendant.

If you cannot determine on which side the evidence preponderates you should find a verdict for the defendant.

Even should you believe that the use of splints and bandages would have been the best treatment of Mrs. Winters' case, and would have brought about the best or better results, their non-use would not *alone* be sufficient to justify you in finding a verdict for the plaintiff. Such non-use must have been occasioned

by the want of ordinary care and skill on the part of the defendant. If he was possessed of ordinary skill and learning in his profession, and used due and proper care in making the diagnosis, an error of judgment in not using splints and bandages would not be sufficient to make the defendant liable, provided he used his best judgment and took ordinary care, believing honestly that splints and bandages should not be used. In other words, if the defendant was possessed of ordinary skill and learning in his profession, and used ordinary care in making the diagnosis, a mere error of judgment would not make him liable, though such error lead to his non-use of those appliances which other surgeons of a different opinion might have used, and which might have brought about better results.

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#### **Rush Monument Committee.**

The Rush Monument Committee have issued a circular to the members of the medical profession in the United States, calling upon them to subscribe to the erection of a monument to the memory of Dr. Benj. Rush, which it is desired should be placed in Memorial Hall in the Capitol at Washington, for while other professions are represented, while there are statues to eminent citizens and to military and naval heroes, the profession of medicine is thus far conspicuous by its absence.

Benj. Rush was not only a great physician, teacher and investigator in medicine, a philosopher, philanthropist, eloquent lecturer and accomplished writer, but also a fearless patriot and founder of the Republic, a member of the Continental Congress, and signer of the Declaration of Independence; the first Surgeon-General of the Army of the Revolution for the Middle Department, and Physician-General of Military Hospitals, and a member of the Convention for the adoption of that Federal Constitution under which we now happily live.

The committee state that this object has met with unqualified approval from all parts of the country, and that they are therefore ready to receive subscriptions and donations.

The price of the monument is estimated at about \$40,000, and the amount of the subscription asked from each physician is \$1. It is to be hoped that the profession of California will respond. Dr. G. G. Tyrrell of Sacramento is a member of the committee, and it is desired that subscriptions collected by those interested in this undertaking be forwarded to him.

**On the Recent Preamble and Resolution Adopted by the Illinois State Board of Health.**

Referring to the resolution adopted by the Illinois State Board of Health, in which the Board avers that it will not recognize any medical college that graduates in the next five years as many as forty-five per cent of its matriculates, it would appear, that, while the motive is an excellent one, the method can hardly be so called.

It is true that the standards of different schools vary; it is also true that they should be as near alike as possible, and that they should, on the average, be higher than they are or have been; but such an illogical, manifestly unfair and high-handed course as the Illinois State Board of Health has, in the above mentioned resolution, taken to bring about this very desirable result can only provoke contempt from the friends as well as the enemies of the higher standard in medical education.

In substance, the resolution is guilty of saying that the graduation of any given matriculate depends only upon the leniency of the faculty of his college. It ignores the elements of intellectual standard, opportunities, advantages, teaching power of the faculty, term of study, percentage of students who are physically qualified to continue study to the time of final examination, and percentage of students who are financially able to continue study to graduation.

It strikes me that these are conditions that vary in different schools and in different parts of the country. To particularize would be to make invidious comparisons; but surely no one will deny that they are varying conditions, and that they do exert an influence in determining the percentage of graduates to matriculates.

A law that will allow everyone to don the dignity of the doctorate who is *qualified*, and that will prevent everyone from enjoying this distinction who is not qualified, is what the profession and the public require. Not a law, medical or civil, that would decimate matriculates in arithmetical fashion to determine, *not who, but how many* should graduate.

This Malthusian method resembles the Alexandrian way of cutting the Gordian knot—it would be efficient, but would reflect little credit on the skill of those adopting it.

E. J. OVEREND.

## Notices of Books, Pamphlets, etc.

A SYSTEM OF PRACTICAL MEDICINE BY AMERICAN AUTHORS. Edited by WILLIAM PEPPER, M. D., LL. D., assisted by LOUIS STARR, M. D. Vol. V DISEASES OF THE NERVOUS SYSTEM. Philadelphia: Lea Brothers & Co., 1886. San Francisco: W. S. Duncombe & Co. Price per volume, cloth, \$5.

The present volume, containing 1,270 pages, and devoted to diseases of the nervous system, is the last of the five large octavos which constitute this series, the finest on the subject which has ever been produced, at least in America.

In reviewing the other volumes, we have spoken of the great advantage to practitioners of being able to consult a truly American work, one written by those who have seen disease under the same conditions of climate, race and surroundings as they themselves are seeing it. From this one point alone it is most valuable to the American practitioner, and should be, therefore, duly appreciated by him.

The number of articles in the series is 185, written by 99 authors who have had especial experience in the matters of which they write. The work covers, with indexes, about 5,600 pages. The editor, in his valedictory in volume five, mourns the loss of so many of his fellow co-laborers, among whom are to be named Flint, Van Buren, Armor, Bemiss and Elsberg.

He feels that it is a subject for congratulation that by the aid of so many prominent men in the profession the entire subject of practical medicine has, for the first time, been treated in a manner truly representative of the American school.

A MANUAL OF PRACTICAL THERAPEUTICS. By EDWARD JOHN WARING, C. I. E., M. D., and edited by DUDLEY W. BUXTON, M. D., B. S., London. Fourth edition. Phila.; Blakiston, Son & Co. 1886. San Francisco: Wm. S. Duncombe & Co. Price, cloth \$3.00; sheep \$3.50.

The first edition of this work was issued in 1854, and since that time and more especially within the last few years such advances have been made in therapeutics, and so many new drugs have been brought into use, that the author has found great difficulty in selecting the most important in order that the present edition might be kept within the bounds of a manual.

The author's health and sight failing, Dr. Buxton was called upon to finish the work, and in doing so to follow the plan laid

down of curtailing old matter and to find space for the later remedies, so that the contents of the volume might be brought up to date.

This has been done most successfully and Dr. Buxton has also contributed a number of longer articles upon the mineral waters, malt, pepsin, the oleates, salicylates, etc., making it one of the most valuable of the late works upon therapeutics.

The book is divided into sections, so that with the good index of drugs and of diseases supplied, it is a most convenient one for ready reference.

**LECTURES ON DIETETICS AND DYSPEPSIA.** By SIR WILLIAM ROBERTS, M. D., F. R. S. Second edition. New York and London: G. P. Putnam's Sons. San Francisco: A. L. Bancroft & Co. Price, \$1 00.

These lectures were delivered as a special course to practitioners and students in the year 1885, and do not pretend to be in any sense systematic, but as the author remarks "they treat of subjects which are somewhat neglected now-a-days and in regard to which there is a conspicuous want of accurate information," and therefore any studies upon them made by so competent an observer as Sir William Roberts, cannot fail to be interesting to the profession. There are in all but five lectures, comprising dietetics in general, which includes dietetic habits and customs, and their effects upon different races; the effect of food-accessories on salivary digestion, *i. e.*, liquors, spiritous and malt, tea, coffee, cocoa, and the table waters; the effects of these upon the peptic and pancreatic digestions. The last lecture is devoted to acid dyspepsia in healthy persons. All are interesting and they are upon subjects about which all should be glad to have reliable information.

#### THE PHYSICIAN'S LEISURE LIBRARY.

Mr. Geo. S. Davis, the well known medical publisher, is issuing a series of twelve medical books by eminent authors, for the very moderate price of \$2.50 for the series. The books, however, may be purchased separately for two bits each. We are already in receipt of the first five volumes, and from their convenient form and from the excellence of the selection of subjects, we believe they will be very popular with physicians.

The first two volumes comprise a comprehensive review of the progress in therapeutics for the last fifty years, and are entitled "New Medications;" the author is the renowned Professor Dujardin Beaumetz, of Paris.



Volume three is by Dr. Beverly Robinson, of New York, entitled "A Manual on Inhalers, Inhalations, and Inhalants," a very practical work.

"The Uses of Electricity in the Removal of Superfluous Hair," is the subject of volume four, and is written by Dr. Geo. Henry Fox. The author details his own experience in these cases, and certainly has attained results what must be satisfactory to his patients, who were generally of the sex who are most sensitive in regard to facial blemishes.

In volume five Dr. Sexton, of the New York Eye and Ear Infirmary, gives the modern treatment of ear diseases. This volume is of much practical value to the general practitioner, as it discusses clearly, yet briefly, the facts requisite to the treatment of these affections.

The other volumes treat of Spinal Irritation, Eczema, The Wearing of Glasses, Practical Bacteriology, Granular Lids, Anti-septic Midwifery, Effects of Compressed Air, Pregnancy, Parturition, and the Puerperal State.

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CURE OF BASEDOW'S DISEASE BY OPERATION.—The case is a strange one. A girl of 17 was suffering from Basedow's disease, with well-marked symptoms. The mucous membrane of the nose happening to be so much swollen that she had to keep her mouth almost constantly open, she came to Prof. Hack for relief. He cauterised the smaller mucous membrane on the right inferior turbinated bone, and found next day, to his astonishment, that the exophthalmos on the side operated on had almost disappeared. He operated on the other side, and anxiously awaited the result, which was also favorable, but not such a brilliant success as the first attempt. Strangely enough, the other symptoms likewise improved, and the operation on the nose seems to have cured Basedow's disease itself. Prof. Hack's explanation of the result is that the disease, in this case at least, was purely reflex, and that as soon as the irritation in the nose ceased the disease vanished. The increased action, and even the increased size of the heart, he attributes to this same reflex action; the coronary arteries might be dilated, and thus give the organ an over-plentiful supply of blood. He further upholds his reflex-theory by giving parallel cases.—HACK (Prof.)—*Deutsche medicinische Wochenschrift*.—*Medical Chronicle*.

## **Extracts.**

### **Notes from the Transactions of the Surgical Congress in Berlin.**

Translated by D. W. MONTGOMERY, M. D.

**JAMES ISRAEL.**—"Ein Beitrag zur Pathogenese der Lungenaktinomykose."

J. I., who is well-known as having given the first accurate description of the actinomycosis, reports a case which is chiefly interesting from an ætiological standpoint. At the autopsy a piece of tooth was found in an actinomycotic cavern in the left lung. From this fact he draws the conclusion that the disease was caused by the aspiration of germs from the mouth, and that carious teeth can form a nidus for the disease. Esmarch, in the discussion which followed, laid great stress on the fact that, almost always, as in this case, the patients had, for years before showing signs of the disease, been occupied with the care of cattle.

**THIERSCH.**—"Meber Hautverpflanzung."

Transplantation of skin is carried out in the clinic in Leipsic in the following way: The granulations are scraped or cut away till the solid subjacent tissue is reached. The skin for transplantation is obtained by preference from the external surface of the upper arm, and in the following manner: The parts are made tense by the operator grasping with his left hand the soft parts on the inner side of the arm, and then thin lamellæ of skin are shaved off with a razor. These lamellæ include part of the corium, as well as the papillary and epithelial layers.

The speaker stated that pieces even four inches long and three-fourths of an inch wide are pretty certain of healing to the wound.

Czerny reported a case of tuberculosis which he believes arose from transplantation of skin taken from tuberculous patients.

M. Wahl, of Essen, also reported a case of inoculation of tuberculosis after amputation of the forearm. The child on leaving the hospital had a small granulating spot on the stump. After leaving the hospital, the child was nursed by a girl having lupus of the face, who, after the exclusion of other causes, was thought to be the source of infection. The wound on the stump enlarged and underwent fungous degeneration, the axillary glands enlarged, and the general health deteriora-

ted. The axillary glands were taken out, and both macroscopically and microscopically were typically tuberculous. The speaker said that the first case of general infection from local tuberculosis was reported by Koch himself. In 1874 he had amputated a finger on account of a troublesome chronic ulcer. The man was in other respects perfectly healthy. After some years he died from phthisis pulmonis. The amputated finger, which had been preserved in alcohol, was examined in 1882, and tubercle bacilli were found in it.

König, of Gottingen, spoke of a case in which tuberculous peritonitis followed a large tuberculous abscess of the rectus abdominis muscle, which probably owed its origin to hypodermatic injections with a needle which had been long used on a patient suffering from phthisis.

CZERNY.—“Demonstration eines geheilten Ruckgratschusses.”

After a short reference to the debates following the shooting of President Garfield, C. showed a section of vertebral column demonstrating gunshot wound of the vertebral column, followed by healing of the wound.

A woman, 22 years of age, received a pistol shot wound one-half inch to left side of spinous process of last dorsal vertebra, on May 6th, 1873. From the paraplegia and anæsthesia of the lower extremities, which followed immediately on the shot, the diagnosis of severance of the cord was made. The bullet was thought to have remained in the vertebral column, because there was no apparent injury to any of the abdominal viscera. The wound was not probed, the surface was washed off with sol. of carbolic acid, and dressed with carbolized cotton. Healing of the wound took place in a few days. In November rapidly advancing decubitus developed over the sacrum, which owed its origin to excoriations caused by urine. Erysipelas extended from this over the entire back, and down the thighs. Exit Dec. 14th, 1873. The bullet was found encysted between the last dorsal and first lumbar vertebrae, to the right of the middle line. The cord was almost completely severed—proximally there was softening as high up as the eleventh dorsal vertebra, distally the cord was thickened. There were small cicatrices anteriorly and posteriorly in the dura, which had become attached at these points to the bony wall of the canal.

C. drew attention to the following points:

1. The purulent softening of the cord, which he thought looked more like an acute ascending myelitis than an abscess.

2. The good general health the patient enjoyed between the closure of the wound and the development of the decubitus.

3. The complete encystment of the bullet.

Esmarch said, that an account of opinions expressed relative to the case of President Garfield, for which he was still repeatedly attacked in the press, he begged that all the specimens of wounds of the vertebral column in the different museums might be made accessible to him.—*Trans. from Centralblatt für Chirurgie.*

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### **Sal Alembroth: Sir Joseph Lister's Latest Antiseptic.**

By EDMUND E. KING, L. R. C. P., London.

It may be news to a great many to learn that Lister has discarded the use of the spray almost entirely, the only cases he has used it in during the past fifteen months being operations involving the peritoneum. I have heard him say that of late he has become convinced that it was by no means to the antiseptic properties of the spray that the good results have followed. After careful examination and study he believes that the germicide properties in a solution of 1-40 carbolic, thrown by the spray into the air three or four feet, to be *nil*, or nearly so, and the sole benefit derived was due to the irrigation and absolute cleanliness induced. Carbolic acid was superseded by perchloride of mercury: this, when used for dressing, was, from its forming an insoluble albuminate of mercury, irritating and thus an unsatisfactory dressing. He now uses Sal Alembroth exclusively in his wards for dressings, and it has so far given very fine results. It is a double mercurial salt formed by the sublimation of a mixture of perchloride of mercury and chloride of ammonium, exceedingly soluble. The salt was known to the Alchemists, it has not been used in medicine in modern times. Lister prepares all his dressing now with a 1-100 solution of this, gauze cotton wool, lint, bandages, draw sheets, and where the wound is covered by the shirt, it is rendered septic by dipping it in the solution and drying before the fire. To make any of these dressings, all that is necessary is to soak them in this solution and dry. It not being volatile does not require to be kept sealed in tin cases. He also colors these dressings with aniline

blue 1-10000, the benefit to be derived from this is that wherever an alkaline discharge comes in contact with the dressing, the blue is removed and turned reddish, enabling you at once to see where the discharge has been, if the quantity was ever so small and had dried up before the dressing was removed. There is one precaution in using this dressing, and that is this: the dressing being dry and frequently handled might have some septic matter from bed clothes, hands etc., so he always dips it in 1-2000 perchloride just before applying it. He is making a Sal Alembroth protective, which will be surcharged with the antiseptic so that as a discharge comes through a dressing it will come in contact with this protective and can be kept aseptic. I do not know of any place in Canada where this can be procured. Martindale & Co., 10 New Cavendish Street, London, Eng., prepare it for Lister.—*Canadian Practitioner*.

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#### **Arsenic in Skin Diseases.**

The editor of the *Journal of Cutaneous and Venereal Diseases* is desirous of ascertaining to what extent arsenic is used by American physicians in the treatment of skin diseases, and also the results of their experience as to its therapeutical value.

Information upon the following points is requested of every physician who reads this:

Are you in the habit of employing arsenic, *generally*, in the treatment of skin diseases?

In what diseases of the skin have you found arsenic of superior value to other remedies?

What ill effects, if any, have you observed from its use?

What preparation of the drug do you prefer, and in what doses do you employ it?

Address, Editor of *Journal of Cutaneous and Venereal Diseases*, 66 West Fortieth street, New York.

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#### **Practice For Sale,**

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PACIFIC

# MEDICAL AND SURGICAL JOURNAL

AND

## WESTERN LANCET.

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VOL. XXIX.

OCTOBER, 1886.

No. 10.

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### Original Articles.

#### **SUPPLEMENTAL REPORT ON INDIGENOUS BOTANY AND DOMESTIC ADULTERATION OF DRUGS.**

##### **Suggestions in Regard to the Law Creating the Office of State Analyst.**

By M. M. CHIPMAN, M. D.

(Read before the Medical Society of the State of California.)

*Mr. President and Members of the State Society:*

Adulteration and substitution in foods, drinks and medicines, appears to have originated nearly coeval with commerce itself. The ancient Greeks complained of the adulteration of their wines, and all wine drinking nations since have had experience, more or less, of the same difficulty. Pliny records the intermixing of white earth, by the bakers of Rome, in making bread, and the adulteration of certain drugs and chemicals; and that even the rich, at times, were unable to obtain the natural wines of Falerno, because of adulteration in the cellars. In the middle ages sophistication of articles of diet, of beverages and of medicines, had become largely developed, and in Britain and on the European continent, the evil increased from the eleventh century onwards. The early jurisprudence of those nations exhibits much of legislation with penalties, more or less severe, to hold in check these fraudulent practices. Fines were imposed and public exposure, whipping, the pillory and imprisonment were resorted to; and in Germany, for heinous offenses, the guilty party was expelled from his guild, and in some instances,

even punished with death. In France, in the most aggravated cases, the offender was forbidden to follow his vocation, and in England, persistent criminals of this class received sentence of expulsion from the city. At the period of the middle of the present century, adulteration and fraud had got to be so common, in the British metropolis, and the food supply so notoriously unwholesome, in many respects, as to have become a cause of anxiety and alarm, when a gentleman, connected with the medical profession, came to the front, with the philanthropic determination of making an effort to change the disease-inviting conditions. Mr. Wakely, editor of the *London Lancet*, associating with himself, several other scientific gentlemen, in 1850, organized the Lancet Sanitary Commission, "The Analytical Sanitary Commission," as it was subsequently called; and this Commission, availing itself of the best scientific methods and appliances then known, including the assistance of a consummate artist in drawing microscopic objects, by an extensive and rigorous series of investigations into the condition of the various articles of diet, supplied to the inhabitants of London and vicinity, the results of which being published in that powerful journal, inaugurated an era of reform. The exposures and the influence of the Analytical Sanitary Commission, turned the attention of the British Parliament to the remedying of the existing abuses, and these efforts, seconded, and subsequently followed up, by other scientific bodies and sanitarians, brought the subject repeatedly before the British legislature, and after several enactments, re-enactments and amendments, the present law for the detection and prevention of adulteration and frauds in foods, drinks and medicines, was evolved in 1878, with slight amendment in 1879; its marked superiority over previous enactments, being mainly attributable to the more complete provisions for its enforcement; and the cunning devices of dishonest producers, manufacturers and dealers, are now pretty well guarded against, in Great Britain, by the general legal surveillance, and wholesome foods and pure drinks, nearly assured. I refer to the work of A. W. Blyth, published in London, in 1882, on Food Composition and Analysis, as containing much useful information on this subject.

The earliest protective legislation in California, in regard to foods and drinks, is found in the Crimes and Punishments Act, of the published statutes of 1850, page 229 et seq., and for sub-

sequent enactments, I will refer to the statutes of 1860, page 186, relative to the adulteration of liquors and beverages; to the statutes of 1862, page 184, regarding foods and drinks; to the statutes of 1870, page 298, regulating the production and sale of milk; statutes of 1878, page 535, to prevent the sale of oleomargarine as butter; of 1878, page 695, against the adulteration of syrup; of 1881, page 14, against substitution and adulteration of butter and cheese; of 1883, page 20, compelling public notice in selling oleomargarine; and to Volume IV. of Deering's Codes, section 383, prohibiting the sale of tainted food, decomposed medicines, etc.

The Acts referred to and the Act of 1885, creating the office of State Analyst, with certain municipal ordinances, in cities, concerning market products, constitute the law of the State for the prevention of adulteration, substitution, misrepresentation in selling, or by any means, the supplying of unwholesome dietary articles to the population; and altogether, it is sufficiently comprehensive and definite and its penalties sufficiently severe, were its provisions fully enforced, to repress the schemes and devices, in this connection, against the public health and comfort. It may create surprise when I state that there have been, for many years, and are still, at present, quite a number of men engaged, in San Francisco, in the adulteration of an article, used in the preparation of the common beverage of nearly every household in the city and throughout the State, and a greater number, in direct violation of the law, are engaged in selling the same adulterated article. I refer to the general practice of adulterating ground coffee, sold in packages, with chicory, and, more or less, with other substances. The Act of 1862, referred to, provides that all adulterated articles of food or drink, offered for sale, shall have the word adulterated and the name of the article which is used, in making the adulteration, printed on the label of every package, in type as large and as clear as any used on the label. The effect of chicory on the human economy, is very different from that of coffee, as instead of being a general stimulant, it affects mainly the stomach and bowels; its constant, and even in instances limited use, promotes and develops dyspeptic habits, and as with other deleterious substances, its presence should be exhibited on every package into which it is introduced, so that the intent of the law be carried out, and the people may know



what they eat and drink. The general use in the traffic, of the words Java coffee on the packages, is also a misdemeanor, as the law prohibits the selling of an article under a false name, and it is morally certain that none of the cheaper mixtures is true Java coffee; but this misrepresentation is of less consequence than the adulteration with pernicious ingredients. There are several other articles which are adulterated in this State, in the preparation for market and adulterated imported articles are being sold, but the former, considering its great prevalence, I believe to be working more injury than any other at present.

Baking powders, which of late years have gone largely into domestic use, being of such nature that changes and substitution cannot be detected by the in-expert, their manufacture and sale should be subjected to strict legal surveillance. The label of the Royal Baking Powder, manufactured in New York, represents that it is absolutely pure baking powder. Such a label is misleading and evasive, as there being no special authoritative or legal formula for baking powder, the assertion, therefore, conveys no definite information, as to the contents of the package. I would suggest that the law should require that all baking powders should have the formula of composition printed on the label of each and every package offered for sale.

The Act of 1885, creating the office of State Analyst, supplies an important and necessary instrumentality for the enforcement of the law in behalf of wholesome diet and pure medicines, and the satisfactory work already performed by the able incumbent of the office, in the detection and exposure of several instances of deleterious adulterations, serves to give assurance as to the very useful purposes to which the office is adapted when filled by a chemist of known skill and reputation. Among other things, may be considered that of the protection of our native grape product from adulterated importations, and of preserving the reputation of California wines, in the interest of the State and of the conscientious producer, as against the disparaging influences of dishonest manipulators; and also of promoting the development of the equally promising industry, now in its infancy, of olive oil production, by exhibiting the impure character of brands now sold, and giving the public assurance of the superiority of our pure fresh home product. But there is a lack yet in regard to the medium of observation as to the character and

quality of goods in the food-supply line, and of procuring and furnishing to the Public Analyst samples for examination, so as to enable a more complete surveillance of what is being done therein. It is quite right, as is provided by the law, that the State Board of Health, the State Viticultural Commission, and the medical officers of cities, towns and counties, should assist the work of the State Analyst, as far as the valuable time and the circumstances of those filling the positions named will permit, but the gentlemen forming the State Board and the State Commission are, perhaps without exception, men whose time is already fully occupied with their own private business and with other public duties; and the other officers referred to are usually busy practitioners, who have too much of other work which requires immediate attention to permit them to look after the various forms of fraud and adulteration. In Great Britain, the machinery of the present law requires inspectors of foods, drinks and medicines in every locality and district, whose business it is to keep a general look-out for transgressions of the law, and whenever finding that suspicious articles are offered for sale, to make inspection thereof, or, when occasion requires, to purchase samples at the expense of the local corporation, and submit to the Public Analyst. It would probably not be necessary in California that every section of the State should be covered by Inspectors, but that there should be provisions for the appointment of such officers, at such times and wherever it might be required, I think will be obvious to any one who will give sufficient attention to these matters to become acquainted with the circumstances. The duties of Inspectors do not require great learning or scientific attainments, but only fair ordinary business qualifications; and experience in dealing or in handling groceries and provisions, or a good knowledge of drugs, or expertness in wine-testing, by the ordinary methods, as the circumstances might indicate, would constitute suitable preliminary education.

I would therefore suggest that in order to promote the more general and effective execution of the laws of California for the detection and prevention of adulteration and fraud, that an additional enactment should be passed, creating the office of Inspector, as aforesaid, and providing for the appointment of such officers, after a manner, as follows:

Whenever it should become evident that the public interests

require an Inspector of foods, drinks and medicines, at or within any certain locality, the State Board of Health or the State Viticultural Commission, shall by a majority vote of either body nominate or recommend to the Chief Executive Officer of the State a suitable person to perform the duties of such office for the city, town or county designated, and the Executive, with the exercise of his discretion in the matter, shall issue a commission of appointment to the person so nominated. Legally constituted Boards of Health of cities, towns and counties, and the Boards of Trustees, Aldermen or Supervisors of municipal corporations or of counties, should also be invested with the right of making such nominations for the locality or district co-extensive with the jurisdiction of each such corporate body. The tenure of office of each Inspector to be dependent on the will of the majority of the Board or corporate body from which the nomination had been received, or on revocation, for cause, of his commission by the Governor. The compensation of Inspectors should be partly dependent on the success of their own efforts; that is, should be derived from fines collected from cases of their presenting, which would render them cautious of commencing without sufficient evidence, and energetic in prosecution after proceedings had been instituted.

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### **REPORT ON OPHTHALMOLOGY.**

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By W. F. SOUTHARD, A. M., M. D., Oakland, Chairman of Committee.

(Read before the Medical Society of the State of California.)

*Mr. President and Members:*—I am aware that a report upon this, one of the most important branches of medicine, if designed to be complete, would be a task of great difficulty and my paper unduly lengthened. These considerations, added to the fact of the great number of subdivisions embraced under the term Ophthalmology, necessitate the making of my report as practical as possible. I shall, therefore, direct your attention to the more important points upon which investigators have been, and are now, at work in attempting to more fully elucidate.

The progress of Ophthalmology during the past year, has in nowise been behind any of its sister branches. On the contrary, it has steadily maintained its usual high standard. It is true we

are not able to chronicle for your edification and applause any one event of such striking importance as the discovery of the application of Cocaine to Ophthalmic Surgery. We believe, however, that the labor done during the past year, should be judged according to the sum total of the results obtained. According to this criterion, we are confident we can show as great progress as for any preceding year.

## LITERATURE.

Among the many excellent publications which have appeared the past few years, none have been more favorably received by the profession than the first volume of Loring's "*Text-book of Ophthalmoscopy*," an American book in every particular. The style is exceedingly pleasing, being straightforward and wholly free from verbiage. The various methods of using the ophthalmoscope, especially in the study of the upright image, are given in a clear and comprehensive manner. I know of no other book containing so full and accurate a description of the anatomy of the fundus of the normal eye, and its appearance as seen with the ophthalmoscope.

The chapter on Refraction is one of the most thoroughly treated in the book, and should be carefully studied by those who wish to master the subject. Examinations by the oblique illumination to discover foreign bodies in the cornea or anterior chamber, opacities of cornea and lens, cloudiness, or iritic attachments and discolorations, is now recognized as the only reliable and satisfactory method. A maneuver, at once so simply and so quickly mastered, should be known by every physician, since he is constantly being called upon to examine eyes afflicted from one or more of these causes. All this is made plain in chapter vi., which treats of the manner of examining the media of the eye, both by the oblique light and the ophthalmoscope. A careful reading of this chapter will more than repay the cost of the book.

Many are anxious to know more of the principles of the ophthalmoscope, the laws of optics, and the properties of lens, but are deterred by the extent of the mathematics which must first be mastered. In the appendix to this volume the whole subject is given in a most lucid manner, and almost entirely free from mathematical formula.

## ANATOMY AND PHYSIOLOGY.

In the minute anatomy and physiology of the eye, also in comparative anatomy, much of value has been accomplished in clearing heretofore obscure points. It is now pretty well recognized by physiologists and pathologists that the middle portion of first gyrus of the occipital lobe is the visual sphere. (Berger.)

One of the obscure points which seems to be in a fair way to be soon solved is the interesting one of the origin of the dilator of the pupil.

Kowalewsky, in an exhaustive review of investigations of nerve centers controlling the dilation of the pupil, followed by numerous original investigations, concludes that "The autonomous center of the dilating fibers lies in the cranial cavity,<sup>1</sup> and can be excited by reflex irritation;" also that "Inter-central exciting fibers pass from this center to the cellular origin of the dilators of the pupils in two directions; through the cerebrum and through the spinal cord."<sup>2</sup>

Zeglinski, after making many experiments on birds, supports the theory which assumes the existence of both a sphincter and dilator muscle;<sup>3</sup> and that the participation of the blood-vessels in dilating the pupil is by no means proven.<sup>4</sup>

Sheglinsky concludes, from a careful and prolonged investigation of the eyes of birds, that the "Ophthalmic branch of the 5th nerve contains all the fibers which dilate the pupil; irritation of its centrifugal fibers always produces dilation of pupil."<sup>5</sup> Upon a correct solution of this question depend many interesting points connected with certain affections of the brain.

## REFRACTION AND ACCOMMODATION.

In refraction and accommodation many new facts have been learned and new ideas advanced, which have an interest not only to the specialist and general practitioner, but to all who have the welfare of children at heart; especially Myopia and its causes.

Dr. Loring makes a statement in his text-book which I be-

<sup>1</sup> Mayer and Pribram found a center of dilatation in spinal cord. The fibers for dilating the pupil, which pass through the cervical part of the sympathetic nerve, take their origin in this spinal center.

<sup>2</sup> Arch. of Oph. Vol. XIV., pp. 477 and 478.

<sup>3</sup> Adolph Arlt, in Lectures on the Human Eye, denies the presence of a dilator muscle in the human eye. *Vide* p. 83.

<sup>4</sup> Arch. of Oph. Vol. XIV., p. 478.

<sup>5</sup> Arch. of Oph. Vol. XIV., p. 325.

lieve contains a great truth, and with which his reviewer, Dr. Burnett, heartily coincides. He considers "The retina as in some manner reflecting the condition of the general nutrition of the body," and that "It is often important to bear in mind the discrepancy in young people, between the amount of labor imposed on the eye, and the capacity, from imperfect nourishment or want of development, to fulfill it. If this were done there would be fewer glasses ordered of an almost imperceptible strength, and more tonics and a better regimen prescribed."<sup>1</sup>

At the present day most specialists recognize the fact that in the treatment of diseases of the eye, to be successful we must look beyond the mere local manifestations for the origin of the disease. Prof. Von. Arlt of Vienna lays particular stress on constitutional treatment in all eye diseases.

A very interesting and instructive contribution to the knowledge of the refractive condition of infants and children during the first years of life has recently been made by Dr. Hermann, who states that the human eye during the first three months is *without exception*, hyperopic. Dr. Horstman of Berlin, examined 300 eyes in children, from birth to five years of age; his conclusions are somewhat at variance with those of Dr. Hermann. In 50 infants, from 8 to 30 days old, he found myopia in 2; emetropia in 10; and hyperopia in 38 cases. At 4 to 5 years of age in the same number of children was found 13 myopes. A careful reading of this paper in full, will amply repay any one who will take the trouble.<sup>2</sup>

Alrich did not find a single myope among 204 eyes of new-born children. Of this number, 184 were hyperopic; but 20 emetropic. While admitting that myopia may be produced by near work, it is a disputed question whether the cause should be attributed to the accommodation or convergence. Another point of considerable interest is the difference between the eyes of country and city children. Hersing, of Strasburg, examined 2132 pupils; myopia was 2 to 3 per cent among country pupils, and from 9 to 14 per cent among town pupils. At age of 10 to 12 years, myopia seems generally to be due to accommodative spasms; after that age to change in form of globe. On the con-

Text-book of Ophthalmology, pp. 84-85.

<sup>2</sup> Arch. of Oph., Vol. XIV, pp. 45-53. Translated by Dr. W. P. Marple.  
*Vide*, Reference Handbook of the Med. Science, p. 46, Art Accommodation.

trary, Dobrowolsky thinks that *convergence* plays a more important part in the production of myopia than accommodation.

Javal takes the side of Hersing, and Abadie agrees with Dobrowolsky, and recommends tenotomy of external recti muscles in certain cases of progressive myopia. There are those who believe that both of these causes play a no inconsiderable part in the production of myopia. Some advise operation; others, prisms and concave glasses.

A noteworthy fact is that of the proportion of myopes among Japanese students. "Per cent of myopia on entering college, 29.5; per cent of all classes, 54; per cent of students developing visual incapacities after entrance, 23. No color blindness was found." (Cutting.) One other cause of myopia not mentioned, is heredity. This now seems to be a well established fact and does not need further demonstration. From a careful examination of the literature on this subject, it seems that we may fairly conclude, first, that but few, if any, are *born* myopic; secondly, that myopia increases before school year has been reached. Later, the percentage of myopes still further increases, and both emetropia and hyperopia decreases. Examination made in various portions of our own country tend to show that myopia does not exist to so great a degree as in Germany; still there is abundant proof that it is largely on the increase. Dr. W. S. Dennett, of New York, examined 1133 pupils in the Hyde Park schools and found that of 580 pupils from 5 to 10 years of age, there were but 21 cases of myopia, a noticeably small percentage.

Now, if myopia is in fact rapidly increasing (and to settle this question, it should be the duty of every school board to order an examination of the eyes of all pupils between the ages of 5 and 10), every effort should be made to obviate this increase in some way. Undoubtedly faulty construction of school-houses, the method of lighting, poorly designed seats, badly printed books, and too long application of the eyes to close work, etc., may have some bearing upon this question. Some of the "demands" made by Dr. Steffan, of Frankfort on the Main, in answer to question, "to what extent do our present methods of teaching during the first three (3) years of school life, (i. e. 7-10 in Germany; 5-8 in America), comply with the demands of the hygiene of the eye?" are so to the point that I can not refrain from quoting some of them.

His first demand applies only to schools where the German type is in use, which he strongly advises should be at once abol-

ished. He demands, (II) the removal of all lines from the slate and writing-book except one; (III) abolition of slate and pencil, either a white slate or paper and lead pencil, where ink is not used; (IV) instruction in reading, *then* in writing, with the aid of blackboard; instead of first in writing and then in reading; (V) instruction in writing should not go so far as to make expert penmen of the children; a neat, legible handwriting is sufficient; (VI) children should not be sent to school before end of seventh year; (VII) abolition, at the Kindergarten, of all work requiring close vision; of net-work drawing, mat plaiting, stitching perforated plain figures, and perforating.

While there may be more or less criticism found with these "demands," those of us who have had anything to do with schools, must acknowledge that they contain food for reflection.

#### SYMPATHETIC OPHTHALMIA.

Another subject of more than passing interest has been treated at some length the past year, viz.: "Sympathetic Ophthalmia," and the *manner* in which the disease passes from one eye to another.<sup>1</sup> Dr. Adolph Arlt has written several very interesting papers on the subject in *Am. Jour. of Oph.* advocating the theory of direct transmission of inflammation from the diseased to the opposite eye, through the optic nerve tract, substantially agreeing with Deutschman. On the other hand, Dr. Theobald takes just the opposite ground; and strongly maintains that sympathetic ophthalmia, like sympathetic irritation, is a reflex neurosis, dependent upon irritation of the ciliary nerves of the exciting eye.<sup>2</sup>

"A powerful argument against the reflex production of sympathetic ophthalmitis lies in the fact," says Juler, "that true inflammation has never been produced experimentally by irritation of a nerve." He favors the theory of transmission of morbid process along the lymphatic spaces.<sup>3</sup>

Arlt thinks that "the transmitting agent should probably be sought rather in the ciliary nerves than in the optic nerve."

<sup>1</sup> *Am. Jour. of Oph.*, Vol. I, pp. 28, 57 and 97. *Vide*, also, same Journal, Vol. I, p. 161, cases illustrating same subject, by Dr. Culbertson; p. 143, cases of Sympathetic Disturbance from Foreign Bodies in the Eye, Dr. Lundy; *Arch. of Oph.*, Vol. XIV, p. 410, Deutschmann on Pathogeny of Sympathetic Ophthalmia.

<sup>2</sup> Same Jour., Vol. XIII, pp. 61-82, Some Recent Theories Regarding the Pathogeny of Sym. Oph., viewed from a Microscopic Standpoint, Samuel Theobald, M. D.

<sup>3</sup> *Ophthalmic Science and Practice*. Juler, page 163.



This view is supported by H. Muller, Donders, A. Von Graefe, and Bowman, "who pointed out that a sympathetic trouble developed in one eye from an injury to the other; the ciliary injection and sensitiveness to the touch in the former corresponded to the spot in which the wound is situated in the eye primarily affected." On the other hand, Knies concludes from the dissection of a case of bilateral irido-choroiditis, that the inflammatory process advanced from the uveal tract of one eye through the sheath of the optic nerve to the chiasma, and thence to the uveal tract in the other eye, and that therefore it is not necessary to recur to the irritation of the ciliary nerve.

If this be true, "it does not" says Arlt, "explain why the inflammation in the second eye should not first become noticeable in the optic nerve or choroid proper, by impairment of its function or by means of the ophthalmoscope."

Again, "this view is contradicted by the fact that the acuteness of vision of the eye first attacked may be preserved so far as the dioptric conditions will allow; whilst that of the other eye is entirely destroyed. \* \* \* There seems to be induced in the corresponding ciliary nerve of the second eye, first, a disturbance of the circulation, and then inflammation."<sup>1</sup>

Schwigger goes so far as to say that "the theory of transmission of sympathetic inflammation by the ciliary nerve, has been exploded." That it has *never* been supported by proof and has always been a mere hypothesis.<sup>2</sup>

#### EXENTERATIO BULBI.

Somewhat recently, a new operation, designed by Prof. A. Graefe of Halle to take the place of enucleation, known as Exenteration Bulbi, has come up for recognition. It is claimed for it that there is less danger of wounding those tissues, especially the lymph sheath of optic nerve, by means of which inflammation is propagated to opposite eye, and the providing of a more movable stump for an artificial eye. The operation consists, briefly, in removing the cornea and scooping out the contents of the globe with a small, sharp spoon, dusting the cavity with powdered iodoform; then drawing the conjunctiva together with a tobacco pouch suture. There have been various modifications of the original operation, but the principal feature is the same; removal of contents and leaving the sclera with its muscles.

<sup>1</sup> Arlt, (Ware, translator) Diseases of Eye, page 294, et seq.

<sup>2</sup> Arch. of Oph., Vol. XIV., page 227.

Dr. J. Green of St. Louis, in a very interesting paper on Operations for the Partial or Total Removal of the Eyeball, in which he gives the history and operative procedure for removal of staphyloma, and for the prevention and cure of sympathetic affections of the eye; thinks that it is admissible to adopt either this method or abrasion in many cases where enucleation is now practiced.<sup>1</sup>

Dr. Holmes of Chicago, reports having performed this operation many times during the past 28 years. He gives in detail the case of a boy upon whom the operation was performed in 1876. He states that he has "never observed serious symptoms follow the operation." He does not think antiseptics of any particular benefit in this operation. He performs this operation in suppurative cases only, but sees no reason why we might not expect satisfactory results in nearly all cases of non-malignant diseases in which enucleation would otherwise be included.<sup>2</sup>

Albini reports six cases of exenteration of the globe. In four of them the cornea and scleral ring was abscised. He does not consider the results very brilliant, as in two cases suppuration set in, and in one the stump was sensitive two weeks later.<sup>3</sup>

It is not intended to replace the operation of enucleation for malignant growths, sarcoma, etc., or those diseases where the sclera is affected. The history of those cases upon whom this operation has been performed in Europe and America, with the subsequent results, are such that for the present we are warranted in saying that its safety is *not* so well established that we can unreservedly recommend it in place of enucleation, especially among the poorer classes.<sup>4</sup>

#### NEUROTOMY OR RESECTION OF OPTIC NERVE.

This is an operation which has been strongly advocated during the past year by Schwigger and others, to take the place of enucleation. It is not an entirely new operation, it having first been proposed by Von Graefe in 1857, to cut off the pathway for transmission of sympathetic disease which he believed traveled along this nerve. While this operation has been performed with varying success since that time, especially in cases of glau-

<sup>1</sup> Am. Jour. of Oph., Vol. XI., pp. 51-61.

<sup>2</sup> Arch. of Oph., Vol. XIV., p. 167. Art. Evisceration of the Globe.

<sup>3</sup> Arch. of Oph., Vol. XV., p. 238.

<sup>4</sup> *Vide* Arch. of Oph., Vol. XIV., p. 309, a case of evisceration of the eyeball, followed by orbital cellulitis. Dr. Kuapp.

coma, it is only recently that it can be said to have gained a foothold as a recognized and useful mode of treatment for certain diseases of the eye. We are indebted to Schwigger more than to any other person for the position it now holds. In a paper covering the whole ground, written the past year, he claims that, properly performed, it is a better protective than enucleation, which he clearly shows cannot be the "only sure" method, since so many eyes have been lost by sympathetic ophthalmia *after* enucleation. He quotes cases from the best observers, Mooren, Pagenstecker, Knies, Horner, and others, in which sympathetic inflammation came on in from *one* day to two weeks following enucleation.

Graefe has repeatedly observed cases of meningitis with fatal results after enucleation. While making, as Schwigger does, a strong argument in favor of neurotomy, he distinctly states that something *more* than simple division of the nerve is necessary to make this a successful operation. He therefore *excises* some ten millimeters, at least, of the nerve; which procedure, he claims, "can be relied upon as a preventive measure, as it prevents regeneration." Herein lies the real value of the operation if his theory of the transmissibility of sympathetic ophthalmia is correct.

In absolute glaucoma, accompanied with severe pain, this operation is indicated, and he has never seen, under such circumstances, atrophy of the globe following.<sup>1</sup>

#### OPHTHALMIA NEONATORUM.

In the treatment of this hitherto formidable disease, there has been a marked advance in the number of eyes saved. In Europe, what is known as Credé's method is now generally employed in the lying-in-hospitals; this consists in the installation of a two per cent solution of argent. nit. immediately after birth. The loss of eyes has been reduced from an alarming percentage to practically none at all, where this method is carefully carried out. In Maternity Hospital, N. Y., of 351 new-born children treated by this method, not one had ophthalmia.<sup>2</sup>

<sup>1</sup> *Vide*, this paper in full in Arch. of Oph., Vol. XIV., pp. 223-242.

<sup>2</sup> *Vide* Pacific Medical and Surgical Journal, Vol. XXVIII, pp. 359-363, and pp. 423-427; a translation by C. H. Rosenthal, M.D., of a paper on Ophthalmia Neonatorum, by Dr. R. Labusquiere, in which the author shows that this disease is of bacterian origin. The treatment as carried out by Credé is given in full with results. These results are so conclusive as to

## GALVANO-CAUTERY.

We have heard so much of the use of the galvano-cautery in surgery the past year or two, that a glance at the results of its use in certain diseases of the eye may not be without interest to some of you. It is found to be most useful in diseases of the cornea called *ulcus cornea serpens*, *suppurative keratitis*. (Arlt.) This has always been considered one of the truly formidable diseases of the cornea; its danger, as is well known, consisting in the great and usually rapid destructive process, by which the whole cornea may become involved and the anterior chamber perforated; resulting, in a large percentage of cases, in total loss of vision, *phthisis bulbi*, etc. In case of recovery, there is generally such a loss of corneal tissue that the resulting dense opacities (*leucomas*) greatly interfere with vision. There are (as a rule) more or less adhesions due to the *iritis* which is frequently present. The cause of this disease is now known to be in the mycotic action of fungi in the corneal parenchyma. (Horner and Leber.) Thus classing it with the infectious diseases.

Saemish, a few years since, thought to lessen its virulence and check its progress by dividing the ulcer through the base, cutting outwardly, by this means greatly lessening intra-ocular pressure. His results appeared to be so favorable that many since that time have made use of this procedure. In this country it does not appear to have been received with as much favor as on the continent, and is but little relied upon by our ophthalmic surgeons in the treatment of this disease.

the value of antiseptic treatment, that they will bear repeating, and are here given.

Year.	No. of Births.	No. of Ophthalmia Neonatorum.	Per cent.
1874	323	45	13.6
1875	287	37	12.9
1876	367	29	9.1
1877	360	30	8.3
1878	353	36	9.8
1879	389	35	9.2
1880 (to May 31)	187	14	7.6
*1880 (balance)	211	0	0.0
1881	400	0	0.0
1882	418	1-2	0.25 to 0.49
1883 (3 months)	131	0	0.0
March 1883 to {	400	0	0.0
" 1884 }			

\*Installation of 2 per cent solution argent. nitrosi began June 1st, 1880.

Dr. Martinache, a member of our Society, in 1873 first proposed the use of the galvano-cautery, an operative procedure which is now rapidly coming into favor. He did not follow up this most brilliant and original idea, and it has since lain semi-dormant until the past year, when Dr. Greuning of New York, and Dr. Niedan of Bochun, Prussia, made a somewhat extensive trial with it and reported their results.

Dr. Greuning reported, early in 1885, seven cases to the Ophthalmic Society, followed by three more some weeks later. His results were exceedingly satisfactory; not an eye was lost; all were benefited; several cured. He combined Saemish's operation in advanced cases. He states that he considers the best results to be in incipient stage of *ulcus corneae serpens*. The most thorough and graphic account of this operation, the character of the cases in which it should be used, the mode of application, and conclusions, is contained in two papers having an interval of six months between their appearance, by Dr. Niedan. He reports two sets of cases, one hundred in each set. His results are certainly remarkable—not an eye being lost; neither was there a case of *phthisis bulbi*. Average duration of treatment, thirteen and a half days. The process of repair begins almost at once. There was *leucoma* in twelve cases, and slight *maculae* resulting from the ulcerative process in the remaining eighty-eight. If it is deemed necessary to make an incision through the cornea, which is but seldom, it is done with the heated loop. Rapid disappearance of ciliary irritation is always observed. There is no pain, as cocaine anaesthesia is sufficient. The eschar is usually thrown off in twenty-four hours.

The value of this operation, over *all* others, appears to be on account of its being a powerful antiseptic agent; hence is indicated in all affections of the cornea which take their origin in mycotic infection.<sup>1</sup>

#### CATARACT.

The past fifteen years have witnessed no greater triumphs in the domain of surgery, judged according to the results obtained, than in the modern cataract operation. It is necessary to look back to the time of the needle and flap operations, with their large percentage of unsuccessful cases, to gain an adequate idea

<sup>1</sup> Arch of Oph., Vol. XIV pp. 28-31.

<sup>2</sup> Same journal, Vol. XIV., pp. 31-41 and 453-467.

of the great progress made in this branch of surgery. The linear or Graefe operation, with the various modifications which have been designed to meet certain emergencies as they have crises, is now acknowledged to stand pre-eminently above any other ever devised, for the small percentage of eyes lost and the excellent vision obtained. Compare, for example, Knapp's eight hundred extractions with but two failures,<sup>1</sup> with the best results in the same number of cases previous to 1876, and it would seem that in certain directions no better possible results could be obtained.

While we can point with pardonable pride to the remarkable success attained in extracting, there is another phase of this same subject wherein improvement is possible. It is well known to you all that the time necessary for the maturity of a cataract varies greatly, ranging from a few months to several years. In the latter cases, vision may be so greatly impaired that an operation would be useless. In those cases upon whom the support of a family depend, the long delay before maturity "may consume," as it is well said by Dr. Hasket Derby, "the best years of life, and those dependent upon him be reduced to poverty in consequence of his inability to continue support."<sup>2</sup> Looking at the subject in this most practical way, efforts from time to time have been made to artificially ripen cataracts without producing any injury to the eye. Without discussing the various methods suggested, massage, paracentesis, etc., and their results, it will be sufficient to say that it is pretty generally conceded that a preliminary iridectomy affords the best results, as well as being the safer method. Its benefits are twofold—ripening the cataract more rapidly, sometimes in a few weeks, and concluding one of the most important steps of a cataract operation. Of course, the advisability of operating in any given case depends finally upon the decision of the specialist. If a patient can be assured that the ripening of a cataract can be

<sup>1</sup> Arch. of Oph., Vol. XII, p. 269. This paper in full.

Handbook of Medical Sciences, Vol. I, p. 799, Art. "Cataract." Foerster's method for ripening cataract is by rubbing the cornea, with some pressure. This method, though tried to some extent, does not appear to be recognized by ophthalmologists, as a body, as being the best method. Paracentesis of anterior chamber has also been tried with more or less success. *Vide* Trans. Am. Oph. Society, 1883; Dr. Theobald. N. Y. Medical Record, Vol. XXVIII, p. 702; J. R. Pooley. Dr. C. S. Bull in N. Y. Medical Journal: Loss of reflex six days; matured in from six to eight weeks. It is to be noted that iritis sometimes follows this procedure.

hastened, it may be the means of bringing not only happiness to themselves, but comfort to many dependent individuals.

Dr. W. Cheatham, of Louisville, published a report of sixty-three cases of extraction of cataract, which is remarkable from the fact that "twenty-four of these cases were moved, either in a wagon, a carriage, a street-car, or walked, from six blocks to six miles, *immediately* after the operation, or the next day."<sup>1</sup> In these cases vision was up to the usual average for extraction. Some of these cases were poorly accommodated after leaving operating room. Hygiene was bad in many cases; many were not even confined to a dark room. Several were not seen for four weeks following operation. Yet, with all these drawbacks, not one case was lost. The author believes that we keep our patients in bed too much. If the time a patient is usually cooped up in a room painfully dark to the attendant can be shortened in any way, surely we can say a new era has opened in the after-treatment of cataract operations. It is claimed that too close confinement from light causes more or less photophobia and lachrymation; that those who are somewhat exposed to light have very much less subsequent redness of conjunctiva, and sooner regain power to bear the strongest light. There is no question but that the health, both of patients and attendants, is injured by the close confinement usually enjoined upon them. I think many of us can look back to cases where from some circumstance they were exposed to light daily, without any perceptible retardation in recovery. I have in mind a certain elderly lady who would not submit to close confinement in a dark room, a shade only being over the eye, and the ordinary curtains drawn, enough light entering to easily read, near the window. For the first two or three days it was feared that such exposure would be injurious. The final result was, however, a good recovery.

It will be impossible, in this paper, to speak of the advance which has taken place in the study and treatment of the deeper tissues of the eye. I can but briefly say that, in all such matters, especially in the science of ophthalmoscopy and its connection with certain brain lesions, a large amount of solid work has been done. My friend, Dr. Geo. Pardee, has alluded to many of these points in his very interesting paper on "The Ophthalmoscope," hence I will not follow it further.

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<sup>1</sup> Arch. of Oph., Vol. XIV, pp. 1-12.

## JEQUIRITY TREATMENT.

The subject of Tracoma or Chronic Granula Conjunctivitis is one in which we should all have a deep interest, as it is one of the most intractable of all conjunctival diseases, since the time of cure, even in favorable cases, may be weeks, months or even years; and in many cases actually defying all attempts at cure. This is, as is well known, by no means an uncommon affection, being found in every community. The great danger is in injuries to the cornea, due to the constant scratching of the thickened lid over its surface, by which pannus may be formed, and vision partially or wholly lost.

Oculists have long recognized this as one of the most dangerous diseases of the eye, especially in localities where it prevails epidemically, and have for many years been searching for some means by which a rapid and radical cure could be effected without endangering its integrity and at the same time displace the time-honored remedy, sulph. cupri. About sixty years ago, inoculation with blennorrhoeic pus was first put in practice as a means of radical cure, and up to within the past two years, it has been employed in many thousands of cases with remarkably favorable results, especially when accompanied with pannus. Recognizing the danger to the eye which arose from this manner of treatment, viz., the intense purulent inflammation and the possible conveyance of disease from one individual to another, oculists have endeavored to find some other equally potent but less dangerous remedy.

Some two years since, Wecker, of Paris, announced to the profession the discovery of a new drug, with which he had made a rapid cure in a large number of cases. This is known as jequirity bean, from the plant *abrus precatorius*, a leguminous plant indigenous to Africa and Asia, introduced into tropical America, where it has for centuries been used for certain diseases of the eye, and from whence came the first accounts of its virtue. The bean is small, hard, rounded and red in color, having on its raphe a black spot which covers from one-sixth to one-fourth the surface. In using it, Wecker first made a three per cent solution by macerating in water 24 hours, the bruised bean, denuded of its outer covering. A few drops were placed inside the lids with a brush, and a piece of cloth wet in the solution was placed upon the eyelids. About the second day, a dense, croupous membrane was formed on the mucous surface, accompan-



ied with a purulent discharge; from the sixth to the eighth day this pseudo membrane came off, leaving in most cases a smooth surface beneath, and the cornea entirely cleared of pannus, should any have been present. After many successes and failures with solutions of varying strength, he found it non-indicated when there was a purulent discharge present, and that its chief danger is due to two causes: "First applications of too strong infusions in too rapid succession; and secondly, applications to an already discharging surface; because the *specific* jequirity ophthalmia was not then produced, but instead, a violent increase of the pre-existing purulent conjunctivitis," which is contagious. He says that careful attention should be paid to selection of cases, and that it is perfectly safe to use in old, dry trachomas. He also says that the remedy is likely to prove somewhat dangerous in such countries as Algiers and Egypt, where purulent ophthalmia is so often a complication. In reply to certain strictures made by other observers who had used the new drug according to his directions, but with disastrous results in several cases, and who questioned the accuracy of his conclusions, he states that there must have existed a purulent discharge at the time of treatment. He also states that the discharge from the true jequirity ophthalmia is non-infectious. As the returns came in from different quarters, it was found that there was real cause for alarm, since many able observers abroad, as well as such conscientious and careful men as Knapp and others in our country, who had used the drug with every attention to details, reported several cases of destruction of the eyes after its use. It was discovered that the chief danger was to the cornea; also the destruction of mucous membrane and its replacement by cicatricial tissue. Its action being more like diphtheritic conjunctivitis than croupous, Knapp concluded: "1. That jequirity cures more quickly though less safely than sulph. cupri. 2. That its action is not uniform or always controllable. 3. Cure is accompanied with more or less atrophy of conjunctiva and formation of cicatricial tissue. 4. Greatest danger consists in occasional development of a severe diphtheritic conjunctivitis followed by pyorrhoea and destruction of cornea. 5. Should be restricted to cases of old, intractible pannus, until a safer method is found."

Dr. Derby, of Boston, is very enthusiastic in praise of this new remedy and states that in a few weeks after beginning its

use at the Mass. Char. Eye and Ear Infirmary, the wards were nearly cleared of their trachoma patients. He, however, finds some word of caution necessary, for "seven out of twenty-four cases were followed by corneal ulcerations, all more or less severe," and that "it is contra-indicated where the trachoma is large and florid, causing external fullness of upper lid." Dr. Chisholm, of Baltimore, while finding it a valuable remedy, does not give it his hearty approval, for he mentions three cases marked by rigor, chills and high fever after its use, and that there was pain in *all* cases. Vascularity of cornea sometimes was increased. He also reports one case of perforation of cornea. He found it necessary to restrict its use to granulations with pannus. He applied it repeatedly in some cases before cure was effected. Dr. Gruening published in detail a table of twenty

("Out of thirty cases with pannus, more or less cleared in twenty cases; remaining stationary in five; and vision fell off in five.")

cases; five per cent attended with danger to the cornea; two and a half per cent inconstant, granulations either not affected at all or changed into dense cicatricial tissue. Dr. Seely, of Cincinnati, concluded that "Purulency is *not* an essential factor in the cure; on the contrary, the more purulency the more danger to cornea." He also made use of infusions of the common pea. Dr. Webster of New York, states that "It is one of the most valuable additions to the ocular therapeutics of this or any other age, and that Dr. D. E. Wecker, who introduced it to the profession, is a public benefactor." He reports in detail several cases of cure. The testimony of many more who have used it might be quoted to show that there is a diversity of opinion as to its safety, but these will suffice to show that great caution and constant watchfulness is needed on the part of any one who attempts its use. *All* acknowledge that when it does act favorably it acts with wonderful rapidity, curing in a few days some of the worst cases accompanied with pannus and great loss of tissue. In summing up their conclusions, then, its best effect is seen in old, granula cases with pannus and freedom from purulent discharge; that, departing from this rule, it may prove a very dangerous remedy, unless some other method of using it can be found than infusion, which is uncontrollable, or a permanent alkaloid can be extracted from the seed.<sup>1</sup>

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<sup>1</sup> *Vide* Arch. of Oph., Vol. VIII., No. 1, p. 107, *et seq.*, for a more extended account of the use of jequirity, by the authors whose names are mentioned in the text.

The active principle of this drug has not yet been satisfactorily determined. By some it is claimed to be due to a bacillus; this idea is strongly denied by others. Brunschwig from his experiments believes it due to a soluble ferment, analogous to pepsin, the development of bacteria being secondary. Its action being a local irritant.

From the accounts of the possible great danger attending its use, even when the utmost precaution had been taken, I hesitated to make use of it although I had several cases under my care at the time. November last, there appeared an article in the *American Journal of Oph.* by Dr. Arlt, of St. Louis, wherein he claims immunity from all these serious complications, by using this drug in the form of freshly prepared powder. He found that it was more reliable than infusion and entirely controllable. Should a few spots of trachoma be left after the first application, it could with immunity be applied a second or third time directly to these spots, thereby localizing its action. This statement gave me such confidence in its safety when thus used, that I had a few of the beans freshly powdered by Mr. Bowman, an Oakland druggist, who fortunately had some on hand, and at once used it upon several cases. The first three cases I will give in detail.

Case 1. On May last, Mr. D., age 35; occupation, carpenter; was led into my office almost blind from trachoma of both eyes. Duration of disease, 12 months in right eye, and 9 months in left eye. His condition was as follows: Ptosis of lids, which were red, swollen and hard. On eversion, folds of hypertrophied membrane at once rolled into view. The palpebral surface of upper lids covered with dense growth entirely hiding papillae underneath. On the cornea of right eye, large pannus covering one-half from above downward. On the left cornea, pannus was more vascular and had a decided fleshy appearance and covered nearly whole of the cornea. There was general opacity of both cornea. Scarcely any moisture, a constant feeling of dryness, "as though the lids were fastened to the eyeballs" (Xerophthalmia), making it very difficult for him to open them in the morning. There were no cicatrices. Vision was reduced to counting fingers at from two to four feet distant. Patient was anaemic and very weak bodily, feeling scarcely able to come up stairs to my office. He was also greatly discouraged as he considered his eyes irretrievably lost. He had spent more than a hundred dollars on quacks, and his last state was worse than the

first; for when he began treatment with them he had the disease in but one eye, but when he left off treatment he was not only "broke" financially, but he had trachoma in the second eye.

Treatment.—I began treatment in the good old orthodox way; sulph. cupri. hydrg., ox. flav. and vasaline, hydrarg., oleate, ten per cent., argent. nit., locally, and tonics for the system. For some months the progress was about as usual in such cases; there was marked improvement for a time; lids became softer and hypertrophy thinned; pannus cleared up somewhat and the marked fleshy look it had in left eye greatly lessened. In November, having become tired of witnessing these constant intervals of alternate improvement and relapses, I decided to use the jequirity in the form of powder. I carefully but thoroughly applied it with a camel's hair brush to the everted lids of the left eye, though I confess with some fear as to the possible results. My patient being an intelligent man, I had carefully prepared him in advance, by telling him what the effects of the drug would be upon the eye, so that he need not become alarmed should he have pretty sore eyes for a few days.

In one hour after the application of the powder, the eyes began to feel slightly irritated, and a little moisture began to exude from beneath the eye-lids. In five hours, lids were swollen hard, and the whole side of the head and face was sore, the patient feeling "just as though he had received a blow in the face;" at the same time a thick, yellowish, "flaky" discharge came from between the lids. In ten hours, the discharge was still yellow, but thin. The following morning I could not raise the upper lid, it was swollen so hard. There was no pain in the eye at any time; patient slept soundly all night. I ordered hot applications to be applied constantly. Drawing down the lower lid as well as I could, I could see a thick, white membrane on its surface. The discharge gradually decreased, ceasing altogether on the eighth day. On the fifth day the patient opened his eyes for the first time without assistance, and found that his vision was clearer than it had been for a year. The patient stated that he had at no time as much discomfort from the effects of the remedy as from the disease. By the tenth day the pannus had entirely disappeared; cornea clear, with the exception of a white spot at outer third. The hypertrophied tissues had, as it were, melted away, except in one or two spots. On the 16th day, the right eye was treated in the same manner with similar

result, though its action was not as intense. A minute white spot was left at the outer edge of the cornea. One more application to the two or three remaining spots in each upper lid, removed the last of the granulations. The patient now has well eyes and is able to work at his trade. His bodily health is now much better than it was before he was afflicted, and he is in a most cheerful frame of mind. Within the last ten days he stated that he has never felt the slightest roughness since the first application of the jequirity powder.

Case 2. Mrs. P., age 37. Ten years ago, this patient first had granular lids of the right eye. She was under treatment for some months, but was not entirely well when she left off treatment. Ever since that time she has had more or less trouble in this eye. Two years since she had an attack of purulent conjunctivitis, which was cured in a few weeks; after this time until she came to me for treatment, her eyelids were always glued together in the morning, and some time was spent in freeing the edges of crusts. June last, she was sent to me for examination, as she was gradually losing vision in the affected eye. At this time her condition was as follows: Lids red and somewhat œdematous. Ocular conjunctiva deeply injected. On cornea, a large pannus is seen covering more than one-half of cornea, from above downwards, quite fleshy at edge of cornea, slight deposit covering remainder of cornea.

On everting lids, a dense trachoma is found on upper lid, also several cicatrices on tarsal surface. Lower lid very much less affected. The retrotarsal folds were not very greatly swollen; the papillae were, however, infiltrated. On anterior portion of mucous there was a velvety look, almost a purplish red in color. Objects appeared as though patient was looking through a fog.

Treatment was commenced as in case 1, sulph. cupri, etc. I pursued this method until November. At times the cornea became almost free of pannus, vision increases materially, but relapses were very frequent, and we got quite discouraged. Finally, she agreed to try jequirity powder, the effects of which I had not concealed in the least. I applied the powder to the everted lids with a brush; a few minutes later, while sitting in my reception room, she suddenly felt a most singular sensation of a burning character, which began at the lower extremities and quickly passed over the whole body. This condition lasted for fifteen or twenty minutes. On reaching her house, but a

short distance from my office, she experienced a decided chill, and "could not get warm for two days." There was a burning feeling in the eye, but no pain, and it "run continuously." The following day she could not open the eye, the lid being swollen so hard; purulent discharge was well established. Lachrymation was extraordinary and continued three days. She was confined to her bed for four days, and for a while she was quite frightened, fearing that the eye would "run out." On the third day she opened her eye and found that she could see clearly for the first time in two years. On sixth day, cornea perfectly free from pannus, lid soft and of natural color; ocular conjunctiva, but very slightly injected; upper tarsal surface free from hypertrophied tissue, except in two spots in the center of plate, occupying its middle third nearly across from side to side. The cicatrices were softened and only faintly visible; one line running across from side to side, another crossing it diagonally. Patient felt well and very cheerful. I made a second application in fourteen days; patient did not feel any effect from the drug until the second day. She thought, at first, she was not going to feel it at all, but in twenty-four hours the lid was swollen as at first, but not so hard. It was *two* days before she could open the eye. The muco-purulent discharge was but very slight. At the end of two weeks there still remained a small amount of trachoma, when a third application was applied. The effect this time was but very slight. There still remains a small patch which I propose to again treat with some fresh powder in a few days. In every other way, the eye is perfectly clear, and there has been no return of irritation or scratchy sensation. With a magnifying glass the remnants of cicatrices can be seen.

I am anxious to make the trial with the powder again to see if there is immunity from further effects, which would be a somewhat interesting point to work up.

NOTE. Since writing the above, I have again dusted the jequirity powder in this patient's eyes. The effects produced were far less in intensity than at first; the eye was quite sore for two days. After watching it for some weeks I cannot see that the remaining granulations are much, if any, lessened. There has at no time been the faintest return of pannus. Occasionally the patient complains of a slight scratchy sensation which is effectually removed with sulph. cupri., which she prefers to have applied.

Case 3. Mrs. J., age 25. During the summer of 1884, patient first noticed gritty sensation in right eye followed soon after by constant reddening of eyeball, accompanied with photo-

phobia and lachrymation, and whenever she was exposed to cold or heat of stove, purulent discharge. When she came to me for treatment, January 1st, 1886, her condition was as follows: Upper lid, red, swollen, and nearly closed. Extreme lachrymation and photophobia. Ocular conjunctiva, red and chemosed. Vision greatly impaired. Cornea slightly cloudy, commencing pannus at upper margin. Pain in eyeball, lacerating and severe, has continued for months. Whole side of head sore. Pain on palpation. Could not get tension through thickened lid. On everting lids, enormous trachomatous growths exposed to view, both in upper and lower tarsi. No cicatrices seen. A slight mucopurulency present.

I at once proposed the jequirity treatment to patient, telling just how it would act. She very readily agreed to have it used. I dusted the powder over the whole mucous surface. In six hours after its first effects were felt; the lids began to feel hot and uncomfortable, rapidly swelling; a severe pain of a piercing nature, "feeling as though the eye would burst out of the head," followed. The whole side of head painful and sore to touch. The pain kept her awake all night. A profuse purulent discharge soon set in. Ten hours after application (according to statement of patient) "great quantities of matter constantly flowed from the eye." Following morning, eye closed, pain severe all day, "stringy masses came away continually." Second night pain, while present, was not so severe. On third day, great abatement of pain. On sixth day pain had entirely ceased. Lids then very much less swollen than before the drug was used. Vision clearer. Very little redness of conjunctiva. The center portion of palpebral surface of upper lid perfectly denuded of trachoma. No photophobia or lachrymation. In three weeks I again applied the powder, but to remaining spots only. Symptoms, though the same, were far less severe, pain ceasing in two days.

*Status presens.* April 19th, slight redness of edge of upper lid; vision normal; ocular conjunctiva clear; no photophobia or lachrymation since remedy was applied last January. Patient does all her own housework, and does not find any discomfort from being over hot stove or exposure to sunlight. Experiences no feeling of roughness; neither does she have any pain in the eye or head.

On everting lids this morning, May 28th, I found two small

trachomatous spots on upper lid; also a large cicatrix in central portion. The patient does not complain in the least of any discomfort, and continues to perform her household duties.

It is to be noted that there is pretty much the same general favorable results in the three cases. In the first, the clearing of pannus and trachoma was absolute; in the second, the pannus thoroughly cured, but a few spots of hypertrophy still remain, which cause no trouble. Since first application of jequirity, I have touched the eye of case second three times with sulph. cupri. Case third exhibits exceedingly favorable results, although no pannus was present. The rapid amelioration of all the annoying symptoms, grittiness, lachrymation, photophobia, chemosis, etc., mark this as one of the cases where the absence of pannus does *not* contra-indicate the use of jequirity.

#### SUMMARY.

1st. The freshly-powdered bean acts fully as vehemently as the solution, though in some cases, perhaps, the effects are not felt as quickly.

2d. The croupous membrane is formed fully as rapidly as after using the solution.

3d. The powder clears the cornea of pannus fully as effectively.

4th. The pain may be as severe from the use of the powder as from using the solution.

5th. Should spots of trachoma be left after first application of powder, it can be reapplied in from six to twelve days, thus localizing its action.

6th. Its permanent effects are the same as those produced by solution.

7th. It appears to be much the safer remedy, for it does not seem necessary to limit its use to old trachomas with pannus.<sup>1</sup>

8th. Your attention is especially directed to the fact that great caution is necessary in using this remedy, in any form, on account of the unexpected and somewhat alarming constitutional effects sometimes produced.

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<sup>1</sup> Am. Jour. Oph., May, 1886, Vol. III., No. 5, p. 131, "The Jequirity Powder," Dr. Bajardin. (Lille.)



**REPORT OF COMMITTEE ON NECROLOGY.**

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(Read before the Medical Society of the State of California.)

*Mr. President, Ladies and Gentlemen :*

As we meet annually to discuss questions which relate to the progress and science of medicine, and the methods best adapted to relieve human suffering, we look over the assemblage to see who are absent from the floor of the Convention; and, having noted the absentees, it is natural to inquire: "What is the cause of their absence?"

Responsive to this inquiry, your Committee on Necrology would respectfully report that death has removed one highly respected among us since our last meeting, and his seat is now left forever vacant, while his mortal remains have been conveyed to the tomb. We scarcely need tell you his name, for Abraham M. Wilder was too well known not to be missed on this occasion. He is the only member of the State Medical Society who has died during the past year, so far as we have been able to learn, and a careful review of his early and professional life will be given at the close of this report. While it appears that the Committee on Necrology last year failed to report, and whereas two of the most prominent members of this Society had died within the time allotted to the labors of that Committee, it is deemed by your present Committee eminently proper, and a sad duty, for them to make some mention of our deceased brothers, fitting to the high station they occupied, that the present as well as the future faithful history of the State Medical Society may be preserved among its records. Henry Gibbons and Frederick Winslow Hatch were both eminent in their profession and occupied honorable positions as professors in the two colleges of Medicine of California. A gentleman eminent among us, who has eloquently pronounced an eulogy upon the life and character of Henry Gibbons, remarks:

"Upon the highway of life, along which we are passing, a fellow traveler has fallen. It becomes us to pause, and as we take leave of him to recall the great points of his character—rescue from oblivion the past, and realize for him the hope which all good men have that they 'shall not altogether die.'"

Henry Gibbons was born in Wilmington, Delaware, September 20, 1808, of Quaker parentage, than whom none were more

quaint and peculiar, and was always noted for his "thee" and "thou," as the cardinal characteristics in conversation.

At an early age he evinced a fondness for study, and, after receiving a liberal education, graduated in medicine from the University of Pennsylvania in 1829.

In 1844, he was elected Professor of Theory and Practice of Medicine in the Women's Medical College of Philadelphia, and was one of the prominent founders of the "Delaware Academy of Natural Sciences."

He gave much careful attention to local botany, State medicine and meteorology.

When the State Board of Health was organized, he was appointed a member of that body, and held the position until his death. He was many years editor of the *Pacific Medical and Surgical Journal*, and from his pen came many caustic criticisms and much wholesome advice, and for several years he was a member of the State Prison Commission, and was an earnest worker in the Society for the Prevention of Cruelty to Animals.

In 1861, he was elected to the Chair of *Materia Medica* and Therapeutics in the Medical Department of the University of the Pacific, and "on the reorganization of the Medical College of the Pacific under the name of 'Cooper,' " he continued to occupy the Chair he had so well and ably filled; and, indeed, it may be said of him that he filled all the honorable positions in the gift of the profession faithfully and well.

Firm in the consciousness of right, he stood like a colossal pillar among his fellowmen, and was often consulted in regard to important measures of reform affecting the comforts of his fellowmen and general interests of society; nor was he ever known to deviate from the path of rectitude, which is the foundation of the ethics of the profession.

At the close of day the lofty tree casts its lengthened shadow over the earth, and so it is at the close of life that lofty souls cast their luster farthest upon the sea of human life, and a career of brilliant deeds is reflected far beyond the computation of time and space; and so it is with the spirit of our distinguished brother. He was a gentleman, honored for his integrity, who devoted most of his valuable time in the great interests of life, and he has bequeathed to the profession of medicine an example in precept and practice worthy of the emulation of all great and good men.

At the ripened age of seventy-six, on the 6th of November, 1884, his spirit left the body forever, cold and silent in death. And while his calm face was pale and cold and lips unmoved, could we have listened to his inward breathing we should have heard him say:

“ I fear me not. The clouded face  
Of Nature smiles; through all her things  
Of time and space and sense I trace  
The moving of the spirit's wings,  
And hear the song of hope she sings.”

While living, he was honored by the profession to which his life was devoted, and dead his memory is dear to all who knew him.

The following extracts are from the report of Dr. W. R. Cluness, of Sacramento:

“ Frederick Winslow Hatch was born in Charlottesville, March 2, 1822. His boyhood days were passed in Washington, D. C. At that time his father was chaplain of the U. S. Senate.

“ His literary and classical education was obtained at Marion College, where he graduated with honors at the age of 19. Having determined to study medicine, he entered the department of the New York University, where he remained until he graduated, March 10, 1844.

“ He was elected Secretary of the California State Board of Health, March 3, 1876, and held that position to the time of his death.

“ For several years he was Professor of Theory and Practice of Medicine in the Medical Department of the University of California, and for the last four years prior to his death was Professor of Hygiene in the same school.

“ He was also a member of the American Medical Association. Was at all times a hard worker and diligent student, and wore the white flowers of a blameless life. ”

In his death we find an illustration of an aphorism that true greatness survives all that is perishable in man, and time writes the best epitaphs of surviving genius upon the hearts of the living.

The subject of this obituary, Frederick Winslow Hatch, was as prominent a citizen in all civil matters pertaining to good government, as he was prominent in his profession; and honor-

able in all the varied walks of life—always filling the kind office of physician and friend in accordance with the nobleness of his character. The memory of the many excellent deeds of such a man should stimulate the living to perform all the labors of life well, for the value of the inheritance of noble example is greater than costly gems and gold.

It may often be said, that death is the pedestal upon which stand noble and beautiful characters that had risen from their obscurity; and the chiseled stroke of experience gives prominence to the deeds of men, which modesty had destined to occupy a hidden niche in the archives of friendships and learning. So it is with our brother and co-laborator, whose seat will be forever vacant among us.

“Not to the grave—not to the grave—  
Descend to contemplate  
The form that once was dear;  
The spirit is not there,  
Which kindled that dead eye,  
Which throbbed in that cold heart,  
Which in that motionless hand  
Hath met thy friendly grasp,  
The spirit is not there!  
It is but lifeless, perishable flesh  
That moulders in the grave;  
Earth, air, and water’s ministering particles,  
Now to the elements  
Resolved; their uses done.”

#### MEMORIAL OF DR. A. M. WILDER.

Dr. Wilder was born in Bolton, Mass., May 3, 1840, of stern old Puritan stock, tracing his lineage back through many generations of honorable names not only on his father’s side, but also through the Fletcher family to which his mother belonged.

His early experience was that of the New England farmer’s boy of forty years ago, rising at four A. M. to milk cows and drive them to pasture, chop wood and do other so-called “chores” until school time, passing the day at school with very scant leisure for the “play” so loved by boys, and studying in the evening.

In his maturer years he developed more and more the principle thus early engrafted of “all work and no play,” until his

waking hours seemed all too short for the multitude of cares which he chose to make his own.

The fall of 1856 found him behind the counter of the principal dry goods store of the then little town of Lawrence, and later, he was for a time employed in a boot and shoe store; in '57 or '58 the influence of the family physician procured him a place in a drug store where he began laying the foundations of his studies in medicine, for three years devoting his attention to the multifarious duties of the drug store during the day, and spending the evenings in study under the direction of the family physician.

During these years, by rigid economy, he succeeded in saving money enough to take him to Boston, where he entered, in 1861, the Medical School of Harvard University. Here he lived most frugally as a student under the private tuition of Dr. John Green, now of St. Louis, spending a portion of his time daily in serving as private secretary to the Rev. E. E. Hale, whose friendship was most highly prized by Dr. Wilder through the rest of his life.

In 1862, with his preceptor and friend, Dr. Green, and a party of advanced students in the Medical School, he responded to a call of the Government for contract Surgeons, and made two successive short-term contracts, serving as assistant in hospitals, etc.; after which he successfully passed the searching examinations of the service, and received his appointment as Assistant Surgeon of Volunteers.

In 1863, while stationed in Washington on hospital duty, he enrolled himself as a student of medicine in Georgetown University, and took his degree of M. D.

Dr. Wilder's remarkable talents and traits of character soon attracted attention from those in authority, and his appointment as Major and Surgeon of Volunteers soon followed his Lieutenancy, giving him a much wider sphere of action than would have been his as a regimental surgeon; later he was brevetted Lieutenant-Colonel, which was his rank when discharged. In the field and in post hospitals his surgical skill and sound judgment, his firmness and self-reliance, combined with the knowledge of business methods, and the habit of attention to detail, which were gained during his clerkships, gave him early prominence, and the fact that he served as Medical Director of three different army corps in the field before his twenty-sixth year shows

the estimation in which he was held. His name will be found on many a page of reports of operations in the Surgical History of the War of 1861-1865. He served continuously till the close of the war, and then for many months longer sought his discharge in vain, as the Government had need of his marked executive ability in the many complications connected with the close of the war and the disbanding of an immense army, but he was finally mustered out in October, 1865.

After his discharge from the army he spent a few months in Boston, devoting much of his time to the study of ophthalmology under Prof. Henry W. Williams; then, in company with Dr. John Green, made a visit to the hospitals and clinics of London and Paris. On his return, in the spring of 1866, he settled in Lawrence, Kansas, in the practice of general medicine and surgery, where, by his indomitable zeal and the exercise of his finely equipped and cultivated talents, he won a high rank, as is shown by his appointment as chief surgeon of the Kansas Pacific railway, which position he held for several years. From 1868 to 1875, Dr. F. D. Morse was associated with him in practice. In May, 1875, he came to California, on what was intended as a brief trip for health, but was persuaded by Dr. Geo. H. Powers to remain and become associated with him in the special practice of ophthalmology and otology, and in that partnership the remainder of his life was spent. Here, as ever, he immediately displayed his firm intention to be at least among the foremost, and in the spring of 1876 he read his first paper on astigmatism before the State Medical Society.

The thoroughness and perfect clearness of this exposition of an obscure subject brought him to the notice of many, and was a corner-stone in what he steadily strove to make the broad foundation for the building of a wide reputation.

Two exhaustive reports to the State Medical Society on the progress of ophthalmology and otology, papers on color-blindness, and on "new and old codes," with many lesser articles, are still in print, attesting, after he is gone, his studious and progressive mind.

He became a member of the San Francisco Medical Benevolent Society in 1875, and has served for seven years as its secretary, bringing to this office the same fidelity, good judgment and zeal which always characterized him, keeping his accounts and reports with a precision, clearness and neatness which could not

be excelled. He entertained high hopes for the future of the Society for which he was ever ready to devote his best energies, and in the introduction and discussion of professional topics at the Society's meetings he was always ready to take his part. He joined the San Francisco County Medical Society, and the State Medical Society in 1876, and the American Medical Association in 1885. He was also a member of the Harvard Club of San Francisco, and for several years was Surgeon of the First Regiment, National Guard of California, in which he took great interest, renewing there his military life, as well as in the Grand Army of the Republic and the Military Order of the Loyal Legion of the United States. In 1882 he assumed the Chair of Ophthalmology and Otology in the Medical Department of the University of California, where, by his thoroughness and striving after a higher and higher ideal of his own sphere and of what the school and the University ought to accomplish, he made himself a conspicuous figure. He had, in no mean degree, the mechanical faculty and power of invention, and at the time of his death had perfected and had only just received the first samples of some twelve or fifteen surgical instruments of his own device, which will be found in the next catalogue of Tieman & Co., too late, alas, for his enjoyment of their usefulness in his own hands or their appreciation by others.

In every relation of life, Dr. A. M. Wilder was the same true, conscientious, untiring, painstaking, thorough and self-reliant man. He was a strong partisan, strong in his likes and dislikes, but always anxious to be just to foe as well as friend. He was singularly reticent in some ways, and always determined to work out for himself every problem presented, and to form his own judgment and be the founder of his own fortune. He was not contented with present excellence, but was always striving for progress and reform; nor was he one of those whom specialism, as is often charged, makes narrow, for there was no department of knowledge—of philosophy, art, science, or literature, in which he was not at all times ready to take and evince a lively interest.

By his death this Society has lost a most esteemed and valuable member, and in many a household, as a skillful physician and a warm hearted and constant friend, he will be sadly missed.

While the perishable man is laid away to decay, memory is the urn in which his best deeds are securely deposited.

In memory of the dead the foregoing report is respectfully submitted.

WASHINGTON AYER, M. D.

GEO. H. POWERS, M. D.

C. G. KENYON, M. D.

T. B. DEWITT, M. D.

A. B. STUART, M. D.

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## REPORT ON DISEASES OF WOMEN AND CHILDREN.

By C. ANNETTE BUCKEL, M. D., Oakland.

(Read before the Medical Society of the State of California.)

In the *Western Lancet*, of February, 1886, is an article by Dr. Arnold on Tubage of the Larynx. After giving a sketch of the history of this operation, and cases in which it has been used, Dr. Arnold speaks of Dr. O'Dwyer's article in the *New York Medical and Surgical Journal*, in which he gives a description of the tube as used by him, and his method of introducing and removing the instrument, and says: "It is doubtful if much is to be expected from it in diphtheria, for in this dread disease the occlusion of the air-passage is only one of the dangerous symptoms of a malignant systemic disease. But much is to be hoped from it in simple croup, in which the formation of the pseudo-membrane is the disease itself, and in which death always results from apnoea."

In the *Chicago Medical Examiner*, March, 1886, Dr. Waxam, Prof. of Diseases of Children in the College of Physicians and Surgeons in Chicago, writes on intubation, and gives a report of seventeen cases operated on by him, with eight cases of recovery. In every case there was imminent danger of suffocation from either diphtheritic or membranous laryngitis. The ages varied from sixteen months to five years. Six were three years or under, and seven were diphtheritics, two conditions under which tracheotomy is rarely successful.

At the last regular meeting of the Alameda County Medical Society, Dr. Waxam was present, and at the request of the Society gave a most interesting and lucid explanation of his method of operation, his improvements on the instruments of Dr. O'Dwyer, and the result of twenty additional cases in which he had performed intubation since writing the report of his first seventeen cases.



Dr. Waxam says that the tubes, as now manufactured in Chicago under his direction, are of six different sizes, and so constructed that a slight swelling near the upper end prevents it from flying out when the child coughs or chokes, and a little shoulder which projects from the upper rim rests above the vocal cords and prevents the tube from slipping down into the trachea. The thread which is attached to the tube is passed over the little finger while it is being introduced, and is used only for the purpose of enabling the operator to withdraw the tube should he accidentally pass the tube into the œsophagus instead of the larynx. When the tube is inserted, the thread is entirely removed, and the child breathes freely, and eats and swallows food without difficulty, provided it is not liquid food. Milk or water, or other liquids, are apt to trickle a few drops into the tube, and thus cause coughing and choking. The tube is removed by a pair of forceps with elastic points, which can be expanded after passing into the widest part of the tube, and thus by their pressure against the sides of the tube raise it and remove it.

The forceps were exhibited to the Society, but, unfortunately, the Doctor had no tube with him. The advantages which intubation possesses over tracheotomy are stated by Dr. Waxam as follows :

“1. No opposition is met with on the part of parents and friends, quite a contrast to the difficulty, which we usually meet in obtaining the consent to tracheotomy.

“2. It relieves the urgent dyspnea as promptly and as effectually as tracheotomy, and if the child dies there is no regret that the operation was performed, and no discredit to the physician.

“3. There is less irritation from the laryngeal tube than from the tracheal canula; as the tube is considerably smaller than the trachea it does not press upon it firmly at any portion excepting at the chink of the glottis.

“4. Expectoration occurs more readily than through the tracheal tube.

“5. As the tube terminates in the throat, the air that enters the lungs is warm and moist from its course through the upper air passages, and there is less danger of pneumonia.

“6. It is a bloodless operation.

“7. It is more quickly performed and with less danger.

“8. There is no open wound that may be the source of constitutional infection.

“9. Convalescence is more rapid, as there is no ghastly wound to heal by slow granulations.

“10. The patient does not require the unremitting care of the physician as in tracheotomy.

“11. I believe it to be a more successful method of treating croup than tracheotomy.”

The first advantage mentioned by the Doctor can be appreciated by those who have seen their little patients struggling for breath while the anxious parents were hesitating and faithless as to the benefit of applying a knife to the throat of their darling sufferer. The simple operation of slipping a little silver or gold tube down the throat has nothing terrible or revolting in it to excite opposition.

The second advantage mentioned is also very great, as, if the relief is as great even though death might follow both operations, the parents and friends are spared the thought of the needless suffering and suspicions of its injurious effects.

The last, if true, will certainly make intubation supersede tracheotomy so soon as physicians are *convinced* of its truth.

As to the only objection given, viz.: The difficulty of performing the operation, it would seem that physicians will be more ready to seek skill in intubation which can be acquired on the cadaver than in performing tracheotomy, which demands a familiarity with operations on the living subject; and if in diphtheria we can have little hope for those who are so profoundly affected as to demand relief by an operation, it would certainly be far preferable to select the less formidable and painful operation of intubation.

The danger of suffocation is not always produced, however, by the swelling in the tubal portion of the air passage.

In a patient whom I attended this winter, the swelling of the tonsils and uvula after the sloughing of the diphtheretic patches, was so great as to impede respiration; had remedial measures failed in this case, tracheotomy would have been demanded.

## REPORT OF THE COMMITTEE ON GRADUATING EXERCISES.

By DR. J. GREY JEWELL, Chairman.

(Read before the Medical Society of the State of California.)

*To the President and Members of the California State Medical Society:*

As Chairman of your Committee on Graduating Exercises, I have to report that I attended the examinations of the students, who presented themselves for graduation, at the Toland Medical College (Medical Department of the University of California,) and at the Cooper Medical College. At both of these excellent institutions, I was received by the Professors in the most cordial manner, and afforded every facility to become conversant with their mode of teaching and examination, and permitted to read the *Theses* of the students, and even to question the students, on such points as I might desire. The examinations were divided by the Toland College, into three distinct parts, written, oral, and Green Room, and by Cooper College into oral and written. The *written examinations* were held in one of the large halls, of each College, the students being separated a sufficient distance from each other, so as to prevent any possible colloquy, where one might be at a loss for an answer to a question. Each student was well supplied with writing materials, and the questions for them to answer, were either written out in full, upon the blackboard, or supplied to them on separate slips of paper. Each Professor presided over the branch taught by him, occupying generally three hours, 9 to 12 A. M., or 2 to 5 P. M., and preserved perfect order.

The questions varied from 10 to 25 in number for the written examinations, to be answered, by each student, in writing, and were very thorough and exacting. Take for example the questions asked by the Professor of Anatomy at Toland College, and the Professor of Surgery at Cooper College, appended hereto:

QUESTIONS TO GRADUATING CLASS, BY PROFESSOR LEWITT, OF TOLAND COLLEGE. ANATOMY.

1. Describe the humerus.
2. What forms the floor of the lateral ventricles?
3. Give the name, origin, insertion and nerve supply of the muscles which produce talipes equinus, varus, valgus and calcaneus.

4. Describe the right auricle.
5. Which of the abdominal viscera can be reached by the knife without wounding the peritoneum, and how would each have to be approached?
6. A pistol bullet entered the right side four inches from the spines of the vertebrae and between the 8th and 9th ribs. It made its exit on the left side between the 9th and 10th ribs,  $4\frac{1}{2}$  inches from the anterior extremity of the 10th rib. The person injured has just eaten a full meal. Mention the structures and organs injured.
7. Give the relations of the 3rd part of the axillary artery.
8. After a wound of the superficial palmar arch and ligation of the ulnar and radial arteries at the wrist the hemorrhage continues; what is its source?
9. How is the collateral circulation established after ligation of the common carotid artery?
10. Give a short description of Scarpa's triangle, contents and relations of same.

QUESTIONS TO THE GRADUATING CLASS, BY PROFESSOR L. C. LANE, OF  
COOPER COLLEGE. SURGERY.

- 1st. Describe erysipelas of the scalp and mention one mode of treatment.
- 2nd. Give the classes of wounds and describe the treatment of the incised.
- 3rd. What are the forms in which syphilis manifests itself on the scalp and face?
- 4th. Describe the gumma and a recipe to be used in constitutional syphilis.
- 5th. Name the species of tumors found on the scalp and the treatment of angioma.
- 6th. Name all the species of sutures used in surgery.
- 7th. What are the forms of cranial fracture and where is fracture the most dangerous?
- 8th. What is concussion of the brain?
- 9th. What are the symptoms of compression and how treated—including trephining?
- 10th. Give the prominent signs of encephalitis.
- 11th. Give the treatment of the same.
- 12th. For what is trephining done?
- 13th. What congenital clefts are found on the face and neck?

14th. What is harelip and how is the closure of labial cleft accomplished?

15th. What grades of intensity does the burn present, and give a recipe for treatment?

16th. What is epithelioma?

17th. What is sarcoma?

18th. What is the third method of closure in plastic surgery?

19th. What is the difference between parulis and epulis?

20th. Give the signs and treatment of fractures of the lower jaw?

21st. Treatment of fractures of the nose.

22nd. What orthopædic means may be used in the cure of torticollis?

23rd. Name the purposes for which tracheotomy is done.

24th. Name the instruments used.

25th. Name the different modes of artificial respiration.

The oral examinations took place in the same halls and were of the same character, the Professor asking as many questions of each student as he deemed necessary, and rating the student according to his answers. The student *must* answer correctly 75 per cent of the questions before he can graduate; if he absents himself from one-fourth of the lectures, at college or hospital, he falls below the mark, and becomes ineligible, and is not allowed to present himself for graduation.

In the "Green Room" examinations at Toland College, each student was brought separately before the whole faculty, sitting as a Board of Examiners, and each Professor asked one question on some branch of his special teaching. I was much struck by the readiness and intelligence with which the answers were given, especially as the students were more or less nervous, and could have no possible idea what questions would be asked them. This readiness to answer *was not*, in any manner, confined to the male students, but was equally prompt in the female students; indeed, allowing for the natural hesitancy and modesty of the female, the advantage, if there was any, might be accorded to them.

In addition to the oral and written examinations by the Professors of Anatomy and Surgery, each student was required to demonstrate on the cadaver his knowledge of the parts and capability to perform the operations; in this way exhibiting a most perfect training, which was shown in every branch of study,

reflecting great honor on the different chairs, for the thorough and conscientious manner in which all the Professors had discharged their duties to the students. Take, for instance, Chemistry, a branch of study very difficult for students, and, therefore, somewhat neglected, as a rule; but in this, as in the various other branches, the students appeared to be letter perfect. Indeed, one of the *Theses* by a student, on the "*Preparation of some of the principles contained in Bile,*" was pronounced by all present as superior to anything they had ever read on the subject. This paper was accompanied by colored illustrations, *drawn by the student*, and vials, containing the extractive principles, *obtained by the student* from bile, by a thorough chemical analysis. And while it is not expected of a general practitioner of medicine, that he should become distinguished as a chemist, a botanist, or a naturalist, it is well to show *what good training can do* for the human mind, and it follows, as an undoubted fact, that medical students thus taught and trained, as they are at both these excellent colleges, must become adepts in their efforts to cure the sick and relieve the suffering. No school can teach the *practice* of physic, but the wise practitioner, when filling the Professor's chair, can, and does, teach its *principles*, hoping that the earnest student may profit by his instruction, and by the humane exercise of the knowledge thus gained, do good to others.

In conclusion, I must remark, that the Pacific Coast has great cause to be proud of two such noble institutions of learning, as the Cooper Medical College and the Toland Medical College; proud of the men who are devoting their lives, *without remuneration*, to teaching others how to relieve human suffering, and thereby to forward the happiness of mankind. If I might be allowed to do so, I would suggest, in the most respectful manner, that previous training *should be invariably insisted upon*, in the case of medical students. One or two years study in a physician's office, or one year each, in a drug store and a physician's office, would be eminently proper before a student should be allowed to matriculate at our medical schools. Of course it is understood that all students know how to spell correctly, read understandingly, and write a fair hand; these are primary considerations well worth noting; the student should also, before entering on a three years medical course, have a thorough knowledge of mathematics and physics. If, in addition

to these requirements, he understands Latin and Greek, or either, so much the better. Unless a student understands all this and much more, *speaking from personal experience*, he will find the technicalities used in medical lectures, a source of constant annoyance compelling him to refer to his dictionaries very often. The more strict our medical colleges are, in insisting on an elevated line of study, the more proud will they eventually be of their graduates, and the graduates of their alma-mater. No man has it more within his power to improve and perfect himself, and his fellow men physically, mentally, and morally, than the experienced professor, while teaching the industrious student the medical sciences. His object should be, not only to teach the technicalities of the science, but to create a desire in the student to do good to his fellow men, wherever, whenever and to whomsoever he can, with or without hope of pecuniary reward, and thus elevate, as well as ameliorate the condition of mankind. While we are all glad to receive recompense for our services, I am proud to know, that on this Coast, the medical man does not stop to consider the dollars he may receive for his services, but goes at the sufferer's call, day or night, rain or shine, many times much to his pecuniary loss, as a matter of duty. This should be constantly held up to the medical student, as the first consideration, to relieve the distressed, to heal the sick, looking to that higher power that ruleth the universe, for his reward,

When the stars grow old,  
And the sun grows cold,  
And the leaves of the Judgment Book unfold.

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### **LARYNGEAL PHTHISIS.**

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By J. D. ARNOLD, A. M., M. D.

(Read before the Medical Society of the State of California.)

The laryngoscopic appearances in throat consumption have of late years been so closely studied and so accurately noted, that the diagnosis of this disease, with the aid of the mirror alone, has become possible in the great majority of cases; and although it must sometimes happen that a differentiation of syphilis and tuberculosis of the larynx is difficult, the laryngoscopists of the

present day need seldom put a patient upon a tentative anti-specific treatment to decide this point, as was advised by Turk and Gemelede. The clinical value of this fact becomes patent when we remember that, although cases of undoubted primary laryngeal tuberculosis are very rare, in many instances this disease can be recognized in the throat with the laryngoscope, before its presence can be detected in the lung with the stethoscope; and, moreover, if we indulge the hope that medicine will find some means of arresting this fell disease, it is certain that its early recognition must be an important factor to the employment of such means.

It is to be regretted that the tuberculous larynx so rarely comes under the physician's observation in its incipency, because until the development of ulceration few symptoms arise that attest the presence of disease in the throat. In all other processes which have their seat in the mucous membrane of the larynx, and which result in breaking down of tissue and loss of substance, the ulcer is preceded by an acute inflammation accompanied by the usual phenomena—increased vascularity, swelling, tension and pain; but the tuberculous ulcer is not the outcome of an active inflammation in its classical sense, and the conditions preceding its formation occasion the individual little distress, and leave the functions of the parts almost unimpaired. Of course it is possible that in a tuberculous individual an acute laryngitis may occur which is non-tuberculous, that is, which does not arise from the presence of tubercle in the larynx, and such a laryngitis offers little to distinguish it from other inflammations in this region, except that it is less amenable to treatment.

The onset of the phthisical process in the larynx is often evidenced by an extreme anæmia of the mucous membrane, in decided contrast to the angry hyperæmia of acute catarrh or the deep red color of the specific inflammation which always precedes the syphilitic sore. At some point upon the blanched surface will soon arise a small circumscribed tumescence, which slowly broadens and finally breaks down into an irregular ulcer. More frequently the mucous membrane presents, in the first stage of the disease, an appearance somewhat resembling chronic catarrh, with this difference—that all the structures in the larynx look thickened and give evidence of deep infiltration long before any point of ulceration can be seen. The loose dis-



position of the mucosa and submucosa over the arytenoids and ary-epiglottic folds offers less resistance to infiltration than that of the contiguous parts, and the oedematous appearance which these structures present in the laryngoscopic image is almost pathognomonic of throat consumption. Up to this time the epithelium itself has undergone no change, showing that the process originates within and extends towards, not from, the pale mucous surface. Quite limited districts, such as the anterior commissure of the cords, the inter-arytenoid space, or the margin of the epiglottis, may be for a long while the only parts attacked; but, as a rule, several of the different regions in the larynx are simultaneously infiltrated, lose their epithelium in patches, and expose to view pale, unhealthy granulations, that slowly spread and give to the parts that *mouse-nibbled* appearance so characteristic of this disease. These granulations bear some resemblance to the hyperplasiæ which often form at the edges of syphilitic ulcers, but, unlike the latter, they are not obstinate to repair, and evince no tendency to the formation of cicatrices.

The tuberculous ulcer is usually shallow, showing a disposition to spread laterally rather than in depth, and it is only in the late stage that muscle and cartilage become implicated. Its surface has a peculiar grayish white color, and does not present these points of softening which characterise the sloughing sore of syphilis. What is most destructive of the tuberculous process is the absence of all tendency to repair, whereas in the ulceration of syphilis—and it is only with syphilis that tuberculosis in this region is likely to be confounded—there may always be detected in those structures first attacked, the growth of their bands of white fibrous tissue, the earliest evidence of cicatrization. It is not unusual to see the ventricular bands covered with deep sloughing sores, and upon the cords or epiglottis cicatricial webs—the process of repair progressing side by side with the process of disintegration, and this when in the absence of constitutional treatment; for syphilis, as far as its secondary manifestations are concerned, is a self-limiting disease. A condition resembling cedema is usually present at the edges of the tuberculous ulcer, especially when its seat is the arytenoids or epiglottis. That this, however, is not a simple serous effusion is proved by its slow establishment, and its absolute indifference to such measures as are potent for the

reduction of ordinary watery infiltration. The arytenoids when so affected are firm, unyielding and opaque, and lack that opaline, semi-translucent appearance which is typical of true œdema. I had once occasion to see the arytenoids scarified for the relief of such a condition, with the result that to the chronic plastic infiltration was superadded an acute serous œdema which necessitated the performance of tracheotomy three hours after the scarification.

The favorite seat of tuberculous ulcer is the vocal cords, and this is no doubt due to the comparatively greater amount of work which they have to perform in phonation; because, *a priori*, the cords, from their structure, should be better able to resist infiltration and disintegration than any other part of the larynx. After the cords, the inner surface of the inter-arytenoid space is the region most frequently the point of ulceration, and when, as often happens, this is the only part attacked, it becomes quite difficult to determine the character of the ulcer from its appearance in the mirror. One sees merely pale red elevations between the arytenoids, which may be mistaken for papillomatous growths; the experienced eye, however, recognizes in them the fringed edges of ulceration inside the cavern of the larynx, whose surface can only be brought into view by putting the patient in the position for tracheoscopy. It is almost pathognomonic of the phthisical throat, that it is constantly deluged with a frothy secretion, which, from its persistence, is often a hinderance to proper inspection of the parts.

The symptoms preceding the stage of ulceration are, as above stated, very unobtrusive, but when this has once set in, there arises progressive aphonia, due either to loss of substance in the cords, or to infiltration of the constrictors, or to the mechanical impediment offered to the approach of the vocal bands by the pyriform swelling of the arytenoids. Deglutition becomes painful because of the pressure exerted upon the sore parts by the muscles of the larynx, which constrict the glottis during the act of swallowing. A short, distressing, ineffectual cough is always present, but during the intervals between the paroxysms, no pain is experienced unless there exist necrosis of the cartilage. Of course, all the broad, general symptoms will be present which are to be referred to the pulmonary trouble that is always primary to the affection of the larynx.

The anatomical character of the lesion in laryngeal phthisis

has long been a principal theme of dispute among pathologists, and upon no other subject have the dicta of authorities been so radically different. Wunderlich and Louis declare that they never, in a single case, found tubercle in the larynx; Waldenberg and Rindfleisch admit that tubercle may be deposited in the larynx and by retrograde metamorphosis give rise to destructive ulceration, but believe that this is true only in a very small minority of cases; while Andral, Rokitanski, and Virchow state that ulceration of the larynx in phthisical subjects nearly always owes its origin to the breaking down of tubercular masses. When so accurate an observer as Rindfleisch asserts positively that tubercle is rarely, if ever, found in the larynx—and when Virchow recommends this organ as just the region, above all others, for the histological study of true tubercle—it is reasonable to suspect that these pathologists must differ very widely in their definition of the term *tubercle*.

Since Laennec first observed that miliary tubercles agglomerate and undergo caseous degeneration, and taught that whenever caseous metamorphosis takes place it must have such an origin, great confusion has existed as to what actually constitutes *tubercle*; and, as an effect of his teaching, there arose a disposition to call even this caseous—tuberculous—until finally the term miliary tubercle lost its significance. Virchow, whose name is so inseparably connected with modern pathology, brought order again into this chaos by showing that cheesy degeneration is not peculiar to any particular species of pathological tissue, but that under certain conditions of nutrition—pus, cancerous tissue, typhoid infiltration, and the like, could undergo the same change. He concluded, therefore, that the product of such change must not be identified with a neoplasm, which makes its appearance in the shape of minute tumors, and to which alone the term *tubercle* should be applied.

That tuberculosis of the throat is always a secondary affection seems to have been firmly established by the valuable researches of Heinze and Eppinger; but the belief that ulceration of the larynx is always caused by contact of secretion from the phthisical lung, has been entirely abandoned, since it is certain that the lymph and bloodvessels are often the channels for the dissemination of tuberculous matter.

Heinze in his exhaustive monograph upon "throat consumption" finds that among 4,486 consecutive post-mortems made

at the Pathological Institute of Leipsig, in 1,226 cases, pulmonary phthisis was the cause of death; and of these 51.3 per cent had ulceration of the larynx. He further found, and this is of special interest, that ulceration of the larynx was never present with tuberculosis of other organs, when the lungs were intact. As to the influence of age and sex, his statistics agree in general with those of Willig, Ziemmsen, and McKenzie, concerning the character of the laryngeal ulcer. His materials for investigation were 50 cases from among those who died with pulmonary consumption during the year 1876 at the St. Jacobs Hospital; and the only basis for a choice of cases was that the throat should be in some way abnormal. Of this number 49 presented ulceration in the larynx, and 1 an intense catarrh, but no ulceration. Among these the ulceration was tuberculous in 83 per cent, and in 17 per cent non-tuberculous. Heinze recently discovered that whenever tubercle could not be found in the laryngeal ulcer, the loss of substance amounted only to an erosion of the mucous membrane, and agreed in character to the apthous, or as Lirchon has named it, the *lenticular* ulcer, which has also been found in the throat affections of the various exanthemata, and is in no wise peculiar to phthisis. After a careful analysis of his searching histological observations, Heinze deduces: firstly, that laryngeal phthisis always owes its origin to tuberculosis of the laryngeal mucous membrane; secondly, that tuberculosis is never primary, neither in the sense that tubercle can develop in the larynx before the lungs are affected, nor in the sense that the larynx may take part in a general tuberculosis, when the lungs remain intact; and thirdly, that tuberculous ulcers never heal, understanding by the healing of an ulcer, the formation of a cicatrix.

In the light of such thoroughgoing investigation, the cases occasionally reported in the journals, as primary tuberculosis of the larynx, must be read *cum grano salis*; and we may reasonably suppose in such instances either a mistaken diagnosis, or a failure to describe the pulmonary lesion.

The finding of the *bacillus* by Koch, has given a new impetus and a different direction to the pathological study of tubercle, and the conclusion forced upon us after the thorough criticism which his experiments have received, is, that this microbe is a true factor though perhaps not the sole factor in the establishment of tuberculosis. The full fruits of this important discov-

ery belong yet to the future, and will one day form the basis for a rational prophylaxis in this fatal disease. Its immediate benefit is already marked by the general adoption of antiseptics as an important element in the treatment of tuberculosis.

The therapy of throat consumption, when the lesion is thoroughly established, and destructive ulceration has once commenced, is notoriously unsatisfactory. Such measures as tend towards producing an improved physical tone in the patient—whether they be climatic, dietetic, or purely medicinal—must demand the most careful consideration and employment, in the absence of any special treatment that can be expected to arrest or retard this malady. When one has used morphia, or cocaine, or carbolic acid, to ameliorate the distress that accompanies cough and deglutition; when one has resorted to artificial feeding; when one has exhausted the ice-bag and dilator as substitutes for tracheotomy; when dyspnoea from stenosis threatens life—one has done all that is useful, perhaps all that is safe, in the ulceration stage of laryngeal phthisis. Special remedies have never found favor, nor produced expected results in other than special hands; and that a certain quantity of milk per diem will cure the phthisical patients of him who first proposed the milk cure, is just as probable as that a decoction of flint stone will annihilate tuberculosis in the patients of the discoverer of this powerful medicament. In the long list of drugs, from *oleum pini sylvestris* to arsenic, that have been proposed and used in this disease, not one has made good its claims to the slightest curative value in tuberculosis. A gloomy picture this; but, unfortunately, the investigations of pathologists and the experience of clinicians have as yet supplied no brighter tint to lighten up this sombre coloring. In the early stage, however, before any structural change has taken place—in the stage of *anæmia* and *tumefaction*—a judicious and active treatment holds out great promise of success. Naturally, the first essential to such success is the early recognition of the malady, and, thanks to the laryngoscope, this is possible long before the pleximeter or stethoscope can detect the slightest evidence of pulmonary consolidation. When this recognition has once been effected, the physician may meet the disease with the confidence that, although in few cases is a radical cure to be hoped for, yet in every case may he so retard the disorder that many years of comfort will be added to the life of his patient.

## PACIFIC MEDICAL AND SURGICAL JOURNAL

AND

## WESTERN LANCET.

EDITORS:

WILLIAM S. WHITWELL, A. M., M. D.

WM. WATT KERR, M. B., C. M.

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*SAN FRANCISCO, OCTOBER, 1886.*

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**Editorial.****The Board of Examiners.**

Two months ago we called attention to the fact that a homeopathic physician, Dr. E. N. Lowry, had applied for a writ of mandamus to compel the regular Board to grant him a license which the latter had refused. We are glad to state that the application was denied, the judge declaring that until he subscribed to the code governing that body he was not entitled to a license from it.

This decision is not so interesting on account of the individual case, as from the fact that it is an acknowledgment, by the Court, that any Board can refuse a license to persons violating the code of ethics governing that Board, and therefore opens the way to further success in prosecuting the authors of the filthy advertisements that disgrace our daily papers; but this matter will be further tested in the trial of P. Roscoe McNulty, whose license was revoked by the Homeopathic Board and who has now been arrested for practicing without a license. So far this latter trial has been unfortunate, as Judge Rix sustained a demurrer filed by the defendant's attorney who complained that the charges were not sufficiently specified.

The law to regulate the practice of medicine in California requires that every one practising medicine in any of its departments shall, in addition to his diploma, hold a license from one of the Examining Boards, and renders those who fail to comply

with this law liable to arrest and a fine not to exceed five hundred dollars, or to imprisonment for three hundred and sixty-five days, or to both fine and imprisonment, at the discretion of the Court. We would therefore remind our readers that the Board is issuing a new register which will contain the names of all persons practicing medicine in this State, and if there are any who have failed to obtain a license they should do so at once so that they may save themselves the mortification of having their names published in the "quack list." When the last edition was issued this misfortune happened to more than one practitioner who had neglected to obtain the necessary permit, information regarding which may be obtained by applying to the Secretary of the Board, Dr. R. H. Plummer, 652 Mission street, San Francisco.

We would specially urge all the physicians and surgeons in this city to send to Dr. Plummer their cards with their addresses and office hours, so that they may be embodied in a separate directory to be bound up with the register, because such a scheme is of great convenience to the profession and it is only right that we should endeavor to make the work of the Secretary as light as possible.

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THE fourteenth annual meeting of the American Public Health Association will be held at Toronto, Canada, on October 5, 6, 7, and 8.

The Executive Committee have selected the following topics for consideration at said meeting:

- I. The disposal of the refuse matter of cities and towns.
- II. The condition of stored water supplies, and their relation to the public health.
- III. The best methods and the apparatus necessary for the teaching of hygiene in the public schools, as well as the means for securing uniformity in such instruction.
- IV. Recent sanitary experiences in connection with the exclusion and suppression of epidemic disease.
- V. The sanitary conditions and necessities of school houses and school life. (Lomb prize essays.)

VI. The preventable causes of disease, injury, and death in American manufactories and workshops, and the best means and appliances for preventing and avoiding them. (Lomb prize essays.)

VII. Plans for dwelling-houses. (Lomb prize plans.)

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THE charge in the case of *Graves versus Winters*, which appeared in last number of the Journal, was delivered by Judge J. G. Pressly, of Santa Rosa. His name was accidentally omitted.

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## Communications.

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### Appointment in Cooper Medical College.

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The undersigned takes pleasure in announcing to the medical public, the appointment of Samuel O. S. Potter, A. M., M. D. (Jefferson), to fill the Chair of Theory and Practice of Medicine, in Cooper Medical College, made vacant by the death of Professor Henry Gibbons, Sen. The place has been sought by several medical men residing in the East, affording evidence that the institution is not unpopular abroad. In fact, the excellent curriculum of a three years' course which has been established in this school, as well as in its rival, the Medical Department of the University of California, and which is being honestly and consistently carried out, is attracting good classes of students. As endorsement of his appointment, Dr. Potter brings strong endorsements from several of the physicians of Salt Lake City, where he has practiced his profession for some time; besides, he is recommended for the Chair by persons holding prominent places in the East as medical teachers, and whose endorsement of him is founded on full acquaintance. The strongest testimonial, however, which has offered itself to those making this appointment, is the fact that for some years he has utilized the little leisure of a practitioner's life in writing medical books for students; and at this time, he is engaged in the publication of a work on *Materia Medica and Therapeutics*, subjects closely akin to the Chair he has been chosen to fill.

LEVI C. LANE, M. D.,  
President of Cooper Medical College.



## **Proceedings of Societies.**

### **Proceedings of the San Francisco County Medical Society.**

SAN FRANCISCO, Aug. 10th, 1886.

In the absence of the President, Dr. W. E. Taylor, the meeting was called to order by the Assistant Secretary who moved that in the absence of the President and Vice Presidents, Dr. J. G. Jewell would be called to the chair.

The minutes of the former meeting having been read and approved, the name of Dr. S. S. Kahn was proposed for membership by Dr. W. C. Eidenmuller and Dr. J. P. Le Fevre and referred to the Committee on Admissions.

Dr. Clinton Cushing then gave an account of his tour round the world, making particular reference to the Abdominal and Gynecological Surgery as practiced in the different countries he visited, and ascribing the success of British surgeons in the former department to their systematic drainage of the abdominal cavity.

After remarks and queries by several members, Dr. von Hoffman presented a pathological specimen of a carcinomatous uterus, which he had extirpated from a patient fifty-six years of age. The cervix was healthy, and there were no visible signs of cancer, but he made his diagnosis by curetting the internal surface and examining the tissue under the microscope, which revealed the characteristic cells. The operation was performed three months ago, and the patient has made a good recovery.

The Secretary reported that the Committee on Library desired to call the attention of the Society to three volumes of plates illustrating the brain structure, which they would recommend as a valuable addition to the Library. Dr. J. F. Morse moved that the committee be authorized to purchase the work in question. This was carried by the Society.

On the motion of Dr. Le Tourneux a vote of thanks was awarded to Dr. Cushing for his interesting address, and he was invited to continue it on some future occasion.

There being no further business the Society adjourned.

WM. WATT KERR,  
Recording Secretary.

August 24, 1886.

The meeting having been called to order by the President, Dr. W. E. Taylor, the minutes of the former meeting were read and approved.

The name of Geo. E. McPherson, M. D., graduate of Jefferson Med. Coll., in the year 1855, was proposed for membership by Drs. Morgan and Hart, and referred to the Committee on Admissions.

The Committee on Admissions reported favorably on the credentials of S. S. Kahn, M. D., and J. Rosenstirn, M. D., who were forthwith elected to membership.

Dr. Le Tourneux then gave a brief account of medicine as it is practiced by the Chinese, during which he commented upon their ignorance of anatomy, physiology, and everything pertaining to scientific medicine. He was followed in his remarks by Drs. Hart, Taylor, Davis, Sundberg, Frisbie and others, all of whom testified to the absolute ignorance of the Chinese regarding true medicine, and also of the objection they all had to surgical operations. Dr. Davis had operated upon a Chinaman for stone in the bladder with good result, but it required considerable pressure to obtain the consent of the patient and his friends.

Dr. Frisbie related his experience with a Chinaman with a fractured humerus, who told him that when a bone was broken the Chinese physicians were in the habit of tying it up in splints and then mashing the whole bone to pieces, under the belief that union would take place.

It would appear that in medicine the Chinese are far behind any other Asiatic race, for their neighbors, the Japanese, are very proficient in this art, although inferior in business pursuits. Dr. Sundberg also related his experience among an aboriginal tribe in Bengal, who obtained excellent results in the treatment of fractures, by applying splints padded with chewed leaves. They also treated fevers by cold sponging and tea made from leaves of different trees.

The Secretary then called attention to the fact that the State Medical Society had requested the County Society to investigate the charges brought against Dr. E. Donnelly, which had prevented his admission into the State Society; he therefore moved that the case be referred to the Committee on Medical Ethics, with a request to report at the last meeting in September. This motion was carried. As Dr. Kenyon, a member of the com-

mittee, had to appear as a witness in the case, Dr. J. D. Arnold was appointed to serve in his place.

There being no further business the Society adjourned until the second Tuesday in September.

WM. WATT KERR,  
Recording Secretary.

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**Sacramento Society for Medical Improvement.**

SACRAMENTO, August 20, 1866.

The Society met in regular session, the President, Dr. W. H. Baldwin, in the chair.

Dr. J. R. Lainé reported a remarkable case of traumatic aneurism of the superficial femoral: On June 30th, G— W— was "hunting" with some friends. While he was sitting down one of them threw a rabbit into his lap. The animal had been shot in the leg, and the sharp end of the fractured femur was protruding. It struck the patient in the middle of the thigh, making a punctured wound and penetrating the femoral artery. There was considerable hæmorrhage, which continued to syncope. When seen on July 3d, a false aneurism had formed. Digital and mechanical compression was tried, the artery being at one time occluded for two hours. Owing to the femoral vein necessarily being compressed, troublesome swelling of the limb took place. Sloughs formed, after the use of May's compressor, but, under treatment, readily healed. On the 20th of August, with the assistance of Drs. Huntington and Nelson, the artery was ligated above and below the sac, the interval being about two inches. Catgut was the material employed.

Dr. Cluness mentioned a case occurring in his practice some years since, in which he had ligated the femoral artery four successive times. The patient had been shot through the thigh, some of the femoral periosteum was removed, and subsequently a bony growth formed, which ultimately made an opening in the artery, causing a diffuse aneurism, for which the vessel was tied. Secondary hæmorrhage took place, and the vessel was again ligated. The hæmorrhage recurred, and the vessel was again secured. Renewed bleeding followed, and for the fourth time the vessel was tied on this occasion, just below the Poupart's ligament. The patient died two days subsequent to the last operation, from hæmorrhage.

Dr. T. W. Huntington read a paper on Gonorrhœa.

Dr. White noticed that the author had not mentioned many remedies. His usual practice was, during the inflammatory stage, a mild astringent injection. Later he gave balsam internally. Frequent injections attained the object of cleanliness.

Dr. Briggs believed that the great importance of this disease was not generally recognized by patients. Most serious results frequently followed. A very common error committed in the treatment was neglect of the inflammatory condition, and adoption at the first of energetic measures. The sequelæ and complications should be kept in mind; hence during this stage rest, fomentations and alkaline diuretics were indicated. By this course, stricture might often be prevented.

Dr. Snider thought that often where skill and care had been employed failure was not infrequent. If injections were used during the earlier stages, they should be of the mildest character, he frequently did not use any, relying on potass. bromide and aconite internally with fomentations locally. Recently as an injection had used the bi-chloride of mercury in the proportion of 1-6 gr. to 3i.

Dr. Voeller said it was hard to diagnose between acute and specific vaginitis in the female. He had noticed recently that stress was laid on the fact that gonorrhœal discharge had an acid reaction, but his observation was that all vaginal discharges in their first stages were acid. Neuber said that of 100 women who married husbands that had had gonorrhœa, 99 per cent got some form of trouble, which, in certain cases went on to endometritis salpyngitis, etc.

Dr. Lainé, while agreeing with the principles laid down by Dr. Huntington, thought that it would be very difficult in civil practice to get along without internal remedies. He believed that not one case in ten in ordinary practice recovered without the use of copaiba or cubebs in some form.

Dr. Cluness regarded this discussion as important from the general prevalence of the disease, its complications, and the unsatisfactory nature of treatment. Though in opposition to eminent authority he believed that there were two forms of urethritis, a specific, and a non-specific. He believed that in twenty years he had seen a sufficient number of cases to differentiate them. In specific urethritis the discharge was profuse of a yellow or yellowish green color. After the acute stage the discharge became thinner and lighter in color. In the non-specific variety these changes were less marked and the dis-

charge lasted a much shorter time. No doubt in strumous subjects living in unhealthy localities the discharge of a non-specific urethritis would continue for a long time, but taking a patient with a specific urethritis under the most favorable conditions as regards surroundings and treatment, and he would not recover as soon as the former. In fact the *worst* case of non-specific urethritis is more readily cured than the *mildest* case of the specific form. A point of importance in diagnosing between these varieties, was the greater amount of pain in the affected region and neighboring parts which always accompanied specific inflammation. He believed that the disease should be treated on general principles, and that under no circumstances were injections admissible during the acute stage. He had found benefit particularly during the fifth and sixth week from potass. permanganate 3 gr. to  $\mathfrak{z}$ i. continued until inflammatory action was re-established. Internally he used saline and diuretics, but he had also employed the oils of copaiba and sandal wood with advantage.

Dr. Brune in the first stages used very mild astringent injections frequently repeated, in conjunction with the internal administration of alkalis and diuretics. When the disease extended far back he did not use injections but relied on internal treatment.

The President said that having used many remedies he could not rely on any one, or any number. He believed that the disease was self-limited and that the ulcerated condition of the canal was aggravated by its constant use. He did not think that any cases of long standing could be cured without using the sound, he had frequently incised the meatus and then dilated the urethra to its fullest extent.

Dr. Huntington in closing the discussion said: "If the theory could be established that the disease was specific arising from a gonococcus or some other microbe, a rational treatment could be devised. This must be reached by systematic and rational methods which if steadily pursued ought to bring out definite results. Instead of alternating remedies internal and local, of various ingredients and strengths, if it was recognized that the disease depended on a specific cause the line of treatment that I have indicated could be adopted with satisfactory prospects."

There being no further business, the Society, on motion, adjourned to meet on the third Tuesday in September.

JAMES H. PARKINSON,  
Secretary.

**Wm. H. Bruner, M. D.**

At a meeting of the San Francisco Medical Benevolent Society, held September 21, 1886, the following report of the committee appointed by the President of the Society, to prepare resolutions in memory of the late Dr. Wm. H. Bruner, was read:

The undersigned having been appointed a committee, at a special meeting of the S. F. Medical Benevolent Society, held August 11, 1886, beg leave to present the following biographical sketch, "in memoriam," of the life of our lately deceased associate, Wm. H. Bruner, M. D.:

Dr. Wm. H. Bruner was born in Chester, Chester County, Pennsylvania, on May 17, 1826, of remote Swiss extraction, and graduated in medicine and surgery at the Jefferson Medical College, on February 17, 1848, when twenty-two years of age.

Shortly after his graduation, impelled by the excitement connected with the discovery of gold in California, he early joined the adventurous band of pioneers that came to this coast, arriving in California in August, 1849. He immediately sought the mines, and experienced the usual hardships and changes of fortune that characterized the miner's life of early days.

When this nomadic tribe of our humanity began to be crystallized into villages and cities, he resumed the practice of his profession at Sonora, a thriving mining town of the interior, and with such noted success, that he was induced to seek larger fields, and soon found himself established in San Francisco, with a desirable and lucrative practice.

At this early period he became associated with Dr. Wake Briery, a surgeon of wide and deservedly excellent repute. This surgeon, whose name is so well known to old residents, went to Virginia City at the beginning of its mining prosperity, and subsequently died of heart disease. Dr. Bruner was so successful in his practice here, that he was soon enabled to visit the medical centers of Europe, spending most of his time, however, in walking the Paris hospitals whilst he was abroad. On his return to San Francisco, justified by his later studies and experiences, he was received by the public with generous favor, which his superior qualifications enabled him to retain, until declining health limited his physical ability to do justice to his practice.

About four years ago his illness became intensified, and he be-

gan to show symptoms of uremic poisoning, and during an acute attack of suppurative inflammation of the kidneys, the urine showing large quantities of albumen, pus globules, casts, etc., his medical friends despaired of his recovery. After remaining in a perfectly comatose state for several days, he began to show signs of convalescence, and his general health improved with unexpected rapidity, so that in the course of five or six months he resumed the practice of his profession again. He never fully recovered from this blow however, becoming easily exhausted from moderate exercise, and his urine continued to show large quantities of albumen, and sometimes pus, when he was in his most hopeful condition. For a few months prior to his death it was observed by his friends that his mental activity was becoming more clouded, with a decided tendency to attacks of partial cerebral compression. Toward the last, physical debility and waste supervened, until death came to his relief, August 10th, 1886.

A brief allusion may now be made to his personal characteristics and individuality.

He was quiet and reserved in manner, yet eminently social; gentlemanly in address, and never violating the conventionalities of good breeding. Fond of study, and with a mind well stored, he approached the bedside with full confidence in his own judgment, which naturally inspired a kindred feeling in the mind of his patient. In his clinical ability he had not his superior in the profession on the Coast. Courageous and self-reliant, he met the trying and harassing difficulties which sometimes gathered about him with the imperturbability of a sphynx. And his self-command was such that he never betrayed his thoughts or emotions, however strongly moved; yet his kindly and benevolent nature effectively softened this apparent austerity, if not stolidity of manner with which the public were likely to be impressed in a first interview. It is a question with his friends whether this exacting conflict of his interior nature, if it did not lead to the development of, at least accentuated the malady that finally broke down the primarily robust and vigorous constitution he possessed.

It is with his character, in his relations with the profession, most fitting now for us to dwell upon for a brief moment. With a continued association with him for the past twenty-five years, we have never known of his preserving fixed medical antagonisms,

even if he conceived he had been deeply injured by any of his professional brethren. It would never prevent his meeting with such a person in consultation at the bedside of a patient, if he conceived his presence could be of value there; and he never allowed any sentiment of personal antipathy either to bias his mind or cloud his judgment where the welfare of the patient was interested. If he ever felt disposed to ventilate his professional differences it was with that mild quality of language that might be truthfully called the "irony of praise."

If indifferent to the attacks of his enemies, he was intensely loyal to his professional friends, and he would not stop at any personal sacrifice to assist them; and for his clients as well he had no fear of work or vexatious responsibilities. This was recently well illustrated, when physically yielding to the disease which was slowly consuming his life, he placed himself before the Public, in spirit at least, as the defender of justice, undisturbed by the comments of the public press, directed at him day after day in columns of questionable personality.

To his personal peculiarities we can be generously blind. All strong natures possess grave faults, which, by reflection from the cut and polished facets of prominent virtues, become correspondingly bright when exposed to the light of day. Each and every individual has moral eyes of his own through which the trials connected with human existence are regarded and weighed. The elementary question is: are we sincere? And the best proof of sincerity is exhibited when the quality of the action to be criticised is weighed by the standard of a willingness "to do the like unto you," without other reward than may be connected with the sentiment of fealty to friendship and honor.

It now becomes our pleasing duty to be able to enroll the name of our late associate, Dr. Wm. H. Bruner, prominent among the names of the honored dead of our number who have been called before him. He was one of the original members of this Society; one of its early presiding officers, and worked unceasingly to elevate the tone of membership, as well as to advance its material prosperity. Individually, and as a Society, we sincerely mourn his loss; and it may be permitted to us here to take this public occasion to express our full and heartfelt sympathy to his bereaved family.

Signed: A. F. SAWYER, M. D.,  
LUKE ROBINSON, M. D.,  
GEO. H. POWERS, M. D.,

San Francisco, August 21, 1886.

Committee.



## Health Reports.

### Report of the State Board of Health.

The mortality reports for the month of August indicate that the State continues to be free from any serious epidemic disease. The following towns report no deaths whatever for the month: Arbuckle, Bodie, College City, Cloverdale, Colton, Calico, Cottonwood, Downieville, Davisville, Fort Bidwell, Forest Hill, Gridley, Galt, Igo, Jackson, Lincoln, Lemoore, Madera, Merced, Placerville, Riverside, Redding, Santa Maria, Shasta, Tehama, Upper Lake, Wheatland, and Willits, which is the strongest evidence of the general health of the community.

Consumption. Only seventy-seven deaths are reported from this cause, which is the lowest record for many months, and a decrease of twenty per cent from last month, when the mortality was thought very limited.

Pneumonia. Deaths from this disease number twenty-five, which were confined chiefly to those cities bordering on the bay, where the humidity of the atmosphere is greater and the temperature lower than in the interior.

Bronchitis caused twelve deaths last month—eleven of which occurred in San Francisco, and one in San Jose.

Congestion of the lungs was fatal in seven instances.

Diphtheria increased its death rate during August and caused twenty deaths. Of these eight occurred in San Francisco, six in Oakland, three in Sacramento, one each in Santa Cruz, San Diego, and Monterey.

Croup caused five deaths—four of which occurred in San Francisco and one in Santa Rosa.

Whooping-cough. The mortality from this disease was seven, a slight decrease from last report.

Scarlet fever. The mortality from this infectious fever was limited to four, two of which occurred in Siskiyou County, one in Truckee, and one in Napa County.

Measles caused no deaths.

Smallpox is entirely absent from the State.

Diarrhoea and dysentery, although prevailing extensively, caused only seventeen deaths, which indicates that the type is mild and without any epidemic tendency.

Cholera infantum. As indicated in our last report as probable,

the death rate from this disease has decreased from forty-seven last month to twenty-seven this month. This lessened mortality may be attributed to the favorable atmospheric condition which prevailed throughout August, excessive heat being absent.

**Typhoid fever.** As the season advances the mortality from typhoid fever increases. In July it was twenty-one, in August thirty-three. This, perhaps, is not owing to the greater malignancy of the disease, but rather to the greater relative number attacked. As will be seen in our report of prevailing diseases, typhoid fever is present in many more localities than heretofore reported. Its fatality is, therefore, in proportion to its numerical prevalence, rather than to its exceptional virulence.

**Typho-malarial fever** is reported to have caused two deaths, which is a decided decrease over last month's report.

**Remittent fever**, on the contrary, shows an increased death rate, ten deaths being recorded this and only four last month.

**Cerebro-spinal fever** caused six deaths, same number as last reported

**Erysipelas.** There were no deaths from this disease during August.

**Alcoholism** was fatal in twelve instances, and not confined to any locality.

**Thermic fever.** Dr. John M. Forrest, of Alturas, Modoc County, reports a death from heat apoplexy in a man aged thirty-seven years, which was induced from over-exertion on the farm.

#### PREVAILING DISEASES.

Reports received from all parts of the State indicate that little or no sickness prevails; indeed, one correspondent reports that no sickness or death had occurred in his part of the country for two months and over. Twenty-six correspondents report that no deaths had occurred in their vicinity for over a month. We are therefore led to conclude that, as a rule, California at present is in a most salubrious condition and unscathed by epidemic disease.

**Cholera infantum**, although still prevalent, as might be expected at this season of the year, is not universally prevalent. It is mentioned as present in Lemoore, Mariposa, Martinez, Etna, Alturas, Anaheim, Santa Rosa, and Davisville.

**Diarrhœa and dysentery** seem to be the most prevalent of any diseases reported. They are mentioned as present in Red Bluff,

Susanville, Fort Bidwell, Elk Grove, Modesto, Lemoore, Cloverdale, Lakeport, Martinez, Ione, Etna, Hill's Ferry, Alturas, Jolon, Truckee, Gridley, Bakersfield, Shasta, Grass Valley, Oakland, Stockton, Salinas, and San Francisco.

Measles are reported in Salinas and Pope Valley, very mild and sporadic only.

Scarlet fever is reported in Weaverville, Truckee, St. Helena, Alturas, and Etna Mills. The type is very mild, causing but slight mortality.

Diphtheria. This very fatal disease prevails to a limited extent in San Francisco, Oakland, Sacramento, Monterey, Santa Cruz, Mariposa, Martinez, San Diego, St. Helena, Etna, and Truckee. The difficulty of educating the public into the belief of the necessity of quarantining the sufferers from this disease is beyond comprehension. We have seen children playing in the street suffering from a mild attack of diphtheria, who were as capable of infecting others with the disease as though they had it in the most virulent form. Indeed, we witnessed one death produced by contact with these children, and yet their parents could not be persuaded to keep them from contact with others. It is thus that the disease is often diffused from house to house and kept alive where it ought to be diligently extirpated. Every person having it ought to be isolated, and every house in which it is ought to be quarantined and a colored flag placed in a conspicuous position upon the dwelling, to mark the location of the enemy. Local authorities ought to compel such precautions to be taken, as there is no question of the disease being wholly under the control of efficient sanitary measures.

Croup. This disease is not mentioned as prevailing to the same extent as diphtheria, but many of the latter die from the disease invading the larynx wherever diphtheria prevails.

Whooping-cough prevails in Colfax, Cloverdale, Lakeport, Martinez, Modesto, Truckee, Anaheim, Redding, Amador City, Nicolaus, San Diego, San Francisco, and Sacramento.

Erysipelas is mentioned as present in a mild form in Lemoore, Martinez, Nicolaus, Wheatland, Truckee, and Calico.

Typhoid fever is noticed in many of our reports as present. For instance, in Modoc, Dr. Forrest writes that the disease prevails in Goose Lake district and is of rather a severe type. Dr. Fred. Hutchins, of Sierra City, reports cases of typhoid fever in certain ill drained districts of the town. Dr. Jump also re-

ports typhoid fever in Forest City, owing to some sanitary negligence. It is also reported in San Francisco, Petaluma, Fort Bidwell, Elk Grove, Upper Lake, Etna Mills, Alturas, Igo, Oakland, and Santa Barbara. The cases are, however, sporadic, without any epidemic tendency, and probably can all be traced to sanitary neglect of the individual or indifference of the authorities.

Typho-malarial fever may be classed with typhoid and is mentioned in each report with typhoid fever.

Intermittent and remittent fevers prevail extensively throughout the State. Dr. Bathurst, writing from Etna Mills, describes these fevers as differing in type from those usually prevailing, being complicated with bowel disorder, which is unusual.

Pneumonia is occasionally mentioned in our reports. It is noticed in those from Salinas, Livermore, Elk Grove, San Francisco, Marysville, and Auburn. The cases are all sporadic and not of severe type.

Bronchitis is also noted in Nicolaus, Ione, Red Bluff, Modesto, Rocklin, and Camptonville. The disease is of a mild form and in many cases not requiring medical assistance.

GERRARD G. TYRRELL, M. D.,

Permanent Secretary California State Board of Health.

Sacramento, September 10, 1886.

### San Francisco Health Report.

#### ABSTRACT.

	Jan.	Feb	Mar.	Apl.	May	Jun.	Jul.	Aug
Total, 1885.....	438	468	502	468	512	516	458	455
Total, 1886.....	519	382	479	418	435	397	437	408
Phthisis.....	91	67	67	77	63	39	52	43
Pneumonia.....	66	28	34	29	26	18	14	16
Bronchitis.....	25	13	12	11	11	5	7	11
Heart Disease.....	31	22	23	15	16	21	23	25
Aneurism.....	2	1	—	—	1	1	3	2
Apoplexy.....	16	12	8	8	9	11	10	12
Typhoid.....	5	9	7	12	7	6	12	19
Paralysis (Hemipleg, etc.).....	4	8	10	9	8	12	6	6
Cancer.....	16	9	15	6	15	12	16	18
Diphtheria.....	13	14	14	16	22	9	3	8
Croup.....	15	7	13	8	10	1	5	4
Infant Convulsions.....	16	10	18	14	17	11	14	12
Meningitis.....	17	9	10	16	5	—	21	13
Casualties.....	12	21	13	10	15	17	10	13
Suicides.....	5	4	9	8	10	6	3	5
Homicides.....	3	3	2	1	2	1	4	2

Population according to U. S. census, July 1st, 1880, was 234,520; Caucasian, 212,520; Chinese, 22,000. Estimated population, June 30th, 1884, 270,000.

**Licentiates of the California State Board of Examiners.**

At the regular meeting of the Board of Examiners, held September 1st, 1886 the following physicians having complied with the law and all the requirements of this Board, were granted certificates to practice medicine and surgery in this State:

- MOSES F. BASSETT, San Jose; Worcester Med. Institute, Mass., 1847.  
 JAMES J. CHOATE, Suisun; St. Louis Med. Coll., Mo., Mar. 7, 1878.  
 CHAS. A. COOKE, San Francisco; Med. Dept. Univ. of Maryland, Md., Mar. 15, 1883.  
 JOHN H. DAVISSON, Los Angeles; Coll. of Phys. and Surg. at Baltimore, Md., Feb. 29, 1876.  
 CHRISTOPHER C. J. GUTHRIE, Jamestown; Cincinnati Coll. of Med. and Surg., O., June 22, 1864.  
 ANDREW W. HOISHOLT, San Francisco; Cooper Medical College, Cal., Nov. 4, 1882.  
 WM. D. HUNTINGTON, Julian; Jefferson Med. Coll., Penn., Apr. 2, 1886.  
 JAMES W. JESSE, Adin; (lien certificate) Med. Dept. Univ. of the City of New York, N. Y., Mar. 6, 1886.  
 HARVEY B. KILBORN, San Francisco; Jefferson Med. Coll., Penn., Mar. 12, 1879.  
 HEINRICH KREUZMANN, San Francisco; Med. Dept. Frederick Alexander Univ., Erlangen, Germany, June 28, 1880.  
 GEO. D. LATHROP, Lincoln; Chicago Med. Coll., Ill., Mar. 27, 1883.  
 WM. E. MACK, Oroville; Cincinnati Coll. of Med. and Surg., O., Feb. 26, 1884.  
 ALLAN H. MILLAR, Orange; Harvard Med. Coll., Mass., Mar. 4, 1864.  
 JOHN H. MILLER, Alost; Castleton Med. Coll., Vt., Nov. 9, 1859.  
 DANIEL B. NORTHRUP, San Diego; Kansas City Coll. of Phys. and Surg., Mo., Mar. 2, 1880.  
 SAMUEL O. L. POTTER, San Francisco; Jefferson Med. Coll., Penn., Mar. 30, 1882.  
 EDWELL RICHESON, Vina; Missouri Med. Coll., Mo., Mar. 2, 1886.  
 J. JOSEPH RILEY, Woodbridge; Med. Coll. of Indiana, Mar. 1, 1882.  
 JOHN L. TEED, San Diego; Royal Coll. of Surg., London, Eng., Oct. 15, 1841.  
 HORACE P. WOODWARD, San Diego; Coll. of Med. and Surg. of the Univ. of Michigan, Mich., Apr. 21, 1852.

The application of B. B. Lee, of this city, was rejected because of unprofessional conduct.

P. Roscoe McNulty, of this city, whose advertisements have been of the most bold and shameless character, and whose certificate to practice medicine was revoked by the Homeopathic Board, has been arrested for practicing medicine without a license.

Circulars, requesting the names and locations of parties practicing medicine, were sent to every post office in this State, about the first of August. Only 600 answers have been received from the 1100 towns addressed. Doctors are particularly delinquent in this matter, although the work is intended especially for their benefit. Prompt and full reports will greatly facilitate the work, and be properly appreciated.

R. H. PLUMMER,  
Secretary.

PACIFIC

# MEDICAL AND SURGICAL JOURNAL

AND

## WESTERN LANCET.

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VOL. XXIX.

NOVEMBER, 1886.

No. 11.

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### Original Articles.

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#### MOTIONS IN THE ETIOLOGY OF SEA-SICKNESS.

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By HERMAN PARTSCH, M. D.

[Prize Essay read before the Medical Society of the State of California.]

When a person goes up or down stairs in the dark and finds one step more or less than he expected, he suffers a well-known disturbance of muscular adjustment, with some more remote and less definite consequences of the same.

When a person walks out on uneven ground and does the unusual thing of wearing spectacles which make the ground seem nearer to or farther from him than it really is, he suffers at each step a disturbance which differs from that in the preceding case only in degree. And if such person with such spectacles reach for a small object, guiding his hand by sight, he will either reach farther or short of the object.

If a cannon-ball were disguised by paint so as to appear as wood and therefore very much lighter than it really was, and a person having no doubt that it really was wood attempted to pick it up, his hands would slip off without raising the ball. On the contrary, if it were very much lighter than it appeared to be, the person would lift it with unexpected ease and himself and ball rise up with a disagreeable suddenness.

These things are disagreeable to experience, for even after one recovers his muscular adjustment there is plainly left a slightly disordered condition of the individual.

The spectacle experiment has been by the writer and several

friends continued to a series, by walks prolonged to such an extent that the accumulated effect of the series of phenomena had resulted in decided illness.

A friend who is accustomed to using spectacles told me that he had on several occasions gone to duty forgetting to take them. He becomes nauseated when going up or down stairs without them, and also when using his hands in prehension if he guide his movements by sight.

In those optical phenomena, in which there is an unusual modification of our usual means of vision, we get an erroneous notion of the distances that form a great part of the basis upon which our muscular adjustments in such cases are made. Distance is a factor in many muscular adjustments. A person is an expert geometer to the extent that his precision habit is developed, and still he may be quite ignorant of the terms by which his intuitions of space are expressed in language.

Muscular adjustments involving space are based only on the intuitions of that space, and this is entirely independent of that notion which associates itself with the lingual terms which designate that space. An erroneous notion of space involves an erroneous adjustment of the animal mechanism, and the result will be different from that expected.

Such difference between a result expected and a result realized is what constitutes a disappointment. Disappointments always result in violence. (I use the general term *violence* to designate what might better, perhaps, be called *shock*.) The intensity of the violence varies with the magnitude of the difference between the expected and unexpected results.

When a muscular adjustment involves an erroneous notion of weight, the principle is scarcely different.

Experience gives us intuitions of weight; these we employ as a basis upon which we appropriate the requisite amount of power to accomplish the act. That one is always in danger of disappointment in these cases is not to be inferred; for these acts can be, as in childhood and in all first instances of any class, performed tentatively. A man, e. g., about to lift for the first time one end of an iron rail, would make the effort without any preconceived notion of its weight; he would therefore take hold, deliberately apply a good deal of force to start with, and then increase it until the rail yielded.

Expectations are temporary, i. e., formed on and for an occa-

sion. They are also habitual and therefore more or less permanent. In this country, where earthquakes are few and far between, it is with us an habitual expectation that the grounds and floors we walk on retain their positions invariably. This very expectation does more than concern merely the mind; it is a detail of our instinct which we are in a short time unable to dispense with, or even interfere with when we try.

A disappointment, involving this habitual expectation, with its consequent violence, may take place without the subject being conscious of it until he is made so by the nausea which takes place in response to the violence as a stimulus. The subject in such case does not even know the first cause of his illness; it is only after the whole group of phenomena have occurred, and have been explained, before that he is able by comparison to conclude, in the event of a recurrence, that the cause is of like kind.

This is made clear by the following two quotations: *Philosophical Transactions*, volume 42, page 41. From Reverend Matthias Plant's letter to Reverend Doctor Bearcroft, concerning Earthquakes near Newbury (New England) from the year 1727 to 1741: "And I have frequently, in my conversation with sundry persons, been told by them, that for a few minutes before a shock of it came, they could foretell it by an alteration in their stomachs. I attest to the truth of the thing by my own experience."

*Ibid*, volume 51, page 610, on the same subject: "Preceding actual shock a few minutes, many people can foretell the occurrence of an earthquake by the change in the state of their stomachs apparently akin to that attending sea-sickness. And this disturbance always accompanies the wavelike motion of earthquakes when so gentle as to be uncertainly distinguishable by other ordinary means."

In walking on any deck of a ship at sea, inasmuch as the plane of such deck is constantly changing its relation to the vertical, no step can be taken simply by a repetition of the adjustment for preceding step. It is as if going up or down stairs, the steps of which are no two alike in height. The labor of new adjustments probably taxes the mind and tends to fatigue. Even then no adjustment seems adequate, for by the time the foot reaches the point to which the adjustment was made to carry it, that point of the deck has changed position. The consequence is, just as in the spectacle experiment, a series of shocks, such as



have been designated on a preceding page by the more general term *violence*.

Again, it is our constitutional habit to maintain a certain relation when standing or sitting, between our long axis and the vertical; and it is contrary to our habitual expectation that any objective force interfere with such relation. But, as at every instant the lines of the ship's deck change with regard to the vertical, we are, with every such change, thrown out of relation to the vertical, and suffer a disturbance of our muscular adjustment and slight shock. At every moment we readjust, and are as often thrown out of adjustment. This being contrary to an habitual expectation there results a disappointment from every such disturbance; and it is the accumulated sum of the effects of the separate shocks that constitutes the illness attending such experience.

So far we have considered only the effect on the new passenger, of the changes of position of ship's decks with respect to the vertical.

While the etiology of sea-sickness embraces several lesser factors, the chief one is motion. The motions that make us sick are a class that are distinguished very clearly from those that do not make us sick.

All motions to which the body can be subjected may be arranged into *three* classes, each of which is clearly distinguished, and the classification presents nothing that is arbitrary.

A bodily movement may be active or passive in respect of mind as certainly as it is so in respect of body.

My classification is based on this fact, and accordingly we have :

Class first, active mentally and active bodily;

Class second, active mentally and passive bodily;

Class third, passive mentally and passive bodily.

In class first both the mental determination to move and the motor power are subjective. A typical example is walking on a level or up-hill.

In class second there is either a subjective determination to move or a consent to the movement, but the motor power is objective. A type of such class is a ride on a horse whose motions are well known, and therefore comprehended by the writer. Any passive motion to which the body is adjusted by nervous effort, volitionally and consciously, or automatically and unconsciously, belongs to class second.

In class third, both the determining cause and the motor power are objective. As typical of this class, we may take any case in which a person is subjected to heterogeneous passive motion, no detail of which he is aware of nor understands beforehand, to which, on this account, he is utterly unable to adjust himself.

It is invariably motion of class third (passive mentally and passive bodily) that is followed by motion-sickness.

During continued motions of class third there is an equally continued succession of automatic efforts (conscious or unconscious) to accommodate the body and its parts to them.

To the new passenger the ship's motions are of third class. No sooner is a motion adjusted to than it changes and throws the body out of adjustment,—each such disturbance resulting in violence, the accumulated sum of which finally amounts to illness.

Third-class motions on ships are ordinarily such that each variation may be anticipated and adjusted for. The subject becomes cognizant of the variations chiefly by the tactile and kinæsthetic senses of whatever parts of the body are in contact with the object whose motion is communicated to him; by these means chiefly, and in addition, under some circumstances, by the sense of sight. Some attention to the motions facilitates the recognition of their variations. Any variation recognized soon enough, the adjustment to it takes place automatically. The motions being, in the first place, of third class, become motions of second class, to the extent that the subject recognizes them and adjusts to them. To him who is for the first time on a ship the motions are of third class, while the same are to the experienced voyager motions of the second class, recognition of and adjustment to them in his case are automatic and unconscious.

It now seems quite plain that the sickness is not due to motion *per se*, else it would make the sailor sick also, because he is subjected to the same motion. And it is equally plain that the sickness is due to the condition which distinguishes third-class motions, viz., the condition of being passive mentally. Many persons get sick riding inside of stage coaches or carriages; I have been unable to learn of anyone ever getting sick riding on the outside with the driver. The cause of sickness in staging lies evidently in the difference between riding in and riding outside, and what is this difference? On the outside the subject

foresees every start and stop, every curve in the road, every elevation, depression, and in fact everything that will influence the motion of the coach, and therefore of himself. Foreseeing all these, there occur in him accommodating adjustments in accordance.

On the inside, nothing is foreseen; therefore all the considerable variations of motion affect the subject unawares, each resulting in shock which, by accumulation, amounts to illness.

“Aquatic birds of the greatest vigor in flight and habituated to floating on stormy waves, often become nauseated on decks of vessels.”\* I have been told by ship officers and passengers that such birds often get so sick immediately they alight on deck that they cannot fly off.

Here again the motion of the wave is second class to the bird, that of the ship is third class. The wave-motion is comprehensible; its changes are automatically and unconsciously anticipated and adjusted to; while on ship the motion, though far less violent than that of the wave, is yet incomprehensible and cannot be adjusted to, and the bird suffers as any other passenger.

When a motion is uniform, and when direction or velocity, or both, vary uniformly, even though it be at the start third class, it quickly becomes second class; because the laws of the variations are quickly observed, if not too complex, the variations then expected and adjusted to. A motion, therefore, (not regarding its start) may be of the second class, and not make one sick when it occurs in a straight line, or in a uniformly curved line, at a uniform velocity, or a uniformly varying velocity. But its place in class second or third depends upon whether it is comprehended or not by the subject of it.

Our subject may, perhaps, be made more interesting by the consideration of third class motions under some other circumstances. Many persons get sick swinging. So far as I have been able to learn, swinging makes one sick when the moving force is either that of another person or the momentum resulting from the subject's own efforts to swing himself. The movement in such a case is therefore passive bodily. Observe further how complicated the movement is. It describes an arc of a circle, and consequently changes its direction at every point. It consists of a forward start, accelerated movement, retarded movement, stop; backward start, accelerated movement, retarded

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\* R. M. Bache in *Am. Jour. Sci.*

movement, stop. Eight kinds for each round. And, again, the tendency of the centrifugal force to produce cerebral anæmia increases with the acceleration and diminishes with the retardation of the movements.

Seeing that the motion is so complicated, it is easy to understand that it is incomprehensible to many persons; that such persons being, therefore, unable to adjust to the motion, are made sick by it as by any other motions the variations of which are frequent and not foreknown. Many are not sick and others less likely to be so when the motion is active bodily. To move one's self in a swing involves considerable attention to the effort and the movements. And it seems that this amount of attention brings the swing motion, entirely or nearly as the case may be, with the range of the comprehension of such persons.

People get sick on railway trains in motion. The frequency and severity of the cases are proportional to the frequency of curves and grades, and also to the speed. The variations dependent on curves and grades are third class movements.

Not more than about one-half of one per cent of persons are exempt from becoming sick when subjected to rapid rotation in the upright or sitting positions. Such rotation under such circumstances is third-class motion. The more the whirling partakes of the voluntary and active character, the less the physiological disturbance. But even in voluntary whirling there is an inseparable share that is third class, viz., that which results from momentum after the person has determined to stop and has ceased his efforts.

The sickness of whirling and railway traveling is also very often complicated with optical vertigo, a subject considered later on.

On our hotel elevators we have upward and downward movements, upward and downward starts, and upward and downward stops—six kinds. And no two are identical. The uniform movements, up or down, are not generally effective in causing illness. The starts and stops are very effective to those unaccustomed to elevators. To stay on an elevator in motion an hour would make a great many persons sick.

There is a small balance of testimony to show that the downward starts are more efficient in producing nausea than the upward starts. Sir C. Bell mentioned what any observing mother may have noticed in her infant, viz., when the infant is held in

arms and is carried up stairs it manifests no signs of uneasiness; when thus carried down stairs it gives unmistakable evidence of disturbance, even if necessary to awaken in order to do so.

We, in common, probably, with all land animals, have, during the early part of our lives, had many misfortunes associated with downward motions. To associate an anticipation of evil with downward motion, which takes us unawares, is not only a constitutional habit, but a habit that is all the more potent as it is inherited by us from all preceding generations. But no one ever falls upward.

On ship the motions are exceedingly complicated. There is a partial to-and-fro rotation about the ship's long axis; it is called rolling. For each direction there is a start, movement and stop. These are all different; they affect the subject differently and require different adjustments in order to harmonize with them. Aside from starts and stops, the movement is further complicated by being in each case accelerated in the first half of its length and retarded in the second half. The curvature of the movement is still another complication.

To a single round of the rolling movement we, therefore, have eight different motions, viz., start, accelerated movement, retarded movement, and stop, for half the round; and four more such motions back to the point of beginning.

This very brief consideration of the rolling movement applies also to the pitching, which is similar to the rolling, and corresponds to it in every detail. Its axis of rotation is the transverse axis of the ship.

It rotates the long axis of the ship through a lesser angle than the transverse axis is rotated by the rolling, but the extreme ends of the ship rotate through a greater space.

The pitching and rolling then give us sixteen different kinds of motion, requiring as many different kinds of harmonizing adjustments on the part of the successful sailor; and the sailor executes these adjustments perfectly, automatically, unconsciously, and apparently without any deleterious expenditure of energy.

There is another class of ship movements, similar to those of the elevator. This includes the up-and-down movements. Each round consists of downward start, accelerated movement, retarded movement, stop, upward start, accelerated movement, retarded movement and stop. These eight with those already

given constitute twenty-four movements of the ship exclusive of progression and certain tremors.

The actual movement of a ship is almost always a complication or resultant of all the twenty-four details that we have considered.

So far, I have briefly indicated the condition upon which physiological disturbances depend, and have detailed the movements which, under that condition, cause such disturbances.

We next wish to know how these motions cause these disturbances, and what these disturbances consist of.

There is only one department of the animal anatomy that can be reasonably believed to be disturbed primarily by motions; that is, of course, the fluid part; and of this there is ample reason for regarding the blood-vascular system as alone the seat of the primary disturbance. I use the expression *primary disturbance* to distinguish it from the nausea, etc., which latter result from the former, as effect from cause.

Before proceeding farther, I must attempt to establish the data from which I conclude that the blood-vascular system is the seat of the primary disturbance.

A few points in cell physiology must be borne in mind, and I will therefore briefly consider them.

Corresponding to the two kinds of muscle fibers there are two kinds of cells. The cell of the voluntary muscle has three states; one state of rest and two others which may be designated as passive and active states of energy. A complete round of the phenomena of such a cell is as follows: The cell is in its state of rest; upon receiving the proper stimulus through the nerve fiber connecting it with brain, cord or ganglion, it enters the state of active energy which consists in the evolution of force. When exhausted it immediately enters the state of passive energy which consists in the appropriation of force. When charged, it enters the state of rest in which it remains until the proper nervous stimulus is again applied.

The cell of the non-striated muscle has no state of rest; but only the states of passive and active energy, during which it is busy in appropriating and evolving forces respectively. The termination of each state seems automatically to serve as a stimulus in response to which the cell enters the other. The phenomena of rhythm of a great many vital organs and organisms is due to the rhythmical function of the class of cells. Each kind of cell

of this class has its peculiar period. We might also distinguish the two classes of muscle cells as dependent and independent. Because in the one its function depends upon an extrinsic stimulus; in the other it does not.

A part of the muscle cells of the heart and blood-vessels is of the rhythmical kind.

If the independent function of the rhythmic cell is not clearly demonstrated by the phenomena of an excised heart in a vacuum, etc., we may appeal to the rhythmical phenomena of a great variety of vital unicellular organisms. The functions of the rhythmic cells are, of course, greatly influenced by conditions, inasmuch as conditions influence their nutrition, temperature, etc.

The muscular tissue of the heart and blood vessels has, besides this property of rhythmic contraction, also the property of responding to an extrinsic stimulus. This indicates the presence of the dependent class of cells.

Prof. Austin Flint, Jr., says: "It seems well established that the heart, although capable of independent action, is excited to contraction by the blood as it passes through its cavities."

According to the same author, the heart continues to contract in open air or vacuum, empty of blood—but feebly and irregularly; with water the contraction is stronger and more regular, with blood stronger still and most regular; i. e., with blood in its cavities the heart acts about normally even when excised.

These, and other data which cannot find space here, allow the undoubted inference that the dependent tissue of the heart contracts in response to blood pressure as a stimulus.

The independent tissue is evidently governed in the time of its contraction by the time of the contraction of the dependent, when the latter is in operation. The dependent does not seem to contract when the heart is excised and empty; for the weakness of the contraction when excised is reasonably explained by the absence of contraction of the dependent muscle cells; and such dependent cells do contract when blood fills the heart cavities and the contraction then is merely normal.

This class of dependent cells does not differ from that of the voluntary muscles. For we regard the blood pressure as affecting the nervous tissue of the heart, which then influences the dependent cells to contract.

The important point for us is, *that blood pressure is the stimu-*

*lus in response to which the contraction of the dependent muscular tissue of the heart takes place.*

The independent tissue is none the less so on account of its slight dependence as to its times; its independence is evident from its contraction long after excision of the heart.

There is no doubt that the walls of the heart and the muscular coats of the blood-vessels have functions very similar; they differ in degree, but perhaps not in kind.

I doubt not that, so far as the muscular layer of the blood vessels is concerned and in proportion to the mass of it, we have a vascular diastole and systole just as certainly, and of the same kind, as in the case of the heart itself.

The essays\* of the eminent Dr. Henry Hartshorne on "The Arterial Circulation" and "The Present Condition of Vasomotor Physiology," contain an abundance of overwhelming proof that the phenomena of arterial and venous pulsation are due, in part, to a rhythmic function of the muscular coats of these vessels analogous to that of the heart muscle itself; that these vessels have a diastole and systole; and that the arteries are functionally related to ventricle, as ventricle to auricle and auricle to veins.

The human heart and large vessels are only differentiations of what is in primitive classes, and in embryos of higher classes, of animals a mere pulsating, valvular tube.

As the space allowed is too limited for presentation of data to establish the fact, I will content myself at present by saying that what I have noted regarding the heart function holds equally true of the arterial and venous walls. (I am, however, less positive about venous walls.)

There is a demonstrable probability of a certain very important item in the function of the arterial muscular coat. That it belongs to the heart as well is also likely, but has not been determined and does not concern us so much at present. This important detail of arterial function is a variation of lumen, which is dependent on the variation of blood pressure when the bodily act causing such variation is foreknown. It must be plain that blood pressure is nowhere constant. It is varied by position of the body, and evidently by sudden starts and stops. And the fact that, with all the violent motions of first and second classes that we voluntarily execute or submit to, there is no such result

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\* Trans. Amer. Med. Ass'n, 1856 and 1872.



as nausea, has induced me to conclude that when a motion is foreknown there is a vascular adjustment to compensate the tendency of the variation of pressure to produce a physiological disturbance.

I assume that the lumen of a given artery at a given section varies (in health) inversely as blood pressure at that section. So that the quantity of blood passing through that section is invariable, is independent of pressure or lumen; because the effect of greater pressure is counteracted by a smaller lumen, and a lesser pressure by a greater lumen.

Blood pressure, when its cause is foreknown, serves as a stimulus, in response to which the lumen contracts; pressure being relieved, lumen again increases.

If this is so (reasons will appear later), then there is no need of believing that there are two sets of vaso-motor nerves—one to contract, the other to dilate the vessel. For if pressure is the stimulus in response to which alone contraction takes place, a decrease of pressure must cause a dilatation, as an increase caused a contraction. The lumen varies inversely as pressure, and the pressure may, of course, be positive or negative.

The variation of lumen is undoubtedly accomplished through the agency of the vaso-motor nerves. There seems good reason for believing that the vaso-motor system of nerves has an automatic and a volitional function. The automatic function is performed by the fibers which originate in the sympathetic ganglia, and are afferent and efferent in respect to these ganglia. The volitional function depends upon the vaso-motor nerves, which are known to originate at least in the medulla oblongata, and are, therefore, a part of the cerebro-spinal system. It seems probable that these latter nerves are only efferent. Their action is *ideo-motor*—in response to subjective stimuli. But as the stimulus in response to which these nerves act must also often be *objective*—at their *periphery*, there must be a set of *afferent* nerves to convey the stimulating impulse to the vaso-motor center. The heart has such afferent fibers, known as vaso-inhibitory nerve fibers, or Ludwig's sensory nerve of the heart. Some months later I hope to publish a number of reasons for assuming the existence and anticipating the discovery of what will be called the vaso-sensory nerves.

I will use the expression *equilibrium of the circulation* to designate that uniformity of the circulation maintained during

health, and which varies only in a manner consistent with local and general influences and needs.

Then I should say that this equilibrium is preserved by the agency of the vaso-motor nerves. As all motions tend mechanically to disturb this equilibrium, and as there is evidently no violence (to the animal) attending such motions when usual and of classes first and second, I conclude that the tendency to disturbance is compensated by a vascular adjustment, by means of the automatic or sympathetic vaso-motors in the manner already explained. The sailor's immunity from sea-sickness is so explained.

When an *unusual* first or second class motion is undertaken, the cerebro-spinal vaso-motors are called into requisition to so adjust the vascular system as to counteract any tendency to vascular disturbance. Such adjustment is, of course, a muscular adjustment; it takes place simultaneously with any other muscular adjustments necessary to the motion undertaken; it takes place in response to the same subjective determination.

Any motion of third class disturbs the vascular system; because, on account of the motion not being foreknown, no adjustment can be made, neither volitionally nor automatically, to compensate the tendency to disturbance. Disturbances then occurring, they in some way serve as stimuli in response to which other disturbances take place; among which are nausea and all the symptoms of motion-sickness. These secondary disturbances are the first that the subject becomes conscious of.

It is quite clear that one must have a general comprehension of the motion to which he is subjected, as, e. g., the motion of the horse he rides. It is, however, equally clear that, while he must know every *class* of movements that his horse executes, he need not know each *detail* of a class. For we all know that, being once accustomed to a horse's movements, we may actually sleep while traveling on his back and maintain all adjustments necessary to the erect position.

And as all these movements during such sleep are harmonious with those of the horse, we evidently adjust automatically and unconsciously to movements when familiar, which when novel required our attention to adjust to them. Similarly at sea. The new sailor being entirely unable to adjust to the ship's motion at first, soon learns to do so volitionally with the help of his attention to the motions; next he adjusts automatically and un-

consciously. And our familiar example of sleeping on a horse in motion, makes it easy to comprehend the possibility of adjusting to ship's motion in the much easier position of recumbency.

Facts and their circumstances have induced us to conclude that knowledge of motion is necessary in order to be able to compensate its tendency to vascular disturbance and consequent violence; that the compensation is effected at first by means of the cerebro-spinal vaso-motors simultaneously with all other muscular adjustments to the same motion; that finally the vascular and all other muscular adjustments are automatically and unconsciously executed, in which case we have supposed the vascular adjustments to be relegated to the sympathetic vaso-motor nerves.

The theory that, when motion is foreknown, the variations of arterial pressure are compensated by inverse variations of arterial lumina, has grown out of a comparison of the circumstances, conditions and results of third class motions with those of first and second classes.

When for reasons (more than space and time will here allow) I had adopted this theory, there occurred to me a method by which I could certainly either verify or condemn it. If the theory is true, thought I, there must occur such an adjustment of the arteries of my head as to entirely compensate the tendency of gravity of blood to produce cerebral hyperæmia when I stand on my head. Otherwise the theory is false.

The experiment was tried and resulted in notes as follows: San Francisco, February 27, 1884. Placed a cushioned chair against the wall, and stood inverted, with my head on the chair and heels against the wall. In this position I was quite comfortable and without the slightest sign of cerebral congestion, either subjective or objective, until the tenth minute had been completed. Then early in the eleventh minute there appeared some sensible subjective evidence of cerebral congestion. At twelve and one-half minutes a competent assistant, who kept the time, observing sclera and anterior temporal arteries, found slight but undoubted indications of congestion. The subjective symptoms were also yet slight at this time. At full thirteen minutes, while the signs of congestion were still slight but undoubted, the experiment voluntarily terminated. In a few moments the discomfort almost entirely subsided, but not completely for thirty-six hours.

It was quite reasonable to suppose that these symptoms of congestion were induced on the principle of counter-irritation by the somewhat painful pressure of my weight on the top of my head. The experiment was therefore tried again at 8 P. M., September 20, 1884, in the office of Professor W. F. McNutt, who generously consented to be the observer. I stood with my shoulders on two chairs, head down between them and heels up against the wall. During the latter part of the tenth minute there appeared the sensation of tension in my head; it became gradually more intense. At end of fifteenth minute I got down, and during five or six seconds felt the merest dizziness. During the fifteenth minute anterior temporal arteries were observed to be distended and conspicuous, pupils were dilated, sclera were congested. On close examination, several seconds after getting down, the conjunctival parts of sclera and lids showed an active injection of all the finer vessels, the pupils normal, pulse soft and seventy-two. The sensation of discomfort almost entirely disappeared in a minute; there was the merest trace of it at 10 P. M., and nothing left of it next morning. From these results, I conclude that during a voluntary inversion of about ten minutes there is maintained by the vaso-motors such an adjustment of the vascular apparatus as compensates the gravitation tendency of blood to the head; and that on account of the parts involved being subjected to unusual service the nervous (or muscular) energy required to maintain this compensating adjustment is exhausted in about ten minutes, after which cerebral hyperæmia takes place.

The importance of such adjustment may be more vividly realized by remembering that the pressure of blood in the brain arteries in the upright position is that transmitted from the heart *minus* a certain gravitation tendency of blood from head to heart. In the inverted position such pressure is that transmitted from the heart *plus* the gravitation tendency of blood from feet to head. Consequently, if hydrostatic principles hold true for blood in its vessels, the arterial pressure in the brain, in the inverted position, exceeds that in the upright position by twice the gravitation tendency of blood from head to heart *plus* that from feet to heart.

Other things equal, the average passenger suffers far less violence from ship's motion in the recumbent than in the upright position. If my theories so far are true, this is as it should be;

and the theory of vascular disturbance receives a further item of confirmation by the explanation next to be given.

Bearing in mind that gravity and inertia are the agents on which vascular disturbance depends, and that the fluid columns cannot be disturbed by these forces except when they (forces) act on the columns in the direction of their length, it follows that either of these forces acting on the body perpendicularly to its long axis will cause a very much less vascular disturbance than when acting in the direction of that axis. Because the sum of the longitudinal vessels is much greater than the sum of vessels at right angles to the long axis in any given plane.

While the ship's motions are very numerous, the resultant of them all operates on the body as a single force at any given time. Whatever the direction of application of such force to the vascular system, it will disturb the contents of those vessels mostly that lie in that direction, and will also disturb the contents of those vessels that lie within the range of less than ninety degrees of such direction; the disturbance being slight in vessels lying at angles greater than forty-five degrees from the direction of the disturbing force.

Most prominent in the resultant of the ship's motions is the up-and-down constituent. While standing or sitting, this factor operates in the direct line of the long axis of the person. While recumbent it operates at right angles to the long axis, and in only one plane at any given moment. Consequently, in recumbency there is much less vascular disturbance possible than in the erect position.

The causation of optical vertigo is a prominent factor in the etiology of sea-sickness. Inasmuch as this factor is dependent upon *motions*, either of the person or his environs, it comes properly within the limits of our subject and accordingly shall have its share of attention.

We have seen how mathematically accurate are our intuitions of space as exemplified in the accurate muscular adjustments involving space, even though such space cannot by subject be expressed in conventional terms. And we also know how accurate is our intuition of location in space as exemplified in the ability of the woodchopper to strike his axe in the same place repeatedly; his stroke being swift, strong, and through a distance much greater than the chopper's height. And all with little or no deliberation apparently, and with the unaided eye.

It is easy, then, to see that one's intuitions of distances of walls, ceilings and floors of his rooms are accurate. It is one of our habitual expectations that the walls, ceilings and floors of our rooms remain in invariable positions; that any variations of their distances are due to our own movements.

Now, any change of a wall's distance, or other variation of its position, not due to our own movements, constitutes a result realized differing from a result habitually expected. It, therefore, constitutes a disappointment, and serves as a stimulus in response to which some kind of physiological violence takes place. One disturbance institutes another, and somewhere in series of events occur those of which alone we become conscious. These are the vertigo, nausea, vomiting, and other items in a more or less general illness. Not only does every variation of distance constitute a disappointment, but so does also every observed movement of an object which should, according to our habitual expectation, remain immovable. It is scarcely necessary to add that the resulting illness represents an accumulated violence. Thus we explain optical vertigo as it occurs on the ship at sea. It affects the person in any part of the ship. The effect is exaggerated by movements of fluids in vessels, and the oscillations of clothing suspended from hooks, both being violations of the habitual expectation that such things in rooms remain quiet. In a similar way I would explain the optical vertigo consequent on the continued observation of unexpected relations among our environs and between them and ourselves, whether such relations be real or are made apparent by an unusual modification of our usual means of vision.

I have become dizzy by attempting to read the inscriptions on the cars of a passing freight train when I was riding on another train in a contrary direction. In such cases I generally failed to make out what the inscriptions were; so that in the case of a single train I made a series of attempts, and as many failures, and experienced an equal number of disappointments, each resulting in violence, the sum of which amounted to the conscious illness which caused me to cease the efforts.

One of the first things to be observed, in such a panorama as we have now in San Francisco on the corner of Mason and Eddy streets, is that the transition from the platform upon which you stand to the scenes upon which you look is so gradual that it is difficult or impossible to see where the one ends and the other

begins. And to see this is what most all visitors attempt, and many of them soon become vertigoed and even nauseated. Here again, by way of explanation, we have only to note the series of attempts to do a difficult thing, a series of failures, and, consequently, disappointments, each of the latter resulting in violence, the accumulated sum of which amounts to the illness terminating the series of fruitless efforts.

It sometimes happens that, when motion is observed in an object which we habitually believe to be fixed, we interpret the phenomenon as due to our own movement, and have, in fact, subjective sensations of motions in such cases which are attended with all the consequences that follow objective sensations of motions of the same kind. That is to say: There occurs then the appropriate vascular adjustment to that motion. But there being no motion of the person, the vascular adjustment amounts really to a vascular disturbance; and this case of adjustment without motion is equal to the case of motion without adjustment. The illness seeming to be optical vertigo is really due to vascular disturbance complicated with the effect of disappointment incident to the unexpectedness of the event.

Optical vertigo is a variable quantity in the constitution of sea-sickness. With some it is the chief item. This was the case with a distinguished naturalist who, on a late voyage, told me that his sea-sickness almost subsides and he can get about the deck quite well when night comes on. To exclude optical vertigo the eyes, of course, are to be kept closed.

The late and eminent Dr. George M. Beard determined\* that when persons are put into the trance they are entirely exempt (when restored to consciousness) from the dizziness and nausea that ordinarily result from such tests as those to which Professor William James subjected the two hundred Harvard students. Dr. Beard said: I have no doubt whatever that sea-sickness could be cured entirely by putting persons into trance.

The experiment had been put to practical tests by a New York clergyman, who met with apparent success on shipboard before the date of Dr. Beard's experiments.

According to the theories already offered, it must have been observed that the primary disturbance from which motion-sickness proceeds is *peripheral*. And that this peripheral disturbance gives rise to an impulse which is transmitted along the vaso-

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\*Am. Jour. Otology, vol. 4, No. 4, page 253.

sensory nerves to the vaso-motor center and there serves as a stimulus in response to which there occurs a series of events the final of which are those symptoms which, when they emerge into consciousness, prove to the person that he is sick.

Not only must the primary disturbance give rise to an afferent impulse, but it requires a variety of other afferent impulses to make us conscious that we are sea-sick. And I scarcely doubt that the earlier apparent impulses, emerging into and affecting consciousness, serve as stimuli in response to which one's share of sea-sickness is increased greatly beyond what it would be if such earlier impulses did not thus set up a continuation in the evolution of the sea-sick phenomena.

It is a distinguishing peculiarity of the trance state that *peripheral impressions do not emerge into consciousness*. Motor activity in the trance state is always ideo-motor, never sensorimotor. (I refer only to action of the voluntary muscles.)

The suggestion of the operator never emerges into consciousness of the subject; but it serves as a stimulus in response to which a subjective sensation or group of subjective sensations emerge into his consciousness. And this group of subjectives is followed by all the consequences that would attend a similar set of objectives.

For example: Subject is told to drink vinegar; a glass of water being put to his lips. The appearance assumed by his face is that which generally associates itself with drinking vinegar. But as he is only drinking water, it is plain that the gustatory sensation of vinegar is subjective, evolved into consciousness in response to the suggestion, but neither the suggestion nor the gustatory sensation of water emerged into consciousness.

This view is entirely consistent with *all* the trance phenomena. A further showing, I think, would be superfluous.

I will just mention another case, however, which is typical, and interesting on account of its familiarity, and because it shows how similar are the dream and trance states and activities. Our case is a type of a class of dreams. Many of us have once, or oftener, had a dream in which there was a gunshot report associated with an appropriate group of subjective sensations, such as could have had their origin in the oft-repeated impressions of a class of newspaper items. The dream seeming elaborate is, however, short, and is followed by awakening; *then* the real objective character of the shot emerges into consciousness for the first time.



The shot of the dream and the group with which it was associated were all subjective. The objective impression reached the brain, of course, but the subjectives evolved by it reached consciousness, while the objective impression was detained somewhere short of a consciousness until the person had awakened.

As in these dreams, so in the trance state, objective impressions do not emerge into consciousness, but *may* serve as stimuli in response to which subjective sensations emerge into consciousness.

Accordingly, as a person in the trance state cannot be made sick by motions of third class, I conclude that it is because the seat of consciousness, and possibly other brain centers, are in the trance state closed to objective impressions.

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### COMPARATIVE ANATOMY.

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[Essay read before the Medical Society of the State of California.]

Comparative Anatomy is a science of modern growth.

The Aesclepiades, Democritus and other physicians of ancient times, clearly comprehending the close relationship existing between all mammalia, and restrained by popular prejudice from direct investigation, made use of Comparative Anatomy as a stepping stone whereby they might obtain a more correct knowledge of Human Anatomy. It was studied as a means—not as an end.

During the revival of science in the middle ages the anatomist, no longer shackled by ancient superstition, demanded more accurate investigations.

Accordingly the dissection of the human body was vigorously prosecuted and the rewards were many and brilliant—so brilliant that Comparative Anatomy, no longer of service as interpreter, was cast aside and neglected. The body was no longer a mysterious entity.

The discoveries of Mundinus, Lacuna, Levasseur, Tesalius, and Harvey proved it to be a mere machine, composed of levers, pulleys and powers, and digestive and circulatory systems, which acted by natural laws. They demonstrated the wonderful precision with which nature adapts means to ends, and showed how every organ, muscle and nerve has its certain peculiar

function, and how many parts were combined in the formation of a perfect whole.

In addition to these, certain useless appendages were found—some the remains of a foetal state—others without any apparent reason for their presence. Cuvier and his pupil Mecksel, who were the first to treat Comparative Anatomy as a distinct science, soon proved those appendages, so useless in man, to be the analogues of most important animal structures. Lamarck, at the beginning of the present century, brought forward his theory of the variation of species, now known as Evolution. Comparative Anatomy was still in its infancy, and his theory could not be substantiated by adequate proof.

Besides, man, striving to obey the injunction “*Know Thyself*,” studied himself mentally and physically, and so fast was the progress forward, and so easily were problems solved and obstacles overcome, which, to those of a former age, had seemed insuperable, that he became enamored of his own greatness, and believing himself to be fashioned in the image of God, would not acknowledge his relationship to the brute creation. Even Agassiz, to whom the theory of evolution is indebted for many of the anatomical facts upon which it rests, ardently advocated the doctrine of successive creation of higher organized beings. He clearly recognized variation within species and the close relationship between early and simple forms, and those higher and more complex, but, knowing that if he advocated relationship among the lower classes, he must among the higher, and, believing that man was mentally so superior to the quadrumana as not possibly to be contained in the same class, though physically this connection was highly probable, he preferred to attribute their present condition to special creations rather than to gradual evolution.

The proofs of relationship are by no means confined to these useless remains, but all the systems and organs of the different species are wonderfully alike, being developed on one plan, with only such modifications as their ways of life and peculiarities of progression demand.

An excellent method of explaining the essential features of evolution is by comparing it to a tree with diverging branches. The terminal buds represent the living forms that now inhabit the earth; while the many branches, on whose ramification these buds depend, are the ancestors that lived in other ages and the

traces of whose remains are found, stamped in the rocks. The trunk, partaking of the characteristics of its many offspring, fitly represents the foetus, for in this foetus are found many parts which do not exist in the breathing animal. During its short life *in utero*, it seems to pass through the many changes of structure that were slowly undergone by its ancestors during many thousand generations. Hence we must look to the foetus for an explanation of the many changes our bodies have undergone. While the demonstration will not be perfect, there will be much developed bearing out the theory of evolution. After tracing the development of the foetus through its different stages, I shall briefly describe the nervous, osseous, muscular and genito-urinary systems, endeavoring to point out the similarities in and explain the differences between the different species.

#### DEVELOPMENT OF THE FETUS.

All vertebrata are developed on one plan. The ovaries of the female extrude ova which are vivified on encountering the spermatozoa of the male. The period of gestation, i. e., the length of time from the impregnation of the ovum till it is brought a living breathing being, differs in different animals, all occupying a certain period in this way. During this interval the formless mass of "protoplasm," by natural laws, is being evolved into definite shape, but, before it attains this, it must pass through original types. In the ovum of every animal there is a yelk surrounded by its membranes. Immediately after impregnation the yelk undergoes a process of segmentation and multiplication, first dividing into two, these two into four, the four into eight, and so on indefinitely, in geometrical progression, each subdivision or cell having a nucleus. This agglomeration of nucleated cells is called the *mulberry mass*. The globules on and near the surface become flattened and thickened, forming the blastodermic membrane. In that portion from which the foetus is to be evolved there is an aggregation of cells—the *germinal disk*. In this the first trace of the embryo appears as a faint streak, the *primitive groove*, containing a delicate fibril, from which the spinal cord is formed. There soon appear, on either side of this primitive spinal cord, small quadrangular disks in which cartilage is developed—to be further changed into the spinal column.

The blastodermic membrane, formed in the manner described

separates into an external and an internal layer. In a later stage of development, between these two, a third layer is formed and from this the different organs, and, with the exception of the nervous, all the systems constituting the body are produced. From the outer layer is developed the nervous system, and the epidermis. From the inner or mucous layer the mucous membrane lining the digestive tract.

The different phases in the development of the ovum closely resemble permanent forms among the invertebrata. The condition of the ovum immediately after extrusion is perfectly analogous to the most primitive form of animal life, viz.: the monera or the lowest of the protozoa. The monera, like the ovum, has a clear and dense layer—the ectosarc, and an inner granular layer—the endosarc or yolk.

It is propagated by a process of segmentation analogous to that of the ovum: the original cell or individual divides and multiplies, but instead of these new cells uniting to form a higher organism, as is the case with the ovum, the sac enclosing them bursts and they are freed as separate individuals. However in the colenterata, a group of the metazoa, this stage of perfection is reached. The original cell multiplies, the new cells unite and form a sac composed essentially of an outer blastodermic layer—the ectoderm, and an inner layer—the endoderm; a third intermediate layer, the mesoderm, may or may not be formed, depending on the amount of body development. At this point growth ceases and the animal is matured. Through the unclosed end of the sac, it receives nourishment, the food being digested by the endoderm, while progression depends upon the amoeboid movements of the ectoderm.

The next step in the development of the ovum is the formation of a spinal column, and this marks the line of division between the invertebrata and the vertebrata.

This line of demarcation, however, is not so sharp as was formerly supposed. In fact recent investigations have almost bridged over the existing gap. While no definite link connecting these divisions has been found, sufficient proof has been brought forward to show that some of the higher invertebrata possess many points in common with the lowest vertebrata, especial stress being laid on the resemblance of this stage to the embryo of an ascidian which possesses a rudimentary spinal column in the notochordal or unsegmented state. If the foetus

of one of the higher mammalia is examined at this stage it will be impossible to distinguish any part which definitely indicates the final result. All go through the same stages of development till the primary parts are evolved; then they branch, each assuming the characteristics of its ultimate form. In its different phases it resembles successively certain of the lower vertebrata. Those that are most marked will be pointed out in the description of the different systems.

#### NERVOUS SYSTEM.

In the invertebrata there is no brain, its functions being performed by connected ganglia, the analogue of the sympathetic system of man.

In the vertebrata the ganglia in the cephalic portion of the spinal cord become excessively developed, and the surrounding vertebræ are broadened and flattened, enlargening the cranial cavity sufficiently to contain the bulk of nervous tissue. In all animals there exists a direct ratio between the size of the spinal cord and the amount of muscular tissue to be supplied. This is forcibly illustrated by the enlargements found in the spinal cord at the points of origin of the brachial and sacral plexuses of nerves. It also bears a relation to the brain—in length and size varying inversely as that organ. In the lowest classes where mere animal life predominates over intelligence, the brain has scarcely emerged from its ganglionic condition and the cord entirely fills the canal. In the higher forms, as the brain becomes more developed, and takes upon itself functions previously residing in the cord, the latter organ contracts both in length and size till in man it only reaches the second lumbar vertebra and lies loosely in its canal held in position by the *ligamentum denticulatum* and surrounded by its *dura mater*, *pia mater* and *arachnoid*. These coverings extend into the sacrum as the *filum terminale*, containing in its meshes a small amount of atrophied nervous tissue.

The cord terminates in a plexus of nerves characterized by long roots, their length varying directly as their point of exit from the canal, those passing out of the lowest sacral foramina being longest.

#### DEVELOPMENT OF THE CORD.

In the development of the foetus, as previously described, the first structure that appears is the cerebro-spinal axis. It is characterized by several ganglionic enlargements, and as yet

has no bony envelope. This condition of the nervous system corresponds to that found in the invertebrata.

The laminæ dorsales assume the shape of rudimentary vertebra, are connected together and form the spinal column. The cord completely fills this canal and the ganglia of the cephalic portion are so modified as to assume somewhat the appearance of a brain—a condition that closely resembles the nervous system of the lower vertebrata. A canal, filled with fluid, occupies the center of the cord throughout its entire length. In the adult, this canal is almost obliterated by the endogenous growth of neurine.

In the process of development the cephalic portion of the cord increases at the expense of the canal. The cord shrinks, retreats up the canal drawing the nerves after it, but leaves its sheath and a remnant of nerve substance behind. Gray believes that this disparity in the size of the column and cord is due to the fact that the growth of the one is more rapid than that of the other. Such a theory is scarcely tenable when the facts relating to the *filum terminale* and nerve roots are considered. At the third month the cord and the nerves arising from the cord, and the spinal column with its foramina transmitting these nerves, have assumed definite shape. The cord reaches to the bottom of the canal and the nerve roots proceed horizontally outward through their respective foramina. At the fourth month the cord reaches the middle of the sacrum, and the nerve roots, slightly elongated, proceed obliquely downward in order to reach their point of exit. Finally, at the ninth month, when the cord is only two-thirds the length of the canal, the roots proceed directly downward to the lower cervical, the distance of one or two vertebra, the dorsal still longer, while those of the lumbar and sacral regions go the length of five and six vertebrae before making their exit. Moreover the fact that the *filum terminale* reaches the bottom of the canal, and still encloses a slight amount of atrophied nerve substance, scarcely admits Gray's explanation. We must necessarily conclude that, while the bony column and useless envelope grow equally, the development of the most important structure is retarded.

#### DEVELOPMENT OF THE BRAIN.

The brain is developed from the cephalic extremity of the cord by four ganglionic centers. These ganglia are composed of vesicular nervous substance situated in adjacent tracts of the

spinal cord. These four divisions are very evident in the lower animals, but in the higher mammalia they are obscured by the greater complexness of brain structure. Primarily, each division possesses the central canal. Its continuity is interrupted by increase of nerve tissue, yet the remains exist, and are recognized in anthropology as the ventricles, iter and infundibulum. In addition, each division is characterized by a crus formed from the tract and a superincumbent mass from the vesicular enlargement.

The medulla oblongata, pons varolii and cerebellum are evolved from the lowest primary vesicle. From the next division the optic lobes, pineal gland, pituitary body and corpora quadrigemina are developed. The third division includes the crura cerebri and cerebral hemispheres; while the terminal forms the olfactory bulb with its crura or roots. That the last is a true division is proved, not only by its size in lower animals, such as the dog, rabbit, etc., but still more certainly by its minute anatomy. It differs from all other cranial nerves in its structure, origin and distribution. It is not surrounded by a sheath and goes through no canal, but lies on the cribriform plate, giving off numerous filaments that pass to the roof and sides of the nose. It does not arise from a ganglionic mass; the so-called roots being the crura, whilst its bulb is the primary vesicle. Finally, its structure resembles that of the brain, being almost entirely composed of grey vesicular nervous substance. Gray says "It may be regarded as a lobe or portion of the brain, pushed forward in direct relation with the organ to which it is to be distributed. The lateral ventricles are continued downward into the lobe, the crura remaining pervious. Thus, all the characteristics of a division are present, viz.: Crura or roots, a bulb—the primary vesicle with its contained cavity. This primary division of the brain is borne out by a consideration of its functions. The medulla oblongata, pons varolii and cerebellum preside over muscular co-ordination and animal life. The reasoning powers are situated in the cerebrum while opposite kinds of sensory perceptions reside in the optic and olfactory lobes.

#### OSSEOUS SYSTEM.

The simplest skeleton that can be conceived is one composed of vertebræ supporting two canals—a neural and visceral, the one containing the spinal cord, the other, primarily, the vascular system. From the body or center of each vertebra neural pro-

cesses project backward, inclosing the neural canal, behind which is the neural spine. On either side costal processes, reaching outward, enclose the greater part of the anterior canal. This anterior or visceral canal is closed anteriorly, by the hæmal processes projecting from the anterior aspect of the body and also by a hæmal spine.

There is a remarkable resemblance in the development of the spinal column between the embryonic and taxonomic series. In the development of the ovum the spinal column first appears in the noto-chordal state—a condition which is permanent in many of the lowest vertebrata. Next, cartilage is developed—a condition analogous to that found in sharks, etc., while the bony segmented condition is reached only in advanced stage of embryo and in the higher vertebrata.

It will be impossible to give, in detail, the morphological changes by which the complex, highly organized human skeleton was evolved from this primordial simplicity of structure. I can only indicate the general result of the investigations commenced by Cuvier and Oken, and most ably conducted by later comparative anatomists, most prominent of whom is Owen.

The skull is composed of probably four vertebræ. In the complex cranium of larger brained mammals this condition is somewhat marked, but on careful examination, all the parts of the vertebræ are recognizable. The first of the cranial vertebræ is the occipital.

Its foramen magnum is the opening of a vertebral canal. The condyles represent the articular processes of a vertebra; the foramen lacerum an inter-vertebral foramen; while the attachment of the ligamentum teres and muscles proves the occipital protuberance to be the homotype of a spinous process. The other cranial vertebræ assisting in the formation of the skull are the parietal, frontal and nasal.

Their component parts have been carefully traced out by Owen, who has classified all the cranial bones in groups corresponding to their parent vertebra.

The costal and hæmal processes of the occipital are displaced downward and evolved into the scapula, the costal forming its body and the hæmal its coracoid process. These form an arch from which the upper extremity proceeds as a radiated appendage. This is more clearly shown by a reference to fishes in which the two processes form the occipito-hæmal arch, the



cartilaginous appendages of which project outward forming fins. These, beyond all question, are analogous to the arms.

The clavicle is formed from the displaced hæmal process of the atlas. This process is suppressed in all the other cervical vertebræ, but is again apparent in the dorsal, forming the costal cartilages. The costal processes of these vertebræ are elongated into ribs while their hæmal spines consolidate in front to form the sternum. The processes of the sacral vertebræ are modified in a manner analogous to the cranial. The costal process of the first and the hæmal processes of the second and third unite and form the innominate—the ilium being from the first, and the ischium and pubes from the second and third.

In man, even till adult life, these divisions remain ununited. From this arch there arises a series of radiated appendages analogous to those of the scapula.

#### COMPARISON OF THE UPPER AND LOWER EXTREMITIES.

The homotypical relation between the bones of the upper and lower extremity is shown by the following table:

Humerus.	Femur.
Ulna.	Fibula.
Radius.	Tibia.
Trapezium.	Internal cuneiform.
Trapezoid.	Middle cuneiform.
Os-magnum.	External cuneiform.
Unciform.	Cuboid.
Scaphoid.	Scaphoid.
Semi-lunar.	Astragalus.
Cuneiform and pisiform.	Os-calcis.

This similarity is so evident that it needs little explanation. The proof that the radius is the homologue of the tibia rests on comparative anatomy. In quadrupeds they are placed alike on the inner aspect of their respective limbs. The manner in which the radius is transposed from the outer side in man to the inner side in animals is easily understood when it is remembered that the anterior extremities, held in a prone position, are used in progression. This also serves to explain the anomalous position of the component parts of the hand and foot. In man they are reversed, i. e., the trapezium, and the carpal and metacarpal bones, and phalanges of the thumb are external, while the internal cuneiform and corresponding bones of the big toe

are internal. Undoubtedly, while the arms assisted in locomotion, the hands were held in the same position that the feet now are, but on their liberation, with their new functions, they assumed their present reversed position. In ungulata, where movement is limited to flexion and extension, the ulna and fibula are so diminished in size that, in some animals (horse, etc.), they are articulated with the radius and tibia more resembling appendages than separate bones.

Throughout the whole vertebrate series there is a wonderful unity with regard to the number of bones composing the limb. In the ungulalates, of which man is the highest type, and rat and sloth the lowest, the arrangement and number of bones are the same. Comparing the posterior extremities we invariably find a long bone corresponding to the femur, articulating with two smaller bones—the tibia and fibula. These form the leg. The tarsal bones are arranged in a manner analogous to that of man, the os-calcis projecting backward and serving for the attachment of muscles. The only deviation from the plantigrade foot of man is the digitigrade foot of the carnivora. In these the tarsal and metatarsal bones are lifted from the ground, the animal resting its weight upon the phalanges. This deviation is the first step toward the condition found in ungulates.

In these the femur, tibia and fibula (rudimental) assist in forming the thigh and ham bone, the leg being the consolidated, elongated metatarsal bones and phalanges. The tarsal bones, constant in number, bear their usual relation to the tibia, the apparent removal from their normal position being due to the elongated metatarsals.

In the horse, the leg or cannon bone represents the middle metatarsal; on either side are found the second and fourth in a rudimentary condition. The first and second phalanges are raised, the third rests on the ground. Its nail is modified into a hoof.

In ruminants the cannon bone is formed by the coalescence of the second and third metatarsals, the first and fourth hanging down as false hoofs. The arrangement of the phalanges is the same as in the horse, except that the phalanges of the fourth, as well as the third, are continued down and assist in forming the hoof.

#### MUSCULAR SYSTEM.

Movement depends entirely on muscular action, the bones being but levers through which the muscles act. Therefore we

would expect to find the muscles adapted to the movements in which they assist, and that those portions of the body which have a special action, would be supplied by peculiar muscles. This is not strictly correct. For instance, while the action of the arm materially differs from that of the leg, the muscles supplying the one are merely modifications of those supplying the other. So perfectly does the one resemble the other that several muscles of the one have the same or the slightly modified name of the other. The iliacus has its origin in the venter of the ilium, in a manner similar to the subscapularis from the subscapular fossa, the one being inserted into the small trochanter of the femur in connection with the psoas, just as the other has its insertion in the lesser tuberosity. The glutei correspond to the supra and infra spinati, as proved by their similar origin and insertion. As the biceps brachialis derives one of its heads from the scapula and the other from the humerus, so the biceps femoris arises by its long head from the innominate and by its short head from the femur. In like manner the quadriceps extensor is related to the triceps. So evident is this that Cruveilhier named it the triceps femoralis. The quadriceps, as described by anatomists, is composed of four muscles, the rectus, crureus and two vasti. That the crureus is described as a separate muscle is simply owing to a refinement of anatomists. So inseparably is it connected with the vastus internus that they are described as one muscle. In the same way the homotypy of the following muscles are shown, remembering that the bones of the forearm are in a reversed position:

Tibialis anticus.	Extensor primi inter pollicis.
Ext. prop. pollicis.	Exten. secun. inter pollicis.
Ext. commun. digit.	Exten. commun. digitorum.
Gastroc-nemius.	Flexor carpi ulnaris.
Popliteus.	Pronator radii teres.
Flexor long. digit.	Flexor profundus digit.
Tibialis posticus.	
Peroneus longus.	Extensor ossis metac. poll.
Peroneus brevis.	Extensor carpi ulnaris.
Ext. brev. digit.	
Abductor pollicis.	Abductor pollicis.
Flexor brevis digit.	Flexor sublim. digit.
Abductor min. digit.	Abductor min. digiti.

Lumbricales.	Lumbricales.
Flexor brev. pol.	Flex. brev. pollicis.
Adductor pol.	Adductor pol.
Flex. brev. min. dig.	Flex. brev. min. digiti.
Interossei.	Interossei.

The explanation of this relationship is simple, if it is assumed that, in some past state, the arms were used in progression and that as, by degrees, the upright position was assumed, the anterior extremities, no longer acting as supports, were by adaptation, evolved into their present condition. Not only does the analogy between the upper and lower extremities render this probable, but a still stronger argument is the close connection existing between the muscles of the arm and those of the fore leg of mammals. So much do they resemble that anatomists have, with few exceptions, applied to the muscles of mammals the name of the corresponding muscles of man. Their origin, direction and size vary within slight limits, depending greatly on their use. The muscles of the shoulder joint are persistently retained through the whole mammalian class, being due to the fact that, in all, their actions are similar. In front and below there is a pectoralis major and minor, subscapularis and deltoid. They are inserted into the humerus in a manner similar to the corresponding muscles of man. They differ from their homotype in being much larger and stronger, though their extent of origin is less. In this way strength and solid support are gained, but freedom of motion is limited.

The muscles of the arm are represented by the biceps, triceps and coraco-brachialis. The triceps in some quadrupeds has four heads, being re-inforced by a slip from the latissimus dorsi. It is in the forearm that differentiation of muscles is most marked. In man, the forearm has four sets of muscles, corresponding to its four movements, viz.: Flexion, extension, pronation and supination. In the ungulata the motion of the fore-leg is limited to flexion and extension. The pronator is wanting, but the modified supinator is blended with the long and short extensors of the radius, forming the extensor carpi radiale. In the unguiculates, the pronators are especially well developed, the paw resting altogether in a prone position. To enumerate the muscles of the posterior extremity of quadrupeds would be simply a repetition of those of man. The only variation is in size. Man maintains the upright position by the action of the

glutei and the psoas magnus, and for this reason, their development is much greater than it is in quadrupeds. The psoas parvus exists in a rudimentary condition, being present in only one of twenty subjects. In quadrupeds the parvus greatly exceeds the magnus in size, as it is one of the most important muscles which assist in the movement of the tail. In the leg, also, the relative size of the muscles is reversed. The gastrocnemius is reduced to a slender fasciculus and assists the flexors while the plantaris which, in man, is either absent or in a rudimentary condition, is exceedingly well developed. In both extremities the flexors and extensors vary with the number of toes and formation of the foot.

The muscles of the human body are uniformly present in quadrupeds, though their form is somewhat modified. They, however, have one muscle peculiar to themselves. This is the musculus carnosus, covering the whole body and lying just beneath and attached to the skin. This exists in a rudimentary condition, only, in man—being represented by the platysma myoides and some of the facial and auricular muscles. These auricular muscles present certain peculiarities. In structure they are tendinous rather than muscular; they are placed in three pairs arranged in the same manner as is the auricular portion of the musculus carnosus of animals. They are in a rudimentary condition, and unless specially exercised, have no power of motion over the ears.

Owen says that primeval man probably had such power, but, as he became more civilized, it was lost. If this be true, and it certainly is probable, it follows that all other rudimentary appendages, muscular and otherwise, were likewise of importance. We should conclude that in times past the cocyx was elongated and turned outward, the psoas parvus being the principal muscle that moved it; that, like quadrupeds, our ape-like ancestor walked on all four limbs, the plantaris muscle being the principal muscle engaged in raising the hind legs. That like birds, he once had a third eyelid, the only remains of which now present being the plica semilunaris.

#### GENITO URINARY SYSTEM.

The genital and urinary systems are so closely related that they may be advantageously studied together. This connection is apparent, even in the mature animal, but for its demonstra-

tion, their foetal development must be studied. This will not only prove that they have their origin in structure closely related, but that the sexual apparatus of the male and that of the female are merely differential forms of the same primary condition. During foetal life excretion is carried on through the primordial kidneys or Wolffian bodies with their excretory ducts. Behind and closely connected with the Wolffian body is the genital gland. This also has an excretory canal—the duct of Muller. The Wolffian bodies are developed early in foetal life as a mass of cells in close relation with the vertebral column. These cells are organized into short parallel tubes, at first straight, but, afterward, convoluted, emptying into the urinary duct. In structure, they closely resemble the secondary or permanent kidneys and assume their function; the transitory, ceasing to act as excretory organs, become partially absorbed, the remains assisting in the formation of the genital system. In early foetal life the urachus is continued into the rectum, but after its dilatation in the process of bladder formation this opening is gradually closed. This condition corresponds to that of birds in which there is no bladder, its place being supplied by an expansion of the rectum into which the ureters and genital ducts empty.

The kidney of the foetus consists entirely of the medullary portion—the cortical layer and fibrous investment being absent. It is composed of separate lobules and, in form and structure, is entirely analogous to that condition of the kidneys found in the ox and other ruminant animals.

Until the third month of foetal life no feature is presented characteristic of sex. Both alike possess the primordial kidney and genital gland with their ducts, and, from these, the whole genital apparatus, both male and female, are developed. At the beginning of the third month these organs commence a series of changes and differentiations by which they are evolved into distinct and opposite kinds of organs. The genital glands are developed, in females into ovaries, in males into testicles, while the primary kidney forms the stroma of the one and the vas deferens and epididymis of the other. In the female the Mullerian ducts are separated in their upper halves forming the fallopian tubes; their lower united halves being evolved into a uterus and vagina. This method of formation explains the anomaly of the bifid uterus not infrequently met with in the human female.

In certain lower mammalia the ducts do not unite, except at their lower end. The uteri are distinguished from the vagina by an annular constriction, marking the os, and a secular dilatation representing the body. In the higher mammals the ducts have united to form one vagina, but the uterus remains bifid except at its outlet. Its two cornua project up, enclosing large cavities, and terminate in the fallopian tubes. In the human female these cornua normally exist in a rudimentary condition, but they may be elongated and expanded so as to assume the bifid condition.

In the male foetus all but the lower ends of the Mullerian ducts disappear. These, as in the female, unite and form the *sinus pocularis*. This cavity so closely resembles the uterus in its origin, shape and function (the semen emptying into it), that Weber described it as the *uterus masculinus*. It is about a quarter of an inch long and extends backward beneath the middle lobe of the prostate gland. At the upper angles or cornua the ejaculatory ducts empty in a manner similar to the entrance of the fallopian tubes into the uterus.

In the viviparous animals the ovary of the female and the testicle of the male remain connected with the kidney until near the time of birth, when both descend, the one to the pelvis and the other to the scrotum.

In the oviparous both retain their connection with the kidney.

A discussion of the circulatory, respiratory and digestive systems would be extremely interesting, and would be still stronger proofs of the value of Comparative Anatomy as a mirror by which we can at least reflect the most salient features of our growth and development. Were not the length of this essay necessarily limited, it would be extremely interesting to show that all systems are but the modified forms of more ancient types; that the respiratory organs are closely related to those of the saurians, all changes being indicated in the progressive development of the foetus; that there is a close relation between the aortic arches of the foetus and the permanent condition found in the fishes.

I trust, however, that enough has been said as to so interest the members of our profession, that they will leave the well beaten, dusty and dry path of human for the less known but more interesting study of Comparative Anatomy, where so much yet remains to be discovered, and so many doubtful points to be settled.

**MALPRACTICE—IS IT THE FRUIT OF POPULAR IGNORANCE OF MEDICAL SUBJECTS ?**

By N. S. GIBERSON, M. D.

(Read before the Medical Society of the State of California.)

*Mr. President, Ladies and Gentlemen of the Medical Society of the State of California:*

Knowledge, like self-defense, was God-given as the handmaiden in that unwritten code whose principles were implanted by the fiat of creation. But the fates of the twin-born were exceedingly diverse. For, while the written code of jurisprudence entwined itself around the central instinct of human nature, and rose with it to fair and goodly proportions, the first fruits of the tree of knowledge fell blasted at the feet of him who reached forth his hand to grasp the unknown. And to the present day, the blight which descended upon offending Adam, has been sedulously nursed by a conservative element, the sole object of whose existence is to repress the expansion of the human intellect.

Our public schools have been termed the palladium of liberty, and the all-sufficient guarantee against the encroachments of ignorance, which, alone, could sap the foundations of our social polity. Those who heard the discussion during the last hours of this convention, of the sanitary surroundings of some of our San Francisco schools, will question whether the chances for intellectual improvement are not more than counterbalanced by the physical risks entailed in an attendance of thirty hours per week, in such noxious quarters. But while the physical frames of these little ones are being subjected to the process which will render them generously receptive of the zymotic germs, let us glance at the course of study which forms their mental aliment, and which is popularly supposed to nerve and brace them for the struggle of life. The fashion, at present, is to absorb the time of pupils, particularly those above the grammar grade, in the so-called "disciplinary studies," such as mathematics, the classics, and speculative philosophy, to the practical exclusion of any but the most meagre attention to the useful and practical branches which inculcate the lessons of thrift and practical experience. The term "Physiology," as taught in the public schools of this country, is an absurd travesty of the injunction "Know Thyself."

There are absolutely no text-books which deserve the title of "Human Physiology," for that comprehensive subject is glided



over with a prudery which sends us often to the title page, to see if we are not possibly in error as to the author—but no—there in fair round characters is the name —— M. D. Their discussions of the commonest topics are generally perfunctory, unscientific, and utterly devoid of system. They are poorly illustrated, and cuts of important organs are, in the great majority of cases, anatomically incorrect. From their pages are carefully eliminated all allusions to the phenomena of the reproductive apparatus, and upon the subject of genito-urinary troubles they are equally coy. In one rather pretentious modern treatise, we find urination referred to as a “secretion,” and in another, the male organ of copulation is obscurely identified as the “urethral tube.” This sense of false delicacy is mischievous in the extreme. It causes the fond mother to hesitate to impart to her daughter a knowledge of the phenomena which will mark her advent to the functions and responsibilities of womanhood; and keeps the enthusiastic father from discussing with his first-born the lessons of personal experience, and from imparting to him a timely warning of the chasm which may yawn hideously before his unsuspecting footsteps. Hygiene, sanitation—all the cognate subjects—come in for the same treatment. The children thus graduate in ignorance, withering, blighting, accursed ignorance of the most primitive laws of their existence. They, in their turn, produce and multiply, and are called to legislate on the great health-questions which modern civilization has brought to the fore. Behold your sanitary legislator! He may laugh at priestly superstitions; he may defy his maker; he may be able to expound the laws of his country, or to hold spell-bound a scientific audience; albeit he will swallow the disgusting potions of the patent medicine vender, literally ad nauseam, and will gulp down the prescriptions of his family physician, with a faith which is equalled only by his ignorance of their contents, and a confidence as touching and sublime as that of the devout Hindu who seeks “Nirwana” through the digestive tract of an alligator. Discussing the subject of popular ignorance in past time, Dr. John W. Draper informs us sympathetically that “All these delusions, which occupied the minds of our forefathers, and from which not even the powerful and learned were free, have totally passed away. The moonlight has now no fairies; the solitude no genii; the darkness no ghost, no goblin. There is no necromancer who can raise the dead

from their graves—one who has sold his soul to the devil and signed the contract with his blood—no angry apparition to rebuke the crone which has disquieted him. Divination, augury, interpreting of dreams, oracles, sorcery and astrology, have all gone.” There is a grim humor in this sentiment which becomes positive irony when we bear in mind that within five minutes walk of the library of the distinguished author might be found a score of astrologers, mind-readers, magnetic healers, and innumerable other specimens of the genus mountebank, many of whose members work their way deeper into the public pocket, if not into the public confidence, than the properly graduated physicians around them; and who threaten to drag the legitimate practice of physic to the level whence it sprang, viz.: magic, incantations, invocation of saints, and the Pandora’s box of the professional juggler. Since the discovery of steam heralded a new era in the world’s progress, it has been a favorite theme of politicians, scientists, and of those individuals in general who were impelled by necessity or choice to cater to the public taste, to grow enthusiastic over the rapid approach of that universal, mental and physical emancipation which must be the near consequence of such phenomenal activity. The victories of peace were soon to make war impossible. The glad-some light of knowledge, rivalling the sun at noon-day, was to banish even the shadow of obsolete illiteracy from the face of that fair classic, the human intellect. Then indeed was the rich harvest of the millennium to be ripened for the sickle; and the enthusiast waited and watched while the newly evoked demon revolutionized the world’s production and transportation; to be relegated in his turn to a secondary position by the power which had been conjured from “High Olympus,” by the genius of Franklin and Morse, to its royal servitude of transmitting written and spoken thought. We may safely assume that the tide of innovation has reached its flood so far as the present generation is concerned.

All of the ancient landmarks have been obliterated, and the tremendous strides which have been accomplished in the physical world, have been rivalled by a mental advance equally portentous. Nowhere has this great upheaval exhibited its influence more profoundly than in the department of popular education. At no period in the history of the human race has secular knowledge been so widely diffused. To an elaborate

free school system has been practically joined the fiat of compulsory education, among the nations of enlightened christendom, by the enacting of disability statutes on the labor of young children. All this is matter of pride, nay of gratulation; but in the presence of the practical, everywhere, we are privileged to ask the question, How far have these fervid anticipations been borne out; and what is the nature of the impress which has been stamped upon the public character by the new and yet unproved forces around us? Let us look beneath the surface of this busy ant-hill, and discover if we may, whither all this activity is tending; if our exotic of nineteenth century civilization be not respiring an atmosphere of pure oxygen. Our comparison will be facilitated by a long retrospective view, which is rich in historic materials. Passing for lack of space that Mecca of the medical pilgrim, the shrine of Hippocrates and Galen, we will wear our

“Sandal shoon and scallop shell”

still anterior in point of mythologic time to the days of the “Serpent God,” whose wisdom at least, we are yet faith to borrow. Let us fix the pedigree of our remote ancestors, as given by one of the distinguished genealogists of the eighteenth century. He says:

“At first, formed naked both in body and mind, man found himself thrown, as it were by chance, on a confused and savage land; an orphan, abandoned by the unknown power that produced him, he saw no supernatural beings at hand to warn him of those wants which arise only from his senses, or to instruct him in those duties which spring only from his wants. Like to other animals, without experience of the past, without foresight of the future, he wandered in the depth of the forest, guided only and governed by the affections of his nature; by the pain of hunger he was led to seek food, and provide for his subsistence; by the inclemency of the air he was urged to cover his body, and he made his clothes; by the attraction of a powerful pleasure he approached a fellow-being, and he perpetuated his race.”

Our child of instinct, slowly and painfully casting the slough of his brutish environment, at length emerges into the morning twilight of the day of reason.

We may trace the first great medico-scientific question—where philosophy and medicine forged the golden links which

have since bound them in an indissoluble brotherhood—to the groves of the “Academy;” to the walks of Him,

“Whom, heaven inspired,

The Oracle pronounced wisest of men.”

Upon the shores of the Black Sea, was discovered a fossil resin left by the receding waves, which possessed the property when vigorously rubbed, of attracting light bodies to its surface. Great was the wonder thereby excited, and the philosophers of the day, little dreaming that the thunderbolts of Jove could be compressed into such a medium, made answer that the body in question was tenanted by a soul, and in the presence of friction that soul was expelled; delegating in its place—perhaps through sympathy for the disconsolate fossil—the smaller objects around.

Thus the humble electron, became the mother, prolific as a Hindu goddess, of that august family which will perpetuate the names of Volta, Galvani, and Faraday, to the end of time. This reply, though not strictly logical, possessed the merit of originality; and the general public did not affect the scientific in those days. This superstitious deference to the unknown, was destined long to linger as the great bar to healthy unfettered investigation, and we find that more than two thousand years later the same cause was assigned for certain phenomena developed in the chemical experiments of the learned Sulzbach. The increase in weight of a certain silver amalgam when subjected to a high temperature was first noted by him, and explained in these words: “This augmentation of weight comes from this, that a spirit is united with the metal; and what proves it is that this artificial cinnabar, submitted to distillation, disengages that spirit.”

This was progress of rather a negative kind; certainly not calculated to reassure the sceptic in the speedy possibilities of human nature. But the days of “spiritual intervention” in matters of science were numbered, and we will only note in this connection the report of the medical faculty of Madrid, as indicating the similarity of contemporaneous thought. The same year which saw the Cross of St. George planted upon the “Heights of Abraham,” witnessed a frightful tumult in the Spanish Capital. Centuries of accumulated filth had so obstructed the streets as to render them well nigh impassable. Some of the city authorities with a boldness amounting to abso-

lute temerity, had publicly advocated the cleaning of the streets, both from a sanitary point of view, and for the sake of convenience. The public raged at this violation of their rights guaranteed by centuries of uninterrupted enjoyment of the debris of a great and sewerless city.

But the city fathers were obdurate. Hampered by no dollar limit, they sought the bubble reputation as the apostles of sanitation, and the conservators of the public health. Prudence finally dictated the reference of the whole matter to that court of last resort, the medical opinion of Madrid. The response, which, strange to say, was unanimous, would have done credit to the famous reply of Omar when called to decide the fate of the Alexandrian library: "*The dirt ought to remain. To remove it, was a new experiment; and of new experiments, it was impossible to foresee the issue. Their fathers were wise men, and must have had good reasons for their conduct. Even the smell, of which some persons complained, was most likely wholesome. For, the air being sharp and piercing, (Madrid is famous for its keen biting winds, which sweep down from the adjacent Sierra) it was extremely probable that bad smells made the atmosphere heavy, and in that way deprived it of some of its injurious properties.*" This at a time when the University of Salamanca boasted that it would tolerate no chair of mathematics within its walls; and rejected as sacrilege the theory of gravitation, and as contemptible, Harvey's discovery of the circulation of the blood. Scarcely a generation since the Presbytery of Edinburgh—then as famous for the richness and variety of its stenches as the good old city of Cologne—wrote to the Home Secretary, requesting the appointment of a day of fasting and prayer, in consequence of the appearance of cholera. Lord Palmerston gravely admonished them that the Maker of the universe had appointed certain laws of nature for the planet on which we lived, and that the weal or woe of mankind depends upon the observance of those laws, one of them connecting health "with the absence of those exhalations which proceed from overcrowded human beings or from decomposing substances, whether animal or vegetable. He, therefore, recommended that the purification of towns and cities be more strenuously carried on, and remarked that the causes and sources of contagion, if allowed to remain, will infallibly breed pestilence and be fruitful in death, in spite of all the prayers and fastings of a united but inactive nation." Hardly

five degrees of latitude north of the metropolis of the United States, in a city under the boasted rule of British civilization, the sound of mob violence still lingers in the air. Her grief-stricken population have taken up arms to defend their homes and firesides against the conspiracy between cold-hearted officials and equally callous physicians to force upon them vaccination first, and then cleanliness, with the preposterous excuse that these simple precautions will avail in raising the dark wing of pestilence, far more certainly than the parading of blessed relics, the midnight pilgrimages to holy shrines, or the penance of bell, book and cradle. Under the very shadow of Bunker Hill Monument, the "prayer cure" flourishes. Hopeless paralytics, whose withered limbs have long since forgotten their functions, literally obey the injunction, "Take up thy bed and walk," as the result of a single invocation. In the city of New York, only a few weeks ago, we read of a bishop being obliged to threaten one of his parishioners with the terrors of the law—not the law of God, for he had invoked that in vain—before he could swerve him from the avowed determination to place the fractured leg of a six-year old child under the treatment of an "inspired professor," who had promised to reunite the fractured bone by the laying on of hands, and the practice of sundry incantations. "*What a piece of work is man; how noble in reason; how infinite in faculties, in form and moving; how express and admirable; in action, how like an angel; in apprehension, how like a God.*" The greatest disability under which the legitimate practice of medicine now labors, is the fact that it has but recently emerged from the medieval rut of past traditions, and unworthy associates. Until Graves pronounced upon himself the immortal eulogium, "I fed fevers," and the genius of Ephraim McDowell threw off the shackles of prescriptive usage, and struck out boldly into the field which has since become the arena of glorious work, there had not been the advance in medical science which was practically to insulate it from popular conception. When the physician, no longer in league with the powers of darkness, or the reader of the stars, disclosed the mystery which enshrouded him, and brought his entire paraphernalia into the light of day, the laity, true to the old instinct, failed to follow him, and turned with regret to the days of gold-headed canes and bag-wigs, and

“ Words of learned length and thundering sound,”

which have passed into history.

Fellow members: Around us may be seen the signs—and their name and number are legion—of a multitude of workers, whose entire stock in trade is the fund of human credulity, superstition and ignorance. Advertising they have elevated into a fine art, and the harrowing details of their miraculous cures crowd the columns of the daily and religious press. The public at large, still clinging fondly to their old predilection for the marvelous, and having no criterion of judgment, become the credulous and unresisting prey of these blatant hypocrites. Reproach a victim of these harpies for his inconsistency in accepting as truthful the absurd statements which in his own department he would have denounced as monstrous, and he will confound you by the reply that it is your own fault. I hear him, with his look of injured innocence, saying: “ This man, whose practice you condemn, is a legal practitioner under the laws of the State of California. By a statute, which was framed expressly in the interests of legitimate medicine, and presumed to embody the practical wisdom of experience and observation, he has been stamped genuine, and turned loose upon the people at large, invested with all the rights and privileges appertaining to a first class practitioner. You complain that public respect, never too high towards the medical profession, is turned to contempt by the blunders and misrepresentations of this class of competitors. Granted; and what are you going to do about it? If you are unable to weed them out, at least have them properly labelled, as the New York State Dairymen label their spurious butter, and then, after having given us fair warning, if we fall into their clutches, it will be our own fault.” The marvellous has abated not a jot of its old attractiveness; the teachings of Gall and Spurzheim have always drawn a much greater following than Huxley's addresses to workingmen. Shortly after the completion of the Arizona Limited R. R. to Guaymas, I was stopping a few days at the pleasant old town of Magdalena. One morning I was called hastily to the bedside of a Mexican woman who was reported dying. I found her on a wretched mat upon the mud floor of a tumble-down adobe building, surrounded by a herd of her sympathizing neighbors, and speechless with the agony of an acute angina pectoris. I administered a hypodermic injection,

and drove the neighbors and dogs into the street. Under the combined influence of the narcotic and improved ventilation, the intense pain rapidly subsided. In a few minutes, the poor woman who had been lying with closed eyes, apparently unmindful of everything around her, suddenly struggled to her knees, and assuming the attitude of devotion in front of me, began to mumble her orisons in her native tongue, which was "Greek" to me. I inquired of a benevolent looking "Padre" what it all meant; and he assured me that, in her estimation, I was a miracle-worker, and that she had offered her prayer of thanks to me, as she would have done to any other saint in the calender, whose intercession had rescued her from impending death. And the good priest, whose knowledge of the world was confined to observations taken donkey-back through a few miles of the valley of the Sonora, and whose only literature was his prayer-book, crossed himself, and debated seriously whether it did not behoove him to follow the invalid's example. This is, perhaps, an exaggerated case; but we need not stray far from home, to find it duplicated a hundred fold.

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#### **ENCEPHALOCELE COMPLICATED BY A FIBRO-CYSTIC TUMOR OF THE OCCIPUT.**

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By H. M. POND, M. D., St. Helena, Cal.

(Read before the Medical Society of the State of California.)

On September 24, 1885, I was called to attend Mrs. M. in confinement. She was several miles away, and I reached my patient just in time to make an examination, and find that some anomaly existed, before a severe and long-continued uterine effort brought about the delivery of the head. The matter that had puzzled me was then clear enough. At the site of the posterior fontanelle was a pedunculated tumor of the size of a small orange, intensely congested, swollen and blackened by pressure upon it during the delivery. The child seemed otherwise healthy, cried lustily and breathed well. Crying did not alter materially the size of the tumor, nor was there any perceptible pulsation in it, but any manipulation of it or any pressure upon it caused evident distress to the child. Examination of the pedicle of the tumor gave evidence that its origin was within the skull, for the fontanelle was widely open, and a connection evidently existed



through it between the contents of the tumor and those of the skull.

At that time, owing to its congested condition, and the great tenderness in it, I could not make a satisfactory examination of the tumor, but advising the parents to let it alone till the child was somewhat older, and promising then to do something for its relief, I left them.

About two weeks later I saw it again, in company with an amateur photographer, and procured the accompanying photographs (the best size his camera afforded), for preservation in connection with the history of the case. At this time I made a more thorough examination of the case, with the following result:

**Family history:** The mother of the child remembered that her mother had a child who was deformed in a similar manner, but lived only a short time, and that her sister's children, both of whom I delivered, had something unusual about the back part of the skull. One of the brothers also had a child with a dark discoloration of the skin in the exact position of the posterior fontanelle. The case of the grandmother, I verified by examination of other friends; the cases of her sister's children were founded largely on imagination, though in one baby the region of the fontanelle was unusually flat; the brother's child had the discoloration spoken of, but I could not learn that the fontanelle was unusually open at birth.

**Size and appearance of tumor:** It was covered by a smooth, shiny, hairless cuticle; was ovoid in shape, its diameters varying from  $2\frac{3}{4}$  to  $3\frac{1}{2}$  inches; the pedicle had an average diameter of about  $1\frac{1}{2}$  inches. The fontanelle was less open than at birth, but the edges appeared to be rounding. The tumor fluctuated under palpation, and at its extreme point was translucent. No pulsation; no increase of volume on crying; pressure gave evidence of cerebral irritation.

The child was evidently thriving. It was fat and hearty, and looked as bright as an average child of that age.

I again urged the parents to be patient a little longer, intending later to aspirate the tumor and apply elastic pressure, but the advice, though agreed to, was not palatably received. Their fear of idiocy was so great that they desired the tumor removed at all hazards.

Shortly afterward a young German student of medicine, who

## Proceedings of Societies.

### Proceedings of the San Francisco County Medical Society.

SAN FRANCISCO, Sept. 14, 1886.

The meeting having been called to order by the President, Dr. W. E. Taylor, the minutes of the former meeting were read and approved.

Dr. Taylor then exhibited several fibroid tumors that he had removed from a lady some weeks ago. The patient presented herself at his office suffering from a large solid tumor of the abdomen, the surface of which was so smooth and regular that it was supposed to be intra-uterine, and as it was too large to be removed *per vaginam*, it was resolved to open the abdomen and uterus, scoop out the tumor and stitch up the wound. When the abdomen was opened several tumors were found in its cavity; one was lying over the uterus and measured  $21\frac{1}{2}$  inches in circumference, another in the right hypochondrium measured  $23\frac{1}{2}$  inches. While there were many in and around the uterus, varying in size from a large orange to a hazel-nut. The entire mass weighed 13 lbs. The tumors and uterus were removed, but the patient died two hours after the operation.

Dr. Taylor said that had he known the real state of affairs previous to operating, he would have proceeded by removing the tumors and uterine appendages through an abdominal section at one operation, and the uterus itself *per vaginam* at some time subsequent. The tumors were linked together by thin bands of peritoneum.

Dr. Thayer commented upon the small attachment of such tumors to the other organs. He had seen them disappear after the patient became pregnant, but the most satisfactory treatment in his experience had been the patient administration of ergot and hot water douches.

Dr. Washington Ayres had seen Dr. Taylor's case eight years ago. She was then suffering from hemorrhage, and he diagnosed interstitial fibroid, for which he administered iodide of mercury, iodide of potash and local applications, under which treatment the hemorrhage ceased and he did not see her again until just before the operation. He had attended a lady in confinement where the child could not be born without craniotomy on account of a large fibroid tumor filling up the pelvic inlet. The

patient afterwards suffered from metritis and peritonitis, but ultimately recovered, and the tumor has now disappeared, probably from the inflammation arresting the blood supply.

Dr. Miller doubted whether any better result would have followed a double operation, as it was probably from the shock following the necessary exposure and handling of the abdominal contents that the patient died.

Dr. Wagner thought that the most unique point in this case lay in the fact that the largest tumors had none but a peritoneal attachment. He believed with Keith that very few women die from fibroids if they are let alone, because he had met with cases where the patient had nearly died from hemorrhage, but had succeeded in bringing them through by means of curretting and intra-uterine applications of iodine.

Dr. Von Hoffman believed that there were many cases of fibroids in which it was not necessary to operate, but whereas the only indication used to be danger of life of the patient from hemorrhage, we were now influenced by any tendency of the tumor to suppurate or become cystic. He did not agree with Lawson Tait that removal of the uterine appendages is better than removal of the tumor; the latter's statistics are somewhat ambiguous as under the head of "entire recovery," he does not say whether the tumor disappeared or only that the flowing ceased.

Dr. Rosenstirn had removed a retro-peritoneal fibroid from a man. The patient was sixty-five years of age, had a tumor in the abdomen about the size of a child's head, and suffered from cough and fever at night although the chest was normal.

Upon opening the abdomen he found a tumor covered by both layers of the peritoneum. He succeeded in removing it, stitched up the second layer of the peritoneum, cleaned out the abdominal cavity and closed the wound. The patient progressed favorably for two days, when a severe fit of coughing opened the abdominal wound and permitted a prolapse of the intestines which was followed by fatal peritonitis.

Dr. Taylor, in closing the discussion, said that he did not regard intra mural tumors as favorable for operation. He thought the popular belief that few women die from fibroids was a mistake, nor did he deem it right to allow a patient to remain for years upon the verge of the grave rather than operate, because a few have outlived the disease. He favored operation, where

not only the health but even the comfort of the patient has been seriously impaired.

There being no further business the Society adjourned.

WM. WATT KERR,

Recording Secretary.

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SAN FRANCISCO, Sept. 28, 1886.

The meeting having been called to order by the President Dr. W. E. Taylor, the minutes of the former meeting were read and approved.

Dr. William P. Sprague, a graduate of Bellevue, New York, in 1882, was proposed for membership by Dr. G. W. Davis and Dr. W. E. Taylor; and Joseph H. Soper, a graduate of the College of Physicians and Surgeons, Chicago, 1883, by Dr. R. H. Plummer and Dr. A. P. Whittell. These were referred to the Committee on Admissions.

The Secretary then reported that the lawyer who had been conducting the prosecutions of illegal practitioners wished \$40 for each conviction instead of \$25. On the motion of Dr. Kenyon the Committee was instructed to procure another lawyer at the original price of \$25.

Dr. Abrams read a paper on trichinosis, especially referring to the prophylaxis of the disease in question. He deplored the inefficacy of our drugs in curing this affection after the trichinæ have migrated to their usual habitat, the muscles. A brief review of the methods resorted to in Germany for abating the propagation of this disease was given, and it was urged by the writer that like steps should be taken by the American Government in protecting the people from infection. Cases of trichinosis were then reported occurring in the practice of Dr. Groton, of Susanville. Dr. Abrams found trichinæ in the sausage eaten by Dr. Groton's patients. He deems these cases to be of historical importance, inasmuch as he believes they are the first authentic cases occurring in California.

Various specimens of trichinæ were exhibited under the microscope.

Dr. J. A. Miller said that he had seen specimens of trichinæ found in the muscles of bodies in the dissecting rooms, where the patient had not exhibited symptoms of their presence during life.

Dr. Baldwin reported two cases that he had met in his own practice in San Francisco, and Dr. J. S. McDonald mentioned another that had occurred in the practice of Dr. Taylor of Livermore.

The Secretary read the resignation of Dr. C. H. Rosenthal, which was accepted by the Society.

There being no further business, the Society adjourned until the second Tuesday in October.

WM. WATT KERR,  
Recording Secretary.

**Sacramento Society for Medical Improvement.**

SACRAMENTO, Sept. 21, 1886.

The Society met in regular session, the President, Dr. W. H. Baldwin, in the chair.

Dr. Lainé read a paper on "Injuries to Arteries," in connection with his case which was reported at the previous meeting.

The subject did not admit of discussion.

After the transaction of miscellaneous business, the Society adjourned to meet on the third Tuesday in October. Subject of the evening's paper, by Dr. Magill, "Thermal Fever."

JAMES H. PARKINSON,  
Secretary.

**Substitution.**

Does the profession realize how much injury is done to physicians and their patients by the *substitution* of spurious, or the so called "just as good" preparations, *in place of* goods of standard reputation?

The following letter from Doctor Springer is a case in point.

Respectfully,  
BATTLE & Co., Chemists Corporation.

VAN BUREN, OHIO, Sept. 10, 1886.

Messrs. Battle & Co., St. Louis, Mo.

GENTLEMEN:—In the case of "Insomnia," which I reported to you in May last, and wherein it required seven drachm doses (hourly, 1 drachm) to produce sleep by Bromidia bought at pharmacy in Findlay—it required but one drachm, repeated in one hour, to produce a good night's rest, of the sample bottle you sent me. I also use the Bromidia (Battle & Co.) with the best results in "cholera infantum," and in "hysteria."

*Am satisfied that the article bought at Findlay was "Spurious."*

GEO. SPRINGER, M. D.

PACIFIC MEDICAL AND SURGICAL JOURNAL  
AND  
WESTERN LANCET.

EDITORS:

WILLIAM S. WHITWELL, A. M., M. D.

WM. WATT KERR, M. B., C. M.

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SAN FRANCISCO, NOVEMBER, 1886.

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**Editorial.**

**CASTRATION IN NERVOUS DISEASES.**

The American Journal of Medical Sciences contains three very excellent articles on this subject, written by Sir Spencer Wells, Hegar, and Battey. It is fortunate that these two pioneers in this branch of surgery, Hegar and Battey, should utter a word of warning at a time when there is a possibility, we might even say a probability, of the operation falling into disrepute from its indiscriminate use by those who possess the manual dexterity for its performance, but lack the power of discerning the cases in which it is demanded.

We do not mean to insinuate that any member of our honorable profession would value human life and happiness so lightly, as to avail himself of any trivial pretext to remove the ovaries merely for the pleasure or satisfaction that is attendant upon a dangerous but successful operation, but the number of castrations that have been performed on account of nervous symptoms, without affording any relief to the patient, compels us to believe either that there have been very grave errors in diagnosis, or that the object to be achieved by the operation has been entirely forgotten.

The sexual organs of the female are too often made the scape-goat for our ignorance of the nervous system and its medication. The thousand and one backaches, headaches, neuralgias and

dyspepsias to which women are rendered liable by their own imprudent conduct or over-taxed nerves are all charged to the account of the womb, ovaries or fallopian tubes, because these may have been unfortunate enough to suffer in the general disturbance, and the surgeon pounces upon them since there is more satisfaction in dealing with things that are visible and tangible than in groping one's way among the abstruse problems of nutrition and healthy nerve action. Hegar, from the outset, emphatically announced that the object of oophorectomy is to anticipate the menopause, and that, therefore, the surgeon, before undertaking the operation, should thoroughly satisfy himself that the case is one which will be relieved by those changes in the reproductive apparatus that accompany the cessation of sexual activity. Those cases where there is no disease of the organs of generation, but only a group of symptoms such as are often found when some disease does exist, are not suitable for operation even when the neurosis is aggravated during the menstrual period, as the cause probably exists in some of the ganglia or nerve centers which would remain unaffected by the operation.

All the authors above quoted seem to agree that the operation should never be undertaken unless there be present some demonstrable disease of the sexual apparatus which is causing or keeping up a neurosis that would be relieved by the sufferer reaching the menopause. The indications for castration for the relief of nervous symptoms in cases where the sexual organs appear to be healthy are altogether too vague to justify the operation. Hegar speaks very decidedly: "All operations which are undertaken without the presence of a disease or anomaly in the sexual system are, according to the present standpoint of our knowledge, unjustifiable. The mere presence, however, of a pathological change in the genital system, as has commonly been held, is not sufficient, and a strict proof of the causative connection between that change and the nervous disorder has to be demanded." It must not be inferred from this extract that He-

gar maintains castration to be justifiable for the relief of nervous symptoms only in those cases where the ovaries themselves are affected, for other parts of his essay distinctly declare it to be of service where the neurosis or psychosis is caused or kept up by a dislocated ovary, the anæmia or pressure consequent upon a fibroma or any affection of any part of the sexual apparatus that will be relieved by the artificial production of the menopause. He at the same time insists upon the demonstration of a causative relation between the lesion in the genital tract and the nervous symptoms, as the latter may be due to the co-operation of several factors, among which the sexual lesion is comparatively insignificant, and consequently castration would have little or no effect in curing the neurosis. The mere co-existence of an affection of the sexual organs and neurosis does not prove that they stand in the relation of cause and effect, as the latter may be due to disease of a nerve center or reflex irritation, and the co-existence be only a co-incidence. The difficulty of establishing a relation may thus be very great, and very much will depend on the history of the case. The origin of the neurosis simultaneously with the commencement of the anatomical change, the concurrence of exacerbations in the other, and the seat of the nervous troubles, especially when they gradually extend themselves more widely from the sexual organs and their neighborhood, slowly involving nerves lying higher up, are all, when taken together, strong indications of causality.

There is no doubt that these cautionary remarks are much needed, as castration has been both recommended and performed for the relief of some neurosis or psychosis where no disorder of the genital organs could be detected. At times there is a temptation to yield to the solicitations of the patient, when, in response to the entreaties of friends and sufferer alike to try "something" for the relief of a malady that has proved itself unamenable to every form of treatment and is making her life miserable, the surgeon undertakes an operation that is not distinctly indicated, but with the blind or desperate hope that by



some chance it may effect a cure. Nevertheless, these cases are to be condemned because they generally bring disappointment to all parties, and, by the disrepute thereby cast upon the operation, deter others from consenting to a curative measure which might have been of inestimable benefit to them.

We have called the attention of our readers to these articles because they treat of a subject that is engrossing considerable attention in all parts of the medical world, and would recommend their careful perusal by all who can obtain access to them.

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C. MEERKHAM, of San Francisco, the "Indian Eye Doctor," was convicted of practicing without a license. L. Berson of San Jose, has been arrested on the same charge.

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THE operation of extirpation of the kidney is becoming more common, and is at present under certain conditions recognized as a legitimate procedure. That a certain per cent of patients recover from its immediate effects is well known, and by reporting the deaths and recoveries, operators will render service to the profession. Fully as an important point, however, and one in which the profession are equally interested, is whether the patients receive permanent benefit or not.

One of these cases we have followed, the one operated upon by Dr. DeVecchi, and reported in the November number of this journal of 1882. This patient was almost at the point of death, emaciated and anæmic. By the abdominal operation the diseased kidney was removed, and in consequence she has enjoyed perfect health up to the present time, that is four years and over since the operation.

We should be especially glad of any reports of these operations, and particularly would we request that the after results be reported.

**Licentiates of the California State Board of Examiners.**

SAN FRANCISCO, October 7th, 1886.

At the regular meeting of the Board of Examiners, held October 6th, 1886, the following physicians having complied with the law and all the requirements of this Board, were granted certificates to practice medicine and surgery in this State:

- CHARLES W. BRYSON, Los Angeles; Coll. of Phys. and Surg. at Keokuk, Ia., Feb. 28, 1882.
- MARQUIS R. CHAMBLIN, St. Helena; Jefferson Med. Coll., Penn., Mar. 10, 1850, and Med. Dept. of the Univ. of the Pacific, Cal., Mar. 14, 1861.
- DENNIS D. CROWLEY, Oakland; Coll. of Phys. and Surg., of Chicago, Ill., Mar. 10, 1885.
- FRANK H. FLOOD, Sacramento; Med. Dept. Univ. of the City of New York, N. Y., Feb. 20, 1873.
- JOHN HARRIS, Norwalk; the St. Louis Coll. of Phys. and Surg., Mo., Feb. 28, 1883.
- WM. W. MURPHY, Los Angeles; Missouri Med. Coll., St. Louis, Mo., Mar. 2, 1876, and Bellevue Hospital Med. Coll., N. Y., Mar. 13, 1884.
- WM. A. PATTERSON, Tipton; Med Coll. of the Pacific, Cal., Nov. 5, 1878, and Cooper Medical College, Cal., Nov. 4, 1882.
- THOMAS E. TAGGART, Tulare; Coll. of Phys. and Surg., of Chicago, Ill., Feb. 23, 1886.
- GEORGE W. VAN SCHOLACK, Pasadena; Coll. of Phys. and Surg. at St. Joseph, Mo., Feb. 23, 1881.
- DANIEL W. MOTT, Santa Paula; Coll. of Med. and Surg. of the Univ. of Michigan, Mich., June 30, 1881.

During the past few years many letters have been received at this office from licentiates, complaining that the medical law was not enforced, and some, indeed, feeling that it proved a hardship rather than a benefit to them, inasmuch as the "illegal practitioner," who was free to avail himself of *any means* for the advancement of his own interest, flourished like a "green bay tree," while he, who desired to be a law-abiding citizen, and to conform to the code of ethics, was unable to overcome the evil without assistance; hence appeals were made to this Board for help.

To that end circular letters were sent out last year to prominent medical men in different localities, urging them to establish local medical societies, that an organized effort might be made all over the State to suppress this illegal practice. In response to this effort, a number of such societies have been formed. In order to aid them in the work, it was deemed best to issue a new edition of the Medical Register, as so many ad-

ditions to the lists of licentiates, and changes in localities have been made during the last two years, that the edition of 1885 is no longer reliable as a book of reference in such proceedings.

It is desired that the name of every one practicing medicine in this State shall appear in its pages under the proper heading, either as "legal" or "illegal" practitioners. For that purpose the Secretary has been in correspondence with every town, hamlet, and postoffice in the State, having already sent out more than two thousand letters, to which some fifteen hundred answers have been received.

Among the large number of names reported, were nearly two hundred which could not be found in the lists of those licensed by either of the three Boards, hence they came under the head of "illegals."

Hoping that some of these parties might be regular graduates, and had failed to conform to the law through ignorance of its requirements, a circular letter was sent to each one of them, calling attention to the law and its penalties, to the publication of the Register, and the organized efforts to suppress illegal practice; and informing them that by application to this office, the necessary blanks and instructions would be sent to enable them to become legal practitioners, if they were eligible.

In many of the reports received some names were given *without* initials; in other cases, as the sequel proved, the initials were incorrectly given, or the names misspelled—and some were wrongly located, or had moved in the meantime; hence in sending out these notices to the "illegals," much to our chagrin, a few were received by licentiates.

Most of these parties took it very kindly, perceiving that some mistake had occurred; but two or three were highly incensed, refused to accept explanations, took occasion to condemn the medical law, the Board of Examiners and the profession generally, not seeming to understand that our sole object in all this work is to benefit the profession and the public. That the course pursued by the Board in sending out these notices was a wise one, is proven by the fact that we have received many letters of thanks for the information, encouraging words in the good work we are preparing, and numerous applications for certificates. We expect to publish 2,500 copies of the Register, and gratuitous distributions will be made among the licentiates of this Board residing in this State. We hope to have it ready by the 1st of January, 1887.

R. H. PLUMMER, Sec'y.

## Health Reports.

Reports of mortality received for September, continue to present a low death rate, which may be chiefly attributed to the absence of epidemic diseases, and partly to the very favorable meteorological conditions which existed during the month. As a general rule we look for an increase of zymotic diseases during the fall months, especially in typhoid and malarial fevers. Happily, so far, our anticipations have not been realized. The deaths embodied in this report number seven hundred and thirty-seven, of which only one hundred and fifty-three were of the zymotic class.

Consumption was the cause of the death of one hundred and nineteen persons.

Pneumonia. Deaths from this disease number twenty, fourteen of which occurred in San Francisco, which indicates that the interior cities have been comparatively free of the disease.

Bronchitis caused ten deaths, seven of which also occurred in the bay city, which is further proof of the freedom from acute pulmonary disease of the interior towns.

Congestion of the lungs had a mortality of five, which is a slight decrease from the preceding month.

Diphtheria was fatal in seventeen cases, which is a decrease of three from last report. Of these twelve occurred in San Francisco, two in Oakland, one each in Monterey, Grass Valley, and Benicia.

Croup increased its mortality to ten—five in San Francisco, one in San Jose, one in St. Helena, two in Nevada City, and one in Los Angeles. In all these cities it will be noticed that diphtheria has been present.

Whooping-cough, although quite prevalent, caused but four deaths, which is a further decrease from reports of last two months.

Scarlet fever caused no deaths.

Measles caused no deaths.

Smallpox is absent from the State.

Diarrhoea and dysentery. Although these diseases continue to prevail in several localities, the mortality was only nine, a marked decrease from the month before. The deaths in July were nineteen; August, seventeen; and September nine, which

indicates the influence of the season upon the mortality of these diseases.

Cholera infantum caused twenty-seven deaths, which is also a decrease from last report and that preceding it. In July the deaths were forty-seven from this summer complaint.

Typhoid fever. The mortality from this disease during September was twenty-three, a decrease of nine from last month.

Typho-malarial fever is credited with seven deaths.

Remittent fever was the cause of one death only, which occurred in Los Angeles.

Cerebro-spinal fever is reported to have caused eight deaths, which is a slight increase over last report.

Erysipelas, although mentioned quite often in our reports of sickness, caused no deaths.

Alcoholism was fatal to nine persons.

Thermic fever. Dr. A. J. Pedlar reports one death in Fresno from heat exhaustion.

The following cities and towns report no deaths occurring in them during the month: Arbuckle, Auburn, Amador, Camptonville, Castroville, Downieville, Davisville, Elk Grove, Forest Hill, Gonzales, Galt, Jolon, Knight's Ferry, Lemoore, Lincoln, Newcastle, Nicolaus, Redding, Roseville, Shasta, Tehama, Upper Lake, and Visalia.

#### PREVAILING DISEASES.

Reports received from nearly one hundred different localities throughout the State are singularly unanimous in their concurrence as to the absence of epidemic disease and the general healthfulness of their districts.

Cholera infantum is still quite noticeable in San Francisco, Martinez, Fort Bidwell, Santa Rosa, Cloverdale, Petaluma, Lodi, Etna and Eureka. It is, however, diminishing in frequency, the type is milder, and with cooler weather will soon disappear as a constant item in our monthly reports.

Diarrhoea and dysentery, which although more or less prevalent in Martinez, Folsom, Susanville, Camptonville, Santa Rosa, Calico, Colton, Weaverville, Anderson, Lemoore, Lincoln, San Francisco, Oakland, Selma and Sacramento, will also diminish in prevalence with the advent of cold weather and the lessening of the fruit supply.

Pneumonia is increasing in the number of those attacked, although the fatality is limited. San Francisco, Bakersfield,

Eureka, Sacramento, Truckee, and other towns note its growing frequency.

Bronchitis is likewise becoming more frequently mentioned in our reports from Tehama, Camptonville, Fresno, Bakersfield, College City, Nicolaus, and Anderson.

Influenza prevails in Jolon, Nicolaus, Amador City, Martinez, Sierra City, Truckee, and Camptonville.

Whooping-cough is quite prevalent in Cloverdale, Truckee, Anaheim, San Diego, and Amador; in Ontario, Dr. Chaffey writes, it is decreasing.

Diphtheria. This dreaded and most infectious disease is prevailing in a sporadic form in Truckee, Rocklin, Williams, Sacramento, Mariposa, Stockton, Benicia, Grass Valley, Monterey, Oakland, San Francisco, Petaluma, Nevada City, and Amador City. Special precautions ought to be taken to confine this disease to the persons attacked, and a rigid quarantine enforced. If the disease occurs among school children, parents and guardians should give the teacher notice that infectious disease is in the family or dwelling, that every precaution may be taken to prevent the spread of the malady. Children should be strictly forbidden to visit in any dwelling where diphtheria exists, or attend the funeral in case of death.

Measles is quite prevalent in St. Helena. The type is mild.

Scarlet fever is reported in Lodi, Weaverville and Trinity Center. Three deaths are said to have occurred from it in the latter town, but no report of them has reached this office.

Erysipelas is noticed as present in Fort Bidwell, Bakersfield, Mariposa, Healdsburg, Truckee, San Mateo, Amador City, Martinez and Sacramento. The type is mild and unattended by any mortality.

Parotitis or mumps is quite prevalent in Sacramento.

Typhoid fever. As was anticipated, this disease has increased its area of diffusion. Fort Bidwell, Igo, Downieville, Etna, Nevada City, Livermore, Santa Cruz, Upper Lake, Oakland, San Francisco, San Jose, Selma, and Petaluma report cases of it. In Petaluma it was said to be epidemic. In a letter from Dr. L. H. Patty, health officer, he denies this, and says that although several cases have occurred there has been no death from the disease during the month, which indicates the extreme mildness of the type and absence of epidemic tendency. Dr. Patty is of the opinion that with the first rains the disease will cease.

Typho-malarial fever is reported in Cloverdale, Shasta, Igo, Anderson, Santa Rosa, Nicolaus, Etna, Modesto, and Amador.

Cerebral fever. Some cases of this affection have been noticed in Stockton, Anaheim, and San Diego.

Smallpox, although absent from this State just now, prevails in several parts of Mexico, especially on our southern border, and particularly in Guaymas, where it is reported epidemic. According to Consul Willard's reports there were twenty-six deaths up to September 30th. It cannot, therefore, be too earnestly impressed upon the public the necessity which exists for an early vaccination of all unprotected persons, as the probability of the disease being imported into our State is very great, there being absolutely no impediment to its progress across our frontier. Epidemics become extensive in proportion to the material offered for their propagation. In vaccination we have a safeguard that effectually stops the progress of smallpox, and those who fail to avail themselves of it have but themselves to blame if they fall victims to the disease.

GERRARD G. TYRRELL, M. D.,

Permanent Secretary California State Board of Health.

SACRAMENTO, October 10, 1886.

### San Francisco Health Report.

#### ABSTRACT.

	Jan.	Feb	Mar.	Apl.	May	Jun.	Jul.	Aug	Sept
Total, 1885.....	438	468	502	468	512	516	458	455	415
Total, 1886.....	519	382	479	418	435	397	437	408	394
Phthisis.....	91	67	67	77	63	39	52	43	51
Pneumonia.....	66	28	34	29	26	18	14	16	14
Bronchitis.....	25	13	12	11	11	5	7	11	7
Heart Disease.....	31	22	23	15	16	21	23	25	17
Aneurism.....	2	1	—	—	1	1	3	2	1
Apoplexy.....	16	12	8	8	9	11	10	12	4
Typhoid.....	5	9	7	12	7	6	12	19	13
Paralysis (Hemipleg, etc.)....	4	8	10	9	8	12	6	6	8
Cancer.....	16	9	15	6	15	12	16	18	15
Diphtheria.....	13	14	14	16	22	9	3	8	12
Croup.....	15	7	13	8	10	1	5	4	5
Infant Convulsions.....	16	10	18	14	17	11	14	12	9
Meningitis.....	17	9	10	16	5	—	21	13	9
Casualties.....	12	21	13	10	15	17	10	13	14
Suicides.....	5	4	9	8	10	6	3	5	8
Homicides.....	3	3	2	1	2	1	4	2	2

Population according to U. S. census, July 1st, 1880, was 234,520; Caucasian, 212,520; Chinese, 22,000. Estimated population, June 30th, 1884, 270,000.

## Correspondence.

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OAKLAND, Oct. 5, 1886.

DEAR DR.—Having business interests in Antelope Valley, Los Angeles County, California, I was stopping there, upon the 21st day of last August, at a little town called Lancaster; where a most unique, and singular case occurred, of the poisoning of a whole family by eating canned peaches. These cans were labeled, "Columbus Packing Co., Fontana & Co., Prop., San Francisco, Cal."

I was out of town when the peaches were eaten, and it was some hours before I saw the family, and I can assure you, that they were in a most dangerous and pitiable condition. The father, mother and four children were scattered here and there, all violently vomiting—the father purging, as well—and all complaining of pain in the stomach, and bowels, and calling for immediate relief from suffering, and what they, and their friends feared, impending death. I confess I was alarmed for their lives, and used freely the antidotes within reach, with success: viz.: the albumen of eggs and fresh milk.

Upon my return to the city, I was authorized by the father, Mr. Coleman Walsh, to call upon Mr. Fontana, the Proprietor of the Columbus Packing Co., and insist upon some redress for their suffering. I did so; but all redress was refused, and I was here informed, that the poisoning was all the fault of the persons who ate the fruit, as they ought to have known better than to have eaten fruit from a can, which bore the evidence of being poisonous, viz.: "*The can bulging at both ends*" (as was one shown me in the office, by the gentleman himself).

Of course, neither the Walsh family, nor the grocer who sold them the fruit understood this; and the one sold, and the other ate of it innocently.

Now, I think the medical profession, at least, should be aware of this danger to the public; but whether this poisonous condition of certain cans of fruit which "bulge," is peculiar, and confined alone to the cans sent out by the Columbus Packing Co. of San Francisco, or is of common occurrence among those sent out by all other companies engaged in canning fruit, I do not know; but one thing I am assured of—the medical profession should be alive to the damage which threaten the lives of



their families, and their patients; and the public should be warned against canned fruit, if the danger cannot otherwise be avoided; just as at railroad crossings, there are placards printed in large letters, "Look out for the engine, when the bell rings;" and in case the danger can be avoided, and poisonous fruit is mixed with non-poisonous, and sold to the public by unprincipled men, then these men should be compelled to make reparation. In this one case, I saw enough to open my eyes to the distress and danger resulting from eating such fruit. I will add, that these parents state in an affidavit which is now before me, that they ate nothing else at their lunch, but their usual bread and butter, with some meat; but that one member, who was deathly sick, did not eat of the meat. That the first was eaten within half an hour after the can was opened, and the violence of the sickness, was in ratio with the amount eaten by each member of the family.

Respectfully yours,

E. T. BARBER, M. D.

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### Notices of Books, Pamphlets, etc.

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THE PHYSICIAN'S LEISURE LIBRARY—THE MODERN TREATMENT OF ECZEMA.  
By H. G. PIFFARD, M. D.

SPINAL IRRITATION. By WILLIAM A. HAMMOND, M. D. Published by Geo. S. Davis. Detroit, Mich.

Other volumes of this series have already been noticed. The present volumes under consideration are fully equal, in point of interest, to the former ones. Dr. Piffard calls attention to the treatment of a very common, and at the same time a very intractable disease. He describes the forms of internal treatment which are most beneficial, and then devotes a chapter to the local treatment.

Dr. Hammond says that twenty years ago he called attention to spinal irritation, which he considers a true form of disease, and one to which American women are especially liable. He believes that it is a common affection, and one which is particularly amenable to treatment. The chapters treat of the History, Causes, Symptoms, Diagnosis, Prognosis and Treatment, giving the reader a clear idea of a disease, the characteristics of which too often are but imperfectly stamped upon his mind.

**A HANDBOOK OF MATERIA MEDICA, PHARMACY AND THERAPEUTICS**,—including the Physiological Action of Drugs, Special Therapeutics of Diseases, Official and Extemporaneous Pharmacy, etc., etc. By SAM'L O. L. POTTER, M. A., M. D., late A. A. Surgeon, U. S. Army, Author of "An Index of Comparative Therapeutics," "Quiz-Compend" of Anatomy, Visceral Anatomy and Materia Medica, "Speech and its Defects," etc. About 700 pages. Cloth, \$3.00; leather, \$3.50.

This book contains many unique features of style and arrangement; no time or trouble has been spared to make it most complete and yet concise in all its parts. It contains many prescriptions of practical worth, a great mass of facts conveniently and concisely put together, also many tables, dose lists, diagnostic hints, etc., all rendering it the most complete physician's companion ever published. As a practical working book for every day use it is unsurpassed, as the author has had unusual experience and advantages in preparing concise, comprehensive handbooks.

The favor with which Dr. Potter's Compend has been received by students and practitioners in America and England, has stimulated him to produce a treatise which he aims at making the most useful for the practical worker to be obtained. This book, like few extant, treats of established facts, discards arguments, and entirely ignores obsolete experiments; giving marked prominence to all practical points, and leaving mere theories in the comparative obscurity where they belong.

In detailing the physiological action of a leading drug its characteristic qualities are first enumerated, then its action in an ordinary medicinal dose is described, next the effects produced by small doses continued, and finally those from a toxic dose; these being followed by a brief account of its antagonists and incompatibles, and a concise view of its therapeutical applications. The wants of the student and practitioner are kept strictly in mind, and throughout the work the utmost brevity of language has been employed consistent with the retention of all the essentials of the subject. Every drug and preparation official in the last edition of the U. S. Pharmacopœia has been noticed fully, while all prominent unofficial drugs receive such mention as their respective importance demands.

The portion of the book devoted to Pharmacy has been written with especial reference to the belief that many young practitioners would dispense their own medicines if they had any practical directions on the subject, thereby saving many a dollar

for the patient, and preventing those "renewals" of prescriptions which constitute so bad a feature of modern pharmaceuticals. *Prescription-Writing* receives full consideration, and samples are given for prescription of each class in extemporaneous use.

Special Therapeutics are treated elaborately in the third part, which is an *Index* to the treatment of diseases as laid down by the modern writers. Every indication for the use of a drug is referred to the author by his initial and each article is followed by a few selected formulæ to serve as guides in prescribing.

The appendix contains numerous *Tables* comprising doses, diagnostics, Latin terms, formulæ for hypodermics, metric equivalents, specific gravities and volumes, and obstetric memoranda—together with *Notes* on temperature and the clinical thermometer, poisons, urinary examinations and patent medicines.

The index will be a special feature. Extreme care will be taken to include in it every title, synonym and reference of importance; while each article of the *materia medica* will be indexed with at least two entries.

A TREATISE ON THE PRINCIPLES AND PRACTICE OF MEDICINE. By AUSTIN FLINT, M. D., LL. D. Sixth edition, revised and largely rewritten by the author. Assisted by William D. Welsh, M. D. and Austin Flint, M. D., LL. D. Phila.: Lea Brothers & Co. San Francisco: W. S. Duncombe & Co.

This work like Bartholow's has reached its sixth edition, but unlike it, combines Principles with the Practice. It has long been a standard work, the first edition having been issued fully twenty years ago, and has been read and studied by thousands of students and practitioners. It will still be read, and its popularity and usefulness will continue to increase with each succeeding edition, although the master-hand is stilled, for the ground work of the structure will ever remain the same while the elaboration can be left to others. And what is the basis of this great work? The son tells us that it is an unbroken record of cases in private practice and in hospitals, begun in 1833 and continued for more than half a century, covering 16,922 folio pages of manuscript, written in the author's own hand. And these cases do not occur in a practice among one class of people or in one part of the country, but are gathered from the rich, from the poor; from the soldier in camp and in barracks; from the pioneers of the west and from the inhabitants of the great metropolis; from the east, south, north and west. It was a

practice which rarely falls to the lot of one man. Its advantages were fully appreciated and fully utilized.

Among the new articles which have been added to the last edition are the following: infectious tumors; syphilitic disease of the lungs; cerebral syphilis; hereditary ataxia; myxœdema; multiple neuritis; general pathology of fever; and milk sickness. Besides this, many of the former articles have been rewritten and changes and additions have been made, thus placing it fully abreast of present advancement of both the Practice and Principles of Medicine.

REPORT ON THE BILOXI FEVER. By New Orleans Board of Health.

CORONADO BEACH, San Diego, Cal.

SOME RECENT EXPERIENCES IN CLINICAL SURGERY. By DONALD MACLEAN, M. D.

SURGICAL LESIONS OF THE BRAIN AND ITS ENVELOPES. By NICHOLAS SENN, M. D.

SURGICAL NOTES FROM THE CASE BOOK. By WM. C. WILE, M. D.

LA INOCULACION PREVENTIVA CONTRA EL COLERA MORBO ASIATICO. Por J. FERRAN, Valencia, 1886.

THE RELATION OF OUR PUBLIC SCHOOLS TO THE DISORDERS OF THE NERVOUS SYSTEM. By C. F. FOLSOM, M. D. Boston: Grim & Co., 1886.

OPEN PHARMACY AND SCIENTIFIC SUBSTITUTES FOR PROPRIETARY PREPARATIONS. The Remedy for the Great "Patent Medicine" Evil. Issued by the Scientific Department. Parke, Davis & Co.

OPERATIONS ON THE DRUM HEAD FOR IMPAIRED HEARING; with Fourteen Cases. By SETH S. BISHOP, M. D.

TWO RARE CASES OF ABDOMINAL INJURY. By J. A. STUCKY, M. D.

GALVANO CAUTERY IN DISEASES OF THE PROSTATE, BLADDER AND URETHRA. By ROBT. NEWMAN, M. D.

COCAINE IN HAY FEVER. By SETH S. BISHOP, M. D.

TRANSACTIONS OF LOUISIANA STATE MEDICAL SOCIETY 8th Annual Session.

We call attention to the fact that Messrs. Duncombe & Co., who are so well-known to the profession as Medical Publishers, have recently removed from their quarters on Post Street to more commodious ones at 425 Sutter, where they are not only ready to supply medical literature, but also, vaccine virus of the best quality, and antiseptic dressings of all kinds.

A liberal price will be paid for a Pasquelin Caутery, must be in good condition. Address, stating price, Wm. S. Duncombe & Co., 425 Sutter Street, S. F.

PACIFIC  
MEDICAL AND SURGICAL JOURNAL  
AND  
WESTERN LANCET.

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VOL. XXIX.

DECEMBER, 1886.

No. 12.

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**Original Articles.**

**REPORT OF A CASE OF ABSCESS OF THE LIVER.**

By DR. F. A. A. BELINGE, San Francisco.

(Read before the Medical Society of the State of California.)

Abdominal abscesses are not of frequent occurrence; their diagnosis is difficult and vague, and the following report of a case may be useful:

Mrs. X., age 45, has up to the time of her present illness, with one exception (which I shall presently state), always been in good health and has reared a large family. During the summer of 1883, while on a visit to relatives in Oregon, she was taken sick with a fever pronounced malarial by her medical attendant. After two or three weeks, she had recovered sufficiently to enable her to return to this city. For some time afterwards, she complained of irregular attacks of chilliness and fever from which she gradually recovered under the use of quinia.

The following summer was spent in San Jose, in a locality called the Willows. About the beginning of August, she began to complain of feeling sick, but no very definite symptoms presented themselves. She had occasion to come to San Francisco about the 15th and she then told me that she suffered from headache, and that her appetite was bad. She had some fever and her tongue was furred. She complained also of lassitude and soreness of the abdomen. I gave her some purgative pills which gave her relief and she returned to San Jose.

On the 5th of September she came up to San Francisco. I saw her the next day and found her looking very ill. Her face was haggard; her pulse 130; she was weak and had no appetite. She also complained of pain in the right side. After a few days rest in bed, she recovered sufficiently to go about. During the month of September, her condition was variable. The pain and soreness in the abdomen continued. There was no constipation, bowels free. Her pulse was always hurried, generally about 110; a few times it went down to 100 or less, but rose again. About this time, she complained also of a continued pain in the back. She could lie only in the dorsal position. When about the house, she could not walk nor stand erect, but bent forward. Much of the time she was in a despondent state of mind.

An examination made on the 3d of October, revealed some fullness of the right side, and the line of hepatic dullness extended beyond its ordinary limit downward and into the epigastric region, with pain on pressure. There was habitual dryness of the skin. The urine was normal in quantity but rather high colored. Diaphoretics were used but without effect. Warm water and hot air baths were not more effectual. After I discovered the hepatic enlargement, cups, blisters and iodine were applied.

Another physician was called to see the patient, and he corroborated the statement which I had made to the patient and her family of enlargement of the liver.

The fullness of the right side kept increasing and the tumor became more apparent. The pulse continued frequent, the temperature never rose beyond 101° F. Thoughts of some malignant tumor came to my mind, but the appearance of the patient did not justify them. There was no sallowness of the skin and no sign of jaundice.

Then the excited pulse turned my thoughts to abscess.

As the patient was a relation, I became very anxious over the case. About the middle of October, I requested Dr. L. C. Lane to see my patient and advise as to the best course to pursue. After examination Dr. Lane, gave me as his opinion that enlargement of the liver was present and that there was probability of an abscess being formed. Warm poultices were advised in addition to the supporting treatment then being carried out.

From the time poultices were applied, sweating set in

and continued daily. For a few days before the end of October, the patient was inclined to somnolence. The tumor was enlarging and projecting forward in the epigastric region, and below the ribs in the right side. The skin over and below the epigastrium and towards the side was reddened and palpation gave a feeling of fluctuation.

Percussion gave a slightly resonant sound over a circumscribed area of the reddened skin towards the front. My anxiety at this stage of the case made me recall Dr. Lane.

After examination and consultation, it was decided to explore. The needle of a hypodermic syringe was thrust into the center of the reddened spot, and some very fetid pus was drawn out. Dr. Lane then made a short incision into the abscess and about ten ounces of fetid pus came away. A tent was introduced and poultices continued. Next morning, I introduced a drainage tube. Considerable pus flowed at each dressing. The cavity was washed out twice a day by myself. I used plain warm water, as I feared absorption of antiseptics. I watched the case very closely and dressed it myself. The patient's strength was kept up by a generous diet and tonics. Her pulse began to fall and her general condition improved. About three weeks later, I felt fluctuation just under the tenth rib, and, as the skin was somewhat reddened, I introduced the needle of a syringe and withdrew some pus. I then made a short incision into the abscess and introduced another tube. A few ounces of pus flowed out. On introducing the nozzle of the irrigator at the first opening, water flowed out of the second, showing a connection between the two cavities. Irrigation was kept up twice a day. One day, as the quantity of pus had diminished considerably, I withdrew the first tube, but the next day, I found the pulse had risen and the patient uneasy. I immediately reinserted the tube, and a few ounces of pus came away.

This warned me that it would not do to be hasty, and I resolved to leave the tubes as long as possible, feeling that no harm could come from it. So the tubes remained until water would no longer enter the cavity, being shortened from time to time. On the 1st of February, I removed the first tube which was in the epigastric region and the second two weeks later. The sinuses healed up and no further bad symptoms appeared. The patient gradually improved and to-day is well. The only inconvenience which she complains of is a feeling of

dragging or pulling in the right side just under the 10th rib.

The report of this case which I have endeavored to make as full as possible shows the difficulty of making an accurate diagnosis at the out-set of such cases. The symptoms present at first were those of an irregular remittent fever and the patient went about attending to her family. The leading symptom showing irritation of the nervous system was the frequency of the pulse. There was no chill, no diarrhoea, no emaciation, no constipation; her stools were usually soft, sometimes of the color and consistency of an infant's, and no sweating until within ten days of the operation.

The etiology of this case is obscure. This patient has never suffered from hemorrhoids or any other disease of the bowels which might cause embolism or suppuration of the portal system. So I am at a loss as to the cause of her sickness. As this paper is not intended as an essay on hepatic abscesses, I will bring my remarks to a close, leaving my professional brethren to draw their own conclusions.

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## **REPORT OF A CASE OF CHRONIC PLEURITIC EFFUSIO**

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### **Thoracentesis by Aspiration, Five Operations, Removing one Gallon of Serous Fluid.**

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By WM. J. G. DAWSON, M. D.

(Read before the Medical Society of the State of California.)

E. A. G., aged 21, born at Darien Centre, N. Y., single. Was strong and healthy until the winter of 1883 and 1884, when he contracted a very severe cold, while acting as station agent at Hamburg, N. Y. Before he had fully recovered he was taken down with measles, and was very sick for nearly three months. Had a few sharp pains on left side; hands and feet were cold and clammy and had night sweats. Recovered slowly and being in a very weak condition was advised to go south, went to Virginia and worked a little on a farm. Recovered sufficiently to remove to Indiana and resume duties of a telegraph operator, worked two weeks, and feeling indisposed went back to Darien Centre, N. Y., and July 1st, 1884, was taken sick with malaria and dropsy of the bowels; kidneys were also involved; bowels and stomach were bloated badly, and pressed



the diaphragm up so that the breathing became difficult, and the doctor said his lungs were not very strong. Had very sharp pains over the liver. Bowels were much constipated, and condition was so critical that recovery was despaired of. Recovered by Sept. 10, 1884, and worked in a telegraph office until Nov. 1st, when he was again taken sick with yellow jaundice and kidney trouble, was sick about ten days. Nov. 20th went to Wisconsin and was first rate up to Feb. 1st, 1885, when lost appetite, was constipated and kidneys and liver were out of order. Went to a doctor and he said the left lung was consolidated. Was also very weak and had night sweats. Afterwards regained appetite and night sweats disappeared. Was ordered by doctors to California, and while on the way April 15, 1885, his heart was discovered to be on the right side.

He has been stopping at Mr. Anguin's summer resort on Howell Mountain, Napa County, since May 1st, 1885, appetite since then has been splendid and he has gained 26 pounds in weight.

Dec. 9th, 1885, I made a physical examination of chest, found complete dullness all over left lung, voice sounds not distinct, position of patient made no difference in percussion note. Heart pushed to right side, apex beat to right of sternum.

Jan. 11th, 1886. Examination again, complete flatness over left lung anterior and posterior, slight bronchial breathing at apex. Heart pushed well over to right side, dullness on right side anteriorly over the heart, no dullness posteriorly on the right side. Diagnosis:—Pleuritic effusion of long standing complete on the left side.

Jan. 25, 1886. Chest measurement 35 inches around, one inch larger on the left side than the right, rule  $\frac{3}{8}$  inch out of plumb, apex beat  $3\frac{1}{2}$  inches to right of sternum, and one inch below the nipple. Heart sounds at the base heard most distinctly one inch to right of sternum about 5th intercostal space.

Jan. 26th, 10 A. M., 1st operation. Thoracentesis by aspiration in 6th intercostal space, drew off about 14 ozs serous fluid. In the afternoon pulse 60, feels comfortable, no fever, kept in bed after the operation for about 30 hours.

Feb. 1st, 1886. Examination revealed no perceptible difference in auscultation and percussion except the heart had moved to the left about three-fourths of an inch, and there was

no friction sound over the heart, which existed previously. Second operation performed six days after the first near the former spot, drew off about 18 ozs of serum, about  $1\frac{1}{2}$  hours afterwards pulse 74, no pain but a little wheezing in bronchial tubes which soon disappeared.

Feb. 8th. Examination showed apex beat of heart about  $2\frac{1}{2}$  inches to the right of sternum, chest still bulging, percussion at lower portion of chest anteriorly not quite so flat as the middle and upper portions. Third operation performed one week after the second near the old spot, but more anterior, in sixth intercostal space, drew off a little over 32 ozs without pain or any bad effects, making in the three operations one-half gallon of fluid. Visit five hours afterwards found the patient comfortable, pulse 62. About a week after this I sent him up on Howell Mountain, put him on potass-iodide and applied blisters to the affected side. He returned in about two weeks with a very severe cold, cough, etc., which readily yielded to treatment. March 16th operated for the fourth time (about five weeks from the previous operation) in the seventh intercostal space—drew off 32 or 33 ozs. March 22d, six days afterwards, apex beat about  $1\frac{1}{2}$  inches to the right of sternum, operated the fifth time in the seventh intercostal space, drew off thirty-two or thirty-three ozs, making in the *five* operations a total of over *one gallon* of serous fluid. I then put him on acetate of potash and infusion of cinchona, and in a week's time sent him back to Howell Mountain, hoping that the absorbents would take up the rest of the fluid.

Remarks:—

The patient came to this coast believing that his left lung was consolidated, as he was told, and in consumption. He gained 26 lbs. in weight on Howell Mountain, and was able to milk from three to six cows night and morning, all summer, ride to town on horseback occasionally, and not suffer very much distress in breathing. The interesting parts of the case are: Its chronic character, probably lasting since he had the measles during the winter of 1883 and 1884. The erroneous opinion possessed by the patient as to his true condition, and confirmed by physicians. The great displacement of the heart to the right. The complete filling of the pleural cavity and compression of the lung, and yet the patient gained flesh, and did work that is usually considered dangerous in such severe cases.

The number of operations performed (five) and the withdrawal of the large quantity of fluid, amounting to over one gallon.

The aspirator I used is made by Tieman and the needle one millimetre in diameter, except at the last operation I used the larger size, 2 millimetres. I selected the axillary line or a little anterior to it, and the sixth and seventh intercostal spaces. The tubing previous to operation was filled with an antiseptic solution, the atmosphere of the room purified by fresh air and atomization of disinfectants, the patient placed in a semi-reclining position in bed, head and chest raised, the skin at point of puncture sprayed with an antiseptic solution, the hands and clothes of the operator disinfected, and the point of the needle dipped in carbolized water and glycerine.

The pump was carefully worked by my friend Dr. H. M. Pond, who kindly assisted me in the several operations, and the fluid was drawn slowly. At the close of the operation collodion was applied at the point of puncture and a compress and bandage. The patient was kept in bed from twenty-four to thirty hours after each operation.

I am aware that the operation is often performed in the doctor's office, the patient sitting in a chair, and not so many precautions used as I have in this case, but I preferred to be on the safe side and run no risks.

I noticed that a few hours after each operation, the pulse became slow, generally sixty or a little over, and a glow of warmth was experienced by the patient without any rise of temperature.

April 20th, 1886.

Since writing the above I have again examined the patient this day, and find the dullness complete, the upper portion of the chest bulging as before. Auscultation reveals very little change in the lung, the heart is still to the right, the apex beat being from one-half to two inches to the right of the sternum, the chest measurement is still thirty-five inches in circumference, the left side measuring nearly eighteen inches. There is no doubt the fluid has reformed, and further tapplings will have to be resorted to. I examined his urine for albumen and found none. The patient was then examined before the Society, and discussion followed.

**CALENDULA.**

By R. G. REYNOLDS, M. D., Upper Lake.

(Read before the Medical Society of the State of California.)

This plant, the common marigold of our gardens, has been used as a medicine for a great number of years. It used to be considered anti-spasmodic, sudorific, de obstruens and emenagogic, and was given in low forms of fever, jaundice, amenorrhoea, etc. But its effect in any of these complaints was very uncertain, if of any benefit whatever, and so it gradually fell into disfavor and disuse. The 14th edition of the U. S. Dispensatory gives it a place and a very short notice in the list of unofficial remedies, and the 15th edition, being more favorable to its claims, places it in the official list, but has nothing to say in its praise. It says in the days of therapeutic darkness, it was thought to have medicinal virtues which have faded into oblivion in these latter days of light and knowledge. It barely mentions that a tincture is made from it which is used as an embrocatum to which it is gracious enough to ascribe healing powers about equal to simple alcohol. So if we had no other encouragement for the use of the plant then the U. S. Dispensatory we would be likely to give it a wide berth.

In 1868 Dr. A. Livezey published a paper in the *Medical and Surgical Reporter* of Philadelphia, stating that he was in the habit of using a strong tincture of the flowers as an application to incised, lacerated and contused wounds, and invariably found it to have a curative influence, preventing inflammation and suppuration, and promoting the healing of wounds by first intention when the wound was properly adjusted. Since then there has been occasional favorable mention of it by writers in the medical journals, and it began to grow more in favor the more it was tried and written about. My attention was first called to it about the year 1880 by some writer, whose name I forget, and so favorable an impression in its favor as an embrocation was made on me that I determined to give it a trial. I know of no better way to emphasize its virtues than give the history of a few cases wherein it has proved to be a remedy most potent for good.

The first case in which I remember of giving it a trial was that of G. G. Murdoch, who came to me with a deep lacerated wound in the palm of the hand, produced by the head of a horseshoe nail being plowed through the hand by a vicious

horse. The wound was very ragged and about as unfavorable one to expect to heal by first intention as it is possible to conceive of. I thought this a good case to try the virtues of calendula. I made a tincture from the fluid extract made by Parke, Davis & Co., by adding three parts of alcohol to one of the extract, and after adjusting the wound carefully and securing it with adhesive strips I covered it with lint saturated with the tincture, and gave him particular orders to never allow it to get dry but keep the lint constantly saturated with the tincture. He followed the instructions carefully, and in ten days he presented himself with the wound perfectly healed and informed me that not one drop of suppuration had taken place. I considered this remarkable, considering the ragged character of the wound.

Another rather important case was that of Thomas Tallman, who, in a fight, received a knife wound in the face. High up on the temple in the edge of the hair the knife was thrust in to the bone, and then drawn down close by the eye through the cheek clear down to the middle of the chin. The cheek lay open fully an inch, and he presented a ghastly spectacle. I adjusted the wound very carefully and secured it with interrupted sutures, and applied a decoction of calendula made by diluting the fluid extract with three times its bulk of water, with instructions to keep the wound constantly covered with lint saturated with the solution. In fifty-six hours I removed the sutures and found the wound well united by first intention and in less than two weeks he was around well, not a drop of suppuration had taken place except high up in the temple where a small artery was cut, and I had to apply Monsel's solution to arrest the hemorrhage. The consequence was, that the wound, though a desperate one, healed almost without a scar, a very narrow red line being all there is to mark the track of the knife, a very important consideration to the patient as the wound was in such a very prominent place.

But a much more important case occurred in the summer of 1885. One night while peacefully sleeping, a man rushed to my door and commenced ringing the bell as if he were turning the crank of a coffee mill and on my answering, he told me to hurry up to the saloon as James Purkerm had just shot his brains out. I thought if his brains were shot out there was no great need for haste on the part of the surgeon, as I knew of no way

by which I could return them to the cranium, so that they might again perform their functions. However, I dressed as quickly as possible and started up, not thinking it was worth while to take my medicine with me. On the way I met another messenger calling on me to hurry up, as he was still living. I then turned back, and getting my medicines hastened to the scene. I met a ghastly sight. The man was lying on the bed in a pool of blood, a bullet from a 44 caliber Colt had entered the face just in front of the left ear, half an inch below the line of the eyes and ranged upwards and forwards, emerging through the right eye, and obliterating the eye ball. He was unconscious and very weak from the shock and loss of blood. He would only regain consciousness when the stomach would become overloaded with blood and had to be vomited, which would take place about every half hour. The pulse at times would flicker, and I thought sometimes the end was just at hand. But towards morning he began to show signs of rallying, and I concluded I was after all going to have a case to treat. I then prepared an infusion of calendula, one part to three of water, and kept both wounds carefully covered with the wet lint, and enjoined constant watchfulness so that they would not be allowed to get dry. I visited him twice daily, but never found any cause to change the treatment. Fearing I would run out of the medicine I ordered by express six bottles from San Francisco, and received them with the information that that was all that could be found in the city, and this is probably the main cause why you are afflicted with this paper. I concluded that if such a small stock was kept in San Francisco, surely the profession did not appreciate its virtues. In ten days I had him sitting up comfortably, and so far not a drop of suppuration from either wound after he commenced sitting up; there was one day the attendant had permitted the bandage supporting the lint to bulge out, and the wound to dry, and a superficial suppuration immediately began in the wound in the cheek. I carefully squeezed out the pus and filled the wound with the mixture, and enjoining more care in future there was no more of it.

In three weeks he was riding around, discharged and well, and but for the loss of his right eye apparently as well as before he received the wound.

I consider this case peculiarly interesting on account of the size of the ball, the closeness to the brain, the spongy character

of the bones penetrated, and the destruction of the eye. I firmly believe that had this wound been permitted to heal by the old method of suppuration, blood poisoning would have been inevitable, and the well eye would have been also in great danger from sympathetic inflammation, so that I consider the man owes his life entirely to the flower we thought so pretty in our boyhood days, the golden marigold.

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## **THE OPHTHALMOSCOPE IN GENERAL MEDICINE.**

By GEO. C. PARDEE, M. D.

Read before the Medical Society of the State of California.

It is the endeavor of every true physician to make the art which he practices as nearly perfect as possible and place it in the list of exact sciences. Medicine is by no means an exact science, as compared with that most exact of all sciences, astronomy. And it would appear as if it never can be as long as the secret of life is as mysterious and seemingly unsolvable as it now is. But if medicine is ever to become an exact science, it will be by slow degrees, by long-continued, painful effort, by paying the strictest attention to the smallest details, gathering, sorting, arranging and properly placing all the infinite number of little things which go to make up the symmetrical whole. The smallest and seemingly most insignificant fact is not to be despised in this endeavor. For nothing is so small as not to have some weight in determining the final result of the process in which it appears. A single bacillus, too small to be seen except under the most powerful lens, and only then under the most favorable circumstances, may bear within itself energies of destruction so potent and powerful as to destroy the strongest barriers which nature has erected between life and death, and, battering down the defenses of the inner stronghold, dispossess the very soul and wrest from it the fair temple in which it is lodged. If so small and seemingly despicable a thing as this lowest form of life, this wriggling atom hovering on the boundary between something and nothing, can be so pregnant with death, and give birth to untold millions of similar microscopical giants, it behooves us to arm ourselves against still other foes to life, of whose existence we have not even a suspicion, and to avail ourselves of every weapon in the unequal contest. Where

a human life and the happiness of those dependent upon that life are at stake, nothing should be overlooked, nothing neglected, nothing rejected, which, by any possibility, can have even the smallest bearing upon the question at issue.

"Make me a perfect diagnostician and I shall perfect myself in therapeutics," was the pregnant remark of a celebrated physician. And you, as practical men, as seekers after truth in the noble calling which you follow, know how easily a diagnosis may be missed, a treatment misapplied, a life lost because of the overlooking, the failure to perceive, the inability to correctly estimate a symptom or a sign. Nor need I remind you how important, nay, indispensable, corroborative and cumulative evidence is, in medicine as well as in law, in determining the correctness of a position taken. He who relies for his diagnosis upon observing the tongue, feeling the pulse and enquiring concerning the state of the bowels, must necessarily often go astray and involve both himself and patient in the most disastrous of consequences. Yet it was not so very long ago that the physician was limited almost entirely to these meagre means of diagnosis. It was not so very long ago that the chemical examination of the urine was a thing unknown, that the microscope was not a part of the physician's armament, that percussion and auscultation had not advanced beyond the *succussio Hippocratis*, that the clinical thermometer was not invented. Many of you here present can perhaps remember with what doubt, what questionings, what open opposition some of these indispensable adjuncts to modern medicine were received. But, in spite of doubts, questionings and opposition, they have forced themselves upon us, until to-day the testtube, the microscope, the percussion-hammer, the stethoscope, and the thermometer are as much a part of the physician's complete outfit as the thumb-lancet was fifty years ago. Still, there are men—and good men, too—in the medical profession who affect to despise these new-fangled ideas, as they call them. For them, a glance at the tongue, a finger on the pulse, a look at the urine, is examination enough. They can see no use in thumping a patient's chest, nor in listening to the murmurs of his lungs or the beating of his heart, nor can they find any profit in anxiously watching the slowly-ascending column of glistening mercury in the capillary tube. And they will class in the same category any new means of diagnosis or aid thereto. To



such men (for whom the old, because it is old, is good enough) this paper is not addressed. But from those members of the medical profession here assembled, who, knowing how difficult it is to be always right, and who, therefore, wish to avail themselves of every possible means in the search for truth, the writer asks a respectful hearing and as careful a consideration as the importance of the subject-matter may seem to deserve.

The ophthalmoscope was invented in 1851 by that most wonderful of scientific men, who has been foremost in physiology, mechanics and physics, Prof. Helmholtz, now of the University of Berlin. You are all familiar with the little instrument; and it would, therefore, be superfluous for me to describe it to you. Previous to its invention the practice of ophthalmology was an unsatisfactory matter. The bottom of the living eye was a *terra incognita*, and the diagnosis of many of its diseases was a matter of guesswork and chance. With it, however, ophthalmology has taken giant strides and is to-day as near a perfect science as any branch of the healing art. But great as are the changes which this little instrument has made in ophthalmology, it is not alone the ophthalmologist who can profit by its use. The general practitioner has in it a friend, counselor and advisor who may be able to clear up for him many doubtful points and give him greater confidence in the diagnosis of many diseases and lesions, which, at best, are often difficult to discover and more difficult to name and place.

In the following pages I propose to call your attention to a few diseases in which an examination of the bottom of the eye by means of the ophthalmoscope may prove of practical value in determining a diagnosis. In doing so I shall, for obvious reasons, be compelled to merely hint at many things which might well be elaborated, and to pass unmentioned many things of practical value.

Among the diseases of the organs of circulation and respiration which may produce changes in the deeper parts of the eye may be mentioned various diseases of the heart, blood vessels and lungs. In emphysema, for instance, there is a general venous hyperæmia. This venous hyperæmia is, of course, participated in by the retinal veins, which are swollen, tortuous and darker in color than normal. Although advanced emphysema is a disease easy of diagnosis, it might easily happen that the ophthalmoscope would be of value in corroborating the evi-

dence gained by other means and in determining to what extent the venous circulation is interfered with.

An atheromatous condition of the walls of the vessels of the general circulation, as well as a fatty degeneration of the same, often show themselves in the retinal vessels before appearing in the larger and superficial vessels with sufficient clearness to permit of a certain diagnosis. In such cases retinal apoplexies are not uncommon, and the ophthalmoscope would place the physician on his guard and in position to warn his patient of the possible danger of a cerebral apoplexy, and to take the necessary precautionary measures.

These changes in the walls of the retinal vessels reveal themselves by opacities in the normally transparent vascular walls, by increased reflection of the light by them, and the narrowing or even obliteration of the lumen of the vessels. When these opacities are small in extent the red column of blood is seen bounded on each side by a white line. The opacities may accompany the vessels for varying distances, sometimes confining themselves to those parts of the vessels on the *papilla optica*, at other times stretching far out into the retina. When the opacities are extensive they may cover one-half of the red column of blood; and in extreme cases they may simulate or indeed cause a complete obliteration of the vessel, causing an entire disappearance of the red reflex of the normal vessel.

Hypertrophy of the left ventricle is also a cause of retinal hyperæmia. But in this case the arteries are enlarged, not exclusively the veins. In certain cases there will also be a pulsation of the retinal arteries. A heart covered by widely dilated emphysematous lungs is not easy of access. And, although the emphysema presupposes the hypertrophied ventricle, it may be of value to determine approximately the degree to which the heart is affected. This evidence, in the absence of the sphygmograph, and in connection with the other physical signs, is furnished by the state of the retinal vessels.

In a word, any disturbance of the greater or lessor circulation readily and quickly shows itself in the vessels of the retina.

Fatty degeneration of the heart, which is often accompanied by a similar condition of the arterial walls, is often the cause of retinal hemorrhages. The ophthalmoscopic appearance of the retinal vessels when attacked by fatty degeneration has already been referred to.

Pernicious anæmia, causing a degeneration of the coats of the vessels, is also frequently accompanied by apoplexies in the retina. This fact might be of value in determining the diagnosis between simple and pernicious anæmia. In the latter disease the *papilla optica* is pale in color and the retinal veins are hyperæmic, tortuous and in strange and startling contrast to the pale *papilla*. Indeed, so common are the retinal hemorrhages in this comparatively recently discovered disease that they are considered by some authorities, in connection with the other symptoms, as almost pathognomonic of it. Although hemorrhages are common in other organs during the progress of this disease, they are especially frequent in the retina. And as this organ is open to direct inspection, its ophthalmoscopic examination is of especial value. Besides the hemorrhages and the venous hyperæmia, the retina is, in this disease, often the seat of small white degenerative patches.

In certain cases of enlargement of the vessels and dilatation of the heart without valvular lesions, there is a corresponding increase in the size and visible number of the retinal vessels.

In well marked cases of aortic insufficiency a most beautiful pulsation of the retinal vessels may be observed. The great contrast between the systole and diastole of these vessels is often astonishing. During the systole the arteries swell, often to an enormous size, to suddenly collapse and almost disappear during the diastole. The retinal veins collapse while the arteries are filling, and fill while the arteries are collapsing—the rhythmic changes in the two sets of vessels differing greatly from the arterial pulsations characteristic of glaucoma.

In cases of endocarditis, lesions of the cardiac valves and aneurism of the carotid or first part of the aorta, it sometimes happens that an embolus lodges in the *arteria centralis retinæ* and produces its characteristic changes.

Miliary tubercles of the choroid are often, even when present, difficult to find with the ophthalmoscope. But, when found, they are of great value in diagnosing the general disease—especially as they often appear in the choroid months before the outbreak of the symptoms of the general systemic infection. According to the late Prof. Cohnheim, the appearance of choroidal tubercles is the sign of a wide spread infection of the whole system, since the choroid, in his great experience, has never been found the seat of tubercles when only a single other

organ (such as the lungs or intestines) has been affected. Neither are they, according to Cohnheim, a symptom of cerebral or meningeal tubercle alone. According to the same authority they are found in one or both eyes in every case of general miliary tubercle which is examined *post mortem*. While the failure to find choroidal tubercles is not a proof of the non-existence of a general tuberculosis, they are, when found, a pathognomonic sign of the general affection.

The ophthalmoscopic picture of these choroidal tubercles is as follows: A light, yellowish-red patch, seldom as large as the *papilla optica*, often reaching one-third its diameter, still oftener much smaller, lightest in color toward the center and gradually shading off toward the edges into the color of the normal retina. They are never, as in the case of other choroidal troubles, surrounded by a seam of pigment. These spots are oftenest found at or near the posterior pole of the eye—though they are also found at other parts of the fundus. They tend to increase rapidly in size and number. Great disturbances of vision do not necessarily result from their presence.

It will thus be seen that the ophthalmoscope may be used to clear up the diagnosis of miliary tuberculosis and set the seal of certainty upon what might otherwise not be detected or hardly suspected until the systemic infection had proceeded so far that hygeine or therapeutics would be of but little or no use.

Lienal leucocythemia is often accompanied by retinal hemorrhages as well as by a peculiar kind of retinitis. The retinal veins in this disease are swollen, tortuous and lighter in color than normal; the arteries small and pale yellow in color. Extravasations of blood in the retina and yellowish-white spots, often surrounded by extravasated blood, are also found in this disease. The great preponderance of the white over the red blood corpuscles in this disease may be made out by the ophthalmoscopic appearance of the retinal vessels. Especially in advanced cases do we find that the swollen and tortuous veins, instead of being dark in color, are pale carmine or even rose colored. Even the extravasations, if such be present, may have this peculiar light color. In light colored eyes it may even happen that the whole choroidal reflex takes on a lighter color than normal on account of the abnormal composition of the blood contained in the choroidal vessels.

Besides this appearance of the retinal vessels, there is often a

retinitis present. This is, as a rule, not great in extent, and shows itself by opacities accompanying and often covering the retinal vessels, more especially the veins. Many cases are characterized by the appearance of circular spots of retinal hemorrhage and white spots surrounded by a hemorrhagic seam, in the anterior parts of the retina between the equator and the *ora serrata*, or in the neighborhood of the *macula lutea*.

It happens not so very seldom that Bright's disease is first diagnosed by the aid of the ophthalmoscope, the examination having been made for some other purpose, and the patient, in the midst of seemingly perfect health, suddenly finding that he is afflicted with a most serious disease. A typical fatty degeneration of the retina is one of the forms under which the kidney disease manifests itself in the *fundus oculi*. The first change, however, is a diffuse, grayish cloudiness of the retina surrounding the *papilla optica*, together with a few retinal hemorrhages. In other cases, white waxy-looking spots, as a further stage, with or without extravasations, show themselves in the same positions. In still other cases the retinal changes begin as a *retinitis apoplectica*. Sometimes the so-called "choked disc" is seen. The white atrophic patches, following the fatty degeneration, are, however, the most characteristic retinal signs of the kidney disease.

An ophthalmoscopic examination revealing a more or less complete ring of these spots surrounding the *papilla optica* and a few peculiar star-shaped points in the neighborhood of the *macula lutea* should instantly arouse the suspicion of nephritic disease. And this suspicion should be all the greater, if as is most frequently the case, the retinal trouble should be found in both eyes.

Of the different forms of Bright's disease, the interstitial nephritis is most often accompanied by these retinal changes. The appearance of a *retinitis albumenurica* is prognostically a bad omen. But if the retinal process is in retreat the prognosis is better. The condition of the retina will thus be seen to be a means of forming an idea of the state of the kidney trouble and will, so to speak, serve as a thermometer to register its variations.

A typical case of Graves' disease, with its goitre, exophthalmus, heart palpitation and peculiar nervous excitement, is by no means a difficult thing to diagnose. Still, there are

cases where the pathognomonic signs are not sufficiently pronounced to enable one to readily decide in the matter. In such cases the ophthalmoscope may prove a valuable adjunct. In this disease the retinal arteries are generally enlarged, even to the size of the accompanying veins, vary greatly in size in different parts of the same vessel, and are observed to pulsate.

The close anatomical relation between the eyes and the brain would, *a priori*, lead one to suppose that the *fundus oculi* would reflect many of the morbid processes of the latter, and thus afford a nearer insight into the condition of the contents of the skull. And, as a matter of fact, the ophthalmoscopic examination of the eye has become a matter of routine in all brain troubles, especially those of a chronic nature, as well as in the great majority of nervous diseases—the results more than justifying the increased trouble by giving greater certainty in diagnosis and prognosis.

In cases of miliary cerebral aneurisms it is very probable that the ophthalmoscope would aid greatly in the diagnosis. As yet no testimony has been given in this regard. But as the retinal vessels are found *post mortem* to be affected with these minute aneurisms, it is more than probable that the ophthalmoscope would, under the proper conditions, reveal their presence in the living eye.

Any long-continued increase in the intra-cranial pressure leads finally to affections of the optic nerve and retina. In this category may be placed cerebral, cerebellar, meningeal and osteal tumors of all kinds which are large enough to overcome the compensating outflow of the arachnoid fluid or which make direct pressure upon the brain substance. *Hydrops ventriculorum*, abscesses, softenings, echinococcus, hemorrhages, cerebro-spinal meningitis, tubercular meningitis, diffuse encephalitis frequently produce changes in the *fundus oculi* which the ophthalmoscope will reveal. All of these causes, it is true, produce the same changes in the bottom of the eye; so that the ophthalmoscope alone can not determine the nature of the lesion, giving evidence only that some cause is producing an increase in the intra-cranial pressure. The exact nature of the lesion must be determined by other means. Neither will the ophthalmoscopic appearance of the fundus of the eye determine the locality of the lesion—tumors in all parts of the brain, its appendages and envelopes producing the same changes in the

optic nerve. Nor does the absence of the changes in the bottom of the eye prove the non-existence of the brain trouble. For there are cases of even great and extensive lesions of the encephalon in which there is no ocular change. However, those who have had the greatest experience in diseases of the brain, and, consequently, are authorities in such matters, assert that the changes in the *fundus oculi* are present in the great majority of all cases of brain troubles of the natures mentioned above, and that bilateral papillitis is almost always caused by tumor of the encephalon. Some even go so far as to say that tumors of the encephalon always produce changes in the bottom of the eye—provided the patient does not die before the eye trouble has time to develop. The changes in the bottom of the eye appear at different times in different cases. Sometimes they appear before the other symptoms, at other times years elapse after the outbreak of the other symptoms before they show themselves. It will thus be seen that the condition of the *fundus oculi* is a most valuable adjunct in the diagnosis of disease of the encephalon.

The changes in the bottom of the eye spoken of above consist of neuritis, neuro-retinitis, neuritis descendens, choked disc, and, in the last stages, atrophy of the nerve. Of these, the choked disc, as the first sign of nerve trouble, will be most often met with. This pathological condition of the papilla is especially prominent where a slight increase in the intra-cranial pressure has existed for a long time. And there is no other objective symptom which gives such positive evidence of the increase of pressure.

As an illustration of the valuable aid the ophthalmoscope can give in cases of intra-cranial tumors, I cannot refrain from mentioning a patient of mine who accidentally came under my observation. He had been troubled for a long time with spells of vomiting, dizziness and the most agonizing pains in the occipital region. All these symptoms came on regularly at the same hour in the early morning, waking him from sleep, persisting for half an hour and then disappearing for the remainder of the twenty-four hours. Beyond a certain amount of marasmus he presented no symptoms beyond those mentioned. He had consulted a number of physicians, regular and irregular, and had visited a number of hydropathic and other kinds of institutions. All those whom he had consulted located his

trouble in the stomach, and prescribed various medicaments and diets all to no purpose. He came to me for advice about an almost total deafness in one ear. The tuning-fork showed that his deafness was of nervous origin, and aroused my suspicions. On using the ophthalmoscope I discovered an exquisite choked disc in each eye. I was then sure of the intra-cranial seat of his trouble, and from all the circumstances in the case, was disposed to diagnose a sarcoma of the cerebellum. On giving him my views in the matter he was disposed to place but little value on my opinion, as he had known me from boyhood, and had been told by so many different physicians that his trouble lay wholly in the stomach. A few months afterwards he suddenly expired during one of his morning attacks. The autopsy revealed a sarcoma of the cerebellum.

Among the other ocular symptoms of partial cerebral sclerosis may be mentioned the occasional occurrence of an atrophy of the optic nerve.

A frequent complication, or rather symptom of progressive locomotor ataxia, is an atrophy of the optic nerve. And as this atrophy may antedate the appearance of the ataxic symptoms by periods varying from a few months to as many years, it is often of value in determining the diagnosis before the ataxic symptoms have come to full development.

Injuries to the spinal cord often lead to changes in the *papilla optica*. Such changes usually consist of an increased redness of the disc, blurring of its edges, swelling and tortuosity of the retinal vessels and a decrease in the size of the arteries. This condition seldom or never leads to atrophy, but persists unchanged for a long time, finally tending toward recovery.

The nocturnal occurrence of epileptic attacks is sometimes a difficult thing to prove or disprove. In suspected cases the ophthalmoscope, used as soon as possible after a suspected attack, may give valuable evidence. There is after epileptic attacks a venous hyperæmia of the retina which persists for a shorter or longer period. In those cases of epilepsy, depending for their cause upon an anatomical change with an increase in the intra-cranial pressure, there is often found a choked optic disc or an atrophy of the nerve. This fact is not without importance as regards the diagnosis of the causal moment and the prognosis.

Syphilis frequently produces the most serious diseases in all parts of the eye. Among these may be mentioned choroiditis,



retinitis, neuritis and hyalitis. It is maintained by some that *choroiditis disseminata* is always of syphilitic origin.

Saturnine intoxication sometimes leads to choked disc and even atrophy of the optic nerve.

Chronic tobacco and alcohol intoxication frequently lead to amblyopiæ. In such cases the ophthalmoscope reveals transparent media and a normal fundus, or one so nearly normal that an evident cause for the amblyopia is not discoverable. This negative evidence should lead one to inquire into the habits of the patient, thus suggesting the therapy.

Bilateral acquired cataract in those below middle age should lead to the suspicion of diabetes mellitus. This same disease can also be the cause of retinitis, retinal apoplexies, atrophy of the optic nerve and amblyopia without any discoverable cause. The retinitis accompanying diabetes mellitus greatly resembles that found in albumenuria, and generally does not appear until the diabetes has persisted for some time.

Oxaluria has been found complicated with vitreous opacities.

But it is not alone in the diagnosis of diseases of the general system that the ophthalmoscope will be of value in the hands of the general practitioner. Every physician, especially he whose practice is in the country, is consulted more or less by those with diseases of the eyes. And, pardon me for saying it, he frequently makes mistakes in diagnosis which lead to disastrous consequences for the patient and greatly injure his own reputation. For such cases, falling finally into the hands of those dealing exclusively with ophthalmology, and being told that the disease is much more serious than the family physician had led them to suppose, naturally lose confidence in him who gave the false diagnosis. The ophthalmoscope would save the general practitioner from making many mistakes, and would greatly aid him in reputation as well as in pocket.

The diagnosis of incipient cataract is one in which mistakes are too frequently made. It is not so very seldom that the ophthalmologist receives cases in which an amblyopia dependent upon entirely different causes has been diagnosed as incipient cataract, and valuable time thus lost. I remember one case of pure *choroiditis disseminata* which came to me not long ago to be operated on for cataract. The media were perfectly clear; yet the man had been told to await a time with patience, when, blindness having shown that the cataract was ripe, an operation

could be undertaken. In this manner the man had lost several months of most valuable time, so that when he came to me there was but little to be done for him by even the most vigorous treatment. In this case one glance through the ophthalmoscope would, perhaps, have saved the patient his sight and the physician the mortification and pain of making such a terrible and unpardonable mistake.

Another fruitful source of error are cases of glaucoma. This disease, most terrible and sad in its consequences, is frequently mistaken for far more simple affections. The ophthalmoscope would reveal the cupped disc, the pulsating arteries and the swollen, tortuous veins, and would save many an unfortunate from months of pain and serious impairment of vision or even total and irreparable blindness.

Contrary to the usually accepted notion, the *technique* of the ophthalmoscopical examination is not difficult to acquire, at least well enough to make out the more common and coarser lesions. A little practice and trouble (well recompensed by the results gained) will overcome all obstacles.

I should like to see every practicing physician armed with the ophthalmoscope—not only armed with it, but also using it on every possible occasion. He would find that the little instrument would give him a renewed interest in his profession, secure him greater confidence in diagnosis and therapy, and place him in a position to be of greater value to his clients and himself.

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### **ANESTHESIA BY ETHER.**

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By JAS. H. PARKINSON, L. R. C. S. I., Sacramento.

(Read before the Medical Society of the State of California.)

In presenting a paper on this familiar subject, I feel that some apology is necessary.

Something is gained by rendering more precise and accurate methods which are of daily use; and it is my purpose to indicate the direction we should look in the precautions to be observed and the difficulties or accidents likely to be encountered.

I have deemed it best to avoid the consideration of other anesthetics, as in America ether is almost universally employed.

It is unnecessary to enter into details of experiments demonstrating the actions of the various agents used as anesthetics in

order to compare their relative merits. What the administrator seeks is facility—which means rapidity with certainty—and safety.

These conditions will be found to cover the whole ground, and I shall endeavor to show that they are more perfectly fulfilled by ether than by other agents.

When certain rules are observed, insensibility can be produced as rapidly with ether as by any anesthetic, and with a consumption of the drug which renders it most economical.

The certainty of its action is unquestioned. Properly administered, there is no recorded case of failure to anesthetize, and those we hear of in this connection have been due to imperfect methods.

Figures are often unsatisfactory, and open to many fallacies.

Prigden Teale—*Brit. Med. Jour.*, March 11, 1852—says:

“It is confessedly difficult, perhaps impossible, to settle, by statistics, the question of the relative dangers of ether and chloroform, chiefly for the reason, that whilst we know pretty nearly how many deaths from each agent occur during the year, we have not the means of ascertaining the relative proportions of the cases in which each anesthetic has been used.”

Diversity of opinion does exist, but most authorities agree that, for prolonged operations, ether is the safer agent.

Leyman—*Artificial Anesthesia*, page 79, *et seq.*—gives a very complete summary of the different relations, from which we find that with

99,255 ether inhalations there were 6 deaths, or one in 16,542;

And in

492,235 chloroform inhalations there were 84 deaths, or 1 in 5,860.

These figures demonstrate that the risk is very much less where ether has been used.

Several of the fatalities recorded should not properly be ascribed to the anesthetic, as pulmonary trouble often exists, which, on strict enquiry, can usually be traced to be a definite cause.

Dr. Ernest H. Jacob—*Brit. Med. Jour.*, May 2, 1885—gives a list of 6 reported deaths from ether in 1884, and, commenting on them, says, these “deaths occurred, without exception, in persons severely debilitated by disease. It is doubtful how far a case occurring 17 hours after the operation should be attributed to the anesthetic. In a large hospital there are many chances

of a patient taking cold during removal from the theatre to a ward." In his summary for '85—*Brit. Med. Jour.*, March 13, '86—there are only three cases recorded, two of which may be bracketed with the previous list. In fatal cases the respiration has always been observed to fail first, and in instances where it has even ceased, prompt measures have resuscitated the patient.

The only exception that I know of to this statement is mentioned by Dr. Jacob—*hoc cit.* A girl, aged ten years, had taken but a few inhalations of ether when the pulse ceased, the breathing continued; treatment was unavailing.

Dr. Jacob characterizes this as the most remarkable case that he has known, the patient having taken not more than a drachm of ether and dying in a precisely similar manner to that which obtains with chloroform. He regarded it as identical to one occurring some years ago, in which a woman "took 3 or 4 inspirations of ether from a frame inhaler, became white in the face, and died."

He believes these deaths to have been really due to fright or emotion. It may be taken as the strongest point in favor of ether that death has never ensued without ample warning sufficient to admit of remedial measures.

Mr. Woodhouse Braine, in a paper read before the Medical Society of London—*Brit. Med. Jour.*, Nov., '84—of which I shall largely avail myself, says: "Let a heart once thoroughly stop and death always ensues, but let a patient entirely stop breathing for a minute and a half, or two minutes, even then full and forcible artificial respiration, as a rule, produces a happy result."

The rationale of the action of ether is similar to other members of the anesthetic group.

According to Claud Bernard, their phenomena are due to the cessation of molecular motion in the tissues, causing the suspension of animal life.

This condition can be produced in any living organism, for plants succumb to anesthetic vapors as readily as the higher animals, and many chemical processes are inhibited in like manner.

That it is independent of any changes in the vital fluid is proved by the experiments of Hartman, who found that by removing all the blood from a frog and injecting an artificial saline medium, the animal then being in a condition of apparent nor-

mality, succumbed most readily to the influence of the narcotic.

In man the nerve centers are paralyzed in the following order:

- 1st. The cerebrum.
- 2nd. The sensory centers of the cord.
- 3rd. The motor centers of the cord.
- 4th. The sensory and motor centers of the medulla.

While accomplishing the same results, ether differs from chloroform in its mode of action, and it is of great practical importance to note this dissimilarity.

Richardson says: "There appears to be reason for the belief that the lethal energy of an anesthetic is clearly related to the molecular weight of the substance, increasing directly as its weight increases."

The inhalation of all compounds containing chlorine depresses the heart and decreases the arterial tension by a greater or less degree of vaso motor paresis. The ether compounds all produce increased cardiac action and higher arterial tension.

If a heart be examined previous to administration of ether or chloroform, and then one minute after inhalation has commenced, it will be found that in both cases the action is strengthened and quickened.

Examination five minutes later shows that with chloroform the heart has already slowed and decreased arterial tension is evident; while with ether, but slight change is noticeable. During the further progress of anesthesia the chloroformed heart does not regain its original vigor, and may continue to slow, while insensibility can be maintained by means of ether for several hours without the appearance of circulatory failure.

The effects which ether produces bear directly upon the mode of its administration. Unlike chloroform, it can be given unmixed with air, and there is practically no limit to its safe concentration.

This, with the fact that toxic symptoms always appear in a definite direction, are the indications to be followed. The best method is that by which the ether vapor can be inhaled in a highly concentrated form with small admixture of atmospheric air.

This fulfills three important indications: rapidity of anesthesia, economy of ether, and greater immunity from after effects, owing to a smaller quantity having entered the system.

The methods ordinarily in use can be roughly classified as

temporary and permanent; to the former belong paper and pasteboard cones, napkins and towels, and to the latter various apparatus in the form of inhalers. The requisites of a good inhaler are simplicity in construction, compactness, and portability.

The delivery of the vapor unmixed with air.

In fulfilling these conditions, there is a distinction that some instruments are so arranged as to permit of the escape at each expiration of the lung contents, whilst others compel the subject to "breathe and re-breathe the same ether charged air."

Accepting the conditions which I have stated as requisite for efficient ether administration, it will readily be appreciated that the cone so commonly used in this country cannot fulfill them.

The inaccurate fit permits a considerable influx of air at each inspiration, and much ether escapes by the same course as well as at the apex. This wastes the drug, and by diluting the vapor prolongs the primary stages, so that a considerable quantity is required to produce insensibility, and subsequently to maintain the effect.

It is unusual to procure anesthesia in less than five minutes, and often fifteen will be occupied; the amount of ether expended varying from five to twenty ozs.

The bulk of this apparatus is a prominent objection, in operations about the face and in ophthalmic surgery; when continued anesthesia is required, some other means must be adopted.

There are many inhalers, but all conform to the types before mentioned, *i. e.*, providing for the escape of expired air or compelling it to be re-breathed.

Professor Muller, of Germantown, Pa., has lately advocated a method which is practically distinct from either of the foregoing. He arranges for the inspiration of pure ether vapor, none of the expired air coming in contact with the source of supply.

Without enumerating the many inhalers which have been devised, Clover's, Ormsby's, and Muller's, may be taken as the best representatives of their types.

Clover has two instruments, one for ether only and one for nitrous oxide gas and ether; the latter is unnecessary and cumbersome. By using the same face piece the odor of ether persists, and will always be perceptible when the gas is being given.

His ether inhaler, generally known as the "smaller," is bulky. An arrangement is provided by which a known percentage of

air can be inhaled with the ether, or either alone can be respired. The ether reservoir is jacketed with water to prevent too low a temperature, and the vapor is derived from a rubber tissue bag, attached to the reservoir. The size of this commonly used apparatus exceeds that of a neat pasteboard cone. It is economical in the use of ether, and anesthesia can be rapidly produced; but, as Clover himself says, "it is rather too complicated for general use."

Muller's, in theory, is excellent, and practically gives very satisfactory results. It obviates one objection to inhalers by having a simple, easily-cleansed face piece. The anesthetic vapor is drawn directly from a reservoir, the arrangement of which constitutes the improvement.

It is connected to the face piece by rubber tubing, the anesthetic being delivered independent of respiratory effort by the simple expedient of immersing the containing vessel in hot water. Muller claims that this renders the vapor less irritant; in his hands anesthesia has been rapid and certain, though I would feel disposed to question the accuracy of case I., in the first series which he has published.

It is too cumbersome for use as a portable inhaler, and, according to Muller's figures, less economical than is desirable.

Ormsby's, in my opinion, is the best apparatus. It is simple in construction and most economical in operation.

In rapidity of action it equals any inhaler, and the quantity of ether used during a given time is less than that required by others.

It consists of a metallic face piece with rubber air cushion to ensure an accurate fit; the ether is contained in a sponge above the face piece, and the air respired passes through the sponge into a rubber bag to be re-breathed again and again. Fresh ether is added as required.

This differs from other inhalers, in the fact that the patient continually re-breathes the expired air.

It has been said that the process of anesthesia, under these circumstances, is practically asphyxia, but the results are not such as would support this statement; and those who have constantly used it do not find the carbonic dioxide a disadvantage.

Prigden Teale—*hoc cit*—with reference to this inhaler, says: "The patient breathes the same air over and over again \* \* \* thereby economizing the heat of the air passages, economizing

ether, and enhancing the effect of the ether by partial asphyxia."

Mr. Woodhouse Braine, whose longest administration has been three hours and ten minutes, states that he frequently maintains anesthesia with this apparatus by removing the sponge and allowing the patient to breathe into and from the rubber bag, admitting air only when required. He says, "it may be urged against this method that the patient rebreathes the carbonic acid of his own expired air, and this is true; but from the length of time I have employed this plan, and from never having seen any deleterious results from it, I do not attach any importance to the objection."

Mr. Ormsby has kindly given me the result of his experience in 2,500 cases, the ages varying from 2 months to 84 years. He says: "I believe that carbonic dioxide, in a diluted form, assists the ether as an anesthetic, while the rebreathing of the vapor warms it, so that it is more readily tolerated by the patient."

The greatest length of time that he has maintained uninterrupted anesthesia, has been three hours and forty-five minutes.

My own experience of eight years with the apparatus is exactly similar, and I regard the dioxide as tending to shorten the initial stages and lessen excitement.

It is open to the objection raised against any permanent apparatus; but its simplicity, and the materials used, permit of the most effective cleansing.

On the question of rapidity and economy of ether, it would seem that the inhalers represented:

Clover's time,  $2\frac{1}{2}$  minutes; ether, 2 ozs.

Muller's time, average from 15 cases published, 1 min. 9 secs.; ether, 2 ozs., about.

Ormsby's time, 2 minutes; ether, 1 oz.

I believe Ormsby's to be the most economical, and I think that results obtained by it will equal any inhaler.

Before entering into the minute details of ether administration, there are some general directions that should be noted.

If choice is permitted of an hour, Braine recommends that it should be early in the morning, as the patient requires less ether to produce insensibility, and the system will be in a better condition to withstand the shock of operation.

If possible, no food should be taken within four, and not less than three, hours of administration, and then only of the lightest description, preferably some animal broth.



The patient should not become weak from want of food, and stimulants may be given if required.

Attention to this simple matter of detail is very important, and it is well to bear in mind that when regular meal hours are altered digestion does not always ensue.

Ether appears to be more frequently followed by vomiting than chloroform, and several fatalities under its use have been due to obstruction of the air passages by food matters.

With some previous care, one of the most annoying incidents of an operation will cease to be a cause of apprehension.

Independent of the region of operation, it is desirable to have the bowels and bladder emptied, removing a source of possible discomfort.

This is more important with regard to the bladder, as the excretion of urine is increased under the influence of excitement.

False teeth should be removed, and personal inspection of the mouth is advisable in every case.

Braine recommends that in old people where a full set is worn, it should remain in place, "as the gums come so close together that the flabby lips and cheeks act as a valve and prevent the ingress of air."

Clothing, not absolutely required, should be dispensed with, and warmth maintained by suitable coverings, which are less embarrassing to anesthetist and operator.

If this be impracticable, all fastenings should be loosed and the neck, thorax and abdomen be free and unimpeded.

Age is not a factor in ether administration, for it seems to be a safe anesthetic at any period of life.

When used alone, it is an unpleasant vapor to inhale, and much difficulty will be experienced with children on this account, the preliminary stage of excitement being prolonged.

In advanced life the dangers to be apprehended are enfeebled heart, perhaps degenerated in structure, and chronic bronchial affections.

With any forms of heart disease which we can diagnose, ether adds no appreciable risk; and where fatty heart is suspected, the anesthetic exercises a beneficial effect by its sustaining power.

Extra care must be taken in the latter class of cases to guard against shock, which is very likely to prove fatal; indeed, there is far greater danger to be feared from too little ether than too much.

This unreasoning dread of anesthetics has often caused fatalities with which they have been unduly credited.

Lander Brunton explains this very clearly: "The heart's action is accelerated by the vaso motor nerves and inhibited by the vagus. When the nervous system is in working order the shock affects both centers at once, so that one influence counterbalances the other."

"When an anesthetic is administered the vaso motor center is paralyzed before the vagus center, and as the inhibitory nerve alone is active, the shock produces extreme depression or stoppage of cardiac action. When anesthesia is complete the reflexes of both centers are abolished, and no such effect is to be apprehended."—*Notes on Anesthetics, Tenderwood, page 21.*

In this connection it is interesting to note that the first patient in the Edinburgh Infirmary to whom Simpson was to administer chloroform, died before the operation commenced, presumably from shock. Simpson was late and the operation was proceeding without an anesthetic.

It is often said that if the new agent had been used it would have been a serious mishap, though Mr. Chiene thought that "if narcotized the patient's life would have been preserved."

It was precisely one of that class of cases in which partial anesthesia is so dangerous.

Should a preliminary examination of the heart and lungs always be made? I believe so, for though the anesthetic must be employed irrespective of existing conditions, yet their discovery will place the administrator on his guard and he can ascertain peculiarities of circulatory or respiratory action, which might afterwards cause him apprehension. Some authorities, notably Lister, believe that this examination is unnecessary, and tends needlessly to alarm the subject, but Braine's view of the matter is more practical when he says that it gives confidence, "for no patient ever yet took an anesthetic who did not think that his own case differed materially from all others preceding it."

The position of the patient is important. It should be almost horizontal, with the shoulders slightly raised by the pillow that supports the head, both being on the same plane.

This is more convenient than the position on the side advocated by some authorities, which is difficult to maintain unless the subject is profoundly anesthetized. The exigencies of the operation will, of course, govern subsequent proceedings.

The patient's head can be turned over from time to time, permitting saliva, which accumulates in the mouth, to run out.

A napkin or towel should always be under the anesthetist's hand, and the finger, armed with a corner of it, occasionally passed across the front of the mouth to remove any mucous which collects there.

The inhaler should be removed and the towel again brought into requisition when attempts to cough or spit are made.

The administrator should see that nothing prevents the patient being turned over in case of vomiting, and that a suitable vessel is provided.

Surroundings need some attention; the room should be at a comfortable temperature, 63° to 67° F., for general operations.

If special indications require greater heat, or, as is often the case in our State, the time of year will materially influence it, we must recollect that the patient will receive a larger amount of ether vapor and succumb more readily to its influence at 85° or 90° F. than at 63°.

Means of ventilation should be provided by which fresh air can be admitted, and a current maintained without injury to the patient.

During the operation, unnecessary exposure of the surface of the body is to be avoided, and damp clothes or coverings should be removed as soon as practicable. It is not always convenient or advisable to move a patient after operation, and the system is at this time very susceptible to injurious influences.

Perfect quiet is most desirable. Conversation, and particularly laughter, tends to excite and unduly prolongs the first stages of anesthesia.

Touching the seat of operation or handling diseased or painful structures is to be avoided, unless the subject is wholly conscious or unconscious.

In the intermediate conditions, where volition is abolished, these acts produce a feeling of nervousness and terror, frequently followed by struggling and embarrassed respiration.

The foregoing directions equally apply to any method of inducing ether anesthesia; but more specific rules are necessary where special apparatus is employed. Believing that Ormsby's inhaler is the most generally satisfactory instrument, I shall more particularly direct attention to its management.

The stages of anesthesia may be classified thus:

1. Stage of giddiness; volition, and thought deranged.

2. Stage of incipient anesthesia; volition, thought, consciousness and co-ordination lost; sympathetic paralysed.

3. Stage of sensory paralysis; reflex action abolished.

4. Stage of total paralysis of everything except the vital centers of the medulla.—Underwood *op. cit.*

Before commencing inhalation the age of the subject must be consulted; with adults it is advisable to briefly explain the process and the sensation they will experience, coupled with the assurance that there is absolutely no danger of asphyxia.

It is a good plan to make them breathe through the inhaler several times, first stating that there is no ether in it; that when next applied the vapor must be respired, and that the inhaler will then not be removed under any circumstances.

This renders some restraint necessary, and while holding a quiescent patient in anticipation produces a bad impression, the rule should be made absolute that no intermission shall occur in the progress of anesthesia.

Bird and Baily both assert "that there is no greater mistake than to fasten a patient, or clutch at him unnecessarily; either is sure to provoke struggling."

By permitting some movement, and at the same time restraining, a good result will be obtained; one person can control an average man, if the hands are folded on the epigastrium, by grasping the thumbs as they lie alongside each other. Struggling during the semi-conscious stage must be met by main force; but this is rarely seen except in the habitually intemperate, or when the subject has been unduly excited.

With children, restraint from the first, while seemingly barbarous, is really the most merciful treatment.

Never begin administration until everything is ready; experience teaches that an average of two minutes is sufficient, and that very rarely five minutes elapse before the patient is insensible; we can, therefore, with certainty wait till nothing further is required.

In case several assistants or spectators must be present, it is well to have them leave till insensibility has set in, or else produce it in an adjoining room.

If Ormsby's inhaler is used when the temperature is under 70° F. a sponge wrung out of hot water or a hot napkin should be placed in the face piece immediately before using, as the ether vapor comes off more readily.

Always measure the quantity of ether used. I commence with one *ʒi.* on the sponge, and add subsequently, in quantities of *ʒiv.*; if the operation lasts over half an hour, the sponge should be removed and the water which has accumulated be expelled.

Most inhalers provide for the admission of fresh air, and administrators usually attempt to bring the patient gradually under the influence of the anesthetic by giving the vapor at first diluted. This is unnecessary and prolongs the primary stages.

With a little management, pure ether vapor can be inhaled and very little inconvenience experienced. As the result of several experiments on myself, I am satisfied that the coughing and choking, which we see so often during ether administration, is caused by the sudden entrance of a large volume of cold irritant vapor to the larynx.

I found that by keeping the mouth shut and breathing slowly and easily through the nose, that I became unconscious without any unpleasant sensation.

When practicable, I have adopted this method of etherization during the last few years, and, unless the patient is too nervous to follow the directions, have never seen it fail.

The vapor, in passing through the nasal cavity and fauces, becomes warmed previous to entering the larynx, and as the lungs are not completely filled at each inspiration, it diffuses gradually and is in reality at first well diluted.

Telling the patient to breathe deeply is unnecessary; as unconsciousness is reached deep inspiration naturally ensues.

If insensibility is not attained in three minutes pour *ʒiv.* of ether on the sponge, and reapply the inhaler. Should the accession of fresh vapor produce coughing, the apparatus must be removed for two or three inspirations and then reapplied.

This is necessary only if the coughing is synchronous with each inspiration; where it is irregular no notice need be taken.

When the patient is thoroughly anesthetized air can be admitted and insensibility maintained with a proportion of air and ether.

If anesthesia has been profound, the inhaler may be removed and replaced when required, keeping the face piece occluded in the interval to lessen evaporation.

The foregoing rules apply to cases in which ether is used alone; and it may not here be out of place to dwell briefly on the ideal method of etherization, by which every objection, save that to the theoretical danger of the anesthetic, has been removed.

When anesthesia is produced by the successive inhalation of nitrous oxide gas and ether, little remains to be desired.

We have, in fact, the pleasant easy sleep of the gas, insensibly merged into the profound anesthesia of ether.

The necessary appliances and extra expense precludes its every-day use; but in hospitals, and in extensive surgical practice, the increased expenditure is amply repaid.

Valid objections can be urged against any combination apparatus for this purpose, and it is best to have a separate inhaler for each agent.

In conjunction with my friend Mr. Wood, I have used White's face piece for the gas, and Ormsby's inhaler subsequently, with perfect results.

No special directions are needed.

The gas is inhaled in the usual manner, and when a degree of anesthesia has been reached, which renders the larynx insensible, the face piece is quickly changed for the inhaler and the administration proceeded with. It is difficult to lay down precise rules as to length of time or quantity of gas; to obtain the best results, experience must be largely relied on.

In his paper Braine advises that "complete insensibility" should be produced, but I think that this is hardly necessary.

A point of great practical importance is, that the ether anesthesia will be more rapid, more profound, and if inhalation is suspended, recovery will take place sooner than under ordinary circumstances. That is, all the symptoms of profound anesthesia set in immediately, when but little ether vapor has been inhaled, and the recovery from this condition is more rapid.

In answer to an inquiry, Mr. Braine kindly tells me that he finds 3 vi. of ether usually sufficient, and adds, "undoubtedly if N. O. is given first, much less ether suffices, and so little is given the patient recovers very rapidly, and often is not sick; whereas, if the gas is not used, the patient has to be more or less saturated with ether."

No operation should be commenced until the patient is thoroughly under the influence of the anesthetic.

The administrator should note the periods of the operation during which much pain may be inflicted, and prepare for them. He should rely upon his own judgment and experience, more than on the apparent sensations of the patient, who may one moment be sleeping peacefully, and the next struggling violently and noisily.

After the preliminary incisions have been made many operations are comparatively painless. Braine says that in ovariectomy patients are "often able to answer questions \* \* \* being totally unconscious that at that very time the hand of the surgeon is in the abdominal cavity;" and this is true of other cases. The degree of anesthesia required for surgical interference with a particular area can be estimated. Lyman gives the order in which parts become anesthetic, as—first, the back, then the posterior surfaces of the limbs, next the scalp; later the anterior surfaces of the body, the fingers and toes, and lastly the perineum and organs of generation.

The signs of insensibility are, deep regular respiration becoming stertorous, muscular relaxation, and abolition of the reflexes, as shown by insensitive conjunctivæ.

Braine says that subsultus tendinum of the fingers is more trustworthy than the foregoing.

In testing for insensibility it must be noted that if the conjunctiva is repeatedly touched in the same area it becomes insensitive, and the other eye should be tried.

The value of the terms analgesia and anesthesia must be remembered.

When the reflexes are not completely abolished movements may take place, and cries be uttered of which no recollection remains on recovery; the administrator must use his own judgment in determining the degree of anesthesia for a given case, and never allow a manifestation of pain to demand an increase of the anesthetic.

It is essential that he should give his undivided attention to the work he performs, and avoid acting as an assistant unless urgently required.

It may be added that "the operating surgeon should never, by word or action, interfere with the administrator of the anesthetic. It is the province of the anesthetist to produce a safe and thorough anesthesia; to do this well he must be undisturbed by hints or questions."

The pulse and respiration should be carefully watched. Many authorities assert that no notice need be taken of the cardiac action where ether is used, as respiration always fails first.

If this were absolutely true, it is still no reason for neglecting an important safeguard.

When the pulse becomes small and irregular, while the respi-

ration grows more shallow, the danger is far greater than where vascular tension is unimpaired. No condition of respiration need cause apprehension when the pulse remains firm and steady.

The anesthetist, by placing the fourth or fifth finger of that hand which holds the inhaler over the temporal artery, can readily keep the heart under observation. The respiration should be constantly watched; experience is the best guide as to conditions implying danger.

It may be slow, irregular, jerky, abnormally deep, and abnormally shallow.

Slow respiration, if steady, does not require special notice; the intervals between breaths may be very long, without any inconvenience resulting.

Braine advises that the administrator should respire synchronously with the patient, and if he can do so comfortably may be assured that all is well. Irregular and jerky respiration, when the pulse is rapid and corresponds somewhat to the respiratory rhythm, implies partial anesthesia. Deep respiration of a sighing character, or becoming stertorous, and shallow stertorous respiration, are signs of danger; if the pulse is irregular and small, the anesthetic should be pushed most guardedly. If the respiration continues to slow, and remains unchanged in character, while the pulse shows no gain in volume, the ether should be withdrawn and, if necessary, efforts at resuscitation adopted.

It is most important to remember that the chest may rise and fall regularly, and yet not a particle of air enter the lungs, this will always be accompanied by a rapidly increasing pulse, which soon slows and fails.

Milne Murray, who devotes some space to a consideration of this phenomenon—*Brit. Med. Jour.*, Sept. 19, '85—regards it as a failure in the co-ordination of the muscles of inspiration and expiration; in fact, a respiratory stammer analagous to that produced in the speech center by alcohol.

He emphasizes the caution that the air current should be felt as it passes in and out, which Chiene says can be done by the hand between the inhaler and the mouth.

With Ormsby's or Clover's apparatus these precautions are unnecessary, as the inflation of the rubber bag is a reliable indication of the respiratory condition.

The same care should be observed whatever anesthetic is employed to keep the air passages free from obstruction, which may



be produced during an operation, by blood clots, teeth, or vomited matters, and should be carefully watched for and removed.

When a foreign body has entered the glottis, which cannot be reached by the mouth, and change of position fails to remove, tracheotomy should be immediately resorted to.

Mucous accumulating in the pharynx is a source of annoyance more prominent in ether administration than with chloroform; if no attempt is made to swallow or cough it up, it is advisable to introduce the finger and sweep it lightly over the fauces, which by compelling the act of deglutition removes the obstruction.

Owing to its stimulant action on the heart, the liability to secondary hemorrhage or serious oozing is greatly diminished when ether is employed.

Braine quotes Paget as authority for the statement that fifty per cent more vessels were tied under ether than when chloroform was used, and the point is one worth bearing in mind.

Most of the dangers which may be encountered during ether administration have been dwelt on, as, irregular respiration, obstruction to the air passages, by vomited matters, blood, etc., and difficulties arising from individual peculiarity.

It remains to consider the phenomena presented when toxic symptoms supervene.

Passing over these rare instances where death is stated to have occurred from spasm of the glottis, and remote pulmonary complications due to the action of the vapor on the bronchial mucous membrane, we come to those cases in which the drug has affected the medulla, and produced cessation of the respiratory function. This does occur, but in most instances there is ample warning, and treatment as a rule is successful.

Milne Murray states the proposition that "the time required to restore respiration varies inversely, as the concentration of the dose, and directly as the time required to stop respiration."

This is a guide both to results which may be expected and to the time which treatment must be persevered in after breathing has been apparently re-established; for it is not enough to start the respiration, but to keep it going until the function can be fully assumed. One of the first symptoms of danger, as I have before mentioned, is deep, or shallow breathing becoming stertorous. The face, at first pale, deepens into color, from simple bluing to well-marked lividity, synchronously with which the pulse has lessened in volume and force; at this stage, as Hux-

ley has pointed out, a strong respiratory effort may arrest the circulation.

No reference is made to the stertor of ordinary snoring due to movements of the velum, but there are two causes of obstruction to inspiration most important to recognize, which may or may not be accompanied by stertor.

1st. Occlusion of the air passage by the epiglottis owing to the tongue falling back, and

2nd. Approximation of the aryteno-epiglottidean folds of mucous membrane.

It is doubtful whether the heart's action ever stops with the cessation of the respiratory function under ether; the majority of observers agree that in fatal cases it has continued to beat for several minutes. This indicates the course we should adopt, which consists in permanently re-establishing the action of the lungs.

Where signs of pulmonary embarrassment present themselves the inhaler should be removed and the angles of the jaw pressed forward, which opens the mouth and carries the tongue clear of the glottis.

If this fails the mouth should be kept open and the tongue drawn forward by the forceps, artificial respiration, preferably by Sylvester's method, being at once begun.

If the aryteno-epiglottidean folds are obstructing, the pressure of the forceps may excite a reflex effort which will restore the potency of the glottis.

The cases in which these procedures fail are rare; but it is essential to continue the process till cyanosis has disappeared, and the pulse is full and steady.

This is the treatment in pure respiratory failure; where the obstruction is mechanical, the proper means must be adopted to clear the air passages.

Such complications as bronchitis, which occur at a period subsequent to administration do not come within the province of the anesthetist.

There are some points regarding the after management of the patient which is well for him to give directions concerning. It is always advisable to avoid vomiting; indeed, the results of many operations may be impaired or irretrievably ruined by this unpleasant sequela; emesis may be due to matters swallowed during the course of the operation, but usually arises from the

anesthetic circulating in the system. Ether sickness is not so persistent as chloroform, doubtless owing to the greater volatility of the former agent.

Mr. Ormsby tells me that where proper precautions have been taken in the administration of food, he believes that vomiting does not occur oftener than in one per cent of cases. Gunn asserts that age materially influences its occurrence, being more common at puberty and early adult, than in advanced life and with children.

When everything has been completed the patient should be removed to a cool darkened room and the horizontal position maintained for several hours. The absence of light is salutary in promoting rest; and obviating the swinging or moving appearance of objects, familiar to all who have suffered from "mal de mer." No food should be given for three or four hours, unless under special circumstances; and then only in a fluid form. It is advisable that the nutriment should be cold, as being less irritant to the stomach. Ice in small quantities may be allowed, but medicinal sedatives of any kind, except, perhaps, the bromides, are contra-indicated.

When speaking of tracheotomy, and drawing forward the tongue with forceps, both these operations imply the necessity of instruments.

Braine recommends that every anesthetist should be provided with a pair of tongue forceps, a gag, a scalpel, dissecting forceps, and tracheotomy tube; and adds that the presence of the latter gives "a feeling of comfort, and ability to cope with unforeseen respiratory difficulties."

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### **SMALL VERSUS LARGE DOSES OF MEDICINE.**

By J. K. FRANCE, M. D.

(Read before the Medical Society of the State of California.)

The advancement of medical science during the last half of the present century has been marked, particularly in the departments of materia medica and therapeutics. The improvement is striking as regards new articles introduced, and in the quantities and modes of administering those long known to the profession. The ponderous doses so commonly prescribed thirty or forty years ago, are superseded by much lighter ones in

more agreeable forms and by hypodermic medication. The heroic treatment practiced at the beginning or middle of the century has scarcely anywhere an advocate.

The *vis medicatrix naturæ* and the certain, controlling powers of medicine are becoming better understood. The disastrous effects of large doses, especially of heart sedatives in depressing the vital forces and causing death in many cases, are justly looked upon as *murder* perpetrated by licentiates of our profession. Doses comparatively *very small* when frequently administered at short intervals are safer and more successful, and are being much used by intelligent practitioners. Even our systems of mental philosophy and the powers of the mind in their application to the treatment of nervous and all forms of disease are becoming more recognized by every worthy disciple of Hippocrates.

As typical cases that distinguish the present time, we cite the example of Ringer of New York, who prescribes as an antibilious purge, calomel one-half grain, extract of hyoseyamus three grains, to be mixed, and the dose repeated for three nights in succession, assisted by a few drops of the tincture of nuxvomica. For a similar case the physicians of thirty or forty years ago would have prescribed calomel twenty grains, jalap twenty, to be mixed and given as a single dose, assisted or preceded by the abstraction of a pint or two of blood. In all inflammations it was customary practice to *bleed*, in many cases to the extent of syncope; also to apply blistering cerates covering many inches or a foot of surface.

But as science progresses the ideas and practice of a former age have changed and many prescriptions are now made, consisting of a single drop or grain, or part of a drop or fraction of a grain, for a single dose. Morphia, usually given in the one-sixth of a grain, is now prescribed by many in much smaller quantities. It acts better in a vast number of cases when administered in the fifteenth part of a grain, repeated at intervals of half an hour or hour, operating without nausea or wakefulness, often the result of large doses. Calomel given in the tenth part of a grain or even smaller quantity, repeated hourly for several hours in succession, produces better results than in the larger doses, causing little or no nausea but all the good effects that belong to this invaluable medicine. The tincture of aconite has a greater effect in controlling arterial excitement and

fever, given in one-fourth drop doses every hour, then two drop doses every two hours. By its use in these small doses we can secure all the sedative effects we wish, and, what is greatly to be considered, without causing depression of the vital powers, a fact of great importance in making prescriptions of so potent a remedy.

But it is not morphine, calomel, or aconite alone that are more curative in *very small* than in the usual, comparatively large, doses. The doses of our whole catalogue of medicines, as given in our standard authorities, need to be reduced in quantity. A radical change in this respect should be made to keep pace with a more benign and enlightened therapeutics.

It is curious that comparatively very small doses act better than large doses, but experience confirms the fact. The more frequent reception into the stomach may cause a more constant medicinal effect upon the vascular and nervous functions. The absorbents may receive more kindly the small, almost homeopathic doses, while the large ones excite, and thus prevent the assimilation of the medicine into the blood. Our *materia medica* needs revision, and our therapeutics will undoubtedly be improved and changed in the future. We need in medicine more of the certainty and exactness that should belong to so grand a science. The field in this respect is large and the need is great.

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**Resolution of Respect in Memory of the late Dr. Austin Flint.**

(Read before the Medical Society of the State of California.)

*Whereas*, It is not only the custom, but proper, to pause in the whirl of busy life, and pass resolutions of respect in memory of noted leaders, both in war and peace, who have fallen in the discharge of their duties and "passed over to the other side." therefore be it

*Resolved*, That in the death of the late Dr. Austin Flint, of New York, we have lost an honored and illustrious member of our profession, and an accepted author, whose name is inscribed high on the roll of fame, and of whom it can be truly said "the world is better for his having lived;"

*Resolved*, That the foregoing preamble and resolutions be spread upon the minutes of this association and published in the *Transactions*;

*Resolved*, That a copy of the *Transactions* containing the aforesaid preamble and resolutions be sent by the Secretary to Dr. Austin Flint, Jr., of New York. A. B. STUART,

**TREASURER'S REPORT.**

(Read before the Medical Society of the State of California.)

**Cash Account.**

1885.		
April 17.	To Janitor B. B. Hall .....	10 00
" 17.	" Advertisement Chronicle.....	1 95
" 14.	" Spaulding & Co .....	1 25
" 12.	" Dr. W. Ayers, Stamp .....	2 00
" 11.	" Spaulding & Co.....	10 00
" 15.	" Sac. Pub. Co., Advertisement .....	2 50
" 15.	" Post " " " .....	1 00
" 17.	" B'nai B'rith Hall.....	45 00
	" Secretary's Salary .....	100 00
June 26.	" W. S. Whitwell.....	175 00
Aug. 6.	" " " .....	180 00
Nov. 18.	" " " .....	170 00
1886.		
Feb. 22.	To W. S. Whitwell.....	175 00
1885.		
Sep. 24.	To S. C. Maslin, for Filling Certificates.....	30 75
July 10.	" Stamps .....	5 00
Mar. 21.	" Lewis & Johnson.....	4 75
1886.		
Aug. 4.	To Bacon & Company.....	9 30
	" Sundries .....	2 75
		<hr/>
		\$926 25
	Balance in Cash .....	421 05
		<hr/>
		<u>\$1,347 30</u>
1885.		
April 28.	By Cash Balance from Dr. Briggs.....	96 80
" 28.	" " Received from W. A. Briggs, M.D.....	625 00
July 7.	Receipts from W. A. Briggs, M.D.....	173 70
" 7.	By Cash from F. H. Hatch, balance due.....	240 50
1886.		
Jan. 11.	By Cash, Dr. Briggs.....	100 00
Mar. 4.	" " " " .....	26 25
	" Bills paid.....	45 05
Apr. 17.	" Cash, Dr. Briggs.....	5 00
" 20.	" Receipts .....	2 75
	" Cash.....	32 25
		<hr/>
		<u>\$1,347 30</u>

G. G. TYRRELL, Treasurer.

**REPORT OF THE BOARD OF EXAMINERS**  
**For the Year ending April 21st, 1886.**

By R. H. PLUMMER, Secretary and Treasurer.

(Read before the Medical Society of the State of California.)

*Dr.*

To Cash on hand from last year.....	\$85 58
“ “ received from 168 Certificates issued, \$5 each.....	840 00
“ “ “ “ sale of Registers.....	31 50
“ “ “ “ J. T. Johnson, Express Charges.....	5 00
“ “ “ “ Chicago and Jefferson College “Ads.”	50 00
	<hr/>
	\$1,012 08

*Cr.*

By Cash, Collecting Check, Expressage and Telegrams.....	\$3 15
“ “ Witness Fees, Quack Cases. ....	5 00
“ “ Bancroft, as per vouchers.....	21 45
“ “ Printing Envelopes, Paper, etc., as per voucher ..	30 55
“ “ Stamps, Postals and Registering.....	43 70
“ “ Cyclostyle.....	20 00
“ “ Notary Fees.....	50
“ “ Filling in Certificates.....	17 10
“ “ Lawyer's Fees.....	100 00
“ “ Clerical Fees and Office Rent.....	350 00
“ “ Secretary's Salary.....	250 00
“ Balance.....	170 63
	<hr/>
	\$1,012 08

No. of meetings held during the year.....	13
No. of original certificates granted.....	165
No. of duplicate certificates granted .....	3
	<hr/>
Total No. of certificates granted during the year.....	168
No. of certificates granted to parties whose names appear in the list of illegal practitioners in the Register of 1885.	37
There have been additional removals of names from that list by reason of errors therein, deaths, removals from the State, and certificates issued by the Eclectic and Homeo- pathic Boards. ....	43
	<hr/>
Depleting that list altogether .....	80
Or 16½ per cent thereof.	

The total number of certificates issued since the passage of the law in 1876. . . . .	1,890
Total number issued since the publication of the Register in 1885. . . . .	192
Of these there located in San Francisco. . . . .	49
“ “ “ “ Los Angeles. . . . .	13
“ “ “ “ San Jose. . . . .	7

From the above it will be seen that about one-fourth of the licentiates of the past year located in San Francisco. By referring to the Register of 1885, it appears that nearly one-third (.31) of the licentiates in the State were located in this city, while the proportion of our population, as compared with that of the State at large, was only about 23½ per cent.

Acting under previous instruction from this Society, the Board communicated with the several local Societies of the State upon the subject of prosecutions for violating the Medical Practice Act.

In addition to the Societies heretofore enumerated, there have been organized during the year seven, viz.: The Northern District Medical Society at Red Bluff, including all regular practitioners in Tehama, Shasta, and Trinity Counties, W. D. Olen-dorf, President, George I. Cason, Secretary; the Yolo County Medical Society, at Woodland, A. Strong, President, W. W. Macfarlane, Secretary; the Butte County Medical Society, at Chico, H. B. Davison, President, B. F. Clark, Secretary; the Medical Society of Yuba and Sutter Counties, at Marysville, C. E. Stone, President, David Powell, Secretary; the Contra Costa County Medical Society, at Martinez, John Leffler, President, J. S. Riley, Port Costa, Secretary; the Fresno County Medical Society at Fresno, A. J. Pedlar, President, N. P. Duncan, Secretary; the Humboldt County Medical Society, at Eureka, A. A. Glasscock, Ferndale, President, E. J. Ruddock, Eureka, Secretary.

The San Bernardino County Medical Society has been reor-ganized at Colton, A. H. Woodill, Riverside, President, M. F. Price, Colton, Secretary.

An organized system of prosecutions was urged, that the work might be carried on simultaneously in all parts of the State; thus relieving it of any appearance of individual effort.

We have received official information from the Yolo County, Contra Costa County, and Sutter and Yuba County Societies,



hat there are no illegal practitioners in their respective districts, other than an occasional midwife.

The Northern District, Fresno County, Santa Clara County, and San Francisco County Societies, have each appropriated the necessary funds, and appointed committees with instructions to prosecute. Under supervision of the efficient committee of the Santa Clara County Society, one A. J. Hally was arrested, held by the Justice to appear for trial before the Superior Court, and, in default of bail, spent nearly thirty days in jail. He was convicted by a jury and fined seventy-five dollars, after which he "left for pastures new."

The second victim was Lee Wah, a Chinaman, who was fined fifty dollars.

Louisa Hagenow was the third victim. She was fined fifty dollars, and the Court, in passing sentence, remarked, this was the last case of the kind then on the calendar, and the next one which should come before him would be dealt with more severely. During the progress of her trial she offered to pay the County Society one hundred dollars to cease the prosecution. She has since changed her field of practice, and is now a resident of this city.

At a later date other arrests were made, viz., another Chinaman, who now awaits trial; and one Reid, a magnetic healer. At the preliminary trial of the latter, the Justice pursued a singular line of reasoning, viz., that the legislature created the law for the government of the three schools of medicine therein enumerated, and for no others; therefore the defendant was entitled to practice medicine in accordance with the principles of his school without the certificate of either of the existing Boards of Examiners. The case was carried to the Superior Court, sitting as a committing magistrate, where it awaits further investigation.

In like manner, a Chinaman was arrested at Redding, found guilty by a jury, and fined seventy-five dollars.

In Fresno one B. Meyers, alias the "French Doctor," was arrested at the instance of the Prosecuting Committee, and held under bonds by the Justice to appear for trial before the Superior Court. We have been informed he soon after left the county.

One M. D. Kellogg was arrested at San Bernardino. On his first trial the jury failed to agree. On the second he was convicted and fined three hundred dollars. We are informed he

soon after left the county. This case was worked up chiefly through the instrumentality of Dr. S. G. Huff (by whom all the expenses were paid) before the re-organization of the County Society.

Another B. Meyers, alias "Myers," has been arrested at Colusa, held under bonds by the Justice, and is now awaiting trial. This case, also, was worked up by individual effort, there being no society in the county.

Under the superintendency of the committee appointed by the San Francisco County Medical Society, which very generously set aside the sum of five hundred dollars for use in prosecutions, one E. P. Fish was arrested for practicing without a license. His name appeared in the city directory as a journalist until January, 1885, at which time, according to his own testimony, he formed an association or partnership for the practice of medicine with G. P. Allen of this city, whose certificate was some time since revoked for unprofessional conduct.

On the first trial the jury failed to agree. On the second he was convicted, and the Court stated, when pronouncing judgment, that the fine was fixed at two hundred and fifty dollars in consideration of the defendant's promise to cease the practice of medicine.

During the progress of this trial the most strenuous efforts were made by the defense to stop the prosecution. Visits and appeals were made to the attorneys, to members of the Committee and to members of this Board. The defense moved for a new trial, which, was denied. The case was then appealed. The Honorable District Attorney, Wilson, promised to notify special counsel, Taylor, when the case should be placed upon the calendar of the Superior Court. But, to the surprise and indignation of the prosecution, the papers were carried from the lower Court to presiding Judge Lawler, and by him assigned to Department 11, Toohy, judge, without passing through the office of the District Attorney, without his knowledge, and without the knowledge of special counsel, and without having been placed upon the calendar. The District Attorney's office was *surprised* when the case was called, and deputy Jas. M. Troutt asked for a continuance to allow time for preparation, and for notification of special counsel, which was refused. It was then argued by counsel for defense, and the Honorable Court, upon motion, dismissed the case without, so far as we know, assigning a reason therefor.

More recently several additional arrests have been made in this city, among which are one G. M. Baronidis, J. H. Josselyn (some years since arrested for criminal malpractice) and the Chinese Doctor, Li Po Tai, who are awaiting trial. More arrests will follow in due time.

When we were prosecuting, a few years since, all trials before the Court resulted in sustaining the law, though minimum fines were imposed. But it was found nearly, if not quite, impossible to secure a conviction by jury. The public had not been accustomed to being protected, nor to protecting themselves from medical imposters. All great reforms are introduced with difficulty, and time and education are required to overcome the prejudices arising from custom and innovation. We feel that comparative success is attending our efforts. No law is *absolutely* successful. Our statutes are loaded with enactments against the unlawful taking of human life or property, still murder and theft run riot through the land.

We feel that a considerable portion of the intelligent laity has been educated to the point of demanding of those into whose hands they are so often impelled, by the vicissitudes of life, to place their physical well-being, that they shall at least practice the Healing Art in accordance with the laws of the State; as witness, every single case which has been tried by jury during the past year has resulted in conviction, and the Courts have very materially increased the penalty. The agencies and influences which have been tended toward this result have been many, among which, not the least, is the *Medical Register*, published last year by this Board, and gratuitously distributed throughout the length and breadth of the State, where it fell into the hands of the laity as well as the profession.

We feel, therefore, that we are not overstepping the borderland of truth when we assert it has been demonstrated that the present law may be enforced, if the medical profession will unite upon it—step to the front, and put a shoulder to the wheel. No law is self-operating. They all require a *vis a tergo*.

The Board has already taken the preliminary steps toward the issuance of a third edition of the *Medical Register*, which it is designed to complete about December of the present year. We rely upon the members of this Society, and the profession at large, to aid us in procuring the necessary information. We hope to be able to enlarge the book and thus to enlarge its scope of usefulness.

## PACIFIC MEDICAL AND SURGICAL JOURNAL

AND

## WESTERN LANCET

EDITORS:

WILLIAM S. WHITWELL, A. M., M. D.

WM. WATT KERR, M. B., C. M.

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*SAN FRANCISCO, DECEMBER, 1886.*

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**Editorial.****THE SAN FRANCISCO COUNTY MEDICAL SOCIETY.**

The twenty-sixth day of October witnessed the close of another year in the history of this Society, and we would offer the members our congratulations upon the success which has attended them.

The reports of the respective officers showed that the reserve funds of the Society amounts to nearly four thousand dollars, that the annual dues afford an income of more than eight hundred dollars, while fifty-two out of seventy applicants for membership have been added to the roll during the past session. We feel sure that few county Societies can show a better year's work; and it is more gratifying when we remember that three years ago the Society was almost dead, that night after night, despite the greatest exertions on the part of the President, it adjourned because there were not ten members present to constitute a quorum, and that its revival commenced when several of the younger men combined to attend the meetings regularly and provide material for discussion when none was forthcoming from other sources. From that time the course of the Society has been one of rapid and steady progress. There always has been a good attendance, and the members have manifested an interest which has become contagious, and contributed largely towards the increased number of names upon the roll. A visitor

to the Society will find many of those distinct characters such as grace all kindred associations. Among the first to attract his attention will be the man who objects to every new measure, who never gives any sufficient reason for the course he pursues, but appears to be faithful to the principle that there always should be an opposition bench in the house, for he invariably objects. There he will meet that other type of being who always has met with a case exactly similar to the one described in the evening's paper, no matter how rare may have been the disease or exceptional the complications; and, finally, he will discover two other characters markedly opposed to each other, the one confining himself solely to the scientific work; the other rarely heard in such discussions, but deeply interested in the welfare of the Society and using it as a power in the community.

As it requires all kinds of men to make a world, so it requires many different dispositions to make a successful Society. The little oppositions, consequent upon conflicting temperaments, resemble the friction that gives polish and lustre to the precious jewel; they are like the pruning-knife that lops off the luxuriant foliage so that the tree may bear more fruit, and assuredly conflicting opinions have been for the benefit of the San Francisco County Medical Society.

We regret that greater efforts have not been made to procure a better library and accommodation for the Society. Certainly some advance has been made during the past year, but not nearly as much as the resources and membership of the Society demand. The library is fast assuming proportions which will compel the Society either to relinquish this adjunct to their usefulness or make better and more extensive arrangements for its management, and it is time they were bestirring themselves in the matter.

The object of our Medical Society, as set forth in the constitution, is "the cultivation and advancement of medical science," but since it has assumed such proportions there is a danger of its being used for the promotion of other schemes, legitimate

in themselves, but foreign to the purpose for which the Society was constituted. Thus, it is beneath the dignity of this Society to resolve itself into a committee for the performance of such duties as undoubtedly belong to the city police, but which the Society has undertaken by instituting the prosecution of medical men practicing without a license. The law of California characterizes such practitioners as illegal, and it is the duty of the State to see that its own laws are enforced. Medical legislation has failed in California, because it has not the support of even the very highest people in the community, and is regarded as an attempt by the regular profession to obtain something akin to a gigantic monopoly or "corner" in the market. When we hear of a Governor of California consulting a Chinese charlatan, a railroad magnate granting testimonials to a quack, and one of our most distinguished pleaders before the bar of justice placing himself under the treatment of a magnetic healer, we are forced to conclude that the medical law never will be a success in its present condition.

To show how useless are any attempts to procure its enforcement, we submit the results of the prosecutions undertaken in this city during the last twelve months.

The first case was that of "Dr." Fish, who had no diploma nor license, but was a henchman of G. P. Allen, and occasionally dabbled a little on his own account. He was convicted in the police court and ordered to pay a fine of \$250 or go to prison for two hundred and fifty days, but he did not do either, for, on an appeal to the Superior Court, Judge Toohy dismissed the case and the culprit escaped scot-free. It is true that he did not resume practice in the city, but the case shows how much medical legislation is appreciated even in the courts of justice.

Li Po Tai, the well known Chinese charlatan, and "Dr." Josselyn, who is equally notorious, were both arrested at the instance of this Society and their cases dismissed on a technicality. Dr. G. M. Baronidis was arrested and convicted, but he is still engaged in practice, and may be consulted at 250 Ellis street, by anyone who desires his valuable services.

Dr. G. P. Allen, who has advertised for some years all through the State until he is so well known that further advertising is a waste of money, for reasons unknown to us, desired to become respectable. He thereupon submitted to arrest, plead guilty, and was fined fifty dollars; after which a license had to be granted to him, as he is a graduate of a leading college in the Eastern States.

A few weeks ago "Dr." Harlow was convicted. We have not been able to follow his case, but probably he will re-appear in a short time. P. Roscoe McNulty, who cost the Homeopathic Board more than eight hundred dollars in a useless prosecution, has been re-arrested at the instigation of the Regular Board and the case dismissed on a technicality.

Such is a brief outline of the prosecution of illegal practitioners in San Francisco, and we leave our readers to judge how much real good has been accomplished by this expenditure of time and money.

A medical law, in which medical ethics plays so prominent a part, never will receive the support of the people, and therefore never will become a law. All that medical legislation can do is to demand that every practitioner shall have undergone such preliminary training as is generally believed to qualify him for the discharge of his professional duties; in other words, it can only insist upon his possessing a diploma from a recognized medical school. If two men be equally well educated in medical science neither the public nor any other person can understand how the one should not treat disease as well as the other, simply because he advertises in a newspaper; and we have grave doubts whether such men as G. P. Allen, A. E. Mintie, and many others who are graduates of regular medical schools in good standing, but whose licenses have been revoked on account of advertising in the daily prints, could not compel the Board to renew their licenses. The people only desire medical legislation to protect them from ignorance, and do not care one straw about ethical qualifications; indeed, much of the failure in the San Francisco prosecutions may be attributed to the fact that most of them

were primarily placed upon an ethical basis, since the defendants were men holding diplomas from recognized schools, but whose licenses had been refused or revoked on account of advertising or some other breach in the code of ethics.

It has been said that these men impose upon their patients by taking advantage of their credulity, magnifying their diseases or promising cures where such are impossible, and therefore it is the duty of the profession as a body to do everything that will contribute towards their removal from the community. We confess our inability to see why this duty of protecting the public against imposture and deceit devolves specially upon medical men; fraud and deceit are equally infringements of the law, whether they be practiced by a physician or a merchant, and consequently there would be just as much reason in dry goods men prosecuting one of their number for misrepresenting the quality of his own goods, as there is in a medical society taking legal proceedings against an outsider because he claims the power of producing impossible cures. If the patient has been deceived he can bring suit in the law courts against this claimant of supernatural powers for obtaining money under false pretenses; if he has been maltreated he can prefer charges of malpractice, and with much greater prospects of success than if the fight be made by a private organization known to be hostile to the defendant in its very constitution. Such cases clearly come under police or criminal offenses, and have nothing to do with medical legislation.

By ostracizing such men, refusing to admit them into scientific societies, declining to meet them in consultation, or recognize them, and by many similar actions the regular profession can testify to the public their disapproval of what we recognize to be unprofessional conduct; but whenever they go beyond this and institute prosecutions they defeat the ends of justice, firstly by removing the responsibility of such cases from the police authorities whose duty it is to deal with them, and secondly by making the culprit appear before the public as the victim of a conspiracy and not as an offender against law and justice.



We would urge the Society to support only such medical legislation as has for its object the attainment of a higher standard of medical education; let its only endeavor be to protect the people from ignorance; let its charge be to protect the public from the fools who would enter the profession, but by all means leave the knaves to the police.

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#### **BIENNIAL REPORT OF THE STATE BOARD OF HEALTH.**

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Through the courtesy of Dr. G. G. Tyrrell, the energetic Secretary of the State Board of Health, we have received a copy of his biennial report, which shows the death-rate throughout the State to be somewhat less than eighteen per thousand of the population.

At first sight, this does not appear to be much whereof we should boast, but when we remember that our State has become a health resort for people broken down in constitution, that every train brings some one whose health will not allow him to remain in the place of his nativity, that many of these arrivals are in the last stages of phthisis, and that they have been coming in such numbers as to convert the southern part of California into an immense sanitarium, we feel at liberty to credit part of our death-rate to other climates, and claim a much lower mortality from diseases contracted in this State.

The greatest efforts of the Board have been directed towards obtaining an efficient quarantine service for California, and, in 1884, a communication was sent to Washington, requesting an appropriation of fifty thousand dollars from the general fund for this purpose, but unfortunately the matter rested there, and is not likely to make further progress until our own Legislature can be stimulated into more vigorous action. When this will be we do not pretend to foretell, as the State Government, for many years, has shown itself inimical or indifferent to all sanitary measures. Two years ago we called attention to the fact, that when we were threatened with an invasion of cholera, the

Board requested the Legislature to set aside a contingent fund to be drawn upon only in the event of the outbreak of an epidemic, but this was refused, and the annual appropriation, which had been made to the Board since its foundation in 1870 for the purpose of meeting the running expenses, was reduced by one-fifth. Those who have interested themselves in State Hygiene can appreciate how much the Board has been crippled by this false economy, and doubtless will award much credit to the individual members for the great amount of work they have done with the small means at their disposal.

The apathy among politicians regarding sanitary affairs need not be a matter of surprise, as the Board of Health does not create those salaried offices which would make it a bone of contention between rival parties and thus bring it into prominence; while at the same time the community is not sufficiently alive to the impending dangers to make sanitary reform a plank in the political platform. We have obtained considerable amusement from the manner in which some people regarded the precautions taken both by the state and civic authorities to prevent an outbreak of cholera; they were faithful in carrying out the instructions given them, but the disease did not appear in their midst, and now, when we talk to them of sanitary reform, they reply, "That's all stuff! you told us that cholera was coming, and went round nosing into all corners and advising us to clean out one place or fix up another, and it didn't come after all." We are sorry that they feel hurt, for evidently it was their desire to give old King Cholera a right good California welcome, such as they extend to all distinguished visitors, but we cannot help finding a little pleasure in their disappointed expectations.

The Board is very anxious to make vaccination compulsory, throughout the State, but finds it very hard to overcome the ignorance, superstition and prejudices which characterize a considerable portion of the population. The value of this preventive measure is being more fully realized every year. In 1884 an outbreak of small-pox in the district of St. Pancras, London,

led to the examination of 112,425 people inhabiting that neighborhood, with the result that only .02 per cent of those who had been vaccinated twice, and 2.5 per cent of those who had been vaccinated once, were found to be marked by small-pox, while 62.2 per cent of those who never had been vaccinated presented marks of this loathsome disease. Re-vaccination was instituted in Germany about 1872, and not one death from small-pox has occurred in the German army since 1874. With such statistics as these on the one hand, and the constant danger of small-pox on the other, it is hardly possible to believe that any sane man will hesitate about adopting this preventive measure.

Another difficulty the Board had to contend with is that of obtaining accurate records of the births, deaths and marriages throughout California. This is attributable to two causes: First, the want of proper authorities in the sparsely settled districts; second, the responsibility of making a report does not always remain with the same person. Thus, according to the present law, when a doctor attends a confinement he is expected to report the case; when a midwife has charge, it is her duty to do so; and when there is no attendant, the parents have to attend to the matter themselves. It is not surprising that, under these circumstances, comparatively few births are reported, for "what is everybody's business is nobody's business;" but if in all cases the responsibility of registering a birth were made to rest with the parents, much greater accuracy would be obtained. Thus, a law to the effect that every parent, under certain penalty, shall report, or cause to be reported, the birth of his or her child within one week after the confinement, would, we believe, obviate many of the difficulties with which we are contending.

The supplement to the report contains several papers on yellow fever, alcoholism, climate, and other interesting subjects, all of which merit the attention of our readers.

We cannot do more than congratulate the Board of Health upon the excellent work they have done in the past, and wish that a more liberal Legislature may preside over their future.

## **Proceedings of Societies.**

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### **Proceedings of the San Francisco County Medical Society.**

SAN FRANCISCO, October 26, 1886.

The meeting having been called to order by the President, Dr. W. E. Taylor, the minutes of the former meeting were read and approved.

Dr. F. Von Buelow, a graduate of the University of California in the year 1877, was proposed for membership by Drs. Hartley and Plummer, and referred to the Committee on Admissions.

The Committee on Admissions reported favorably on the credentials of Dr. J. H. Soper and W. P. Sprague, who were forthwith elected to membership.

Dr. H. S. Baldwin then read his annual report as Treasurer of the Society, which was referred to the Committee on Finance.

The Librarian, Dr. Kenyon, presented his report, which was received and placed on file.

Dr. Jewell moved that the suggestions contained in the report be approved by the Society, and that the Librarian should be authorized to have the journals bound, the library insured, and the files of journals, lost in the Bancroft fire, replaced.

This was seconded by Dr. Morgan and, after some opposition on the part of Dr. Soule, carried by the Society.

As the Directors and Finance Committee failed to report, it was moved by Dr. Plummer that they should present at the next meeting.

Dr. Kerr moved, as an amendment, that the Directors should be prepared to submit their report to the Finance Committee on Tuesday, 2d November, and that both reports should be presented to the Society at the next meeting. The amendment was carried.

The Secretary of the Society, Dr. W. W. Kerr, read his annual report, which was received and placed on file. He then moved that "The State Society, at its next meeting, be requested to suspend from membership all members who have broken faith with the County Society, by failing to sign the constitution and pay the initiation fee, until they have signed such constitution and paid dues from the time of their admission into the So-

ciety." Dr. Plummer seconded the motion, and at the same time it was suggested that the defaulting members should be notified of the resolution. The motion was carried.

The Committee on Medical Ethics was allowed further time to report on the By-Laws.

Dr. Jules Simon then read the Annual Address, for which, on the motion of Dr. Kenyon, a vote of thanks was awarded.

On the motion of Drs. Arnold and Jewell, two hundred and fifty copies were ordered printed.

New Business: Dr. Plummer said that the third edition of the Register will soon be ready, and urged the co-operation of the profession in securing the names of all practitioners.

The following nominations of office-bearers for the ensuing term were then made:

President: Dr. Jas. Simpson. 1st Vice-President: Dr. H. H. Hart, Dr. J. F. Morse. 2nd Vice-President: Dr. G. W. Davis. Recording Secretary: Dr. Wm. Watt Kerr. Assistant Secretary: Dr. A. P. Whittell, Dr. Frisbie. Corresponding Secretary: Dr. W. S. Whitwell, Dr. Agnes Lowry. Treasurer: Dr. Whitwell. Librarian: Dr. C. G. Kenyon. Directors: The re-appointment of the old Board, consisting of Dr. Jas. Simpson, Dr. Wm. F. McNutt, Dr. Henry Gibbons, was moved by Dr. Kenyon. Committee on Admissions: Dr. Jewell moved the appointment of the old Board, with the exception of Dr. Blake, who is absent from the city, and Dr. McCarthy was nominated in his place. The names are: Dr. H. H. Hart, Dr. G. J. Fitzgibbon, Dr. A. Abrams, Dr. A. P. Whittell, Dr. McCarthy. Committee on Medical Ethics: Dr. Kane, Dr. Davis, Dr. Simon, Dr. Blake, Dr. Winslow Anderson. Finance Committee: Dr. Soule, Dr. Taylor, Dr. Hirschfelder, Dr. Fitzgibbon. Committee on Publication: Dr. Kerr, Dr. Bazan, Dr. Le Tourneau. Executive Committee: Dr. Chesley, Dr. Lonigo, Dr. Thayer, Dr. J. A. Anderson, Dr. Winslow Anderson, Dr. Simon. Curator: Mr. Duncombe was nominated for the ensuing term.

The President appointed Dr. Le Tourneau to deliver the next Annual Address.

There being no further business, the Society adjourned until Tuesday, November 9th.

WM. WATT KERR, M. D.,  
Recording Secretary.

The following are the Annual Reports of the different officers:

SECRETARY'S REPORT FOR 1886.

INCOME ACCOUNT.

Balance from 1885.....	\$ 86 20
Cash received from annual dues.....	813 50
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	\$899 70

EXPENDITURES.

Paid to Treasurer.....	\$834 50
Balance in hands of Secretary....	65 20
	<hr/>
	\$899 70

Fifty-two new members have been admitted to the Society during the present year; fourteen names have been removed from the roll, nine of these on account of removal from the city, three as they had not time to attend the meetings of the Society, one by action of the Society, and the last by death.

The number of members in good standing is one hundred and fifty-nine, being an increase of thirty-six over last year; but in addition to these are twelve applicants who have been elected to membership, but have failed to comply with the constitution, which requires their signature within four weeks of election. Several notices have been sent to each of these gentlemen which they have failed to acknowledge. The trouble and annoyance caused by such conduct has been considerable, especially as there are many others who, in response to their notice of election, have replied that they never made application for membership, or even had positively refused to allow their names to be proposed. The explanation will be found in the action of those who were canvassing for the candidates for President of the State Medical Society, as they evidently endeavored to rope in every member of the profession who was likely to vote their way. As such conduct cannot but be prejudicial to the interests of the Society, it is hoped that in the future all members will discourage any endeavor to pervert the Society from its original objects to others less worthy of it.

WM. WATT KERR, M. D.,  
Recording Secretary.

TREASURER'S REPORT FOR 1886.

EXPENDITURE.

Hall rent for 11 months . . . . .	\$110 00
Printing Library Catalogue . . . . .	15 00
“ Postals, circulars, and list of members . . . . .	24 25
“ Annual Address . . . . .	10 00
“ Names on Diplomas . . . . .	11 75
Advertising funeral notices . . . . .	1 50
Postage, Stamps and Cards . . . . .	36 50
Stationery . . . . .	7 75
Book Case . . . . .	40 00
Collector's Commission . . . . .	66 40
Dr. E. R. Taylor for services in “ Fish ” case . . . . .	100 00
Boarding witness in “ Fish ” case . . . . .	75 00
Legal Services in Baronidis' case . . . . .	25 00
“ “ “ G. P. Allen's case . . . . .	25 00
“ “ “ J. L. Harlow's case . . . . .	25 00
Medical Journals . . . . .	48 50
Library Books . . . . .	112 60
Messenger Boy . . . . .	25
	<hr/>
	\$734 50

1886.

INCOME ACCOUNT.

October 25, Vouchers for bills paid by Secretary . . . . .	\$734 50
Cash from Secretary . . . . .	100 00
Balance from 1885 . . . . .	51 42

1886.

\$885 92

October 26, Paid to Trustees of S. F. Co. Med. Soc. . . . .	\$100 00
Balance to 1887 . . . . .	51 42

H. S. BALDWIN, M. D.,

Treasurer.

DIRECTORS' REPORT.

SAN FRANCISCO, November 1st, 1886.

*To the San Francisco Medical Society.*

Herewith we submit our report of the funds of the Society committed to our trust:

Balance in Odd Fellows' Savings Bank . . . . .	\$ 584 45
Balance in S. F. Savings Union . . . . .	2,971 66
	<hr/>
	\$3,556 11

Received from Dr. Baldwin, Oct. 26, 1886. .... 100 00

Which was deposited in Savings Union, as per bank book.

All of which is respectfully submitted.

JAS. SIMPSON, Chairman.

#### REPORT OF THE FINANCE COMMITTEE.

*To the Officers and Members of the San Francisco County Medical Society:*

The annual reports of the officers of this Society, having been referred to the Finance Committee, we hereby report that we find them correct.

The Trustees report a balance in their favor in the San Francisco Savings Union of \$2,971.76, and in the Odd Fellows Savings Bank \$584.45,—the bank books of these banks in the hands of the trustees being the vouchers which verify these balances.

We find vouchers in the hands of the Treasurer that correspond to the amounts named in his report which leaves a balance in his hands of \$51.42, to be turned over to his successor in office.

The Secretary's cash book we find to correspond with his report which shows that he has collected of members during the current year \$813.50, which with a balance on hand from the former year of \$86.20, making a total of \$899.70, of which \$834.50 has been paid to the Treasurer leaving a balance in his hands of \$65.20 to be carried to the next year.

We find it very embarrassing in the reports, that the financial and official years do not correspond and earnestly recommend a change in the by-laws to make them both begin with the year.

The Librarian submits an elaborate report to the Society of books and library fixtures which are of considerable value, but cannot be estimated by this committee on a financial basis.

The assets of the Society in the hands of the Trustees are

Balance in San Francisco Savings Union .....	\$2,971.76
Balance in Odd Fellows Savings Bank. ....	584.45

Total.....\$3,556.21

This being the total amount of our accumulated property,



aside from the Library and small balances in the hands of officers for the current year.

Respectfully submitted,

A. G. SOULE,  
W. S. WHITWELL,  
J. O. HIRSCHFELDER.

San Francisco, Nov. 23, 1886.

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REPORT OF LIBRARIAN.

SAN FRANCISCO, October 26, 1886.

*To the Officers and Members of the San Francisco County Medical Society.*

GENTLEMEN:—As Librarian, I beg to submit the following report: In last report, as stated, we had two hundred and fifty-two (252) volumes bound books. Since has been added by purchase 15 volumes, viz.: Pepper's Practice of Medicine, 5 vols.; Int. Encyc. Surg., 6 vols.; Dalton's Brain Sections, 3 vols.; Clouston's Mental Diseases, 1 vol.—making a total of 267 vols. Besides, the files of unbound journals for the current year, and the files of British Medical Journal, contributed by Dr. Stallard, which I respectfully recommend to be bound, and placed regularly on the library shelves.

The Society has suffered a loss through the Bancroft fire of the Medical Journal for 1885, left with them for binding.

A new book-case has been added to the property of the Society, making two cases. The other property of the Society in my department consists of a skeleton in case, pathological specimens in jars. This latter property is at my office, 664 Mission street. The Library is now stationed at Mr. Wm. S. Duncombe's agency, 425 Sutter street, where a separate room has been set apart for accommodation of the members who desire to avail themselves of the privilege of examining the books of the Library.

I would recommend an *insurance* to be taken out on the Library, as the house is an old wooden building and liable to loss by fire.

The journals subscribed for are: Philadelphia Medical and Surgical Reporter, Therapeutic Gazette, N. Y. Medical Journal, Medical News, Medical Record, Boston Medical and Surgical Journal—weeklies; Pacific Medical and Surgical Journal and

Western Lancet, American Journal Obstetrics, British Medical Journal—monthly; American Journal Medical Sciences, Brath-wathe Retrospect and Epitome—quarterly; which we recommend to be bound; also the London Lancet be subscribed for.

There are no outstanding bills unpaid.

Respectfully submitted,

C. G. KENYON, Librarian

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**Sacramento Society for Medical Improvement.**

SACRAMENTO, October 19th, 1886.

The Society met in regular session. In the absence of the President the chair was taken by Dr. I. E. Oatman.

Dr. Mary J. Magill read a paper on Thermal Fever.

In the discussion which followed Dr. Cluness said that this disease which was rare in California had been increasing. This, while in part perhaps due to growth of population, depended also on the more extensive cultivation of the soil with irrigation which had tended to alter the climate by increasing the amount of moisture. He had seen two cases, both of which occurred on the river front; a fact which supported his opinion in regard to causation. The first case was a painter working in the sun on the side of a building. He complained of illness at 2 p. m., at 3:30 he was found to have fallen from the staging. He was then unconscious, face flushed, pulse and respiration slow, temperature above normal. The treatment applied was cold affusion; the patient never regained consciousness. That was in '81. The second case occurred last summer, the subject a "deck hand" was engaged in loading a steamer. He complained of *mal aise* and soon after fell down. In this instance it was impossible to estimate the temperature at the time of seizure as ice had been at once applied. The man subsequently became comatose and died within a few hours. The doctor believed that these cases died mainly from asphyxia.

Dr. Simmons could not recall having seen a case of thermal fever. He recollected cases similar to those of Dr. Cluness, but had associated them with cerebral congestion or effusion rather than nervous exhaustion. The distinction between these diseases was important. He would take exception to the opinion expressed that there was an increase of this disease, attributable to moisture. For many years the main industry of the

State had been mining, the miners worked in the water, and yet there were few cases of sunstroke. With regard to treatment stimulation appeared to be the main reliance, and he preferred trusting to this rather than to cold.

Dr. W. E. Briggs thought that the excessive heat of the past summer was sufficient to explain this increase of sunstroke independent of any atmospheric condition. He did not believe that there was enough water used for irrigation to influence the climate of the State.

Dr. Brune believed that he had seen two cases of this affection during last summer. One was an elderly female, the symptoms were those of apoplexy, the patient died. The other subject was a young man who had previously had a slight attack, he was evidently suffering from cerebral congestion. Treatment pursued was cold applications and large doses of potassium bromide internally; recovery ensued.

Dr. Merrill thought that stimulants or depletion, according to the nature of the case, were the most hopeful measures.

Dr. Lainé had often heard it said that there were no cases of sunstroke in California. He had doubted this statement. A case seen some years ago, was that of a young man working on a hay press, he recovered without medical treatment. Last summer saw a man who had been overcome by the heat at the railroad shops. Rest and cold applications were ordered, recovery ensued. Strabismus was present within five days of the seizure, this subsequently disappeared. He had heard old miners say that sunstroke was not uncommon in early days.

Dr. Briggs believed that in this disease the first question was diagnosis. He thought that in the Sacramento and San Joaquin valleys mistakes would often occur. We had a heated term coincident with the most intense malaria. A man at work, having no chill, is taken with intense fever; he continues at work and is finally overcome by the hyperpyrexia. Thought that many cases, particularly the last mentioned by Dr. Brune, belonged to this class; it would require much inquiry and great judgment to distinguish them. Hyperpyrexia was due to overproduction or retention, both were common to all fevers, but in thermal fever there was at first simply retention until the excessive heat caused overproduction. "Retention fever" would be a better term, it was more general and embraced a larger number of conditions. That high temperature if dry, could be sustained for a long time was a well-known fact.

Dr. Huntington, alluding to sun temperature which had been mentioned, asked how long could a person sustain a temperature of  $120^{\circ}$  F. In the mines at Virginia City the temperature in some levels was  $120^{\circ}$  and there the "shifts" were only twenty minutes. He thought that there were often mistakes in the reading of thermometers exposed to direct sun rays, owing to the metal fittings absorbing more heat than the surrounding objects.

Dr. Agard of Auburn, mentioned a case which he had seen at Penryhn, a district where irrigation was extensively employed.

Dr. Oatman, contrasting the prevalence of sunstroke in New York with a temperature of  $93^{\circ}$  F., and its infrequency in California with a temperature of  $110^{\circ}$ , believed that the relative humidity of the two climates explained the different mortality. Had seen one fatal case during the building of the north levee. In early days at the great fire had seen three cases, none fatal. He thought that intense heat acting on the body when the blood had already been depleted of fluid caused a condition of asphyxia by the thickened blood circulating in the pulmonary capillaries. Some years since had seen a well marked case, recovery followed the application of cold affusions externally, and small quantities of water internally. Had seen a fatal case last summer. With Dr. Briggs had been impressed with the similarity between this affection and acute malignant congestive intermittent as seen in Illinois.

Dr. Simmons wished to point out that authorities—as he was familiar with them—did not trace any similarity between sunstroke which was characterized by cerebral anæmia and cerebral congestion. Cases which had been mentioned by Dr. Brune and Lainé were undoubtedly apoplexy. The importance of post mortem examinations in every case was very great. The doctor cited a case which he had seen many years ago. The subject, a middle aged man, had been exposed to the sun. He was suddenly stricken down and rapidly succumbed. This was clearly a case of "sunstroke," yet post mortem examinations showed that there was considerable cerebral effusion due to chronic meningitis, the adhesions between the membranes being so dense that in places it was impossible to separate them.

Dr. Briggs speaking with regard to the connection between humidity and thermal fever thought that the explanation was simple. In passing from the solid to the gaseous state an

amount of heat was lost which could be numerically expressed. Thus the evaporation of 1 lb. of perspiration would reduce the temperature of a man weighing 140 lbs. 1°. In a humid atmosphere this loss did not take place, which would explain the inability to support prolonged exertion in the mines as alluded to by Dr. Huntington.

There being no further business the Society adjourned to meet on the third Tuesday in November; subject for the evening's paper by Dr. Merrill "Cerebral Anæmia."

JAMES H. PARKINSON, Secretary.

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### **The End.**

PETALUMA, November 23d.—In the celebrated malpractice case of *Winters v. Graves*, the jury, at the third trial last June, rendered a verdict in favor of the defendant. A motion by the plaintiff for a new trial was argued all day yesterday before Judge Pressley, of the Superior Court of Sonoma. The Court denied the motion and the suit stands defeated.

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THE Commencement Exercises of the Cooper Medical School were held in the college building on Tuesday evening, November 9th. The degrees were conferred by the President, Dr. L. C. Lane, upon the graduates, who were eleven in number: Richard Harrington Ashby, Mary Elizabeth Bennett, James Newmar Camp, William Chapman, Arthur du Milien, Mary Delanc Fletcher, Joseph Newton Johnson, Albert Brown McKee, Max Salomon, John Llewellyn Siefkus, John James Tully.

The valedictory address was delivered by Dr. Joseph H. Wythe. Mr. William C. Bartlett also delivered an address, taking for his subject the "Ideals of Professional Life."

Drs. Bennett and Fletcher have been appointed to positions in the Children's Hospital and Primary School for Nurses. Dr. McKee has taken the position of resident physician in the R. R. Hospital at Sacramento, while Drs. Chapman, Johnson and Camp are at the City and County Hospital of San Francisco. Dr. Salomon expects shortly to leave for Heidelberg, where he will spend some years in study before settling down to practice. Dr. du Milien has settled in Colfax.

## **Health Reports.**

### **Report of the State Board of Health.**

The mortality reports received for October exhibit an increased death rate over that tabulated for the preceding month. This cannot be attributed to the development of any epidemic disease, but rather to the increased number of those attacked by endemic diseases which depend more or less upon those meteorological changes which are so frequent during the autumn and early winter months.

Consumption caused one hundred and nine deaths, which is a decrease from last report.

Pneumonia, on the contrary, increased its death rate from twenty in September to thirty-nine in October. The lowered temperature during October may account for many of these.

Bronchitis caused but seven deaths, which, contrasted with the prevalence of the affection, may be considered a very limited mortality.

Congestion of the lungs is the reported cause of six deaths.

Diphtheria increased its mortality nearly double, there being no less than thirty deaths from this cause. San Francisco reports eighteen deaths; Oakland, three; Redwood City, two; Fall River, Jolon, Los Angeles, Pomona, Rocklin, Sacramento, and San Jose, one each.

Croup. Eleven deaths are ascribed to this disease: two in Amador, one in Los Angeles, one in San Jose, and seven in San Francisco. In all of these cities it will be noticed that diphtheria is or has been present.

Whooping-cough caused seven deaths, which is an increase over the death rate of September.

Scarlet fever caused one death in Napa, one in San Francisco, one in Stockton, and one in Santa Cruz, a total mortality of four.

Measles had a mortality of four, all of which occurred in Napa county. No deaths from it are reported elsewhere.

Diarrhoea and dysentery. The deaths from these diseases show an increase of six from the September report—the mortality being fifteen.

Cholera infantum shows a gratifying decrease of eleven; sixteen deaths only being reported from this cause during the month of October.

**Typhoid fever.** The deaths from this preventable disease show a marked increase to almost double that of the preceding month, the number of decedents being forty-five.

**Typho-malarial fever** caused only two deaths, a decrease of five from last report.

**Remittent fever** is reported to have caused five deaths.

**Cerebro-spinal fever** was fatal in seven instances.

**Alcoholism** caused eight deaths.

The following cities and towns report no deaths occurring in them during the month: Auburn, Berkeley, Benicia, Cottonwood, Los Gatos, Saucelito, Knight's Ferry, Lemoore, Gonzales, Anderson, Galt, Fort Bidwell, Davisville, Forest Hill, Sierra City, Tehama, Nicolaus, Elk Grove, Livermore, Newcastle, Gridley, Salinas City, Williams, Monterey, and Wheatland.

#### PREVAILING DISEASES.

Reports received from ninety-nine localities throughout the State continue to indicate an absence of disease in an epidemic form. The different zymotic diseases, as noticed in this report, are all of a sporadic nature, and so far as an inference may be drawn from the information received, do not exhibit any tendency to become epidemic. The lowered temperature of the month of October increased the liability to pulmonary affections, and also produced an augmented number of bowel complaints, with a slightly increased fatality.

**Cholera infantum** has been reported as quite prevalent in Sacramento, Oakland, San Francisco, Nicolaus, Mariposa, Davisville, Colton, Woodbridge, Healdsburg, Castroville, Lemoore, Knight's Ferry, Dixon, Arbuckle, and Santa Cruz.

**Diarrhoea and dysentery** have also been quite noticeable in Bakersfield, Santa Cruz, Sacramento, Willits, Jolon, Lincoln, Cloverdale, Anaheim, Colton, Hill's Ferry, Fall River, Tehama, Calico, Anderson, Gridley, Newcastle, and Lakeport.

**Pneumonia** was quite prevalent during the month of October, and is noted as occurring in San Francisco, Oakland, Sacramento, Marysville, Bakersfield, Colton, Eureka, Grass Valley, Los Angeles, Anaheim, San Diego, San Jose, Santa Rosa, Stockton, Salinas City, Gridley, Anderson, Hill's Ferry, and Truckee.

**Bronchitis**, which in September was hardly noticed, in October appeared in Calistoga, College City, Bakersfield, Pomona, Sacramento, San Francisco, Oakland, Mariposa, Fall River, Colton, Sierra City, Downieville, Etna Mills, and several other places,

indicating the general prevalence of the disease with the advent of cold weather.

Influenza is likewise very general; the type of the disease thus far appears to be mild and without fatal tendency.

Whooping-cough is still reported in San Francisco, Oakland, Sacramento, Dixon, Newcastle, Amador, Calistoga, Los Angeles, Hill's Ferry, Napa, Healdsburg, and Cloverdale. In Ontario, Dr. Chaffey writes, the disease has quite disappeared.

Diphtheria. This disease still continues to pervade the State in sporadic form, being no doubt carried from place to place by those in contact with the disease. It is still noticed in San Francisco, Oakland, San Jose, Santa Clara, Sacramento, Amador City, Anderson, Pomona, Jolon, Gonzales, Fall River, Rocklin, Hill's Ferry, Napa, Santa Rosa, Salinas, Livermore, Los Angeles, Oroville, and Redwood City.

Croup is noticed in Amador City, Sacramento, Truckee, and Rocklin.

Measles continue prevalent in St. Helena, Healdsburg, Calistoga, and Fall River.

Scarlet fever prevails to a limited extent in Santa Cruz, Napa, Lodi, St. Helena, Anderson, Woodbridge, Santa Rosa, Stockton and Livermore. The limited mortality indicates the mildness of the type and the absence of epidemic tendency.

Erysipelas is noted in Lemoore, Cottonwood, Knight's Ferry, Jolon, Salinas City, and Newcastle. The cases are sporadic and without fatality.

Typhoid fever. The rapid increase of this disease and its wide range during the month, indicates that the observation made of its increase after the first rains is singularly corroborated. In the reports of this month we find it noticed in Igo, Martinez, Santa Cruz, Willits, Bodie, Dixon, Etna Mills, Petaluma, Anaheim, Healdsburg, Napa, Galt, Fort Bidwell, Truckee, Los Angeles, Sacramento, Oakland, San Francisco, Amador City, Weaverville, Pope Valley, Susanville, Santa Clara, Elk Grove, Alturas, Pomona, Salinas, Santa Rosa, and Gridley. Dr. Patty, writing from Petaluma regarding this disease, says: "that it is lessening in frequency; no new cases having developed since the rains. Those cases which did occur were mild in character with a very limited mortality."

Smallpox still prevails in Guaymas and along our southern border. It is now reported as very close to Arizona, and most



probably will be carried to California before many months if proper means are not taken to quarantine those ports where it is likely to enter. This cannot be done without legislative aid, which should be rendered at the earliest possible moment, as once small-pox is permitted to develop there is no knowing where its ravages will cease, how many lives will be sacrificed, or what monetary loss it will entail upon the State. Prevention is our only safety and should be adopted at once.

GERRARD G. TYRRELL, M. D.,

Permanent Secretary California State Board of Health.

SACRAMENTO, November 10, 1886.

### San Francisco Health Report.

#### ABSTRACT.

	Jan.	Feb	Mar	Apl.	May	Jun.	Jul.	Aug	Sept	Oct.
Total, 1885.....	438	468	502	468	512	516	458	455	415	432
Total, 1886.....	519	382	479	418	435	397	437	408	394	425
Phthisis.....	91	67	67	77	63	39	52	43	51	48
Pneumonia.....	66	28	34	29	26	18	14	16	14	15
Bronchitis.....	25	13	12	11	11	5	7	11	7	3
Heart Disease.....	31	22	23	15	16	21	23	25	17	19
Aneurism.....	2	1	—	—	1	1	3	2	1	3
Apoplexy.....	16	12	8	8	9	11	10	12	4	7
Typhoid.....	5	9	7	12	7	6	12	19	13	21
Paralysis (Hemipleg, etc.)	4	8	10	9	8	12	6	6	8	6
Cancer.....	16	9	15	6	15	12	16	18	15	17
Diphtheria.....	13	14	14	16	22	9	3	8	13	18
Croup.....	15	7	13	8	10	1	5	4	5	7
Infant Convulsions.....	16	10	18	14	17	11	14	12	9	11
Meningitis.....	17	9	10	16	5	—	21	13	9	9
Casualties.....	12	21	13	10	15	17	10	13	14	11
Suicides.....	5	4	9	8	10	6	3	5	8	2
Homicides.....	3	3	2	1	2	1	4	2	2	2

Population according to U. S. census, July 1st, 1880, was 234,520; Caucasian, 212,520; Chinese, 22,000. Estimated population, June 30th, 1884, 270,000.

DR. A. A. GRAHAM, of Redding, was recently arrested for practicing without a license. He plead guilty and was fined \$50. It would be interesting to know whether Dr. Graham is really an illegal practitioner, or whether he was merely practicing illegally.

Boys and girls may be had—particularly boys—for service at wages; for indenture, or for legal adoption, by applying with recommendations to E. T. Dooley, Supt. Boys and Girls Aid Society, Baker street, corner of Grove street, San Francisco.

**Licentiates of the California State Board of Examiners.**

SAN FRANCISCO, November 5, 1886.

At a regular meeting of the Board of Examiners, held November 3, 1886, the following physicians, having complied with the law and all the requirements of this Board, were unanimously granted certificates to practice medicine in this State:

GEORGE P. ALLEN, San Francisco; Coll. of Med. and Surg. of the Univ. of Michigan, Mich., June 26, 1879.

FRANK K. AINSWORTH, Riverside; Med. Dept. Univ. Vermont, Vt., June 27, 1878, and Med. Dept. of the Univ. of the City of New York, N. Y., Feb. 18, 1879.

BROOKS O. BAKER, Sunolglen; Med. Dept. of the Univ. of the City of New York, N. Y., Feb. 20, 1877.

DEWITT C. BENNETT, Los Angeles; Rush Med. Coll., Ill., Feb. 18, 1857.

FORBES H. BROUGHTON, Gilroy; Indiana Med. Coll., Ind., Feb. 27, 1874.

DARIUS BURTON, Live Oak; Coll. of Phys. and Surg. at Keokuk, Ia., Feb. 26, 1884.

GEO. W. COOK, Los Angeles; Med. Dept. of the Univ. of the City of New York, N. Y., Feb. 25, 1853.

WILLIAM CROTHERS, San Francisco; McGill University, Canada, March 31, 1876.

JAS. A. DOUGHERTY, Vernon; Med. Dept. Transylvania Univ., Ky., March 1, 1850.

EGBERT W. DUTCHER, Tulare; Albany Med. Coll., N. Y., Dec. 22, 1870.

LLOYD GOODNOW, Coleville; Worcester Med. Coll., Mass., 1846.

WILLIAM HARRISON, Los Angeles; St. Louis Med. Coll., Mo., March 12, 1874.

THEODORE KOEBERLE, Los Angeles; Med. Coll. of Georgia, Ga., March 1, 1885.

HORACE M. LOCKE, Lockeford; Harvard Med. Coll., Mass., June 30, 1886.

EDWARD N. LOWRY, San Francisco; Bellevue Hosp. Med. Coll., New York, March 13, 1884.

MARTIN E. MUNGER, San Diego; Rush Med. Coll., Ill., Jan. 27, 1864.

EDWARD C. PRINDLE, North Teunesca; Coll. of Med. and Surg. of the Univ. of Michigan, Mich., March 29, 1876, and Coll. of Med. and Surg. of the Columbia Coll., N. Y., March 1, 1877.

JOHN T. SCHOLL, Los Angeles; St. Louis Med. Coll., Mo., March 2, 1858.

FRANK S. SUTTON, San Francisco; Med. Dept. Univ. Pennsylvania, Penn., May 1, 1835.

S. P. SWEARINGEN, Pasadena; Columbus Med. Coll., Ohio, March 1, 1883.

ISAAC A. WALTON, King's River; Med. Dept. Transylvania Univ., March 10, 1843.

WOLRAE WINTERBERG, San Francisco; Coll. of Phys. and Surg. of New York, N. Y., Oct. 11, 1881.

The profession will remember that some weeks ago, E. N. Lowry, one of the above licentiates, sued out a writ of mandate to compel this Board to issue to him a certificate to practice medicine in this State.

As the result of that trial is a direct support of the rules of this Board, and of section 4 of the amended law (relating to unprofessional conduct), a history of the case will doubtless prove interesting.

When Dr. Lowry came to the State he sought information regarding our medical law with a view to registering. He stated he had first graduated and practiced as a homeopath; but not being entirely satisfied, he subsequently graduated at Bellevue. Upon this statement he was informed that the requirements for registration by the regular Board were, the presentation of his diploma, affidavit, fee of five dollars and a letter of recommendation from some physician in this city, known to and in good standing with this Board, certifying to the fact of an acquaintance with him, and to his correct professional conduct. He then stated that he could not comply with the latter requirement because he still intended to practice homeopathy at will, and to consult with homeopaths. He was then informed that the law had created three Boards of Examiners to accommodate those who desire to practice in one or other of the different schools of medicine, and that the proper place for him to make application was to the Homeopathic Board. Some weeks later he applied at this office, stating that he had received a certificate on his homeopathic diploma from the Homeopathic Board, but that he then desired to make application to this Board on his Bellevue diploma.

Upon being informed that he had already complied with the law by procuring *one* certificate, and that nothing further was required of him, he replied "you will have to recognize that diploma, or show cause!" Besides holding a homeopathic certificate, he was at this time associated in office with a homeopathic physician, and was one of the physicians to the Homeopathic Dispensary.

His application was accordingly presented to the Board, which refused to grant him a certificate. In due time a writ of mandate was served upon the Board. At the trial the Court refused to grant his petition, but granted, instead, an order that the Board give him a hearing, and that his possessing a certificate from the Homeopathic Board, should not be taken into account, *provided*, that, at such hearing, he should renounce all his rights under said homeopathic certificate, and agree to conform his professional conduct to the code of ethics adopted by the Medical Society of the State of California.

At the hearing the doctor satisfied the Board that he was prepared to carry out the stipulation in good faith, that he had severed his objectionable office association, and his connection with the aforesaid dispensary; and upon signing an agreement in accordance with the order of the Court, and the rules of this Board, and upon delivering up his homeopathic certificate for cancellation, he was granted the certificate, as above, which he could have procured as others had done before him, without going to law.

R. H. PLUMMER.

### The Brain of Gambetta.

Translated by DR. D. W. MONTGOMERY.

M. Duval has made a minute examination of the brain of the great French patriot and orator, of which the following are extracts of some of the most important points:

The third frontal convolution on the left side was found markedly developed; and instead of having but one fold, as is usually the case, it had a double fold. The third frontal convolution of Broca, is the part of the brain most intimately connected with the function of articulate speech, and the memory and correct arrangement of words to express ideas, and it was very interesting to find it so markedly developed in such a famous orator. The other great point of interest about Gambetta's brain was its light weight. The average weight of a European's brain is about 1,400 grams, and Gambetta's brain, weighed by Professor Cornil, was found to be 1,160 grams. M. Duval showed that this weight ought not to be admitted on account of the substance which was used for injection (chloride of zinc), and that the weight should really be about 1,241 grams. This is still lighter than the average by about 150 grams. M. Manouvrier remarks that it is not astonishing to find Gambetta's brain lacking in the total quantity, as he was neither a scientist nor a philosopher, and that he devoted himself very little to really intellectual pursuits. He also remarks that a perfect brain and a perfect man are probably very rare, even among great men. What one can say is that Gambetta was an orator of the first rank, and that he was perfect in this point; and curiously enough, in this point he was found anatomically perfect, and, from the simple examination of his brain, might have been suspected, even if one did not know the man, of being a great orator.—*Le Progres Medical*.

## Notices of Books, Pamphlets, etc.

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**NINTH BIENNIAL REPORT OF THE STATE BOARD OF HEALTH OF CALIFORNIA.**  
For the fiscal years from June 30th, 1884 to June 30th, 1886. Sacramento, State Office, 1886.

**EIGHTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF ILLINOIS.**  
With an Appendix, embracing:  
A.—Report on Disinfection and Disinfectants.  
B.—Coast Defenses against Asiatic Cholera.  
C.—Report of Proceedings of Sanitary Council of Mississippi Valley.  
D.—Meteorological Tables.  
E.—State Sanitary Survey and House to House Inspection.  
F.—Vital Statistics of Illinois and Coroners' Inquests.  
G.—Medical Education in the United States and Canada.  
Springfield, Ill., 1886.

**FIRST ANNUAL REPORT OF THE STATE BOARD OF HEALTH AND VITAL STATISTICS OF THE COMMONWEALTH OF PENNSYLVANIA.** Transmitted to the Governor, December 7th, 1885. Harrisburg, 1886.

**MEDICAL AND SURGICAL DIRECTORY OF THE UNITED STATES.** Comprising a list of all the physicians of the United States, arranged alphabetically, with the number of the page in which the name appears. Price, seven dollars, complete in one volume. R. L. Polk & Co., Publishers, 1886.

A most complete work and very carefully prepared. We find at the end of this volume a list of all the physicians of the United States, and opposite each name a number giving the page on which this name appears. This page tells us whether the physician referred to is a regular practitioner or not; the year in which he graduated; the State and town in which he is practicing and his street and number. Another number refers to the list of medical colleges, and we learn from what institution he graduated. All these facts can be determined in less than a minute.

Besides this, there are lists of all the societies, hospitals, sanitariums, asylums, and other medical institutions, Boards of Health, in fact everything relating to the practice of medicine.

**A MANUAL OF OBSTETRICS.** By A. F. A. KING, A. M., M. D. With one hundred and two illustrations. Third edition. Philadelphia: Lea Brothers & Co. San Francisco: W. S. Duncombe & Co.

This manual has been spoken of before as a very useful one for students. In its newly revised shape, with additional illustrations, and the changes which have been necessary on account of the recent advances of obstetrical science, it will more than ever be worthy of recommendation.

**DISEASES OF THE DIGESTIVE ORGANS IN INFANCY AND CHILDHOOD**, with chapters on the Investigation of Disease and on the General Management of Children. By LOUIS STARR, M. D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania, etc., with colored plate, and other illustrations. Philadelphia: P. Blakiston, Son & Co., 1886.

The young practitioner especially will, on looking up a particular case, find to his annoyance that the very points on which he especially wishes to be informed the book to which he refers are the most silent; it is the details that are omitted, and he discovers that, in order that he may treat the case successfully, it is these that he must not omit. The author of the volume under consideration has noticed this defect, and has written with the special object in view of remedying it. He speaks of the general regimen as quite as important as the administration of drugs; of the necessity of paying attention to the selection of proper food, clothing, and to hygiene in general.

The author has added to the literature of Diseases of Children a work which, while not encroaching on the standard authorities, still supplements them in a most valuable manner.

**A TREATISE ON THE PRACTICE OF MEDICINE FOR USE OF STUDENTS AND PRACTITIONERS OF MEDICINE**. By ROBERT BARTHOLOW, M. A., M. D., LL. D. Sixth edition, revised and enlarged. New York: D. Appleton & Co.; 1886. San Francisco: W. S. Duncombe & Co., 425 Sutter st.

Professor Bartholow announces in the preface of this edition his intention of preparing a work in three volumes which shall cover the whole domain of special pathology and therapeutics.

The volume on *Materia Medica* appeared some time ago, but the third volume which will treat of the Principles of Medicine is now in course of careful preparation, and will, when published, complete a most valuable set. The present edition of Professor Bartholow's Practice is considerably larger than the last, several new subjects having been introduced, together with numerous new illustrations. It is deservedly popular with practitioners and students, and likely ere long to become one of the standard works on Practice, if it has not already attained this position.

THE Courier Review Call Book published by J. H. Chambers & Co., has just been received. It is a most excellent one, arranged and prepared by Dr. E. M. Nelson. It contains all the facts to which the practitioner desires most commonly to refer.