PROCEEDINGS

OF THE

NEBRASKA

STATE MEDICAL SOCIETY

AT ITS

EIGHTEENTH AND NINETEENTH ANNUAL SESSIONS,

1886 AND 1887.

LINCOLN, NEB.:
JOURNAL COMPANY, STATE PRINTERS.
1887.
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OF THE
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1886-1887.
RICHARD C. MOORE..................President...............Omaha.
MILTON LANE..................1st Vice President........Lincoln.
N. F. DONALDSON..............2d Vice President........North Platte.
A. S. V. MANSFELDE........Permanent Secretary..........Ashland.
H. B. LOWRY................Corresponding Secretary..Lincoln.
W. M. KNAPP................................Treasurer ..............York.
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<td>Omaha</td>
<td>University of Iowa</td>
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<td>Beghtol, J. V.</td>
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<td>Missouri Med. Col.</td>
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<td>Butin, John L.</td>
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PROCEEDINGS

OF THE

Nebraska State Medical Society.

EIGHTEENTH ANNUAL SESSION

HELD AT

LINCOLN, NEBRASKA, JUNE 1ST TO 3D, 1886.
INTRODUCTION.

The Nebraska State Medical Society does not assume responsibility for the utterances of anyone who may have contributed to these proceedings, except when expressly so stated; nor does the Committee on Publication deem itself holden for the appearance of any and all papers in these proceedings, since the society has not clothed it with editorial privileges. The Committee has simply put into print what was referred to it for publication.

A. S. v. MANSFELDE, M. D.,

Secretary and Committee on Publication,

N. S. M. S.
MINUTES
OF THE
EIGHTEENTH ANNUAL SESSION.

AFTERNOON SESSION.

LINCOLN, June 1st, 1886, 3 p.m.

The Nebraska State Medical Society was called to order by
the Secretary, in the United States court room, Post Office
building, with W. M. Knapp, President, in the chair:

Report of Committee on Credentials by Dr. Sophronia M.
Lane:

Mr. President and Members of the Nebraska State Medical
Society:

Your Committee on Credentials find the following perma­
nent members present and entitled to seats in the convention:

R. C. Moore, Omaha; W. S. White, Palmyra; P. S.
Leisenring, Omaha; E. W. Lee, Omaha; Alfred Shipman,
Plattsmouth; W. M. Knapp, Asylum, Lincoln; E. L. Smith,
Shelton; D. S. Woodard, Hampton; G. L. Pritchett, Fair­
bury; Sophronia M. Lane, Lincoln; Alice E. Huff, Lincoln;
Theo. P. Livingston, Plattsmouth; L. H. Robbins, Lincoln;
A. S. v. Mansfelde, Ashland; William Protzman, Lincoln;
F. G. Fuller, Lincoln; H. B. Lowry, Lincoln; Geo. B.
Ayres, Omaha; N. F. Donaldson, North Platte; D. C. Bry­
ant, Omaha; James Carter, Omaha; M. W. Stone, Wahoo;
Chas. S. Hart, Lincoln; E. A. Kelley, Omaha; A. Bowen,
Nebraska City; L. B. Graddy, Omaha; N. J. Beachly, Lin­
NEBRASKA STATE MEDICAL SOCIETY.

colin; W. L. Dayton, Lincoln; Martin Clark, Sutton; T. C. McCleery, Exeter; G. W. Johnston, Fairmont; C. E. Elder, DeWitt; Jas. McLean, Minden; E. M. Whitten, Nebraska City; Horace Chapin, Lincoln; F. C. Brosins, Kenesaw; Robert Damerell, Red Cloud; T. M. Hayden, Oseola; M. L. Hildreth, Lyons; T. E. Coulter, Waterloo; D. A. Wal­den, Beatrice; Milton Lane, Lincoln; A. R. Mitchell, Lin­coln; D. H. Muir, Lincoln; L. A. Merriam, Omaha; W. A. Bridges, Omaha; Chas. Oxford, West Point; L. J. Abbott, Fremont; J. O. Carter, Lincoln; M. Ryerson Butin, Dor­chester; E. W. Cook, Plattsmouth; R. M. Stone, Omaha; C. C. Cook, David City; A. B. Newkirk, Falls City; J. H. Hall, Plattsmouth; C. F. Ballard, Grafton; T. J. Schug, Columbus.

After thorough investigation, we submit and recommend for membership the following:

J. J. LONG, graduate of Medical Department of Western Re­serve University, Cleveland, Ohio, 1883, Wakefield.
S. W. DODGE, graduate of Medical Department State Uni­versity of Iowa, Iowa City, 1882, Reynolds.
JOHN E. SUMMERS, Jr., graduate of College Physicians and Surgeons, New York City, 1881, Omaha.
THOMAS H. LINE, graduate of Rush Medical College, Chi­cago, 1881, Marquette.
JOHN B. DUFF, graduate of College Physicians and Sur­geons, Keokuk, Iowa, 1883, Cedar Creek.
A. F. HINZ, graduate of Omaha Medical College, Omaha, 1886, Logan, Col.
H. C. DEMAREE, graduate of Kentucky School of Medi­cine, Louisville, Ky., 1879, Roca.
J. B. SAMUEL, graduate of Louisville Medical College, Louisville, Ky., 1879, Rulo.
GEO. M. MILLS, graduate of College Physicians and Sur­geons, Keokuk, Iowa, 1876, Rush Medical College, Chi­cago, 1883, Kearney.
EIGHTEENTH ANNUAL SESSION.

MRS. E. H. BURCH MILLS, graduate of College Physicians and Surgeons, Keokuk, Iowa, 1881, Kearney.

E. A. BENTON, graduate of University of Vermont, Burlington, Vt., 1866, Central City.

HELEN B. BODELSON, graduate of Woman's Hospital, Medical College, Chicago, 1878, Asylum, Lincoln.

J. H. CALKINS, graduate of Rush Medical College, Chicago, 1882, David City.

B. T. WHITMORE, graduate of St. Louis Medical College, 1875, Louisville Medical College, 1874, Lincoln.

E. F. ROOT, graduate of Cleveland Medical College, Cleveland, Ohio, 1880, Exeter.

JOHN L. BUTIN, graduate of Northwestern Medical College, St. Joseph, Mo., 1882, Dorchester.

L. A. CLAUSEN, graduate of Chicago Medical College, Chicago, 1879, Beatrice.

W. GRUWELL, graduate of State University of Iowa, 1885, Republican City.

We also submit the credentials of the following delegates:

R. STANHOPE, Cleveland Medical College, Cleveland, Ohio, 1880, delegate of Lincoln Medical Society, Lincoln.

C. M. G. BRIART, delegate Douglas Co. Medical Society, Omaha.

Motion by Dr. Bowen: That the report of the committee be received, the delegates be admitted to the Society, and that all the applicants be admitted to membership. Carried.

By Dr. S. M. Lane: The application of Dr. Dailey, of Omaha, is in the hands of the committee. Her credentials are satisfactory to the committee, but since there has been some correspondence in regard to her application, that may be of interest to the Society, the committee respectfully submit both the application and the correspondence herewith.

By Dr. Carter, of Omaha: If the committee are perfectly satisfied, why isn't that a recommendation?
By the President: I could not say, not being a member of the committee.

By Dr. Carter, of Omaha: I move that the committee be directed to report and recommend the admission of Dr. Dailey.

By Dr. Mansfelde: I think that motion is out of order.

By the President: I think that the motion that the committee recommend is out of order. A motion to refer the matter back to the committee would be in order.

By Dr. Carter: I move the admission of Dr. Dailey to membership.

By the President: You have heard the motion, that the doctor be admitted to membership.

By Dr. Mansfelde: Before that motion is carried, I want the Chairman of the committee to submit a correspondence in regard to the admission of the lady, before the Society can intelligently decide for or against the motion. That was the object of the Committee on Credentials.

By Dr. Carter: I object to any further consideration of the question.

Question submitted to the Society, by the President, as to whether or not the question was to be debated:

The motion in favor of the debate was carried.

By Dr. Fuller: I think that this is a matter that can be explained in a very few words, and if the Chairman of the committee desires me to do so, and it is the pleasure of the society, I can explain the reason this committee submits this correspondence to the Society.

By the President: I hear no objection. You are privileged to speak on the question.

By Dr. Fuller: This application for membership is made by Eleanor Stallard Dailey, and she has been recommended for membership by L. A. Merriam, M.D. of Omaha. The Chairman of the committee says that Dr. Dailey names the location of the college of which she was a graduate as being the Woman's Medical College of Chicago, and as having been
a resident of Burlington, Iowa, where she practiced. The Chairman of the committee, upon her own responsibility, but as I think rightfully, corresponded with the Secretary of the Medical Society in Burlington, and asked with reference to her standing. He states in a letter, which is in this package, that she was not in good standing in the Society of that county, for the reason of non-payment of dues, and also that some time before she had issued a circular, or advertisement, that was unprofessional. The Chairman of the committee, Mrs. Lane, wrote to the applicant, Dr. Dailey, and informed her of what had been discovered, or what had been written. Dr. Dailey wrote and denied the whole charge, except the one that she had failed in the payment of her dues, but that there were others who had done the same thing, and she thought that would palliate the offence. That is the reason why the committee referred this matter to the Society. The committee would recommend Dr. Dailey, and recommend her cheerfully, had it not been for the correspondence that occurred.

By Dr. Kelley, of Omaha: I would like to ask if there hasn’t been some subsequent correspondence retracting the first statement of the Secretary of the Des Moines Society.

By Dr. Fuller: Yes. So far as Dr. Dailey’s application is concerned, the committee would recommend her, but they wished this matter referred to the Society.

By Dr. Kelley: I would like to hear the letters from the Secretary of the Des Moines Society, who first brought up this matter.

By Dr. Fuller: (After reading letter number one from the Secretary.) This is the letter which was first written, in which he recommends her. Here again, is this letter, number two, in which he finds that she has issued a circular that is unprofessional. He again writes a letter at a subsequent date, which says: “Charges against a member of our Society must be made when that body is in session. Inasmuch as that wasn’t done in the case of Dr. Dailey, of Omaha, I have
written her that upon payment of dues I will send her a certificate of membership."

By Dr. Stone: There is an additional letter by Dr. Dailey herself, saying that she had received a retraction of the first statement, and that they would recommend her heartily to membership.

By Dr. Fuller: There is a letter here from Dr. Dailey.

By Dr. S. M. Lane: The letters he has reference to are credentials, sent by the President and Vice President of the Des Moines County Medical Society. They were sent to us as a committee, and after receiving some half a dozen letters from different physicians of Burlington, recommending her very highly, and explaining somewhat the cause of the dues not being paid, and the letters were still coming in, I wrote Dr. Dailey that her credentials were entirely satisfactory, and that she would be recommended, and that we didn’t think it worth her while to send any more.

By Dr. ———: I think we should be cautious about receiving members, but if there is nothing against the doctor, but simply the non-payment of her dues, that was probably caused by poverty, and that is no crime. If she is willing to pay her dues here, I don’t think we have any right to go back into her financial condition in the society to which she formerly belonged. I think it exceedingly unfortunate for the lady that Dr. Merriam wrote that letter, but as that appears to be the only objection the committee has to her, I don’t think she should answer for the sins of Dr. Merriam.

By Dr. Kelley, of Omaha: I would like to say a word in regard to the payment of dues. Dr. Dailey tells me that the reason she discontinued the payment of dues was because she ceased attending the Society, and the reason she discontinued attendance upon the Society was because there were only a half dozen members attending, and they spent most of the time in talking about horses and things of that kind, devoting no time at all to medical subjects. She remained
away from the Society a year and a half, and did it because it was no sort of service to anyone.

By Dr. Milton Lane: Not wishing to speak for the Society, but the committee here is in possession of information from the Des Moines County Medical Society, of Iowa, that the normal condition of that Society is not to pay dues. They haven’t paid any dues for four years, and have money enough in the treasury to run things for four years more. I think it would be an error for this Society to keep Dr. Dailey out, simply because she didn’t pay her dues, if that was the normal condition of the Society.

Dr. Carter’s motion to admit Dr. Dailey to membership was carried.

A programme for this session of the Society, prepared by the Secretary, was now read.

Motion by Dr. Bowen: That the programme be adopted, and that it shall not be departed from except upon a three-fourths vote of the members present. Carried.

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**EVENING SESSION.**

8 O’CLOCK P.M.

The President in the chair.

Reading of the minutes by the Secretary.

By Dr. White: That the reading of the minutes be dispensed with. Carried.

By Dr. Bowen: That the minutes be adopted.

Amendment by Dr. E. A. Kelley: That all that portion thereof relating to Thursday’s session be stricken from the records of this Society.

Amendment to the amendment by Dr. Leisenring: That we take up section by section of the last day’s proceedings. Carried.

Dr. Bowen’s motion as amended by Dr. Leisenring, carried.
Minutes of the last meeting taken up, section by section, and read by the Secretary. The minutes were adopted, section by section, as follows:

Appointments of standing committees by the President, by motion of Dr. Shipman.

Disposition of papers not otherwise provided for, by motion of Dr. Moore.

The printing of 100 copies of constitution, by motion of Dr. Shipman.

Procuring a short-hand reporter for session of 1886, by motion of Dr. Bryant.

Adding fifty dollars to expense account of Secretary in addition to the amount recommended by special committee, by motion of Dr. White.

Reference of Dr. Ballard's paper, by motion of Dr. Leisenring.

Reference of Dr. Graddy's paper, by motion of Dr. Shipman.

Voting the thanks of the Society to individuals and corporations, by motion of Dr. White.

The recommendation of Dr. C. M. Duncan to membership, by motion of Dr. Leisenring, laid on the table.

Dr. Emory Lanphear, of Kansas City, made a member by invitation, by motion of Dr. Mansfelde; also Dr. J. O. Dawson, of Lincoln, by motion of Dr. J. O. Carter.

Report of Committee on Arrangements, read by Dr. S. M. Lane:

Mr. President, Ladies and Gentlemen of the Nebraska State Medical Society:

Your Committee of Arrangements appointed at the last annual meeting have the honor to report that they have secured for the use of the Society during their present session the room now occupied; that the only expense connected therewith will be the janitor's fees and the expense of gas. They have procured reduced rates at the Windsor, Commer-
cial, Opelt, and Tremont hotels. They also report that Dr. Horace Chapin, Secretary Lincoln Medical Society, has, at the invitation of his fellows, kindly consented to deliver an address of welcome at such an hour as you may be pleased to listen to him.

Respectfully submitted,

F. G. FULLER,
L. H. ROBBINS,
SOPHRONIA M. LANE, Ch’n.

On motion of Dr. Mansfelde, received.

Dr. James Carter, Vice President, in the chair.

Reading of address of welcome by Dr. Horace Chapin, Secretary Lincoln Medical Society:

Mr. President and Members of the Nebraska State Medical Society:

It being my fortune, or misfortune, as the case may be, to have been elected for the present year to the highest official position in the Lincoln Medical Society, it is presumable that for this reason alone the Committee of Arrangements invited me to extend to you its cordial greeting and the assurance of welcome from our local society.

It would have accorded far better with my wishes, and no doubt with yours, had any member of this committee been assigned this position; for example, if the Chairman, whose acknowledged ability and medical attainments so well qualify her for this duty, could have been persuaded to have pronounced the welcoming address; or if the second member of your committee, an ex-President of your society, and who, from time to time as a member, and often as the Chairman of important committees, has given proof of his fitness for such occasions, would have assented to have spoken at this time words of welcome and wisdom; or if the other member of your committee, who served your Society soon after its organization as its Recording Secretary, who but recently held the
important and honorable position of President, and whose cultured mind, geniality, and wit are resources that he could so easily have drawn upon, to our delight and instruction, would have consented to present to you the hearty welcome of the Committee of Arrangements and of the Lincoln Medical Society, then, in either instance, the welcoming address would have encouraged and strengthened you all in the pursuit of your professional labors.

But, Mr. President and gentlemen, you will, under the arrangements of your committee, bear with me, I trust, although the entertainment which I propose to offer may fall far short of that which you would have received at the hands of any one of this committee.

We, the members of the committee and of the Lincoln Medical Society, welcome you as co-workers in the study and practice of medicine and surgery, as members of the medical profession, which is both conservative and progressive, whose aim is to protect the true and oppose the false in every line of medical and surgical research and practice.

We greet you—not the drones or idlers, if any such there may be whose names are enrolled upon our list of membership—but the constant workers in our noble calling. For it is well directed and unremitting work only that will tend to the advancement of the medical and surgical sciences.

In view of the constant and rapid numerical increase in your Society from its inception to the present time, we congratulate you; and especially would we express our congratulations to the members of the first meeting—the twenty-four whose names were borne upon the roll of that assembly—in 1869. You may well feel a good degree of satisfaction in the result already attained in that direction. But we would not say, for we do not believe it true, that the Society has made in other directions equal advancement. It is to be presumed, however, that as you have from year to year received large accessions to your ranks, a goodly number of
them have not only increased numerically your list of membership, but by their wisdom and by their medical attainments have contributed largely to the advancement of the Society in other and more important directions.

To the members of the Society who have joined our ranks within the last few years, we, the older members, pledge the assurance of aid and counsel, particularly in times of perplexity and doubt which beset the path more or less of every practitioner of medicine and surgery. And in turn we shall require at your hands a due regard for the obligations you have assumed by signing our constitution and by-laws; and thereby pledging yourselves to a compliance with the duties and amenities formulated in the code of medical ethics.

And now, Mr. President and gentlemen, I ask your indulgence while I, in my further remarks, digress, it may be, from the path usually followed by those who give welcoming addresses, and present my views in a matter of vital importance to our state and to the prospective standing of this medical society.

If there be any one thing that has given our nation a high position among the highly civilized nations of the world, it is our system of public education, first established by the earliest settlers of our country, in the belief that only second to honesty of purpose, virtue, and generally the faithful following of the precepts of the moral code, whose basis was the Bible, their duty was to educate the people. This duty was religiously carried into effect by the establishment of public schools in every settlement of the northern colonies; and the system of public education then first adopted, modified, it may be, in some particulars, but remaining essentially the same in its objects and results, has been continued to the present time, not only in the Atlantic States, but in other parts of our country, to that extent that at this time there cannot be found a single state without a system of public instruction. Such a system was adopted for our state, even before its admission.
into the union of states, and in the act for admission the receipts from the sales of large areas of public lands were to be set aside and used only for the purpose of public education. The receipts thus far expended have undoubtedly, in most instances, been wisely applied to the furtherance of the objects intended. This is evident from the fact that public schools of every grade have been established and are in active operation in the different sections of our state to that extent and perfection that every child and young person has the opportunity to acquire, not only a common school, but a high school education; and to those whose acquirements are sufficient to justify the undertaking, there is presented an opportunity for a college training.

Besides these schools, there has been instituted in connection with the State University an agricultural and a medical department. These schools, supported from the school fund, are open to all persons in the state who possess the requisite qualifications for admission.

In conformity with these facts it behooves us, does it not, as citizens of the state and as practitioners in medicine, to see to it that our influence, be it more or less, be given to the maintenance of thorough instruction in all the schools of every grade and department. To this end we should particularly insist that the students in our medical schools shall receive as practical and thorough medical instruction as is given anywhere in this republican Union.

When this thoroughness in teaching is secured in all the schools under the fostering care of the state, then will the state rank high on the roll of the states, not only for its production of corn and cattle, but, far better, for its production of eminently practical and highly educated men and women; and then will our Medical Society receive accessions to its ranks from those whose object in joining will be highly commendable, and whose wisdom in council will give additional influence to its decisions.
By Dr. Leisenring: I move that we return hearty thanks to Doctor Chapin for his eloquent and instructive address, and especially ask that a copy of his address be furnished for our proceedings. Carried.

By Dr. Protzman: That we request Dr. Bowen, one of our older members, to give a brief reply to the hearty welcome we have received. Carried.

Dr. A. Bowen, Nebraska City:

Mr. President, Ladies and Gentlemen:

Convinced, as I am, on this short notice, how inadequate is the manner in which I shall be able to respond to the eloquent address of the gentleman, I yet feel, and I can but feel, that it is a welcome office, and if you would look in my breast this moment, and see the thoughts that are welling up there, you would not wonder at it.

Lincoln is the child, in a sense, of Nebraska City. It has been my fortune to be a resident of the state of Nebraska some thirty years. You are aware that there has always been some degree of, perhaps envy, certainly of unkind feeling between our prominent towns, more particularly the towns on the river.

I had always prided myself, up to the winter of '66 and '67, that I had been especially exempt from any feeling of unkindness toward Omaha or any other place in the state.

It was my fortune to be called to Omaha during the session of the last legislature which met there. I was called there for the purpose of organizing a deaf mute institute, in which I was appointed one of the first directors. I saw the scenes of violence and anarchy which prevailed in the closing hours of the last session of the territorial legislature. I also witnessed the first hours of the state legislature. If there are any gentlemen present who attended the last session of the territorial legislature, they will bear in mind the scenes of violence which were enacted that last night. I then stated to Governor Sanderson, an old friend of mine, that from that
hour forth I was in favor of the removal of the capital, and I went home and agitated for it in good earnest. I was reminded afterwards that I was one of the agitators of that, and I was called upon to put my hand in my pocket and subscribe for Lincoln lots, and I did so to the extent of my ability, which was very small. I can truly say that the motives of the first men who favored the removal to Lincoln, it rather shames me to say, were to spite Omaha. Well, we started Lincoln and the child has outgrown the parent wonderfully.

It was my fortune in the winter of 1872 and 1873 to be a member of this legislature. The older residents are aware that there were only thirteen members of the senate. I came to Lincoln after dark the evening before the legislature convened, and I was from half to three-quarters of an hour getting from the front door of the Tichenor House to the office desk to register my name. I found the other twelve members of the senate had been here all day. They had parcelled out the offices from page to president. There was a gentleman from Omaha and a gentleman from Nemaha county, both candidates for president. My vote decided the whole thing, and when I was importuned to go for this man, or that man, my answer was that it was poor business talking to a hungry man. I had been among my patients till the moment I came away, and had had no dinner, and as yet had gotten no supper. After eating my supper I went among my friends and learned who was the most proper person to elect for president. I had no difficulty in learning that the gentleman from Omaha, Mr. Guire, was the most proper man. I voted for Mr. Guire and he was elected, of course. He had seven votes and the other man six. A question soon came up which is probably mostly forgotten by you, that was the removal of the capital from your city, and I had the misfortune to make enemies at home. I was the only man in our county who unqualifiedly opposed the removal of the capital. A gray-haired gentleman met me on the street to-day and offered his
hand and said; "I remember you, for you stood by us in '72 and '73." I well knew it meant enormous taxes on the people, and though bonds were offered us to place it at Columbus or place it farther west, I knew that those bonds were valueless and the people would incur a debt for new public buildings, and I opposed the idea of removal, from the beginning to the end. I assure you to-day, with almost three score years and ten on my head, that every place in Nebraska is dear to me. It is natural, as we go down into the vale of life, at its last end, it is natural that we see the folly of quarreling, and the folly of wrangling. I have even been sensitive here this evening, for fear that personalities should come into use. I was glad that our Chairman cautioned us not to indulge in them. Lincoln looks pleasant to me; its people look pleasant to me; Omaha does the same. Omaha was my home for part of one year when I was in the army as medical director on General Drake's staff. I learned to love Omaha; I love old settlers of Nebraska wherever they may be. I wish before I sit down to express my surprise and gratitude to the lady who is Chairman of the Committee on Arrangements. I can not understand how she obtained possession of the United States court room for our meeting; I never before heard of a United States court room being open to a scientific convention, or to a professional one, certainly not to a political one. I think she must have used especial means.

I feel grateful that I have known Nebraska from the time it was a wild prairie. The red man had not left when I came here, by considerable. It was dangerous when I went twenty and twenty-five miles, as I some times did, if I did'nt get home before dark. There was nothing to guide the eye, but merely the wind to go by, and if it changed, we might lie out on the prairie all night. Medical men have their trials. We sometimes get the blues I guess, I do; brother Abbott doesn't.

Here, to-night, I feel as if I were among friends. I thank
you for providing this room; I thank your speaker for the very eloquent address of welcome that he has given us, and I hope in our future meetings that these sentiments will prevail. I heartily concur in his words for our schools. In my feeble way I have labored for the same ends.

The reading of the President’s address, Dr. W. M. Knapp, York:

Ladies and Gentlemen of the Nebraska State Medical Society:

Agreeable to our established custom, it becomes my pleasing duty, as your presiding officer, to address you on this, the opening of your eighteenth annual session, and however much I may distrust my own ability to offer a production that will compare favorably with those of the long line of distinguished gentlemen who have preceded me in this position, yet I assure you the honor is none the less highly prized; and though I may not succeed in gleaning from the broad fields of inviting inquiry gems of medical thought, either learned or abstruse, still I trust that the few remarks I shall make may prove suggestive, and that wise and mature action by this body may render them of practical utility, not only to the profession, but to the people of this rapidly developing state. A distinguished member of our profession has very aptly said, “Aggregations of individuals form communities, and intercourse establishes society. Common interest and enlightened sentiment, with frequent meetings and exchange of views, evolve dominant ideas.” And ideas rule, not only societies like ours, but the whole world. So I indulge the hope that from our present meeting there may be evolved ideas that shall prove of lasting benefit to each individual member of the profession of the state, and through them to her entire citizenship. And I trust that whatever action is taken by this Society, shall be done with an unselfish and sincere desire for the elevation of our noble calling, and for the more certain and speedy prevention or amelioration
of human suffering, and the prolongation of human life. To this end, I would ask the attention of this Society to the relationship of the medical profession to the state. We are, I fear, acting too much on the theory that our professional attainments are purely individual stock in trade, a means of increasing our private bank accounts, and that the only duties we owe to the state are to pay our annual taxes, obey her laws, and live peacefully in the several communities where we ply our trade, thus degrading our noble profession to a level with that of the common hod-carrier or day laborer, forgetting that a state consists merely of an aggregation of individuals of varied vocations; and that she expects and demands from each vocation or profession duties commensurate with their several attainments, and their importance to the general good. Upon her citizenship as a whole she levies taxes in proportion to their individual prosperity, to carry on public work and defray the expenses of government; from the entire community she selects the most perfect types of physical manhood to act as defenders of her soil and institutions from foreign invasion or internal revolution. From her scientists she expects information and aid in the development of her internal resources; from the legal fraternity she seeks advice relative to the enactment of wise laws for the general good, that all may have equal justice; to the clergy she looks for the diffusion of such a system of morals as will be productive of a peaceable, law-abiding citizenship; to her educational institutions, and those who are at their head, she looks for such a training of her youth as will prepare them to improve and perpetuate her institutions, and advance still higher the standard of her civilization; and upon the medical profession she justly depends as the conservators of public health, which our enlightened civilization recognizes as being not only public wealth, but the foundation upon which the most perfect success of all the others must depend; for the lawyer is not capable of imparting wise council, the clergy to inculcate cor-
rect morals, nor the teacher to properly direct the mind under his charge, when one or all parties are suffering from the effect of the poisoned atmosphere of a poorly ventilated room, an imperfect system of sewerage, impurities in the water or food supply, the debasing and pernicious effects of excessive indulgence in social libations of alcoholic stimulants, or any of the various other evils, the guarding against which is to be the special province of the physician of the future. As the human mind tends more and more toward positive science, it turns further away from the mythical creeds which are more the creations of the imagination than of the understanding, and in its philosophy it substitutes for the blighting breath of angry divinities, which was once fabled to be the cause of disease, the poisonous exhalations of marshes, sewers, and cess-pools, and of the filthy and crowded conditions of our habitations. Preventive medicine and public hygiene are now receiving the earnest attention and careful study of many of the most profound thinkers of the profession; and though the people may still continue to view the medical profession in the same light as did the blind poet of "Scio's Rocky Isle," when he makes his wounded hero, Idomeneus, say to Nestor,

Ascend thy chariot, haste with speed away,
And great Macheon to the ships convey;
A wise physician, skilled our wounds to heal,
Is more than armies to the public weal.

Yet it is true that an enlightened civilization will soon demand of the physician protection from disease-producing influences, as well as ministrations to mitigate or cure diseases with which the body is already afflicted. Recognizing the justness of this claim of our advanced civilization upon the medical profession, we would recommend that a Section of Preventive Medicine or Public Hygiene and a Section on Dermatology be added to the regular sections of this Society, and that we express in some appropriate manner to the medical
colleges of the state and nation our opinion that these branches of the science of medicine be more prominently recognized in their curriculum. While we are willing to admit all and more that we might have mentioned of the obligations which our profession is under to the state, we cannot avoid the feeling that there are certain reciprocal obligations, the discharge of which by the state, through her law-makers, it is our right to demand. Among these we may mention:

First. The duty of the state to protect the profession and the people from charlatans.

Second. To aid by legal enactments in the collection of vital statistics, the prevention and the spread of contagious diseases, etc.

Third. To provide ample facilities for the education of her sons and daughters in every branch of the science of medicine, in their proper order and on an equal basis with the provision for education in the other branches of applied science.

Fourth. To provide for the utilization of the material furnished by her Insane Hospital and other charitable and corrective institutions, for the benefit of the science. While it is true that as the result of the long continued efforts of members of the medical profession, and especially of members of this Society, we have a “Medical Practice Act,” which, so far as its provisions can be made operative, in the absence of any special authority for its enforcement, is a good one, yet we would suggest that to derive the full benefit of the act requires a supplemental clause creating a special board for its more perfect utilization. This duty might safely be intrusted to the board necessary to the discharge of the duties suggested by our second obligation, viz., the creation of a State Board of Health and Vital Statistics. To secure the benefits of the third obligation which rests upon the state, allow me to suggest that, as the state, through the Chancellor and Board of Regents of her university, undoubtedly has the right to fix
the necessary qualifications of entry into and graduation from any of the colleges comprising that institution, including the medical as well as the agricultural, or the College of Arts, it would be wise to sustain the College of Medicine of our State University, and to recommend that the regents of that institution fix the standard of requirements for entering upon this course of study and for graduation therefrom so high that none save those into whose hands the great problems that the medical profession are to solve may be safely intrusted; then, to quote from a very erudite paper read by a distinguished member of this Society, "This (referring to an ideal standard previously portrayed) can be done by the enactment of a law preventing any one proposing hereafter to enter upon the practice of medicine in our state from doing so until he shall have received a good literary and medical education. To this end let a law be enacted establishing a board of medical examiners, whose duty it shall be, first, to examine all persons about to enter upon the practice of medicine in our state; second, to license such persons only to the practice as may in their opinion possess the requisite high qualifications, and let none other be permitted to practice medicine." Then, again, allow me to suggest that we urge upon the legislature such an amendment to our present law legalizing dissections as will compel the delivery of the bodies of those dying as criminals or in our institutions, which are not claimed by relatives, to the medical colleges of the state, to be used for scientific purposes only.

Of our fourth proposition, permit me to recall to your minds the alarming increase in the past half century of insanity, and kindred nervous disorders tending thereto, and of the fact that at a time when preventive measures are best instituted these cases are largely under the care of the general practitioner, and while he may have had a limited opportunity of observing the phenomena of the inception of the disorder, under our present regime he can know nothing of the treat-
ment, termination, or pathological changes wrought by the malady. Permit me also to suggest that we ask for the enactment of a law making it the duty of the physicians in charge of our hospitals to keep an accurate clinical record of all cases received for treatment, and also the appointment of a competent pathologist as one of the assistants, so that, on the death of any person therein, concise, accurate, and scientific observations may be made; and that these records be published annually, or at such times as may be deemed advisable, that all may have the benefit of this aggregation of valuable material now allowed to pass from the reach of science. For the furtherance of these several objects, we would suggest that a standing committee be appointed, to whom may be referred, from year to year, such matters as this Society may deem of sufficient importance to bring before our legislature, with power to draft and present before that body our wishes in the form of legal acts or bills.

Remembering that though failure may succeed failure, persistency in just claims will ultimately lead to success.

Finally, gentlemen, allow me to congratulate you on the number present and our freedom from any extended, fatal epidemics within our borders during the time which has intervened between this and our last annual meeting, and on the fact that so few of our number have been called by the "boatman pale" to pass over the dark river to that mysterious clime where the "elixir vitae" flows from every fountain and the "philosopher's stone" is in the possession of all.

Motion by Dr. Bowen: That the President's address be received and referred to committee on publication. Carried.

By Dr. Mansfelde: That the President's address, before it goes into the hands of the committee on publication, be examined and reported upon by a committee of three. Carried.

Committee on President's Address: Drs. Abbott, Kelley, and Milton Lane.

The President, Dr. Knapp, resumes the chair.
Mr. Chairman and Fellows of the Nebraska State Medical Society:

Your special committee appointed to report upon the suggestions of the President, in his address, respectfully submit: That, in our opinion, the qualifications necessary to entitle one to matriculate in any medical college in the state should not be less than a diploma from a literary college, or one from a high school, or a certificate of the second grade from the county superintendent, with the addition of elementary chemistry. And we recommend that no one be permitted to graduate who has not attended three full courses of lectures of six months each; and that a board of examiners, composed of not less than five, who have no connection with the college, be appointed to examine applicants for graduation. That we heartily commend his suggestion on preventive medicine or public hygiene. We would further suggest that there be a Section on Dermatology. We also think the present medical law is wholly inadequate to protect the honor and dignity of our profession.

L. J. Abbott,
Milton Lane,
E. A. Kelley,
Committee.

Unanimously adopted by the Society.

PERMANENT SECRETARY’S REPORT.

Ladies and Gentlemen of the Nebraska State Medical Society:

This, my eighth annual report, affords me the opportunity of announcing that our Society is now more than two hundred strong. The actual membership at the close of the year just past was two hundred and three. This number, though handsome, is by no means proportionate to the number of
regular physicians in the state, and we should not have much cause for glorying, were it not for the fact that the recent increase in numbers has been outstripped by far by the increase in brain and enthusiasm, which indisputable facts are amply demonstrated by the contents of this year's programme. Nearly three-fifths of the papers have been furnished by members not over three years connected with the Society. An augury full of hope for the future of this Society. An omen predicting that the scepter will slip the grasp of the old stand-bys to be raised by the vigorous hands of the young, if the former do not look to their laurels. The constitution provides the issue of the programme at least four weeks prior to the meeting. This year reports of chairmen and individual members did not reach the Secretary earlier than two weeks of the meeting, thus making it impossible for him to print the programme prior to the 20th day of May. A time too short to insure the benefits to members intended to be derived from this document. Means of relief are respectfully asked for.

Dr. T. C. Sexton, of Fontenelle, against whom no charges exist, desires to withdraw from the Society.

The matter of Dr. Crabbs, formerly of Fremont, now of Hot Springs, Arkansas, has not been adjusted by the report of the Special Committee on the Secretary's Report of last year. Dr. Crabbs had paid his dues up to the time when he asked for his withdrawal. The committee simply drew the Society's attention to the non-ethical appearance of his letterheads. Thus the Society is placed in the position of carrying a member who does not pay his dues, and who, according to the committee, is violating the code. It is obvious that this unenviable condition should be corrected.

Another matter sub judice should crave the Society's earnest attention—the election of new members. Hitherto, at least for eight or ten years past, the entrance into the Society has been notoriously easy. The Committee on Credentials
never had an opportunity to investigate the character of the applicant's social and professional standing. I speak of both, for I doubt not I voice the sentiments of this Society when I assert that social degradation, particularly the disgusting habit of intoxication, is at least as detrimental to the dignity and welfare of this Society as a non-observance of medical ethics.

Again, persons have forced their way into the Society in open violation of the requirements for membership, such persons being graduates from schools which this Society could not recognize without foregoing its envied claim to progressiveness.

This great wrong to the Society and its members is not to be sought for in the committee appointed for investigation, but in the methods which have become usage. This should not be tolerated any longer. The plan suggested in the draft for a revised constitution and contained in the Proceedings for 1884, pages 29 and 30, it is believed will remedy this evil, and is therefore again brought to the notice of the Society.

In connection with this matter, the case of Dr. C. M. Duncan, of North Platte, craves your attention. Dr. Duncan was made a member of this Society in the usual way, at the very close of last year's session. A telegram to the President of the Society from the members of North Platte, and substantiated by a subsequent letter to the Secretary, informed the officers that the doctor was not entitled to the honor of membership. The Secretary, in conformity with the expressed desire of the President, has withheld the certificate of membership, and he awaits the Society's direction as to his duties in the premises.

Dr. C. H. Philpot, a member of this Society, who resides at Albia, Iowa, was delegated to represent our Society in the Iowa State Society's meeting for this year.

Drs. W. O. Henry, A. B. Anderson, W. M. Knapp, J. S.
Leonhardt, H. B. Lowry, C. S. Hart, L. H. Robbins, S. D. Mercer, A. Bowen, Geo. B. Ayres, R. C. Moore, J. C. Denise, G. W. Johnston, Peter Hostetter, W. S. White, L. F. McKenna, A. S. Mansfelde, W. S. Gibbs, C. E. Elder, E. M. Whitten, and A. B. Newkirk received credentials to the meeting of the American Medical Association. Other members made application for credentials after the delegation was full. Drs. J. H. Peabody, G. H. Peebles, and H. Link received credentials in place of three members who found it impossible to go. In order to give others an opportunity, and thus secure a full delegation in case any of the members holding certificates should be detained at home, blanks, duly executed, were sent to Dr. R. C. Moore, to supply such vacancies.

Should the Society sanction this course, it will be made a practice in the future.

The railroads operating in the state have again, as usual, granted a reduction in fare to the members of this Society— for which generosity they are entitled to your thanks.

The Secretary would draw your attention to a number of members who yearly receive the documents of the Society, at a great expense to the Society, without paying their dues or making their appearance at our meetings; he would suggest that the Society instruct the Treasurer to draw, through his banker, on every one of the members two years in arrears (the number of years at the option of the Society), for the dues, and if his paper is not honored, to notify the Secretary that he drop such names from the list of membership—the Treasurer's draft to be preceded by a ten days' notice of his intention, and the Secretary to give notice to such persons that they are dropped—a duplicate notice to be sent to the local Society of which such person may be a member, and also to the Permanent Secretary of the American Medical Association.

Still another and very important matter should crave your attention—the recklessness of members in advertising. It is
almost incredible, but literally true, that members of this So­ciety advertise in the secular press as follows: "K.'s balsam for the lungs, the great guaranteed remedy. * * Dr. A. B. has secured the agency for it."

Another member prints on his letter-head:

"Dr. C. D., Gynaecologist, and does general practice."

Now I believe these members do this thoughtlessly, yet does that excuse them? Do you not think it high time for the Society to call a halt upon such violations of the code? It must certainly be very questionable practice, and it ought to take a good deal of stretching of the code for a physician to sell patent medicines over his counters, and it is done every day; but to praise such dishonest wares in the public print is a jump into transgression which should be stopped peremptorily.

Your Proceedings for 1885 contain two laws upon the prac­tice of medicine: One drafted by your Secretary, which would have become a law of the state at the last session of the legislature had not the chairman of the committee car­ried it in his pocket for a week after the committee had de­cided to recommend its passage.

The other one, suggested by the committee of the Ameri­can Medical Association, is for the purpose of creating a board of examiners in medicine, and cannot become effective under our constitution. The former measure provides for a board of health, under the control of which the regulation of the practice of medicine passes. This measure is legal, and can be passed as coming under the police regulations of the state.

Your interference in this matter has become one of ur­gency. All the states bordering on Nebraska, the latest Iowa, are enacting laws which make quackery an uninviting pur­suit in their territory. Nebraska can illly afford to harbor this material within its limits. Shall this Society suggest a measure of relief to the next legislature—one that is endorsed by all its members?
In connection with the submission of my report of expenditures for the year just past, I ask that the committee who shall report upon my suggestions direct their attention more particularly to it, because of remarks contained in the Treasurer's report of last year, and in that of the Special Committee on the Treasurer's Report. This committee says it "would recommend that there be, during the coming year, a more economical expenditure of the funds of the Society in the matter of printing circulars, cards, proceedings, etc."

Then they proceed: "We believe there can be saved in the expense of printing, as follows:

Printing of proceedings......................... $100.00
" " list of members.......................... 17.50
" " board of health returns............. 52.50

$170.00

Add to this expense of stenographer saved.... 26.10"

These statements would not be reiterated here, were it not for two unwarranted inferences which may be drawn from them, to-wit: That the Society can do without a list of members, circulars, cards, etc., and secondly, that the saving of the one hundred dollars on the Proceedings is a possible thing. In regard to the first count, I have to say, when the Society tells me that certain circulars, cards, etc., are not necessary for the information of the members and the enhancement of the best interests of the Society, I am ready to pay for them myself.

In regard to the Proceedings, I submit that the last issue contracted for by the Treasurer in Omaha cost the Society $1.13 a page, for 300 copies; while the Proceedings upon which the committee based its extravagant statements cost only 91 cents a page, a saving of 22 cents a page, or of $78.54 on the whole issue! The error of the committee consisted in this, that they computed the price of the former (Proceedings of 1883), without the price of binding and covers, whilst
in the latter (Proceedings of 1884), they left the price of bindings and covers in their computation.

Presumably the error was occasioned by the statement in the report of Committee on Publication (Proceedings for 1884, page 25), that the cost of publication was eighty-two (82) cents a page. This figure was received from the Treasurer, who paid the bill without presenting it to the President and Secretary for endorsement.

The Treasurer, being absent from the meeting, sent his bills to the Secretary, when it was discovered that an extra charge had been made for cloth covers, amounting to thirty ($30) dollars, which sum raised the price to $1.13 per page.

The Proceedings of 1885 cost 90 cents a page (inclusive of binding, covers, etc.) for 350 copies—a book which, for its contents and its execution, has received unstinted praise at home and abroad. One word in regard to the final sentence I took the liberty of quoting from the committee's report, the saving of $26.10 for stenographer. Members present at the Grand Island meeting went all over town hunting a stenographer, and declared they would have paid this person out of their own pockets, rather than lose his valuable services. The members know that the discussions at Grand Island were equal to any paper presented, and very valuable as the sentiment of the Nebraska profession upon subjects of importance, and accordingly a peremptory order was made at that meeting that the Secretary be instructed to procure a stenographer for the Lincoln meeting.

The Proceedings could not have been printed a dollar cheaper, and if cards, circulars, list of members, and stenographers can be dispensed with, I do not understand why we might not, with equal propriety, do without such committee reports, the printing of the Proceedings, and the yearly meetings.

An itemized account of my expenditures in behalf of the Society, accompanies this report. It will show how nec-
necessary the act of the Society, executed almost at the close of last year's session, of adding fifty dollars to a like sum already set aside for the Secretary's use. The first fifty dollars barely sufficed to pay the postage of the Society.

Of course much of the money voted to the Secretary might be saved, if this functionary would consent to follow in the footsteps of those who only answer a letter when necessity compels it. It remains with the Society to say whether the Secretary shall or shall not be limited by dollars and cents in his endeavors to advance the best interests of the Society.

If this Society must practice economy, permit me to suggest that it be in a different direction. If the watchword is, "Cut down the expenses," do not slight your Proceedings, which have become the password for our Society, anywhere.

Do not cut off information from the members, that is what they pay their money for, but rather economize on your Secretary. For the last year or two the Society has very kindly (unasked by him) tendered the Secretary a per capita of 50 cents, "As a token of appreciation of his services to the Society," as the kindness of the committee prompted them to express it. I would suggest that the Society do not hamper the Secretary's work, and hard work it is getting to be—harder every year—by cutting short his stationery, rather cut off his "per capita," he can exist without it, and he certainly values the Society's appreciation very much more than a few dollars received at the expense of the Society's usefulness.

Report of the Secretary referred to a committee of three, by motion of Dr. Bowen:

Committee: Drs. Bowen, Lane, and Abbott.

REPORT OF COMMITTEE ON SECRETARY'S REPORT.

LINCOLN, June 2, 1886.

To the Members of the Nebraska State Medical Society:

Your committee appointed to consider the report of your Permanent Secretary would respectfully state that they have
had the subject under advisement, and after consultation with our Treasurer, and scanning each item of the expenditures of our Secretary in the light of his explanation of the purposes of each, we fail to note any important departure from due economy; and in view of his zealous and efficient management of the duties of his office, which are very onerous and constantly increasing, and believing as we do that his zeal and efficiency have had much to do with the present prosperity of our Association, we do earnestly express the hope that our Committee on Ways and Means will devise measures to meet the necessary expenses of his office.

This committee would recommend that Dr. Sexton, of Fontenelle, be honorably discharged from our Society, and that the name of Dr. J. H. Crabbs, of Hot Springs, be dropped from the roll of our Society.

The suggestions of your Secretary with regard to the too great facility with which members who are unworthy gain admittance to our Society should claim our constant care; and we cannot too earnestly and immediately adopt urgent and efficient means to force the payment of neglected dues or the expulsion of delinquents.

A. Bowen,
L. J. Abbott,
Milton Lane.

REPORT OF CORRESPONDING SECRETARY.

Plattsburgh, Neb., June 1, 1886.

To the Officers and Members of the Nebraska State Medical Society:

Gentlemen—Your Corresponding Secretary begs leave to report that he has received the following transactions of State Medical Societies during the year just closed:

Alabama, 1885; Connecticut, 1885; Michigan, 1885; Missouri, 1885; New York, 1885; New Hampshire, 1885; New Jersey, 1885; Oregon, 1885; South Carolina, 1885;
Tennessee, 1885; Texas, 1885; West Virginia, 1885; Illinois State Board of Health, 1885.

The Atlanta Medical and Surgical Journal from May to December, 1885, inclusive, and January to April, 1886, inclusive.

The Pacific Medical and Surgical Journal and Western Lancet for October and November, 1885, and from January to April, 1886, inclusive.

Bound copies of our Proceedings for 1885 have been forwarded to all State Medical Societies in the Union with which we have relations, and copies to the principal medical journals of the country.

All of which is respectfully submitted.

R. R. LIVINGSTON,

By motion of Dr. Leisenring, referred to Committee on Publication.

An open letter to the Secretary from Dr. R. R. Livingston was now read by Dr. Mansfelde, and upon motion by him, was ordered to be placed on record:

Plattsmouth, Neb., June 1, 1886.

A. S. v. Mansfelde, M.D., Permanent Secretary Nebraska State Medical Society:

My Dear Doctor—In the winter of '67-'68, impressed with the belief that organization of the profession in Nebraska was necessary, I corresponded with Dr. Jas. H. Peabody, of Omaha, urging my views. This correspondence was read before the Omaha Medical Society, and I was requested to visit Omaha for purposes of consultation. I did so, and some time in the early part of April, 1868, there met in Dr. Peabody's office (on South Eleventh street, I think) Dr. G. C. Monnell, Dr. J. H. Peabody, Dr. S. D. Mercer, Dr. V. H. Coffman, Dr. H. P. Mathewson, Dr. R. C. Moore, Dr. Wm. McClelland, and myself. There may have been
others present, but I cannot recall them. This meeting assigned to me the duty of issuing a call on the physicians of Nebraska to organize local medical societies and elect delegates to a convention to be held in Omaha in May following. I was also directed to prepare a constitution and by-laws for a state society, if it was deemed best at the May meeting to organize one. I performed the work delegated to me, and the result was that on the 11th day of May, 1868, in the Good Templars' hall on Douglas street, Omaha, Neb., the preamble, constitution, and by-laws I had prepared were adopted. From that time to the present, over eighteen years, I have been a faithful worker in the vineyard of State Society duties, and as age admonishes me of failing senses, I look back with no little gratitude upon the honors I have received at the hands of the members of our Society. I have held positions of trust ever since it was organized, and presided over its affairs. I have been called upon to teach the broad and deep foundations of medical knowledge in two medical schools in this state; have educated one son and am now educating another in our profession, and at last feel that with three score years of life almost completed, my time for activity and labor must soon close. It is, however, deeply gratifying to see the few members of the society of old swollen to such goodly proportions, and to realize that it is now no longer weak, but full of manhood and strength to go forward and command the esteem and respect of even older organizations. Trusting in its healthfulness, and knowing that my poor efforts for its prosperity will scarcely be missed, when there are so many competent and able young men in its ranks to do its work, I must beg leave to be relieved of all official duties, and that younger and stronger hands be assigned in my place.

In taking this step, I desire that you understand me as never relinquishing the interest I feel in the Nebraska State Medical Society—that interest will cease only when the
Reaper whom you and I have so often combatted shall have conquered, and the joys and sorrows of earth shall have ceased forever for me.

Again thanking you and the Society for the many kindnesses I have experienced at your and their hands, and fervently hoping that, as time rolls on, new strength will be vouchsafed to you and them for additional triumphs,

I remain, your obedient servant,

ROBT. R. LIVINGSTON.

TREASURER'S REPORT.

Gentlemen of the Nebraska State Medical Society:

I have the honor to submit the following report of Treasurer for the years 1885–6:

RICHARD C. MOORE, TREASURER,

In Account with Nebraska State Medical Society:

Dr.

To cash from Ex Treasurer .............................................. $243.16
“ collected during the year ................................... 399.00

$642.16

Cr.

By paid Secretary, appropriated at last session .............................................. $247.21
By paid publishing Proceedings .......................... 370.70
By expenses of Treasurer .................... 17.48

$635.39

Balance in Treasury.................................................. $6.77

In my report last year, I called the attention of the Society to the fact that $121.04 more had been expended than had been received, and suggested that hereafter the expenses be kept within the income. This advice was unheeded; the appropriations were unreasonable, and as a result your expenses the past year have exceeded the receipts by $236.39.
At this rate, next year will find the Society fully $250 in debt. This misfortune can be averted by adopting one of two courses. First, increase the income by a special assessment. Second, reduce the expenses. The former plan is not practicable. Gentlemen are willing to pay their regular annual dues, but are very loath to pay special assessments, especially when such assessments are rendered necessary by extravagance and poor management. The second plan, namely, cut down expenses, is practicable, and should be rigidly enforced in making appropriations at this session.

The expense of the Secretary’s office can be very materially reduced, by appropriating say $25 for his use, which will be ample to pay postage and other incidentals. This will save seventy-five dollars, and by declining to pay this official a salary, will increase the saving by one hundred dollars.

The expense of publishing the Proceedings, by inviting bids for the work and leaving out all worthless matter, can be reduced fully one hundred dollars. Thus by carefully managing our finances we can reduce the expenses of the Society two hundred and seventy-five dollars below what they were last year, and will avoid the necessity of levying a special assessment.

I would suggest that the appropriations for the ensuing year be kept within the amount received from all sources the past year, namely, $399.

I would also suggest that the following resolution be adopted.

Resolved, That without unnecessary delay, after each session of the Society, the Secretary shall pay over to the Treasurer all money received at such meeting, and shall take his receipt for the same.

All of which is most respectfully submitted for your consideration.

Your obedient servant,

Richard C. Moore,
Treasurer Nebraska Medical Society.
Motion by Dr. James Carter: That a Special Committee of three be appointed on Treasurer's Report.

Substituted by Dr. Moore: That the report go into the hands of the Committee on Ways and Means. Carried.

By Dr. James Carter: That the announcement of the Committee on Sections be the first order of business of the morning session.

Adjournment.

MORNING SESSION.

Wednesday, June 2d, 9 o'clock A.M.

The President in the chair, who announces as a Committee on Chairmen of Sections, Drs. Clark, White, and Donaldson.

Regular order of business.

Dr. Merriam reads his paper, "What is Disease?" and is followed by Dr. James Carter in a rejoinder on "What is Disease?"

Both papers after discussion (See appendix to Dr. Carter's paper) are referred to Committee on Publication, by motion of Dr. Mansfelde.

Motion by Dr. Mansfelde: That the discussion of papers be limited to five minutes, except that of the author, who should have ten minutes to close the discussion.

Amended by Dr. Leisenring: That each paper be allowed twenty minutes. Carried as amended.

Reports from Drs. Mercer, Christiansen, and Gahan were received for absence from meeting, and placed on file.

Reading of report on Practice of Medicine by the Chairman and referred to Committee on Publication, by motion of Dr. Stone, Omaha.

Reading of paper by Dr. Lowry, on Medical Men of London, and their Methods, and referred to Committee on Publication, by motion of Dr. Lee.
Dr. Lowry read his paper on Tubercular Meningitis, by title; it was referred to Committee on Publication, by motion of Dr. Leisenring.

Dr. Shipman read his paper on Typhoid Fever. Referred to Committee on Publication, by motion of Dr. Leisenring.

Adjournment.

AFTERNOON SESSION.

2 o'clock P.M.

The President in the Chair:

Reading of the report of the Chairman on Surgery by Dr. Lee; referred, by motion of Dr. Lowry, to Committee on Publication.

Reading by Dr. Hildreth of his paper on Anaesthetics; referred, after discussion, by motion of Dr. Mansfelde, to Committee on Publication.

Dr. Summer's paper on Antiseptics read by title and referred for publication.

Reading of paper by Dr. E. A. Kelley; referred for publication by Chairman.

Motion by Dr. Stone: That it is the sense of this Society that our organic law should be amended in such a manner as to provide that the courts alone should call expert witnesses. Carried by a standing vote of 13 to 7.

Motion by Dr. Merriam: That the unexpired time be given to the section on Materia Medica and Therapeutics. Carried.

Reading of report by the Chairman, Dr. James Carter; referred to Committee on Publication, upon motion of Dr. Stone.

Adjournment.
EIGHTEENTH ANNUAL SESSION. 49

EVENING SESSION.

8 o'clock P.M.

The President in the chair:

Charges against Dr. Charles S. Hart, referred to Committee on Grievances.

Reading of the proposed new constitution.

Motion by Dr. Shipman: That the new constitution be adopted; lost by a vote of 29 to 15.

Reading of report of Special Committee on Permanent Secretary's report; re-referred for amendment.

Reading of report of Committee on President's Address by Dr. Milton Lane.

Motion by Dr. Line: To adopt recommendations of the committee. Carried.

Report of Committee on Ways and Means by Dr. Benton.

Motion by Dr. Shipman: That the report be adopted.

By Dr. Kelley: That it be recommitted to the committee for reconsideration. Carried.

Motion by Dr. Line: That the report of the Committee upon Permanent Secretary's Report be adopted as amended. Carried.

Amended report of Committee on Ways and Means adopted, upon motion of Dr. Line.

REPORT OF COMMITTEE ON WAYS AND MEANS.

Mr. President and Gentlemen of the Nebraska State Medical Society:

We, the Committee on Ways and Means, beg leave to make the following report:

We find on careful examination that the expense of publishing the proceedings of the Society will be...... $370.70 Expenses for postage, stationery, printing notices of meetings, and programme.............................. 75.00
Stenographer's bill............................... 25 00
Gas and janitor ..................................... 10 00
Expenses of Treasurer for postage, etc........... 10 00

Amount to.......................................... $490 70
We find that the probable amount collected by the
Treasurer will be about........................... $475 00
Amount of money on hand.......................... 6 70

$481 70
Which will cover the expenses as stated above.

D. A. WALDEN, Ch'n.
E. A. BENTON,
J. O. CARTER.

SUPPLEMENTARY REPORT.

We, the committee, find a further claim of the Secretary
for $101.50 against the Society, and recommend that the
Society pay the claim and devise such means as they may see
fit to secure the necessary funds.

D. A. WALDEN, Ch'n.
E. A. BENTON.

REPORT OF THE COMMITTEE ON NECROLOGY.

Your Committee on Necrology beg leave to report that it
becomes our pleasant duty to inform your body that the Ne­
braska State Medical Society has lost no member by death in
the last year.

A. BOWEN,
Ch'n. Committee.

Lincoln, June 2d, 1886.

Referred to Committee on Publication, by motion of Dr.
Merriam.

Report of Committee on Foreign Correspondence referred
by motion of Dr. Mansfelde. (Printed with the report of representatives.)

Motion by Dr. Benton: That we proceed to the election of officers. Carried.

Tellers appointed by the Chair: Drs. Mitchell, Livingston, and Line.

Informal ballot for President: Moore, 20; Graddy, 12.

Motion by Dr. Graddy: That the election of Dr. R. C. Moore be made unanimous. Carried.

Dr. Milton Lane is elected upon the second ballot, with 23 votes of 41 cast, as 1st Vice President.

Dr. N. F. Donalson receives upon the third ballot 31 votes of 35 cast for the 2d Vice Presidency.

Dr. H. B. Lowry receives 24 out of 39, informal ballot for Corresponding Secretary.

Motion by Dr. Benton: That the informal ballot be declared formal. Carried.

Dr. M. W. Knapp receives 27 votes of 33 cast on second ballot for Treasurer.

Motion by Dr. Newkirk: To take from the table that part of the minutes of last year relating to Dr. Duncan. Carried.

By Dr. Newkirk: That all that part of the minutes referring to Dr. Duncan be stricken out. Carried.

Motion by Dr. Merriam: That we proceed to consider miscellaneous business. Carried by a vote of 21 to 5.

Resubmission of the draft for a new constitution voted down at this meeting, by Dr. James Carter. (See printed Proceedings, 1885, pages 50–56.)

Motion by Dr. Merriam: That standing resolution No. 11, referring to a per capita tax for the payment of services of the Secretary, be rescinded. Lost.

Motion by Dr. Beachley to adjourn. Carried.
MORNING SESSION.

June 3, 9 o'clock A.M.

Dr. Knapp in the Chair.

Reading of report on Obstetrics, by Dr. R. M. Stone; referred for publication, by motion of Dr. Bridges.

Reading of paper by Dr. Mary R. Butin on Perineal Laceration; referred, by motion of Dr. Mansfelde.

Dr. Chapin: That the report of the Committee on Grievances be heard. Division called. Lost.

Reading of paper by Dr. Eleanor Dailey on Uterine Fibroids. The Doctor's time having expired, it was extended, on motion of Dr. Mansfelde, and finally referred for publication.

Dr. E. M. Whitten's paper is read by title and referred.

Dr. Bridges reads a paper on Face Presentation, which is referred for publication.

REPORT OF COMMITTEE ON GRIEVANCES.

I, in conformity with a vote of the Lincoln Medical Society, charge Dr. Chas. S. Hart, of Lincoln, with violating the code of medical ethics of the Nebraska State Medical Society, in resorting to public advertisements in the newspapers, and through other channels, of the so-called Lincoln Medical Institute and Water Cure; also for associating himself in the practice of medicine and surgery with irregular practitioners.

HORACE CHAPIN, M.D.

In answer to the charges preferred by the Lincoln Medical Society against me, I will state that the charges are admitted to be correct.

By way of explanation, will say that I went into the arrangement with the intention of having a hospital in the city, and not an advertising institute; further, I took no part in writing any advertisements, and these came out contrary to
my wishes. As soon as this occurred I immediately took steps to withdraw from the institute, and as soon as practicable I did so.

To the best of my knowledge, there are now no advertisements of any character bearing my name, nor am I in any way professionally associated with any irregular or disreputable practitioner, nor have I been for some time; further, I have no intention of associating myself in any way with irregular practitioners or advertising schemes.

Respectfully submitted,

CHAS S. HART.

Lincoln, Neb., June 3, 1886.

LINCOLN, NEB., June 3, 1886.

Mr. President and Gentlemen of the Society:

Your Committee on Grievances would respectfully report in regard to the charges preferred against Dr. Chas. S. Hart, of Lincoln, that it has investigated the matter, and finds that the charges are fully sustained by the evidence and admitted to be true by the said Dr. Hart, and in view of the facts and the explanation of Dr. Hart herewith appended, the committee would recommend that the said Dr. Hart be reprimanded by the President and suspended from the Society for one year.

HORACE CHAPIN, M.D.,
ALFRED SHIPMAN, M.D.,
Committee on Grievances.

Motion by Dr. Mitchell: That the report of the Committee on Grievances be adopted.

Dr. Hart being brought before the Society, the Chairman administered the following reprimand:

"It is a painful yet pleasant duty to the presiding officer of this meeting, in accordance with the resolution of this body, to censure you for conduct unbecoming a professional gentleman."
"I say it is my painful duty, because it can never be con­ sidered other than painful to reprimand even an erring brother.

"I say it is my pleasant duty, because it is certainly a pleas­ ure to me to know that the members of this body, workers in the field of science, are so zealously guarding their man­ hood, and with it, so zealously guarding that principle which has ever actuated our profession, that principle which we prize so highly as professional men. It is also a pleasure to me in another sense, to offer these words of censure. It is pleasant to know that a member of this Society has the cour­ age, the manly principles, to admit himself in the wrong.

"It requires, gentlemen of the Society, far more courage, a higher degree of true manliness to acknowledge errors than it does to persist in evil doing. For these reasons, it is a pleas­ ure, and for the reasons which I suggested, it is a sad duty, to offer, in behalf of this Society, words of censure upon your conduct, and to say that in accordance with their action you will stand suspended from the rights and privileges of this Society for the period of one year."

Motion by Dr. Graddy: That this session be continued until one o'clock. Carried.

Dr. Leisenring read his paper, "Oclusion of Os Uteri," which was referred to Committee on Publication.

Drs. Christiansen's, Robbins', and Pritchett's papers were read by title and referred for publication.

Dr. Benton read his paper on "Ovariectomy," which was referred for publication.

On motion of Dr. Mansfelde, Dr. Jacob Geiger, of St. Joseph, Mo., was made a member by invitation.

Adjourned, by motion of Dr. Mansfelde, until two o'clock.
AFTERNOON SESSION.

2 o'clock P.M.

Dr. Knapp in the chair.

Dr. Graddy reads his paper on "Snow Blindness;" referred for publication.

Dr. Newkirk submits report as chairman of Section on "History of Medicine;" accepted and ordered printed.

INSTALLATION OF OFFICERS.

In the absence of the newly elected President, Dr. Milton Lane, first Vice President, occupies the chair.

Motion by Dr. W. M. Knapp: That the President-elect, Dr. R. C. Moore, be declared installed. Carried.

By motion of Dr. R. M. Stone, Omaha was chosen as the next place of meeting.

Motion by Dr. Mansfelde: That the Secretary correspond with the Committee on the Appointment of Chairman of Sections and ascertain their result, and if nothing has been done, then it shall become the duty of the Committee on Publication to fill the Sections to the best interests of the scientific part of the session. Carried.

On motion of Dr. Knapp, the bill of Mr. Guild for printing, amounting to $21.85, was allowed.

Upon motion of Dr. Graddy, it was resolved: (Standing resolution, No. XIX.) That Sections on "Laryngology, Psychology, and Dermatology," be added to those already provided by the constitution. Carried.

Dr. Leisenring moved: That the Secretary be instructed to notify our members in Congress that this Society asks their concurrence in a bill providing for an appropriation of $50,000 to assist in defraying the expenses of the International Medical Congress.

Motion by Dr. Leisenring: That the Secretary be requested
to return the thanks of the Society to Assistant Secretary Dr. Alice E. Huff, the railroad companies, and others, for favors shown the Society at this session. Carried.

By Dr. Knapp: That an assessment of one dollar be made on all members of the Society to defray the current expenses of the Society. Carried.

Dr. Geiger, of St. Joseph, received permission to explain the present status of the college he represents.

Announcement of standing committees and sections:

STANDING COMMITTEES.


COMMITTEE ON WAYS AND MEANS.—E. M. Whitten, Nebraska City; F. G. Fuller, Lincoln, and N. F. Donaldson, North Platte.


COMMITTEE ON NECROLOGY.—L. J. Abbott, Fremont; J. T. Hay, Lincoln, and W. O. Bridges, Omaha.


SECTIONS.

Section I. PRACTICE OF MEDICINE—
Dr. L. A. Merriam, Chairman (Omaha).
Dr. W. O. Bridges (Omaha).
Dr. E. M. Whitten (Nebraska City).

Section II. SURGERY—
Dr. J. S. Leonhardt, Chairman (Seward).
Dr. A. S. v. Mansfelde (Ashland).
Dr. T. P. Livingston (Plattsmouth).
Section III. Obstetrics—
Dr. Mary R. Butin, Chairman (Dorchester).
Dr. Eleanor S. Dailey (Omaha).
Dr. Sophronia M. Lane (Lincoln).

Section IV. Materia Medica and Therapeutics—
Dr. A. B. Newkirk, Chairman (Falls City).
Dr. M. L. Hildreth (Lyons).
Dr. N. F. Donaldson (North Platte).

Section V. Anatomy and Physiology—
Dr. Geo. B. Ayres, Chairman (Omaha).
Dr. Charles Inches (Scribner).
Dr. L. B. Smith (Fremont).

Section VI. Forensic Medicine and Toxicology—
Dr. M. V. B. Clark, Chairman (Sutton).
Dr. W. M. Knapp (York).
Dr. U. H. Malick (Bloomington).

Section VII. Ophthalmology and Otology—
Dr. DeWitt Bryant, Chairman (Omaha).
Dr. W. L. Dayton (Lincoln).
Dr. J. C. Denise (Omaha).

Section VIII. Climatology and Prevailing Diseases.
Dr. D. A. Walden, Chairman (Beatrice).
Dr. L. A. Clauson (Beatrice).
Dr. S. W. Dodge (Reynolds).

Section IX. History of Medicine—
Dr. A. Bowen, Chairman (Nebraska City).
Dr. L. J. Abbott (Fremont).
Dr. J. C. Campbell (Nebraska City).

Section X. Psychology—
Dr. H. P. Mathewson, Chairman.
Dr. J. T. Hay, and
Dr. Helen B. Bodelson (Asylum, Lincoln).
Section XI. **Laryngology**—
Dr. J. E. Summers, Jr., Chairman (Omaha).
Dr. L. B. Graddy (Omaha).
Dr. E. A. Benton (Central City).

Section XII. **Dermatology**—
Dr. C. M. G. Biart, Chairman (Omaha).
Dr. E. A. Kelley (Omaha).
Dr. A. S. v. Mansfelde (Ashland).

Upon motion of Dr. Leisenring, adjourned *sine die*.

A. S. v. MANSFELDE,
*Permanent Secretary.*
PROCEEDINGS

OF THE

Nebraska State Medical Society.

NINETEENTH ANNUAL SESSION

HELD AT

Omaha, Nebraska, May 3D to 5th, 1887.
OFFICERS

OF THE

NEBRASKA STATE MEDICAL SOCIETY.

1887-1888.

G. H. Peebles .................. President .................. David City.
MARY R. BUTIN .................. 1st Vice President .............. Dorchester.
C. O. REYNOLDS .................. 2d Vice President .............. Seward.
A. S. V. MANSFELDE .............. Secretary .............. Ashland.
L. A. MERRIAM .................. Corresponding Secretary .... Omaha.
W. M. KNAPP .................. Treasurer .............. Asylum.
MINUTES
OF THE
NINETEENTH ANNUAL SESSION.

OMAHA, May 3d, 1887,

The Society was called to order at 3 o'clock p.m., by the Secretary, in Masonic Hall, Omaha, Dr. R. C. Moore, President, in the chair.

After payment of dues to the Treasurer, the following permanent members registered:

L. J. Abbott, Fremont; C. C. Cook, David City; Geo. B. Ayers, Omaha; A. S. v. Mansfelde, Ashland; W. O. Bridges, Omaha; W. P. Wilcox, Omaha; R. C. Moore, Omaha; O. C. Reynolds, Seward; L. A. Merriam, Omaha; James Carter, Omaha; E. W. Lee, Omaha; H. Link, Millard; H. W. Hewit, Friend; L. B. Graddy, Omaha; W. M. Knapp, Asylum; James M. Swetnam, Omaha; M. L. Hildreth, Lyons; C. M. G. Biart, Omaha; M. W. Stone, Wahoo; M. J. Gahan, Grand Island; D. F. Anderson, Edgar; A. Bowen, Nebraska City; D. W. Bryant, Omaha; B. T. Whitmore, Lincoln; A. A. Parker, S. K. Spalding, J. E. Summers, Jr., Ewing Brown, P. S. Leisenring, W. S. Gibbs, E. A. Kelley, and R. M. Stone, all of Omaha; T. H. Line, Ogalalla; S. F. Blair, North Bend; N. B. Larsh, Nebraska City; H. G. Leisenring, Wayne; G. W. Shidler, York; H. C. Demaree, Roca; Milton Lane, Lincoln; M. R. Butin, Dorchester; S. B. Taylor, Blair; E. W. Cook, Plattsmouth; Alfred Shipman, Plattsmouth; J. C. Davis and Peter Hos-
REPORT OF COMMITTEE ON CREDENTIALS.

OMAHA, Neb., May 3d, 1887.

Your Committee on Credentials, report the following applications for membership:

S. P. BALDRIDGE, Omaha, University of Iowa, 1887.
J. V. BEGHTOL, Friend, College of Physicians and Surgeons, Keokuk, 1877.
J. C. F. BUSH, Wahoo, College of Physicians and Surgeons, Baltimore, 1882.
M. D. CARTER, Tobias, Missouri Medical College, 1882.
W. F. CONWELL, Oakdale, Bellevue Hospital Medical College, 1886.
C. B. DITTEBRANDT, Nebraska City, Omaha Medical College, 1887.
GEO. O. W. FARNHAM, Beatrice, University of Vermont, 1883.
JOHN M. FRANCE, Blue Hill, Rush Medical College, 1885.
H. GIFFORD, Omaha, University of Michigan, 1882.
A. P. GINN, Omaha, University of Vermont, 1883.
JOS. E. HALL, Weeping Water, Medical College of Indiana, 1881.
C. P. HARRIGAN, Omaha, Bellevue Hospital Medical College, 1885.
J. W. HULL, Brainard, University of Iowa, 1886.
Z. L. KAY, McCook, Kentucky School of Medicine, 1876.
J. F. Larimer, Omaha, University of Pennsylvania, 1868.
L. M. Line, Ogalalla, College Physicians and Surgeons,
    Baltimore, 1884.
G. E. Lloyd, Hastings, Omaha Medical College, 1882.
J. P. Lord, Omaha, Rush Medical College, 1882.
George S. Milnes, Litchfield, Rush Medical College, 1886.
E. A. Sears, Decatur, College Physicians and Surgeons,
    Des Moines, Iowa, 1886.
F. W. Voos, Nebraska City, University of Nebraska, 1886.
Claude Watson, Nebraska City, Missouri Medical Col-
    lege, 1877.
H. G. Wiese, Omaha, Omaha Medical College, 1886.
All of whom are recommended for membership.

James Carter, Chm,

L. A. Merriam.

Report adopted, on motion of Dr. Mansfelde.
New members sign the constitution—when recess is taken
until 7:30 p.m.

EVENING SESSION.

President R. C. Moore in the chair.

Vacancies in standing committees were filled by the ap-
pointment of Drs. P. S. Leisenring, Gahan, and Reynolds to
the Committee on Ways and Means.

Dr. P. S. Leisenring moves that the reading of the minutes
be dispensed with.

The Secretary reads regrets for absence, from Drs. Henry

Committee on the selection of Chairmen of Sections: Drs.
M. W. Stone, E. A. Kelley, and A. Bowen.
Reading of the Secretary's annual report:
Mr. President, Ladies, and Gentlemen:

Kind Providence has permitted me, with your indulgence added, to record your proceedings for ten years. I cannot pass this occasion without expressing my obligations to the many friends who, from year to year, re-elected me to the honorable office of Secretary, until their judgment fastened the same in perpetuity upon me by constitutional amendment. The office has become permanent, but not in like manner the bed of roses bestowed with it. For the last two years discontent has lifted its head to such an extent that it has not halted even in putting its hand on the landmarks of our being, the constitution of our Society—a document, which ought to be alike sacred to the old and young members; to the older for the memory of the hardships and sacrifices with which its pages are garnished; to the younger generation of doctors, for the precept of devotion to our art and science, which every line of it inculcates. Fault has been found secretly and openly with my management. It is true, not by a majority of the members, but by too many to make the office any longer one of pleasure to its incumbent. He cannot retain it after this meeting, unless you see fit to silence the objections and satisfy the objectors by an unsparing examination of the Secretary's work. To that end I respectfully ask the appointment of a Special Committee, as is usually done, for the consideration of the Secretary's report, which Committee shall add to its duties an investigation of the work of the Secretary, both as such officer, and as Chairman of the Committee on Publication.

With this report I submit for your approbation the programme for this meeting:
PROGRAMME NINETEENTH ANNUAL SESSION.

BUSINESS MEETINGS—1ST, 2D, 5TH, AND 8TH SESSIONS.

Tuesday, May 3d, from 3 P.M. to recess and 8 P.M. to recess. Wednesday, May 4th, from 8 P.M. to recess. Thursday, May 5th, from 8 P.M. to adjournment.

ORDER OF BUSINESS.

1. Organization of the Society.
2. Payment of dues.
3. Registry of members.
5. Signing of the constitution by the delegates and newly-elected members.
6. Appointments to fill standing committees.
7. Appointment of the Committee on Chairmen of Sections.
8. Reading of the Minutes.
9. Reading of notes from absentees.
10. Reception of members by invitation.
12. Secretary's report.
13. Corresponding Secretary's report.
14. Treasurer's report.
15. Unfinished business; (a) report of special committees; (b) amendments to constitution and by-laws.
16. New business; (A) report of Committee on Chairmen of Sections; (B) report of Board of Trustees; (C) report of special committees; (D) report of standing committees; (a) Committee on Ways and Means; (b) Committee on Grievances; (c) Committee on Necrology; (d) Committee on Publication; (e) Committee on Foreign Correspondence; (f) Committee on Public Health.
17. Election of officers.
18. Installment of officers.
19. Selection of next place of meeting.
20. Miscellaneous business.

(Reports of Committee on Credentials and reception of members by invitation to be always in order.)

SCIENTIFIC MEETINGS—3D, 4TH, 6TH, AND 7TH SESSIONS.

From 9 o'clock A.M. to recess and from 2 o'clock P.M. to recess, Wednesday, May 4th. From 9 o'clock A.M. to recess and from 4 o'clock P.M. to recess, Thursday, May 5th, and such other time as may be at the disposal of the Society.
THIRD SESSION (WEDNESDAY, MAY 4TH), FROM 9 TO 12 O'CLOCK M.—
PRACTICE OF MEDICINE, LARYNGOLOGY, AND MATERIA MEDICA
AND THERAPEUTICS

Dr. L. A. Merriam—The Practice of Medicine.
Dr. W. O. Bridges—The Diagnosis of Diphtheria.
Dr. W. F. Milroy—The Etiology and Course of Consumption as Influenced by the Climate and Soil of Eastern Nebraska.
Dr. A. B. Anderson—The Use of Antipyrin.
Dr. John E. Summers, Jr.—Laryngology—Tuberculosis of the Larynx.
Dr. L. B. Graddy—The Propagation of Diseases of the Nase-Pharynx to the Ear.
Dr. E. A. Benton—The Laryngoscope in the Hands of the General Practitioner.
Dr. A. B. Newkirk—Report of Progress in Materia Medica and Therapeutics.

RAILROAD SURGEON'S SOCIETY MEETING, FROM 2 TO 4 P.M.

FOURTH SESSION (WEDNESDAY, MAY 4TH) FROM 4 TO 6 P.M.—SURGERY
AND DERMATOLOGY.

Dr. W. O. Henry—"A Rare Case."
Dr. C. M. G. Biart—Report on Dermatology.
Dr. A. S. v. Mansfelde—The Treatment of Small Pox, with some points in Dermato-Therapie.
Dr. C. M. G. Biart—Differential Diagnosis of Small-Pox.

SIXTH SESSION (THURSDAY, MAY 5TH), FROM 9 TO 12 O'CLOCK M.—OBSTETRICS, GYNAECOLOGY, DISEASES OF CHILDREN, ANATOMY AND PHYSIOLOGY, PSYCHOLOGY.

Dr. Mary R. Butin—Report on Progress in Obstetrics.
Dr. A. S. v. Mansfelde—Advances in Normal and Pathological Histology.
Dr. H. P. Mathewson—Report on Progress in Psychology.

SEVENTH SESSION (THURSDAY, MAY 5TH) FROM 2 TO 6 O'CLOCK P.M.—
OPHTHALMOLOGY, OTOLOGY, FORENSIC MEDICINE, CLIMATOLOGY, HISTORY OF MEDICINE.

Dr. H. Gifford—Recent Contributions to the Theory of Sympathetic Ophthalmia.
Dr. M. V. Clark—Report on Progress in Forensic Medicine and Toxicology. Four cases of criminal poisoning in Nebraska.

Dr. W. M. Knapp—On Legal Protection Against Malicious Prosecutions for Malpractice.


Dr. A. Bowen—Report on History of Medicine.

This document has been sent you but a few days ago, when by constitutional provision it should have been in your hands one month prior to this session.

The fault of delay was not mine. Had I furnished you a programme four weeks ago you would have received a blank sheet of paper, and in spite of my resolution not to do a thing during the year just past that would involve the outlay of one cent to this Society not provided for in the constitution, I chose to set aside my feelings for the sake of a successful meeting, and, in consequence, sent the following letter:

Ashland, April 11, 1887.

I, M.D., Chairman of the Section on...................................................

Dear Doctor—Not within the province of my official duties, yet, I hope, pardoned by you, if you consider the motive—I draw your attention to Article IV., Section 4, Resolution X., of the constitution. The publication of the programme has already been delayed for want of material. Your report must reach me soon after the receipt of this letter, if you desire recognition for yourself and your section in the programme.

Very respectfully yours.

The outgrowth of this letter was the very meagre response, outlined in the programme.

As usual, I asked the railroads for a reduction of fare to this meeting and met with the objections incorporated in the annexed letter:
BURLINGTON ROUTE,
OMAHA, NEB., March 24, 1887.

A. S. v. Mansfelde, Esq., M.D., Ashland, Neb.:

Dear Sir—I have your favor of recent date in regard to special rates for those who may attend the annual meeting of the State Medical Society at Omaha, May 3d to 5th, and beg to say in reply that the prevailing opinion of railroad counselors is to the effect that, after the 1st of next month, it would not be lawful to make special rates as proposed, confined to any class of persons, and, as the penalties provided for violations of the law are very severe, railroads do not feel like taking any risks. Hence, after April 1st, reduced rates on the occasions of gatherings will only be made open to all applicants desiring to go from and to the stations in question at the time, and, as this would apply any given reduced rates to a large class of other business, which would move just the same at regular rates, the effect would be a loss instead of an increase in revenue.

Railroads will not, therefore, make any reduced rate, except upon such very public occasions as will warrant the expectations of large crowds.

Yours truly,

P. S. Eustis,
G. P. & T. A.

In regard to the Committee on Examination of Candidates for Graduation in the two medical colleges of the state, the annexed correspondence ensued:

ASHLAND, NEB., Feb. 1st, 1887.

Dear Doctor—The subjoined report was unanimously adopted by the Nebraska State Medical Society, and Drs. Bear, Haldeman, Stone (Wahoo), Bridenstine, and Oxford appointed as such Board of Examiners.

The Board of Regents of the University of Nebraska ac-
cept and invite said committee to perform its duties in behalf of said State Medical Society.

Very respectfully,

A. S. v. Mansfelde.

Your Special Committee appointed to report upon the suggestions of the President in his address, respectfully submit: That in our opinion the qualifications necessary to entitle one to matriculate in any Medical College in the state, should not be less than a diploma from a Literary College, or one from a High School or a certificate of the second grade with the addition of Elementary Chemistry, and we recommend that no one be permitted to graduate who has not attended three full courses of lectures of six months each, and that a Board of Examiners composed of not less than five, who have no connection with the College, be appointed to examine applicants for graduation.

DEAR DOCTOR—The Dean of the Medical Department of the University of Nebraska asks your attendance for the purpose of conducting the final examinations of the candidates for graduation on Monday and Tuesday, March 14th and 15th inst.

Very truly yours,

A. S. v. Mansfelde,

Permanent Secretary.

I also submit the following, from the Secretary of the University of Nebraska. The matter is one of great importance to the Society. It contains the evidence of a feeling on the part of our medical institutions of learning, that the Nebraska State Medical Society is the arbiter of all things medical in the state. An earnest attention to the matters submitted is the least this society can do to sustain its high prerogatives.

Dr. A. S. v. Mansfelde, Secretary, Ashland, Neb.

DR. SIR:—I am instructed by the Board of Regents to present through you to the State Medical Association the
record of the action of the Board of Regents of the University, at their late meeting, *In re Schultz*.

Enclosed please find certified copy of the resolutions passed upon the final hearing and disposition of that case.

Yours very respectfully,

J. S. Dales,

*Secretary.*

STATE OF NEBRASKA, \( \) ss.

Lancaster County, \( \) ss.

I, J. S. Dales, Secretary of the Board of Regents of the University of Nebraska, do hereby certify that the following are true and correct copies of proceedings had and done, and resolutions passed and adopted by the Board of Regents of the University of Nebraska, at a meeting of said Board held in Lincoln, in said county and state, on the 16th and 17th days of March, A.D. 1887, as the same appears upon the record of proceedings of said Board of Regents, now in my charge as such Secretary, to-wit:

WHEREAS, Heretofore, to-wit, on the 16th day of December, A.D. 1886, certain charges and specifications were presented to the Board of Regents of the University of Nebraska, against one Johann Ernst Schultz, formerly a student in the Medical College of said University, in substance, charging said Schultz with false, fraudulent, and improper statements and representations by him made to the authorities of said University and said Medical College, whereby and wherewith the said Schultz had obtained, or sought and endeavored to have, procure, and obtain certain preferment, advancement, recognition, benefit, privilege, degree, diploma, and advantage to which the said Schultz was not and would not upon a true statement and condition of affairs be entitled, said charges and specifications being among the files in the office of the Secretary and Steward of said University; and

WHEREAS, Duly certified copies of said charges and specifications, together with a citation to said Schultz to be and
appear before said Board of Regents of said University on the 16th day of March, 1887, were, as appears from the record and return on said citation endorsed, duly served on said Schultz, on the 8th day of January, A.D. 1887 (a duplicate copy of said citation, with the return and record of service thereon endorsed, is with the files in the office of the Secretary and Steward of said University); and

Whereas, Said Schultz has wholly and utterly failed, neglected, and refused to be and appear on the date and at the place fixed, before said Board or any member thereof, either in person or by agent or attorney, and has wholly and utterly failed, neglected, and refused to present, offer, or tender any answer, response, reply, statement, or proof adverse to or contradictory of said charges and specifications; and

Whereas, The Board of Regents, upon information, statement, and correspondence, had and received, concerning the allegations in said charges and specifications set forth, have good reason to and do believe that said charges and specifications, and all thereof, are true and well founded as against said Schultz;

Now, therefore be it Resolved, That said charges and specifications hereinbefore referred to, and all thereof, are declared to be and the same are taken, accepted, and found to be true, exact, and correct as the same are formulated, stated, and set forth; and it is also hereby further

Resolved, That said Johann Ernst Schultz be and he is hereby dishonorably dismissed and expelled from the said Medical College of the said University of Nebraska. That certified copies of the foregoing resolutions be, by the Secretary of said University, presented to and filed with the proper officials of the State Medical Association of the state of Nebraska, and also filed with and recorded in the office of the county clerk of the county of Hamilton in the state of Nebraska, where said Schultz, as appears from the return made upon said citation, now resides, and also that a copy of these
resolutions and findings be served upon said Schultz personally.

In testimony whereof I have hereunto set my hand officially and affixed the seal of the University, at my office in Lincoln, in said county and state, this 19th day of March, 1887.

[seal.]

J. S. Dales,
Secretary of Board of Regents of the University of Nebraska.

LINCOLN, NEB., April 20, 1886.

Dr. A. S. v. Mansfelde, Permanent Secretary, etc., Ashland, Neb.:

DEAR SIR—Yours of the 22d of March promptly at hand. The accumulation of business in my office during the session of the legislature has made it impossible for me to give earlier attention to the subject-matter of your letter.

To answer your questions in the order you put them, I may say, first, that Mr. Schultz has received no diploma at all from any section of the Medical College of the University, no degree having ever been conferred upon him here.

To put the case as briefly as possible, it is this: Under the regulations existing two years ago for admission, candidates were entitled to advanced standing upon the presentation of credentials from reputable medical colleges of work done and attendance upon prescribed courses of study and lectures.

Mr. Schultz presented himself for admission as a student, and to gain such advanced standing as he desired, produced to the authorities of the University documents in the German language purporting to be certificates from the proper authorities of the University of Berlin, to the effect that he had been a student in and had pursued to some extent medical studies and lectures in that institution. Mr. Schultz was admitted, and by the advancement thus sought to be obtained, would have received his degree here in March, 1886. Some circumstances which I need not pause to mention now led to
an investigation of the genuineness of the said credentials. That investigation was thorough, being carried across the sea and to the very doors of the University of Berlin; it resulted in fully satisfying the chancellor and his associates that the credentials presented by Mr. Schultz were utter fabrications, and his degree and diploma were accordingly withheld.

In December last, charges and specifications in due form were presented to the Regents against Mr. Schultz, as a former student in the Medical College of this University, setting forth fully the facts in relation to this matter, and charging Mr. Schultz with fraud and deception and conduct unbecoming a student of this university, the substance of which you have repeated in the resolutions which I sent you. Mr. Schultz was duly served with certified copies of these charges and cited to appear before the Board of Regents in March last and show cause why he should not be dishonorably dismissed from said College and from the University. He failed to appear or to file any denial of the charges preferred against him, and the Board, upon due consideration of the whole case, took the action which has been certified to you.

I am informed that Mr. Schultz has been holding himself out as a graduate of the Medical College of the University, but I have no positive knowledge of that fact.

Speaking now in a general way, on behalf of the University, I may say further that I believe the statement of the facts I have given you above puts the case in its most inoffensive aspect. But, however grave Mr. Schultz's offense may be, considered from a moral and legal standpoint, the University is not a public prosecutor, neither has it anything to gain by acting upon the principle of retaliation in individual cases of discipline. The University through its Board of Regents has simply aimed in this case to defend itself, in a dignified yet effectual manner, against deception and imposition in a matter of much concern to it. This done, its officers believe that its whole duty is done, both toward itself and toward the state.
Should you desire any further information or comment upon this matter, please address the chancellor.

I am, sir, yours very truly,

J. S. Dales,
Secretary Board of Regents, Etc.

I submit the correspondence had with our members of Congress in regard to an appropriation for the International Medical Congress:

The following letter was sent in accordance with your instruction to each Senator and Representative, all of whom, with the exception of the senior and retiring Senator, responded promptly, and are deserving of an appropriate recognition:

**Office of the Permanent Secretary,**
**Nebraska State Medical Society,**
**Ashland, Neb.**

Sir—The Nebraska State Medical Society passed, and instructs me to transmit to our Representatives in Congress, the subjoined resolution:

That our Representatives in Congress be requested to favor and assist in the procurement of an appropriation for the International Medical Congress, which will meet in the city of Washington in September, 1887.

An acknowledgment is respectfully solicited.

A. S. v. Mansfelde,
Permanent Secretary.

Letters on file in the Secretary’s office.

Your attention is also called to the papers herewith submitted from the Lincoln Medical Society. I may be permitted to state that this Society must keep up the rule, established by the American Medical Association, which provides that no person is entitled to recognition on the floor of said Association if not in good standing in the Society from which his or her credentials must come. The non-payment
of moneys due such society creates such suspension of privileges, and since the Nebraska State Medical Society made use of this rule of the American Medical Association in the action of the Douglas County Medical Society against the Nebraska State Medical Society, it is but meet that it should uphold the rule in its own jurisdiction.

Lincoln, Neb., April 28th, 1887.
A. S. v. Mansfelde, M.D., Permanent Secretary of Nebraska S. M. A., Ashland, Neb.:

Dear Doctor—At the regular meeting of the Lincoln Medical Society, April 12th, 1887, the following resolutions were passed:

Resolved, That the Secretary of this Society transmit to the Secretary of the Nebraska State Medical Association a list of the names of all persons who at any time were members of this Society, but whose names are no longer found upon its roll of membership, giving the reason in each instance for the severance of the connection with the Society, and that the Secretary of the Nebraska State Medical Association be requested to bring the list before the State Association at its next meeting.

In accordance with the above, I submit the enclosed list.

List of names of persons who have lost their membership in the Lincoln Medical Society:
E. B. Appleget, non-attendance; Arthur H. Bowen, removed from jurisdiction; James Cotter, non-attendance; B. B. Davis, withdrawn by consent of Society; J. R. Haggard, non-compliance with Art. VIII. of By-Laws; Charles S. Hart, non-compliance with Art. VIII. of By-Laws; Charles M. Headrick, removed from jurisdiction; J. A. Kettring, removed from jurisdiction; J. D. Leslie, died Nov., 1881; J. E. Reed, expelled for violation of Code of Ethics; R. Stanhope, non-compliance with Art. VIII. of By-Laws; A. J. Shaw removed from jurisdiction; J. B. Tamblin, withdrawn; Ruth M. Wood, withdrawn.
(See Art. VIII. of By-Laws on page 3.)

Article VIII. of By-Laws:

"A list of names of the members shall be alphabetically arranged by the Secretary. The member whose name appears first on the list shall be prepared at the first meeting to read an original paper upon some topic connected with medicine, surgery, or the allied sciences; and at each subsequent regular meeting, a member in the order of his or her name on the list, shall in like manner be prepared to read. Any member who neglects or refuses to read or procure a substitute, shall, unless he present in writing at the following meeting a satisfactory excuse, pay a fine of two dollars. If the fine remains unpaid for three months after it becomes due, the name of the delinquent shall be dropped from the list."

[A correct copy.]

Sophronia M. Lane, M.D.
Secretary Lincoln Medical Society.

Your Secretary again directs your attention to the importance of the selection of members. To this end he suggests that Article IV., Section 1 of the constitution, be amended to read:

"The officers of this Society shall be a President, three Vice Presidents, one from each Congressional district, one Recording Secretary, one Corresponding Secretary, and one Treasurer. Each officer shall hold—etc., etc."

That Article IV., Section 3, be amended to read:

"The Vice Presidents, when called upon, * * * one of them shall officiate in his place. They shall constitute the Committee on Credentials."

Further, That in Article VI., entitled Duties of Committees, a section be added, entitled Committee on Credentials, which shall read:

"The Committee on Credentials shall have referred to it and consider the application of every candidate to member-
ship in and delegate to the Society. This committee shall consist of the Vice Presidents of the Society. They shall meet a sufficient time before the annual meeting is called to order and prepare their report, which must be submitted immediately after the organization of the yearly meeting.”

Also add to Standing Resolution II. the following:

“When duly executed the application must be returned to the Permanent Secretary, with an enclosure of five dollars, which sum will be returned to the applicant if he is not made a member.

“Immediately upon the receipt of the application the Secretary shall transmit the same to the member of the Committee on Credentials in whose district the applicant resides; this member shall be required to report in writing upon the application at the meeting of the committee, as provided for in this constitution.

“All applications for membership, with the written report on the same, must be forwarded to the Chairman of the Committee on Credentials in whose care of the Chairman of the Committee on Arrangements, at least five days prior to the yearly meetings of the Society.”

This method was tried, though a little modified, one year, and since then, in isolated cases, and has been so very satisfactory that its adoption is urged as the best plan of protecting the Society from worthless membership.

In regard to the collection of moneys due this Society, the suggestion is offered that the Nebraska State Medical Society adopt the plan pursued by all other corporate bodies, namely, the collection of all moneys by the Secretary, who shall be required to keep a ledger account with every person from whom money is due or collected, that he be required to give bond to the sum of $500, and that he pay over such moneys as he receives, immediately upon their receipt, to the Treasurer, who in his turn shall keep a like account, and such ac-
counts of both these officers shall be audited by the Board of Trustees of the Society, at each annual meeting.

I submit the itemized account of the expenditures of my office during this year, for your examination and approval. It is accompanied by vouchers wherever possible.

**Nebraska State Medical Society,**

*In account with A. S. v. Mansfelde, M.D., Per. Secretary:*

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 3, 1886</td>
<td>to stationery, Lincoln meeting</td>
<td>$1.10</td>
</tr>
<tr>
<td>July 26, 1886</td>
<td>postage, registered letters, etc.</td>
<td>50</td>
</tr>
<tr>
<td>Aug. 11, 1886</td>
<td>postage, circular letters</td>
<td>2.25</td>
</tr>
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<td>Sept. 15, 1886</td>
<td>postage, 2 cent stamps</td>
<td>1.00</td>
</tr>
<tr>
<td>March 1, 1887</td>
<td>expressage to Dr. Lowry</td>
<td>50</td>
</tr>
<tr>
<td>April 12, 1887</td>
<td>postage, programme</td>
<td>2.50</td>
</tr>
<tr>
<td>June 3, 1886</td>
<td>bill of Mr. Guild</td>
<td>21.85</td>
</tr>
<tr>
<td>Sept. 1, 1886</td>
<td>printing, stationery</td>
<td>11.50</td>
</tr>
<tr>
<td>Apr 30, 1887</td>
<td>programme</td>
<td>21.25</td>
</tr>
</tbody>
</table>

Total amount received from the Treasurer, Dr. W. M. Knapp: $75.00

Amount paid out as itemized: $67.95

Balance as per check inclosed: $7.05

$75.00

The Society, at its last meeting, set aside for the use of the Secretary the sum of seventy-five dollars. Of this amount he paid the bill of Mr. Guild, allowed at the same meeting, the Treasurer not having sufficient funds in his hands. It will be seen that the expenditures of my office amounted to

*See accompanying vouchers and bills.*
forty-six dollars and ten cents, which sum would have been increased by no less than forty-five to fifty dollars had the Proceedings been published and sent to the members, as it would have required all of this money for postage and expressage. It will be seen at a glance that the report made by one of the officers at the last meeting, that twenty-five dollars should be sufficient for the expenses of the Secretary, was dictated by a total ignorance of the requirements of the Society with its present membership.

The Secretary is at present fully equipped, as far as stationery is concerned. His expenses for the coming year will consist of such printing as the Society may direct at this meeting, and postage, and this postage will be small, five to ten dollars, or large, forty-five to fifty-five dollars, if the Proceedings are or are not published this year.

A very important matter will come before the American Medical Association at its meeting in Chicago, June 7th. The probable solution of the proposition of establishing this organization upon a solid basis, somewhat similar to that of the British Medical Association. Your Secretary has paid earnest attention to the pros and cons of the measures proposed. The idea itself has, during the year, received the approbation of the great majority of those who have discussed the matter. The plan of creating a permanent Society, with inherent powers capable of being expended for the benefit of the medical profession at any time, is a serious and most important one. This Society should exert its influence in favor of the proposed change, and to that end should give explicit instructions to its delegates to the next meeting of the Association.

In conclusion, permit me to say that my intercourse with the members during the year has been very pleasant. Nothing has marred the year’s record but the restriction which a very unwise financial course, inaugurated at the last two meetings, has brought about.
Without money, however earnest your intentions, it will be impossible to maintain the high position we have attained in the profession of the Union.

Your banner must float high in the air, the emblem of progress, if you wish your Secretary to follow it; if mistaken policies lower it unto the dust, you will have to choose younger blood to take upon itself the labors I have never shirked, when they added to your pleasures and the good name of the Nebraska State Medical Society.

Respectfully submitted,

A. S. v. Mansfelde, M.D.,
Permanent Secretary.

Motion of Ur. Graddy: That the Secretary's report be referred to a special committee. Carried.

The Committee: Drs. Merriam, Hildreth, and Link, who report as follows:

REPORT OF SPECIAL COMMITTEE ON SECRETARY’S REPORT.

Omaha, Neb., May 4, 1887.

Mr. President, Ladies and Gentlemen of Nebraska State Medical Society:

The committee to whom your Secretary's annual report has been referred, after careful reading and consideration of the same, beg leave to submit the following, viz.:

We, your committee, heartily commend the action of the regents of the State University in their expulsion of Johann Ernst Schultz, as set forth in Secretary's report. We commend them for their care and caution in their effort to give to the state well-educated and honorable physicians.

In regard to the request to assist the International Medical Congress, your committee do not feel disposed to recommend any appropriation, owing to the embarrassed financial condition of the Nebraska State Medical Society. We commend the faithfulness of our Secretary in his compliance with the
instructions of our Society in regard to the correspondence with our representatives in Congress relative to appropriations for the International Medical Congress. We recommend that the Secretary be instructed to return the thanks of this Society to our honorable representatives in Congress for their promptness and zeal in support of the measure.

With reference to the Secretary's suggestions as to amendments to constitution and by-laws, we recommend that, if he desires such changes, he present them in the manner provided by the organic law of this Society.

In relation to the itemized financial account of the Secretary, we recommend that it be adopted, and that the sum of one hundred dollars be set aside for the use of the Secretary in defraying the incidental expenses for the coming year, including the sending out of the forthcoming Society's Transactions. We endorse the suggestions of the Secretary relative to the establishing of the American Medical Association on a permanent basis, and recommend that our delegates to that body be instructed in accordance to that end.

In regard to the Secretary's request that we investigate his financial expenditures prior to the past year, we beg leave to state that we do not consider this a part of the duties incumbent upon your committee.

Respectfully submitted,

L. A. Merriam,
M. L. Hildreth,
H. Link.

Adopted, by motion of Dr. Knapp.

READING OF THE TREASURER'S REPORT.

To the President and Members of the Nebraska State Medical Society:

Your Treasurer offers the following report for the year ending April 30th, 1887:
Treasurer Nebraska State Medical Society,

Dr.

1886.
June 3, Received from Dr. Huff at Lincoln...........$185.00
June 16, Received from R. C. Moore.................... 91.60
Received from members since the meeting at Lincoln, 83.00

Total .......................................................$359.60

1886. cr.
June 3, By cash paid voucher No. 1............$176.50
Aug. 19, By cash paid voucher No. 2............. 40.00

Total .......................................................$216.50
Balance in treasury May 1st, 1887.................$143.10

I find that, according to the Treasurer’s record, there is
due the Society from members in arrears $596.
All of which is most respectfully submitted for your con­
sideration.

W. M. Knapp,

Attested:

A. S. v. Mansfelde,
Secretary.

Motion by Dr. P. S. Leisenring: That the report be re­
ferred to Auditing Committee. Carried.

REPORT OF COMMITTEE.

Your committee appointed to audit the Treasurer’s report
respectfully say that the report is correct, as per vouchers,
and would urge the Treasurer to collect the outstanding debts
due the Society.

P. S. Leisenring,
O. C. Reynolds.

Report adopted, on motion of Dr. Link.
Motion by Dr. R. M. Stone: That we proceed to take up
the amendments to constitution offered last year by Dr. James Carter, and that we vote by ballot.

Dr. Graddy moves to amend: That action on the subject be made a special order for Wednesday evening at eight o'clock. Carried.

By Dr. Mansfelde: That we now take a recess until tomorrow morning at nine o'clock.

MORNING SESSION.

WEDNESDAY, May 4th.

In the absence of the President and Vice Presidents, on motion of Dr. Knapp, Dr. R. M. Stone, Omaha, is called to the chair.

Regular order of business—The reading of papers in Section on Practice of Medicine.

Reading of papers by Drs. Merriam and Bridges. The paper of Dr. Bridges referred to Committee on Publication.

Motion by Dr. Knapp: That the programme prepared by the Secretary be adopted. Carried.

Recess.

AFTERNOON SESSION.

Dr. Milton Lane, 1st Vice President, in the chair.

Motion by Dr. Knapp: That the regular order of the morning session be continued. Carried.

Reading of paper by Dr Milroy. Referred to Committee on Publication.

Motion by Dr. Merriam: That Dr. J. E. Summers, Sen., Medical Director of the Department of the Platte, U. S. A., retired, be made a member by invitation. Carried.

Recess of ten minutes.
After recess, the Chairman of the Section on Surgery, Dr. J. S. Leonhardt, read his report.

Paper referred for publication, upon motion of Dr. Mansfelde.

Dr. Summers' paper on Tuberculosis of the Larynx, and Dr. Harrigan's paper on Antifibrin, were referred, on motion of Dr. Mansfelde, for publication.

The Secretary read the paper of Dr. Henry, on case of Mesial Cleft of Palate, by title, which was referred for publication, upon the motion of Dr. Coffman; also paper by Dr. Anderson.

Verbal report of Chairman of Section on Dermatology.

Motion by Dr. Bowen: That Dr. Biart put his report in writing, and present it to the Committee on Publication.

Recess until 8 P.M.

EVENING SESSION.

Meeting called to order by the President, Dr. R. C. Moore.

Reading of the new constitution, by the Secretary.

Motion by Dr. R. M. Stone: That we adopt the new constitution. Amended by Dr. Hildreth, that it be adopted section by section. Carried as amended. (By division, 35 in favor, 9 against.)

Motion by Dr. Denise: That no member shall speak on one section more than once, nor more than five minutes. Carried.

Motion by Dr. Knapp: That the further consideration of the constitution be postponed for five years. Lost.
CONSTITUTION.

ARTICLE I. NAME AND OBJECT.

SECTION 1. This Society shall be named the Nebraska State Medical Society.

SEC. 2. The object of this Society shall be the promotion of medical knowledge, and the encouragement of social and harmonious relations within the profession.

ARTICLE II. QUALIFICATION OF MEMBERS.

SECTION 1. The members of this Society shall consist of permanent members and members by invitation.

SEC. 2. The permanent membership of this Society shall be composed of such persons as have complied with the following requirements:

1. They must be regular physicians in good standing, graduates of regular recognized colleges, and residents of the state of Nebraska.

2. If they reside within the jurisdiction of a regular county or district society, they must first come to this Society as delegates from such local society.

3. If they reside without such jurisdiction, they must be recommended to membership by two permanent members of this Society.

SEC. 3. Each applicant for permanent membership shall fill out and sign the following blank application:

FORM OF APPLICATION FOR PERMANENT MEMBERSHIP IN THE NEBRASKA STATE MEDICAL SOCIETY.

(Date) ........... 

I, .........., aged .......... years, residing at .........., a graduate of .........., class of 18 ..., a member of .......... Medical Society, hereby make application for membership in the Nebraska State Medical Society. 

(Signature.) ........... 


SEC. 4. Three opposing votes shall deny membership to any applicant.

SEC. 5. This Society may invite to participation in its meetings, without the privilege of voting, any reputable physician, who may be introduced by a member of this Society.

ARTICLE III. OFFICERS.

SECTION 1. The officers of this Society shall be a President, two Vice Presidents, a Recording Secretary, a Corresponding Secretary, a Treasurer, and these officers shall constitute the Board of Trustees.

SEC. 2. The Election of Officers.—The nomination of officers shall be by informal ballot, the election shall be by ballot, a majority of all votes cast being necessary to a choice. The officers of the Society shall hold their office for one year, and until their successors are chosen.

SEC. 3. Duties of Officers.—The President and Vice Presidents shall discharge the duties belonging to their respective offices.

The Recording Secretary shall keep a record of the proceedings of the Society and of the Board of Trustees, of which latter he shall be ex-officio clerk.

He shall superintend the publication of the Transactions of the Society under the direction of the Board of Trustees.

He shall attest all orders drawn upon the Treasurer.

He shall prepare a report at the close of each year.

He shall prepare a programme of exercises of the annual meeting, which shall include the titles of all papers which he has been notified will be presented to the Society, with the names of their authors, and forward it to members of the Society at least two weeks prior to the annual meeting.

The Corresponding Secretary shall review such transactions of other Medical Societies as he may receive, and present at each annual meeting a report of such matters contained in these transactions as he may deem of interest to this Society.
He shall deliver to his successor in office all Transactions in his hands.

The Treasurer shall have charge of the funds of the Society.

He shall keep a ledger account with each member of the Society, and with all other persons with whom the Society may have business transactions.

He shall make an annual statement of the finances of the Society.

He shall give a bond in the sum of $1,000.

He shall pay orders voted by the Society, signed by the President and Secretary.

The Board of Trustees shall hold the bond of the Treasurer, have general supervision of all the property of the Society, shall have the power to collect all moneys due the Society, shall sue and be sued for the Society, and perform the duties that usually devolve upon Boards of Trustees.

ARTICLE IV. MEETINGS.

The place of meeting shall be determined by a majority vote of the Society, and the time of meeting shall be any Tuesday in the month of May or June of each year, as fixed by the Board of Trustees.

ARTICLE V. AMENDMENTS.

This constitution and the following by-laws may be amended by a two-thirds vote of all the members present; Provided, That notice of the proposed amendment has been given in writing at the annual meeting next preceding.
1. **Quorum.**—Twenty members shall constitute a quorum.

2. **Standing Committees.**—The President shall appoint, at the annual meeting, the following standing committees, each composed of three members:
   - Committee on Credentials,
   - Committee on Arrangements,
   - Committee on Grievances,
   - Committee on Necrology,
   - Committee on Auditing, and
   - Thirteen Committees on the Progress of Medicine.

**Duties of Standing Committees.**

(a) All applications for membership shall be referred to the Committee on Credentials, who shall report thereon.

(b) The Committee of Arrangements shall be composed as far as possible of members resident of the city in which the annual meeting is to be held. They shall make suitable arrangements for the meeting.

(c) The Committee on Grievances shall constitute a board of trial for all offenses against the Constitution and By-Laws, or for conduct unbecoming an honorable physician, and shall have the sole power of moving the expulsion of a member. The vote on the expulsion of a member shall be by ballot, and an affirmative vote of three-fourths of the members present shall be necessary to expel. All charges against members of the Society shall be in writing, and the Committee on Grievances shall furnish an accused member with a copy of the charges preferred thirty days prior to the annual meeting.

(d) The Committee on Necrology shall report upon such deaths as may have occurred among the members of the Society, together with such resolutions as they deem proper.
(e) The Auditing Committee shall examine and audit the Treasurer's report.

(f) The President shall assign to each of the thirteen Committees on the Progress of Medicine, one of the following departments of medicine, viz.:

1. Practice of Medicine.
2. Surgery.
3. Obstetrics.
5. Nervous and Mental Diseases.
6. Anatomy and Physiology.
8. Materia Medica and Therapeutics.
9. Medical Jurisprudence, Medical Chemistry, and Toxicology.
10. Pathology and Histology.
11. Public Hygiene and Medical Legislation.
12. Dermatology.
13. Laryngology.

These committees shall report at the ensuing meeting on the year's progress in the department assigned.

3. Membership.—All applications for permanent membership shall be accompanied by the membership fee of $5.00, returnable if the application is rejected.

All permanent members shall, after the first year, pay as annual dues $2.00. Failure to pay the annual dues and registering shall forfeit all rights and privileges for that session, and failure to pay the annual dues for three years shall subject the member to loss of membership.

6. Code.—The Revised Code of Ethics of the American Medical Association shall be the rule and guide of the members of this Society.

7. Roberts' Rules of Order shall govern the Society in all cases not provided for by the Constitution, By-Laws, or Standing Rules.
STANDING RULES.

No. I. The following shall be the order of business at the meetings of this Society:

1. Organization of the Society.
2. Payment of annual dues.
4. Signing of the constitution by the newly elected members.
5. Reading of the minutes of the last annual meeting.
8. Report of the Corresponding Secretary.
10. Selection of next place of meeting.
11. Appointment of standing committees.
13. New business:
   - Report of special committees.
   - Report of the Board of Trustees.
   - Report of the Committee on Grievances.
   - Report of the Committee on Necrology.
15. Election and installation of officers.

No. II. The report of committees on the Progress of Medicine and the literary work of the Society, the reading of papers, addresses, etc., shall occupy the day sessions, the transaction of business the evening sessions of the Society.
No. III. The Society shall, at its pleasure, elect delegates to other medical societies.

No. IV. All resolutions introduced to the Society must be furnished to the Secretary in writing.

Motion by Dr. Knapp: That the Constitution as amended be adopted. Carried, unanimously.

REPORT OF THE COMMITTEE ON EXAMINATIONS OF CANDIDATES FOR GRADUATION.

OMAHA, May 4th, 1887.

To the Nebraska State Medical Society:

Sirs—Your committee appointed to be present at the examinations and graduation of the classes of the Medical Department of the Nebraska State University and the Omaha Medical College, ask to submit the following report:

That by invitation of the Faculty of each of the schools they visited them, were present at, and by request of the Faculty assisted in the examination of each student presented for graduation.

That they were shown every courtesy by the Professors, who assisted your committee by placing in their hands the class for examination, together with the written questions and answers of each student, that had been given the Faculty by the student and in the handwriting of the student.

That your committee were present at the oral examination of each student, asking such questions as they thought best.

That your committee found that the candidates present for examination possessed the necessary qualifications to begin the study of medicine, as required by resolution of this Society.

That they had been well taught in Anatomy, Physiology, Therapeutics, Surgery, Materia Medica, Obstetrics, Chemistry, Practice of Medicine, Diseases of Women and Children, Ophthalmology, and Otology, etc. That the highest average
was ninety per cent; that the lowest was seventy per cent of all questions asked.

That of the eleven graduated from both schools, seven graded ninety per cent and three graded seventy-five per cent and one graded seventy per cent per one hundred questions asked. Two candidates who presented themselves for graduation were rejected, their grading not reaching fifty-five per cent.

That the Faculties earnestly hoped that the Society would send out each year a like committee, empowered to act and assist the Faculties in these examinations.

Your committee would recommend that should the Society deem it advisable to have such committee, that they be appointed at once, so that they may be prepared by a proper organization.

That we are satisfied that much good will come to our profession by the continuance of the work just begun by you in trying to elevate the standard of the profession in our state, by closely watching its portals that none may enter who are not thoroughly prepared and duly qualified, that you appoint only workers on this committee. No drones needed in this work.

Respectfully submitted,
M. W. Stone,
Ch’n. Committee.

Motion by Dr. Shipman: That the report be accepted and handed to Committee on Publication. Carried.

Motion by Dr. Knapp: That the committee be continued for the coming year. Carried.

REPORT OF COMMITTEE OF ARRANGEMENTS.

Omaha, Neb., May 4th, 1887.

Your Committee of Arrangements would beg leave to report that they have incurred the following expenses, to-wit:
Rent of Masonic Hall for session..........................$60.00
1 muslin sign and hanging........................................4.00
Use of 3 tables..................................................2.00
Stationery.......................................................... .75

Total .................................................................$66.75

They respectfully ask the Society to appropriate the sum of $66.75 for the payment of the above bills.
They would further report that they collected from exhibitors the sum of $27, which was turned over to the Secretary of the Society.
All of which is respectfully submitted by your committee.

JAMES CARTER, Chm.
L. A. MERRIAM,
E. A. KELLEY.

Accepted and allowed.

Motion by Dr. Mitchell: To take recess until 9 A.M., May 5th. Carried.

MORNING SESSION.

THURSDAY, MAY 5th.

Society called to order by Vice President Dr. Milton Lane.
Report of Chairman on Obstetrics, Dr. Mary R. Butin; report referred for publication, by motion of Dr. Mansfelde.
Report of Chairman on Diseases of Women, Dr. Eleanor S. Dailey; referred for publication, by motion of Dr. J. C. Denise.

Motion by Dr. Bridges: That we take a recess until 1 P.M., and that the first hour be employed for business. Carried.
AFTERNOON SESSION.

Vice President Lane in the chair.

Dr. Bridges moves the acceptance of the resignation of Dr. Stephenson. Carried.

A bill for expenses of printing in Committee on Surgery, submitted by Dr. Leonhardt, laid on the table, on motion of Dr. Merriam.

Dr. W. M. Knapp moves the appropriation of $25 for use of International Medical Congress. Amended by Dr. Mansfelde that $50 be appropriated. Accepted by the mover and carried unanimously.

Regular order of business.

The reading of paper by Dr. Bryant, A Case of Tumor of the Eye; referred for publication.

Dr. H. Gifford: Recent Contributions to the Theory of Sympathetic Ophthalmia; referred for publication, on motion of Dr. Mitchell.

Report of Cases of Criminal Poisoning, by Dr. M. V. Clark; referred for publication, on motion of Dr. Conwell.

Dr. Biart's paper on the Differential Diagnosis of Small-Pox was preceded by remarks on the histological pathology of the disease and the indications for treatment derived therefrom, by Dr. Mansfelde, who claims that the suppuration stage is one of auto-infection of the deeper layers of the skin, and the danger derived from typical pyaemia. Paper referred for publication, by motion of Dr. Leisenring.

Motion by Dr. Mansfelde: That the business of the Society be now transacted. Carried.

REPORT OF COMMITTEE ON WAYS AND MEANS.

The Committee on Ways and Means would report that the estimated amount of money needed to defray the expenses of the Society for the year 1887–88 is about five hundred and
fifty dollars ($550). The amount of funds on hand up to noon to-day is five hundred and eighteen dollars ($518)—a sufficient amount in all probability to pay all expenses for the year.

All of which is respectfully submitted.

P. S. LEISENRING,
O. C. REYNOLDS.

Adopted, on motion of Dr. Conwell.

Motion by Dr. P. S. Leisenring: That we now proceed to the election of officers. Carried.

Drs. James Carter and E. Lee are appointed tellers.

Balloting proceeded with, with the following result:

Dr. G. H. Peebles, David City, President.
Dr. Mary R. Butin, 1st Vice President.
Dr. O. C. Reynolds, Seward, 2d Vice President.
Dr. A. S. v. Mansfelde, Ashland, Secretary.
Dr. L. A. Merriam, Omaha, Corresponding Secretary.
Dr. Wm. M. Knapp, Asylum, Treasurer.

The President on the second ballot; the 1st Vice President on the third ballot; the 2d Vice President on the second ballot; the Secretary on motion of Dr. P. S. Leisenring; the Corresponding Secretary on motion of Dr. Galbraith, and the Treasurer on motion of Dr. Mansfelde, by acclamation.

Motion by Dr. Knapp: That the Secretary of the Society be requested to prepare a suitable memorial page and put it on record in behalf of Dr. Dildine, deceased. Carried.

Motion by Dr. J. Carter: That the Secretary issue credentials to delegates to the American Medical Association and other societies.

Motion by Dr. Carter: That the Secretary be empowered to print hundred copies of the constitution as amended.

Motion by Dr. Galbraith: That the next place of meeting of the Society be at North Platte. Amended by Dr. Mansfelde that it be at Lincoln. Amendment carried.
Motion by Dr. Knapp: That the Secretary be instructed not to forward a copy of the Proceedings to any member who is not clear upon the books of the Society, as certified to him by the Treasurer. Carried.

Motion by Dr. Merriam: That the Secretary procure 300 copies of the Proceedings for the years 1886 and 1887. Carried.

By Dr. J. Carter: That we proceed with the installation of officers, and that we declare Dr. G. H. Peebles, absent, duly installed. Carried.

Motion by Dr. Mansfelde: That Drs. Carter and McKenna conduct the newly elected officers to their places.

Dr. Mary R. Butin, 1st Vice President, in the chair.

Motion by Dr. Mansfelde: That the Treasurer receive his yearly dues as payment for services rendered.

Motion by Dr. Mansfelde: That the Society stand adjourned sine die.

Adjourned.

A. S. V. MANSFELDE, M.D.,
Secretary.

May 5th, 1887, 6 P.M.
In Memoriam.

C. T. DILDINE, M.D.

Doctor C. T. Dildine was born in Dansville, New York, December 19th, 1850. He died in the same place July 13th, 1886, of chronic inflammation of the Ductus Choledochus and Duodenum, with stenosis of the former and atresia of the latter.

He graduated from Buffalo Medical College in 1872, and was married to Flora A. Ewers in May, 1873. He practiced his profession in Almond and Dansville, N. Y., and in Kearney, Nebraska, since 1874.

His sorrowing widow, three children, one brother, two sisters, and his aged parents live to grieve for his loss, whilst the profession of Nebraska bear him kind remembrance.
COMMITTEES
OF THE
NEBRASKA STATE MEDICAL SOCIETY,
1887—1888.

Committee on Credentials.—Drs. A. S. v. Mansfelde, C. C. Cook, F. D. Haldeman.
Committee of Arrangements.—Drs. H. B. Lowry, A. R. Mitchell, F. G. Fuller.
Committee on Grievances.—Drs. M. W. Stone, W. J. Galbraith, H. G. Leisenring.
Committee on Necrology.—Drs. L. A. Merriam, N. H. Norris, G. W. Shidler.
Committee on Auditing.—Drs. T. M. Hayden, A. B. Anderson, N. F. Donaldson.
Committee on Practice of Medicine.—Dr. L. J. Abbott.
Committee on Surgery.—Drs. E. Brown, F. D. Haldeman, A. R. Mitchell.
Committee on Obstetrics.—Drs. O. C. Reynolds, M. W. Stone, L. H. Robbins.
Committee on Gynecology.—Drs. T. P. Livingston, J. S. Leonhardt, A. S. v. Mansfelde.
Committee on Nervous and Mental Diseases.—Drs. W. M. Knapp, E. A. Kelley, J. T. Hay.
Committee on Anatomy and Physiology.—Drs. W. O. Bridges, E. Brown, J. S. Leonhardt.
Committee on Ophthalmology and Otology.—Drs. H. Gifford, J. C. Denise, L. B. Graddy.
Committee on Materia Medica and Therapeutics.—Drs. James Carter, M. V. Clark, W. J. Galbraith.
COMMITTEE ON MEDICAL JURISPRUDENCE MEDICAL CHEMISTRY AND TOXICOLOGY.—Dr. H. Link.


SECTION
ON PRACTICE OF MEDICINE.

REPORT OF PROGRESS, BY THE CHAIRMAN,
DR. WM. PROTZMAN, 1886.

WHAT IS DISEASE?
DR. L. A. MERRIAM, 1886.

REPLY TO AN ESSAY, ENTITLED "WHAT IS DISEASE?"
DR. JAMES CARTER, 1886.

TYPHOID FEVER.
DR. ALFRED SHIPMAN, 1886.

PSEUDO MEMBRANOUS ENTERITIS.
L. G. PRITCHETT, 1886.

NEPHRITIS.
DR. A. BOWEN, 1886.

THE TWENTY-THIRD CENTURY OF MEDICINE.
DR. J. S. LEONHARDT, 1886.

THE DIAGNOSIS OF DIPHTHERIA.
DR. W. O. BRIDGES, 1887.
ANTIFEBRIN AS AN ANTIPYRETIC.
DR. C. P. HARRIGAN, 1887.

THE USE OF ANTIPYRIN.
DR. A. B. ANDERSON, 1887.

DIFFERENTIAL DIAGNOSIS OF SMALL-POX.
DR. C. M. G. BIART, 1887.

THE ETIOLOGY AND COURSE OF CONSUMPTION AS INFLUENCED BY THE CLIMATE AND SOIL OF EASTERN NEBRASKA.
DR. F. W. MILROY.

TUBERCULOSIS OF THE LARYNX.
DR. J. E. SUMMERS, JR., 1887.
REPORT OF PROGRESS.

BY WM. PROTZMAN, M.D., OF LINCOLN.

Mr. President, Ladies and Gentlemen:

Your Committee on whom this Society conferred the honor at its last annual session to investigate and report on the advancement in the various departments of medical science and treatment of disease, have found a difficult task before them, as the ground has been so thoroughly gone over by competent committees during the years of 1883, 1884, and 1885, and from the slow progress of our science, that we are unable to add anything materially new. I shall confine my report, therefore, to some of the antagonistic influences that are brought to bear against the progressive investigation of our science, together with other subjects pertaining to the successful treatment of disease.

THE PRACTICE OF MEDICINE.

The alluring fascination for the dispensation of remedies in the treatment of disease is not confined to the present age, but antedates prior to Asclepedian schools of Greece, when conjugation of the integral parts of medical science was unknown, and when pathography of diseases were supposed to have one common origin. But I need not go back to the primitive age of Greece, nor quote from the ancient history of Rome to establish the fact of the advancement of medical science, but confine myself mainly to the latter half of the nineteenth century.

We find in every city, town, and country those who are practicing medicine that care little or nothing for the integral
parts of medical science, and who depend almost exclusively upon their practical knowledge and free sample bottles of medicines that are left upon their tables. Allow me to say to those who are thus prostituting our noble profession to remember that the acme in medical science cannot be attained through idleness, strategy, nor compound speculation, as there is no genius or magic greatness of medical science born in man, but that the peasant boy, born in abject poverty, by application may attain the highest eminence in our profession, equal to that which may be attained in like manner by those who are rocked and nurtured in the cradle of royal highness. Yet the advancement in medical science does not entirely depend upon new discoveries in chemistry, physiology, pathology and its allied sciences, but it also depends upon outside influences, more especially the laws of our land.

Is it not true that our laws regulating the practice of medicine in many respects are antagonistic to the progressive investigation of our sciences? The present is not unlike the past; medical science has never flourished nor been cultivated to the highest degree in any country where it had no legal recognition. The want of such recognition by our legislature is painfully felt in our young and growing state.

I would like to ask our law-makers, in the name of common sense and justice, in the name of humanity and civilization, when we come to consider the human body—the most wonderful workmanship of God, the ideal of mechanism, with its many wonderful and complicated parts harmoniously at work every moment when unaffected by disease, how, in case of disease, can an enlightened legislative assembly surrender this complex structure into the hands of uninformed and unskillful practitioners?

The medical profession in our state is unprotected except by regulations of its own organizations. The laws in our state governing the practice of medicine are incomplete; quite insufficient in many respects to protect the lives of our peo-
EIGHTEENTH ANNUAL SESSION.

ple, and who is to blame? Is it not true that this Society has time and again appointed committees to wait upon our legislatures to secure better and more stringent medical laws, but without having accomplished in the least degree in a single instance the desired result? But, gentlemen, let us not give up the ship, let us go on persevering in the future as we have done in the past, and the prize will be ours.

What progress has medical science made during this nineteenth century? I answer:

1st. Surgical operations under which the fairest forms of humanity succumbed to trivial operations under the surgeon's knife may now be performed whilst the mind is tranquil and at rest.

2d. Contagious diseases that formerly terrified the nations of the earth, and that left their trail of desolation behind (not unlike our recent cyclones), are now robbed of their terrors.

3d. The death-rate of hospital reports of America, England, Germany, and France, since 1800, has been lessened more than twenty-five per cent, and the duration of treatment lessened nearly one-half.

I present these reports as the battle-ground of our profession, and to prove that medicine is not based on mysticism or fanaticism, but upon principles deduced from observations and certainties, on reflection, experience, and investigation.

On hygiene and materia, in a great measure, depends the successful management and treatment of disease. The practitioner in medicine dare not remain a stranger to either of those branches, that he may be able to choose, prepare, and superintend the use of curative agents with the greatest possible discernment and exactness.

CLINICAL THERAPEUTICS.

In this branch of medical science the physician will find himself face to face with disease and its realities. Here he will find that in vain will he have stored his mind with the
precepts of great teachers. In vain will he have watched the progress in the late discoveries in therapeutic science if he has not followed his remedies to the bedside of the sick, and here made a test of their action on the human body in countering disease. Here is the great battle-field for the student, the theatre where he finds the opportunity to display not only the resources of his art, but also of his genius. The student may acquire the latest and most extensive theoretical knowledge of medicine, and yet find himself surrounded by inextricable difficulties that language cannot describe, and which sight can only supply at the bedside of the sick, and without which the physician cannot have that correct judgment, that prompt appreciation, nor that firmness of resolution necessary to successfully combat disease. The want of clinical teaching is painfully felt in many of our medical colleges.

The chemical laboratories of America, England, Germany, and France are daily proclaiming new discoveries in therapeutic science for the alleviation and prevention of disease; many of these remedies are found valuable accessions when placed in the hands of the scientific physician; for examples are cascara sagrada, salicylic acid, antipyrine, the different preparations of mercury as germicides, and numbers without end of other remedies, together with cocaine, the remedy that was applied and that gave unmeasured relief to, and no doubt prolonged the life of, one of our noted American citizens; one who was honored by every nation of the earth, whose memory is revered and cherished by every American citizen, one who received the highest honors in the gifts of the American people, and who ranked high among the greatest generals of the world.

But in the successful administration of remedies it should not be forgotten that “nosography is the eye of therapeutics; in proportion as the first is lucid, methodic, and complete, the second is sure and rational.” The possession of the most efficient curative agents are of no avail to us if we are unable
to designate the cases in which their use is advantageous from those in which they would be injurious; therefore, gentlemen, let us remember that the scientific administration of remedies can only be attained by comparison of the morbid phenomena before us, with those we have before observed with the most faithful nosological description of others.

PHYSIOLOGY.

The science of physiology not only enables us to comprehend the various functions of the body, but it also enables us to prevent early decay, to make life more vigorous and useful, and death more remote. In my opinion there is no part of medical science more useful to the physician, and one that is more neglected. But my time precludes the possibility of doing more to-day than to make mention of some of the most important and recent discoveries in this branch of medical science. The infinitesimal organisms known to biologists are those which have received the names of amoeba and amoebiform bodies that are found in both vegetable and animal life. Those infinite nucleated bodies are said to be able to change their form as well as their position almost every moment. They eat, digest, live, move, grow, and yet their whole structure is little more than a lump of protoplasm; the contraction of the muscular fiber, irritability, assimilation, metabolic and secretory, are said to be due to amoeboid changes in undifferentiated protoplasm. If this be true, it would not require any great strain of the imagination to believe that vitalization is the result of amoeboid changes; but physiological advancement does not culminate in amoeboid changes, it includes the entire field of the nervous system. I invite your attention to vaso-motor influence upon the circulation, in secretion, contraction, and dilatation of the vascular area, which I believe to be a great stride in the right direction. But I am well aware, gentlemen, that physiology is not a complete science, and perhaps never will be, yet when we look back, say 25
years, and compare the past with the present, we see that "old Dame Nature" has been compelled, under the skillful researches of "Claude Renard," and other noted physiologists, to unveil and surrender many of her hidden mysteries, and the advancement in physiology is onward and upward, and which has laid a broad foundation for pathological study.

**PATHOLOGY**

Is known by signs only, and yet they cannot be recognized as such, unless we understand functions and manifestations that belong to health; pathological changes are to-day what they were in Pathagorian times, immutable and unchangeable as the laws of nature themselves; our advancement, therefore, in pathological science is confined to a better appreciation of post mortem appearances and the outward signs of internal changes. Pathological symptoms are only the outward manifestations of disease through which internal changes declare themselves, and from which we decipher and interpret those signals; and if we are able to fix in our minds a clear conception of health, then we will have no difficulty in comprehending what is meant by disease. The science of pathology is based upon physiological investigations. The former has been pursued with greater zeal and determination within the last ten years than during any subsequent period. Of this the results have been more correct distinction of diseases formerly confounded, fuller and more precise information regarding those which were imperfectly understood, confirming chemico-pathological as well as mycological investigation of bacteria.

**GERM THEORY OF DISEASE.**

This, gentlemen, is a subject that has occupied the mind of the scientific world more than any other. The cloak of adynamic, contagious, and infectious diseases that were shrouded in a vail of mystery from the earliest history of
medical science, has been unveiled and exposed by mycologists of Europe and America within the last ten years, since which time the nebula and mist of darkness, doubt, and prejudice has given place to bright, shining light, echoed and reflected from every part of the land. The morphology of microbes and germacetic remedies are yet in their incipient stages of development, but from the light of recent discoveries under the lens of the microscope, who dare venture a limit to the future results in this direction?

CHOLERA.

Investigations during the past year in the etiology and treatment of cholera have added nothing materially new. The bacillus of Koch, as the cause of this disease, has received but slight favor among scientists. Koch himself unhesitatingly admits that the bacillus is by no means the exciting cause of this disease, but claims that bacilli are always found present in choleric discharges. Looking over the various reports, we find that little or nothing has been definitely established during the year in the etiology and treatment of this disease.

HYDROPHOBIA.

"Again has the zealous pride of France received the meed of devotion from one of her industrious students," perhaps there is no student in Europe or America that ranks higher among the benefactors of humanity than M. Lewis Pasteur; from repeated and successful experiments that he has made upon the human family, as well as the lower animals, he has learned the secrets of many diseases. One of his greatest achievements that has been published to the world, and that has elevated him in the estimation of all nations, is his successful inoculation of rabid virus as a preventive of hydrophobia. It appears that he drew his deductions from attenuated virus as a preventive of hydrophobia from his extensive experiments with anthrax in cattle.
Simular deductions are now being made at our State Farm by Dr. Billings, late of New York, against hog cholera and other germ diseases in animals; the public await results with much anxiety.

In conclusion, allow me to say that I believe that we are fast approaching an epoch when the science of medicine will be stripped of its "mystic vail" and reveal her secrets in open day.

And now, ladies and gentlemen, if I have been successful in my report in arousing the potential energy of one single cell of unorganized protoplasm in the brain or brains of this Society, I shall feel myself amply paid.

By Dr. Lee, of Omaha: Every one is looking with anxiety to see what the investigations upon the treatment of hydrophobia by inoculation will bring forth. People were treated fifty years ago for hydrophobia, after they had been bitten by a dog known to be rabid, with what is called a blood stone, simply a little sulphate of copper rubbed over the body. Those people have never had hydrophobia. This has been carried on to a great extent, in the South especially. Some people in the South have made a world-wide reputation for using the blood stone and using it with apparent success. The people on whom they used it never had hydrophobia. Pasteur has inoculated several, or a large number of people I should say; he has had several cases of rabies following. If there is any benefit to be derived from this it should be promulgated. We should find out the exact manner in which this inoculation is performed, and how the virus was attenuated, and everything like that, so that we can be able to use it here. This question of rabies has become one of vital importance. The number of cases of hydrophobia increases every year. The question, I think, demands discussion from the Medical Society.
WHAT IS DISEASE?

BY L. A. MERRIAM, M.D., OMAHA, NEB.

This question has been asked and answered in many ways during the ages of the past. It was thought to be an evil spirit, sent by the devil, and was to be driven out by the prayers of the clergy, by the laying on of hands, and by a direct appeal to the gods. It was held to be an entity which had gained an entrance to the body, and must be eliminated by emetics, purgatives, blisters, and bleeding. It was held to be a punishment, sent direct by the Almighty, and to be endured or atoned for by sacrifice, burnt offerings, etc., to appease an angry God. Many other fanciful ideas, too numerous to be mentioned, have been held, and though long since proven to be untrue, yet we often meet with people who still cherish these false opinions, for the errors of the past, in all departments of the world’s progress, linger still in the minds of the people long after they have been proven to be erroneous. The same has been seen in other departments of nature, for Kepler had a guiding angel for the planets, but Newton discovered a physical law, and the metaphysical one was abandoned. Parallel instances are found in studying the social, philosophical, and religious history of the world, which no doubt will readily be recalled. In endeavoring to answer the questions that may arise in the study of the phenomena of nature, there is a law which constitutes the only logical barrier between science and superstition, and this law was named by Sir William Hamilton “the law of parsimony,” or the law which forbids us to assume the operation of supernatural or higher causes, when natural or lower ones are found sufficient to explain the observed effects. For it is manifest that
it is always possible to give a hypothetical explanation of any phenomenon whatever, by referring it immediately to the intelligence of some supernatural agent; so that the only difference between the logic of science and the logic of superstition consists in science recognizing a validity in the law of parsimony which superstition disregards.

Bearing in mind, then, this law of parsimony, we proceed to study the phenomena of the universe, and we conclude that the great generalization known as the law of evolution, so masterly set forth by the great philosopher, Herbert Spencer, explains more of the phenomena of nature than any other, and hence becomes a very probable hypothesis, almost ceasing to be hypothetical; and its high probability has caused it to be regarded as a law, and it is now held by all leading scientists, to say the least, as the best working hypothesis extant. Now since the phenomena of nature are best explained by the law of evolution, and the phenomena of disease constitute a part of the phenomena of nature, it is logical and right for us to look to the law of evolution for an explanation of these same pathological processes. A few brief statements of the general principles of this law of evolution will enable you to follow more closely, and comprehend more clearly, the ideas I would set forth as to the nature of disease.

This law of evolution is three-fold in character, and embraces:

1st. Those changes seen in all departments of nature, whether physical, chemical, biological, or sociological, in which the structure changes from a lower to a higher or more fully developed form, from the simple to the complex, from the homogeneous to the heterogeneous, and which has been named by E. Ray Lankester the law of elaboration, or, as others have called it, the law of progress. This is well illustrated by those changes which take place in the growth and development of the embryo, while passing from its first beginnings through its pre-natal existence and youth to full maturity.
2d. Those changes, typical examples of which may be seen often in nature, in which the structure, though constantly undergoing change, the resulting product seems to maintain the same form, and is maintained as it were in a state of balance. This is known and described as the law of balance. As examples of the conformity of nature to this law we may mention among living forms the lowest types of life at present existing, such as the animalcules and bacteria, the amoeba and infusoria, the simpler living molusca and shell fish, and some of the simpler vertebrates and worms.

3d. Those changes from a higher to a lower form, from the complex to the simple, from the heterogeneous to the homogeneous, in which the organism becomes adapted to less varied and less complex conditions of life, in which there is suppression of form corresponding to the cessation of work. Dr. Dohrn, of Naples, has named this the law of degeneration, and it is found to have a wide application in explaining many existing forms of life and many pathological processes. That it is the law underlying all pathologico-histological changes is not yet proven, but I have from my reading and study come to believe it will be. In the study of nature we find organisms at one period of their existence conforming to the law of elaboration, later, during the period of maturity, following the law of balance, and later still, during the period of old age and decline, following the law of degeneration. In other organisms we find organs and tissues being elaborated, some in a state of balance and others still at the same time undergoing degeneration. Again we speak of degeneration of parts of an animal or plant, in cases where the organism as a whole may be spoken of as an example of elaboration or of balance.

Numerous examples will readily occur to those of you familiar with palaeontological, zoological, and biological studies. Let it be noted here that, other things being equal, those organs or tissues latest in the process of development and the
most highly differentiated are the first to fail. The senses and the faculties, not only in old age but during the period of dying, fail in the reverse order of their development. This reversion of structure and function to, or towards, the embryonic type is found in many forms of degeneration. So those anatomical or histological changes brought about by any new set of conditions that surround a plant or animal, when of such character as to transform the organism or any parts of it to a lower or more degenerate form, follow in many cases, if not in all, in an inverse order the same steps that occurred during the elaboration or embryonic growth of the structure. So long as this degeneration of organs or tissues is so gradual that the system at large is able to adapt itself to the new conditions, no physiological inharmony results. But when because of changed or sudden influences certain organs or parts of organs or tissues degenerate or revert towards their embryonic types of structure more rapidly than the general system is able to adapt itself, then physiological inharmony results and we have perverted physiological action; in other words, we have disease.

Not that degeneration, either general or local, is disease, but that degeneration is the generic term of which disease is but a part; or to put it more logically, some degeneration is disease, all disease is some form of degeneration, and often, if not always, a reversion of structure and function to or towards the embryonic condition. In this law of degeneration, which is but a part of the great law of evolution, I expect will be found the solution of many an intricate problem that now vexes the pathologist and practical physician.

Mind you, I did not say all problems, nor the most difficult problems, for I am aware that the etiology of disease assumes a position in medicine the urgency or immediate interest of which far exceeds that of the biological problem. Rindfleisch well expressed it in 1883, when he said: “Most diseases are generated by certain morbific causes, and it is the variety
of morbific causes that corresponds to the variety of disease—species. Disease, as a whole, stands for the effects of this interference, and these effects flow in part from the nature of the morbific cause, and in part from the nature of the body which suffers. That which is uniform in these effects flows from the nature of the sick body, that which is various flows from the variety of morbific causes. It is above all the seat of the disease, its duration, the sequence and combination of the type groups of symptoms, which are determined by the morbific cause. Only this varying element can be used to distinguish one disease from another. Therefore, there is only one truly natural principle of subdividing diseases, and only one point of view in special pathology from which the construction of a natural system may be approached, namely, the etiological principle of classification, and the etiological system."

Remember, then, my position with reference to the etiological problems, and that the hypothesis I have enunciated has more especially to do with the biological problem, the behavior of the elements of the living body in the usual kinds of illness, or to put it more briefly, as Virchow said, "the history of the elementary processes of disease." The recognition of the law of reversion, or, as I have called it, degeneration, as explanatory of all pathologico-histological changes, was submitted Sept. 2, 1884, and published November, 1884.

These views may need some little modification as science advances, but in the main I believe they will be verified by the observations and experiments of many workers in the field of pathology. Having answered the question, "What is disease?" I now proceed to consider a few things corroborative of its truth. Inflammation enters so largely as a factor in disease that it is worth our while to gather a few facts touching upon this question. Strieker says: "Two features characterize inflammation, viz.: First, an active hyperemia; second, an active tissue metamorphosis." In active hyperæmia the
blood vessels become dilated, because the stimulus, traumatic agency, or influence has induced an impaired function of the special nerves of that part, definitely known as the vaso-motor nerves. That this impaired function of the nerves is a degeneration may be seen by recalling Herbert Spencer's well-known law of development and its converse, viz.: "When a wave of molecular transformation passes through a nerve there is wrought in the structure of that nerve such a change that a like succeeding wave will pass through with greater facility than its predecessor." It seems to me that the converse of this law must be equally true, viz.: When a wave of molecular transformation passes through a nerve with less facility than the preceding wave there has been wrought in the structure of that nerve a change from a higher to a lower organization, and this is at least a temporary degeneration. In corroboration of this view, experimental and clinical investigations have proven that these degenerative changes are characterized in the main by diminution and loss of the faradic and galvanic irritability, and this loss of power, demonstrated by electricity, is characterized as "degeneration-reaction."

Stricker defines his theory as a "metamorphosis of tissue, return to the embryonic condition, division into ameboid cells of the masses which have become movable, hence the destruction and suppuration." Stricker has so clearly demonstrated his position that it should only be necessary for me to refer to it in support of my position. The forms of degeneration which may exist in inflammation are various, they vary with the nature of the exciting cause and with the intensity of the irritation, with the character and extent of the vascular disturbance, and with the nature of the tissue.

And when we take into consideration the great field of disease into which the inflammatory process enters as a factor, the value of the degeneration hypothesis is clearly seen. Stricker holds that the cardinal symptoms of inflammation,
redness and heat, not always being present, should be discarded as inaccurate, for when present both are fully explained by the active hyperëmia, the redness by the increased quantity of red blood-corpuscles and the heat by the accelerated blood current. Pain swelling and impaired function are explicable only on the hypothesis of tissue metamorphosis. Pain and visible swelling are not always present in inflammation. The swelling from infiltration and enlargement of the cells, Stricker holds to be due to a more youthful condition of the tissues, the pain to tension or laceration of nerve filaments induced by the swelling, and the impaired function to degeneration of the structures involved. Stricker holds these changes in the tissues are always degenerative at first, and when a stage of retrogression has been reached where cell multiplication can take place, the tissues may then be elaborated into their appropriate mature structure, or they may undergo still further degenerative changes which are destructive in character. Leaving now the subject of inflammation and all diseases of an inflammatory character, and referring you to Stricker's writings for further information on this subject, I pass on to neoplasms, which when carefully studied will be found to be included under some of the forms of degeneration. Cohnheim says "a neoplasm is an atypical new formation starting in a latent embryonic rudiment." Since there is no evidence to show that latent embryonic rudiments exist, I consider this idea as supported only by the logic of superstition, and not by the logic of science. He forgets entirely Sir Wm. Hamilton's law of parsimony, which forbids us to assume the operation of higher causes when lower ones are found sufficient to explain the observed effects. Virchow was nearly right when he said: "The cellular elements of a tumor are derived from the pre-existing cells of the organism," and before one tissue can be transformed into another it must first return to the embryonic or juvenile condition. A. Lücke says: "A tumor is a growth produced by new formation of tissue
without a physiological termination." Now since it is a fact that in the repair of broken bones, severed nerves, muscles, or tissues of any kind, repair does not take place until the severed ends or edges have reverted back to a simpler type of tissue where proliferation can take place, it is fair to infer that in neoplasms the normal cells of the part have first undergone changes from a higher to a lower type of tissue, and when a certain stage of embryonic tissue has been reached they proliferate and grow, sometimes retaining their embryonic type of tissue, as in sarcoma, and in other cases, being elaborated into the various forms of tumors existing.

In confirmation of this view, let us not forget that there is a growing opinion among the best pathologists of the world that many kinds of neoplasms do originate in the course of irritations and inflammations, contrary to the view held by many of the older pathologists.

In the field of nervous and mental troubles, Ross and Hughlings-Jackson, and others have found degenerative changes, a reversion of structure from the most highly differentiated and least organized, to a structure less highly differentiated and most organized. With this change of structure there exists a corresponding loss of function, and the complex movements seen in health become difficult or impossible, and this is in conformity to the law I have described as the law of degeneration. I hold that the method in pathology should be based upon the facts of embryonic development, for a careful examination of the broadest of facts gives evidence that the life of the body retains vividly the memories of the past. In other words, there is much in pathology to show that when the organism goes wrong it retreats to broader ground or reverts to modes of life which it had come through. Even in the normal functional and structural processes of the mature body, we find occasional evidences of the same reversion to embryonic modes of life. In the periodical formation of the placenta for the intra-uterine nourishment of the child
we have a reversion in the midst of mature life to vessel-making and blood-making such as the body goes through otherwise only during its development.

In rickets the formative powers are diverted from bone-making and spent upon blood-making, and we find the explanation in the intra-uterine connection between mother and child a preponderance of the haemato-blastic function of embryonic cells over the osteoblastic, a reversion in the cell life of the growing frame towards independent blood-making, and traced directly to failure in the placental function.

Osteomalacia, usually occurring in women during mature life, consists essentially of the reduction of the bone to red marrow, as in the first formation of the medullary cavities of long bones; the earthy salts are removed, and all the cells of the tissue acquire an embryonic character. Take the diseases, leukaemia, pseudo-leukaemia, and pernicious anaemia, and we trace them to errors in the blood-making organs, which, having undergone changes to a more embryonic type, produce microcytes or embryonic corpuscles, such as are common in the embryo, but rarely exist in the healthy adult.

The pathology of secreting structures is concerned not only with deviations from their normal activities, but also with an additional series of phenomena, recalling the more elementary or embryonic kinds of cellular activity. Cancers, which are malignant tumor diseases of secreting structures and epithelial surfaces generally have their beginnings in disturbances of the apparatus and processes of secretion, and the changes carry us back to that embryonic activity of cells in mature life, which has been found so frequently in other elementary processes of disease.

In the epithelial parts of the body there is a liability to revert to rudimentary forms of cell life, wherein the epithelial cells reveal their inherent power to act as independent units, or to reveal their spontaneity and their self-governing properties. In those mucous surfaces, most liable to catarrh,
we have a hypersecretion of the epithelium, and, as Virchow said, "The change in the filtrate is due to the change in the filter;" hence I hold these catarrhal processes are best described as a reversion to a more embryonic or more elementary type of cellular activity. These morphological changes of a degenerative character are less obvious in diseases of an organ like the liver, which had been early acquired in the evolution of the animal body, than in diseases affecting an organ like the breast, which is a late (mammalian) acquisition. Numerous other illustrations of the truth of reversion, or a form of degeneration might be given, did time permit.

There is much more truth in this theory than most of you are willing to admit, but the scientific progress in pathology will, I trust, compel you, ere long, to accept the truth that degeneration is the law of tissue change in all diseases, and that the most common form of degeneration is a reversion of structure to or towards the embryonic type.
REPLY TO AN ESSAY, "WHAT IS DISEASE?"

BY DR. JAMES CARTER, OMAHA.

In the essay just read, the author has endeavored to answer the question "What is disease?" Just how well he has succeeded remains for us to judge, after a careful, judicious, and critical examination of his premises, the lines of argument by which he reaches his conclusions, and the proofs offered for their verification.

His answer, tersely stated, is, that "Reversion to an embryonic condition or type as a form of degeneration is the law of tissue change in disease?"

"That this is the law underlying all pathologico-histological changes, he has come to believe." (Merriam.)

The first premise upon which he bases his argument is the law of parsimony, to-wit: "The law which forbids us to assume the operation of supernatural or higher causes, when natural or lower ones are found sufficient to explain the observed effects." From which he deduces the conclusion that the hypothesis of evolution, since it explains more of the phenomena of nature than any other hypothesis, its truth becomes highly probable and by reason of this high probability, it must perforce be a law.

In the first place the evolution hypothesis does not fall under the law of parsimony, since the forces of evolution have not been proven to exist beyond a question, much less to be natural forces. And even admitting all this, the supernatural element is removed but one degree farther away, since the primal source from which they emanated, and by which they are maintained, is unknown, and by it we receive no explanation of the origin of all force and all matter. And
again, the theory of evolution fails to explain so very many natural phenomena that lie within its scope; in other words, the evidence is so defective that it falls far short of that verification necessary to elevate the best working hypothesis to the dignity of a law.

Starting as he does from a false premise, with insufficient verification, his deductions are illogical, and hence not to be accepted in the argument.

Taking up his statement to the effect that the third part of the evolution hypothesis, the so-called "law of degeneration or reversion," is found to have a wide application in explaining the many pathological processes." This is manifestly inconsistent with his other proposition "that this law underlies not many, but all pathologico-histological changes." If reversion to embryonic type exists in some morbid changes only, and not in all which come under our observation, then it is not a law.

Throughout the essay are to be found numerous like instances wherein one statement is contradictory of another, wherein a principle is expressed in an unmodified manner, and again the same idea surrounded and hedged in by many qualifications. In a score of instances he restricts the application of the term degeneration to reversion to an embryonic condition. And this is the basis, the central idea of his entire argument, by means of which he connects disease with the evolution theory. Anon he makes its application broad enough to cover various manifold changes totally different in character, as reversion, elaboration, decomposition, disintegration, and metaplasia, converting it into a blanket term, broad enough, surely, to cover most conveniently all inconsistencies, and he is thus guilty of a reductio ad absurdum of his own argument. In the statement of his law degeneration means reversion, or it means nothing.

In defining disease under the existing state of our knowledge, the most that we dare assert is in the words of Ziegler,
"By the term disease we are to understand a deviation of some of the vital manifestations from the normal, the deviation being conditioned by external influences." A statement somewhat vague and indefinite, formulating a world of ignorance. Compare this definition with that offered by the writer (Merriam), who says: "When because of changed or sudden influences, certain organs or parts of organs or tissues degenerate or revert towards their embryonic type or structure more rapidly than the general system is able to adapt itself, then physiological inharmony results, and we have perverted physiological action; in other words, we have disease." Now what does this comparison show? It shows us the anomalous spectacle of a Ziegler, one of the foremost of modern pathologists, whose name is on every tongue and whose fame shines like a brilliant gem in the galaxy of the world's great names, bowing in humbleness of spirit and in very shamefacedness as he acknowledges his ignorance of the true nature of morbid action and limits it simply to a deviation from the normal.

While our friend, with a boldness and a courage that challenges our admiration, goes a step forward and beyond the greatest pathologist of his time, and announces to us that he has wrested from nature the secret which has so successfully eluded thus far the grasp of mighty genius, he tells us that the deviation from the normal is ever and always a reversion to the embryonic type. That in inflammation neoplasms, and in all pathologico-histological changes whatsoever, the one grand, universal, biological factor is the law of reversion, which he has deduced from the evolution hypothesis.

The fact is, that disease is a very complex problem, made up of many phenomena embraced within the genesis, the etiology, as well as the morphology of morbid changes in cells and tissues. And it is well known that the cellular processes which underlie the various diseases are extremely manifold and extremely diverse in character. (Ziegler.) Ziegler says, "The essential facts of pathological anatomy which have
been gathered and sifted out by the fundamental investigations of Virchow and the labors of Forester, Von Recklinghausen, Klebs, Cohnheim, Eberth, Rindfleisch, and many others, lead us to this outcome of their labors.” That pathological processes fall into four great groups (Ziegler), to-wit:

1. **Hypoplasia, or Aplasia**, which comprises incomplete development of structure.

2. **Retrogression or Regression**, meaning destruction on the one hand and on the other degeneration of parts already formed, the destructive and degenerative changes not being all alike.

3. **Progression, Overgrowth or Hyperplasia**. The characteristic of these changes is an abnormally active growth, also abundant cell production, resulting in hypertrophies more or less general or local, and so-called tumors. Such changes are called constructive or formative.

   Not infrequently constructive and retrogressive changes are correlative, the former succeeding to the latter. This is called regeneration.

4. **Metaplasia**. Comprehending processes which lead to the transformation of one species of tissue into another, and that without passing through an indifferent blastema stage, with the characters of embryonic or formative tissue. Metaplasia play no small part in pathological changes. They are confined to the connective tissues; fibrous tissue, cartilage, bone, mucous, and adipose tissue are, so to speak, potentially convertible. One may pass into another by simple modifications partly affecting the cellular elements and partly the basis substance.

“The processes involved in metaplasia have their physiological and embryological prototypes. Hyaline cartilage, for example, is especially prone to transformation, its matrix often undergoing a mucoid softening on the one hand or a change to fibrous tissue on the other, which areolar tissue may subsequently become osseous tissue or fat, conversely osseous
tissue may be directly converted into fibrous tissue or cartilage.” (Zeigler.)

“The fibrous structures found in tumors are like the normal ones, liable to metamorphosis into others of the same class, as in the highly cellular sarcomatious tissue.” “Metaplasia is to be distinguished from the simple degenerations, as well as from the proliferative processes.” “In proliferation new tissue is formed from a cellular matrix or blastema, which is the result of cell multiplication. In metaplasia there is new tissue formed, but there is no cell multiplication.” (Zeigler.)

Let us now consider the evidences he offers in verification of his deductions.

First. With reference to inflammation, he holds it to be a disease, under all circumstances, and that in every inflammation there is a primary stage in which there is always a degeneration or a reversion to an embryonic condition of the cells, which constitutes the chief biological factor in the process. The only authority that supports him in his position is Strieker and his pupils. Among all of the leading pathologists of the day, not one has signified his unqualified acceptance of Strieker’s views. They one and all maintain that the essential features of the inflammatory process are an increased afflux of blood to the affected part, and an exaggerated tending to cell proliferation and tissue formation from the primal elements furnished by the nutritive fluids and exudations from the blood.

“Recent researches have not tended to confirm the results on which Strieker’s objections to Cohnheim’s theory were based.” (Zeigler.)

Cohnheim has shown that it was impossible to suppose that all pus corpuscles arose from fixed cells, and that even the migratory connective tissue cells of Van Recklinghausen were inadequate to produce the enormous multitude of cells found in pus. Numerous investigations made since then have shown that pus corpuscles are derived solely from the blood and that
cells of the lymphoid type (such as pus corpuscles) are never produced from fixed tissue cells. (Zeigler.)

The change in tissue cells is not a reversion, but a disintegration, a destructive change which may stop at a certain point and be repaired.

The writer (Merriam) says: "Stricker has so clearly demonstrated his position that it should be necessary for him only to refer to it in support of his position." But with the most glaring inconsistency he follows immediately with these words: "The forms of degeneration which may exist in inflammation are various. They vary with the nature of the exciting cause, with the intensity of the irritation, with the character and extent of the vascular disturbance, and with the nature of the tissue." This latter statement, taken in connection with the one preceding, is an absurdity. He all along holds to the idea that the biological factor in all inflammations, yea, in all diseases, was degeneration, synonymous with reversion to an embryonic type. That is the fundamental idea in his paper, that is the great truth he has promulgated, and now when brought to bay, with no possible loophole for escape, he turns in desperation and tells us that degeneration in inflammation means not only reversion, but almost anything else under the shining sun that you care to make it mean. That the forms of degeneration in inflammation are various. They vary with the exciting cause, vary with the intensity of irritation, vary with the character and extent of vascular disturbance, and vary with the nature of tissues. Whether this variation be hyperplasia or metaplasia, addition of new elements, or change from one form to another, whether it be destruction or repair, formation of pus, or union by first intention, whether it be hypertrophy or atrophy, whatever the conditions, and however opposite they may be in character and results, the one convenient way out of the dilemma is to cover the whole with a single word, degeneration. Gentlemen, this is sophistry, and the error is so obvious that I need
dwell on it no longer. Again, a little further on in the essay, we find these words: "When we take into consideration the great field of disease into which the inflammatory process enters as a factor, the value of the degeneration hypothesis is clearly seen." Here the inherent weakness of his position is beginning to dawn upon the intelligence of the writer, as he says hypothesis of degeneration instead of law.

The essay to which we have been directing our attention is a most excellent and brilliant one indeed. It is the outcome of a great deal of thought and study, and an index of a highly cultured mind. And for these very reasons one comes to question in open-eyed wonderment why a paper emanating from such a source should be the very embodiment of false premises, illogical reasonings, and erroneous conclusions. It is filled with specious arguments, well calculated to mislead the unwary into pitfalls. It has been my effort to prick the bubble, to bring out in bold relief the great errors into which my illustrious friend has fallen. Briefly, then, in conclusion, he has selected a single phenomena that occurs in many (not in all) pathological processes, from among a large number of associated factors which go to make up the whole, and reasoning from analogies in the great field of evolution he has deduced a statement which he erroneously dignifies by the title of law.

The question, "What is disease?" is as old as the dawn of human intelligence, and through all the ages since has this query fretted the inquiring mind of man as it now disturbs the placid depths of the great mind of our friend. In response to a great yearning desire for knowledge he has attempted the formulation of a principle of limited application, applying it as a law to a question of great magnitude, co-extensive with the problem of life itself, and so long as the secret of life shall remain an impenetrable mystery, just so long will this question, "What is disease?" remain unanswered.
First. We must know the histological structure, then the nature of vital force and its modes of action; then only can we hope to solve the question of the thousand deviations from which we call disease.

It is true that the history of the world furnishes us with numerous examples of philosophers and scientists, men of genius who have promulgated error and gone down to the grave maintaining it with all the power of which they were capable.

Again has it occurred that men to fortune and to fame unknown have forced ahead of the bustling throng of humanity and announced a principle, which, in the light of future progress and knowledge, came to be accepted as a verity. I say it with the kindliest of feeling for my friend, it is possible that in this glorious land of human liberty there may have been enunciated this day a generalization of a principle that shall engage the earnest attention of the scientific world, and come eventually to be acknowledged as a grand truth. But for the present you and I, as consistent, fair-minded judges, will not violate the law of parsimony, we will not explain what we do not know, but frankly confessing our ignorance, we will maintain that blissful reserve of opinion and skepticism which is such a pleasant and constant condition of our friend's mental faculties, and for which he has become so famous.

The discussion of the papers was opened by Dr. Mansfelde, saying:

It is nothing new for me to open the discussion upon any paper. In this instance, however, I am influenced by the desire to enter my protest against its presentation here. I have heard that paper before, and read it before—reasons why it should not have been brought here.

The criticism of the original essay is not at all equivalent to the paper—it presents a brilliant array of things that are known and some that are unknown, but it does not say one
word about the author's subject, his hobby, the law of degeneration, or what he calls disease.

He says that disease is a reversion of, or to, the embryonic type of tissues. He bases this saying upon the theory of evolution, claiming a reversion of the mature tissues in disease to the embryonic type, that therefore they degenerate. Is embryonic tissue the lowest form of tissue? Does physiology warrant this assumption? Does pathology teach it? No, gentlemen, embryonic tissue presents the acme of creative force, all else are simply the result of environment.

Our friend bases all his talk upon his notion that embryonal tissue, for him the lowest in the scale of evolution, is invariably the one to which tissue reverts, when it becomes diseased.

How the tissue, which in potentiam contains the possibilities of all life, can, if present in disease, play the role of reversion to degeneration, I leave you to comprehend, but beg to draw your attention to inflammation, as that pathological condition which we have to contend with more often. It is not a type of degeneration, but an anomaly of nutrition, hyper-nutrition in consequence of hyper-irritation, unusually prolonged,—and nowhere in all the phases of its career do we meet with embryonic tissue; we have either hyperplasia, i.e., a multiplication of the same elements constituting the tissue, as in epithelial tissue, or hypertrophy, a simple enlargement of the same tissue elements, as in muscle fibres. Or we have so rapid a multiplication of the one that its elements remain immature or green, and die rapidly, thus forming pus, first having crowded the other elements from the food sources, thus initiating their decline and final destruction. Does the author of the paper refer to cicatricial tissue as embryonic and therefore apropos to his hypothesis? Cicatricial tissue is not a reversion, it is simply the wreck, the ruins of a conflagration. Who would call these debris embryonic tissue? I fear our author in chasing his favorite phantom, and he has
been at it for some time, does sometimes see things which are truly imaginary. He endeavors to strengthen his position by statements, some he claims are Zeigler's—(well, if they are, they are made in editions of the author's work published since I left Ashland)—statements, I say, which do not bear the touch of scientific criticism; they sound well, but are very fragile. But whatever his hobbies may amount to, they are worthy of attention rather than long-winded and withal empty tirades, misnamed "criticism."

By Doctor Merriam: Just one word with reference to the quotation which I used, and to which the last speaker referred as if it did not exist in any book. It was one published since he left Ashland. You will find those words exactly in Ziegler. If they are not in my book, then I have committed a great error indeed. All my references to pathology are taken from the pathologists of the day, and not from any knowledge or original investigations of my own. I find myself in common with the rest here, we get all our knowledge from one source, or from the same source rather. None of us can claim to be original pathologists.

So far as any pathological knowledge concerning inflammation goes, all that any of us can claim to possess is what we gain from other persons, and not from any one present. We must, in our discussions, use the theories which are promulgated by Virchow or men of like standing.

By Doctor Mansefelde: I wish to say that Ziegler has got out his third edition, which may change that point very materially.

By Doctor Merriam: Mr. President, ladies and gentlemen: I have only a few words to say in closing this discussion. My object in writing this paper and bringing it before you was to cause a discussion on pathology, to waken up some interest in the subject. Though presented two years ago in another form and at another place, it is now modified and
improved. It is customary to have a second edition of books and papers, etc., in accordance with the progress of events and the progress of ideas. I do not hold in every respect the ideas that I held two years ago; neither do I expect to hold the ideas five years hence that I do now. If I have learned something in two years, I am glad of it. It is very proper, I think, that the subject should be discussed.

My critic, who prepared this very able criticism of my paper, says I have no one but Strieker and his pupils to support my position in regard to inflammation. That may all be true. Strieker writes only of inflammation as degeneration existing in inflammation. I have, from my reading, gone a step further, and hold that degeneration, or some form of degeneration, exists as a factor in all forms of disease.

My worthy critic says that I use a blanket term, which is broad enough to cover the whole field. Let us see about that blanket term, whether it is broad enough to become a law. Facts are absolute knowledge. Hypotheses are guesses at truth. If I have made a guess at truth and there is an element of truth in the guess, so far so good. If it falls like thousands of hypotheses, let it fall, it will at least do this much—stimulate thought in the direction of a progressive pathology. When an hypothesis, or guess at truth, becomes so well founded, or becomes very well founded, very well substantiated, then it is regarded as a theory. When it is fully substantiated, then it becomes a law. Now, a law is a uniformity of nature, of greater or less generality. In order to be a law, it does not necessarily follow that it must be perfect in every respect, for you may study physics, the law that light moves in straight lines, and the law of gravitation, and you find imperfections in them. It may be in the days to come that you will need some improvement or addition to the so-called law of gravitation.

It is true that the promulgations of science often fall upon barren soil, hence do not take root and flourish, until in the
fullness of time the age has become ripe, then they are not long in joining in this guess at truth.

If this fall upon barren soil, in some respects I am not responsible for it, but if it will stimulate any one or more of you to a closer study of the fundamental principles of pathology, and the nature of disease, I am satisfied.
EIGHTEENTH ANNUAL SESSION.

TYPHOID FEVER.

OBSERVATIONS EXTENDING OVER A PERIOD OF NINETEEN YEARS—1867 to 1886.

BY ALFRED SHIPMAN, M.D., PLATTSMOUTH.

My observations of the diseases prevailing in Nebraska extend over a period of nineteen years, and I may say with all due diffidence, that that period of time should entitle me to the position of a creditable witness.

A somewhat extensive experience with the various forms of fever that have prevailed here during the period above named, inclines me to the belief that a record of my observations might be of some practical value.

Previous to the year 1870, typhoid fever was unobserved. During the years 1867, '68, and '69, malarial fever was very prevalent.

During the earlier part of the above named periods the fevers encountered were of the intermittent varieties. Later on, the remittent form predominated, and after 1870 I occasionally found a form of fever which would not yield to anti-peridics, in fact was made worse by active medication. This form of fever possessed many of the features belonging to the ordinary remittent, but very few of the symptoms of typhoid. The degree of fever present was subject to great variations, and there was an evening rise and a morning decline, and the fever frequently went off in the form of a curable intermittent, and I was in the habit of calling it simple continued fever.

The change from the continued to the intermittent form was frequently announced by the patient dropping into a con-
dition of collapse (congestive chill), and he then required the most active and persevering efforts to rescue him from impending death. At a later period we met with more of the typhoid elements, and in the summer of 1872 I treated the first case of genuine typhoid fever I had ever seen in Nebraska.

This was a typical case occurring in a young man aet. 19 years, and possessed in a marked degree all the characteristics of genuine typhoid fever. He had complained of lassitude, inability for exertion, with prostration gradually increasing, until he was compelled to take to his bed. There was severe frontal headache for the first eight days, then mental dullness increasing to stupor. The roseola eruption was distinct over the whole abdomen; there was tenderness and gurgling, particularly marked in the right iliac fossa. The bowels confined at first were very easily moved, and in the third week diarrhoea came on, the evacuations being of the characteristic yellow color. He passed through the disease without any especial mishaps, but convalescence was not established until the forty-second day.

During 1873 I met with seven cases of fever bearing a close resemblance to typhoid, but with more or less of the malarial element present, the fever running on for about twenty-one days. They were all mild cases and I regarded them as examples of what is generally called typho-malarial fever.

During 1874 I saw no case in which typhoid symptoms appeared, but in 1875, during the fall months, I met with thirteen cases, and during the spring and fall of 1876, eighteen cases, in all of which the typhoid characteristics were well marked, and the malarial element seemed almost entirely absent. During 1877, I encountered fifty-six cases of fever in which malarial symptoms predominated. Some of these cases persisted in spite of treatment, running on for from twenty-eight to forty-two days, but in a great majority the fever
ending about the twenty-first day, and in some few cases in from nine to fourteen days, many of these cases were characterized by early and obstinate diarrhoea, the stools being of a dirty brownish or yellow color, and extremely offensive. There seemed to be in nearly all cases great derangement of the functions of the liver, and the spleen was generally enlarged. There was much variation in the temperature, and it was commonly observed that in the more severe cases the morning was above the evening temperature. Hemorrhage, nasal or intestinal, was a very common complication. Intestinal perforation occurred in two cases, and was verified by post-mortem examination. In one of these cases the patient, a lady, was convalescent and had been out of her bed six days, in spite of the protests of her medical attendant had eaten a large quantity of cheese, and was seized with severe abdominal pain soon thereafter. The examination revealed the partly digested mass in the peritoneal cavity, a considerable portion of the conference of the ilium having given away as the seat of a large ulcer that was in process of healing.

During 1878 and 1879 I saw no cases of typhoid fever, but from July 4, 1880, to Jan. 1, 1881, I had the good, or rather I might say bad, luck to encounter no less than one hundred and two cases. I will call it bad luck because I nearly sacrificed my own life in my efforts to properly care for my patients, and, gentlemen, let me assure you, I did care for them, I did not neglect them, I visited them by day and by night, without sleep, hungry, tired even unto utter exhaustion, I continued my work in sunshine and storm, and, gentlemen, I came off conqueror in the end, and with the proud satisfaction which any physician can realize when I tell you but two deaths occurred among all that number of cases. Now some will say they were mild cases. Well, many of them were. Forty of them were of the mildest form, and required only ordinary attention, the fever ending from the eighteenth to twenty-first day; I believe in no case was conva-
Iliac tenderness was marked in about one-half, and slight tenderness present in many others. In the mildest cases pressure over the bowels caused but little discomfort. Gaseous distention of the abdomen was generally present in all cases where diarrhoea was a prominent symptom; severe diarrhoea was present in only seven cases, more moderate looseness of the bowels existing in thirty-one cases, but generally not present until the third week. In all cases the evacuations were of an ochre yellow color, and when severe diarrhoea existed the discharges were of the character of a dirty yellow water. Suppression of urine for twenty-four hours occurred in two cases. Retention, requiring catheterization, in eight cases. The tongue was but slightly coated in the commencement, generally acquiring a greater accumulation later on, then after a time the coating would begin to strip off, leaving the organ red and glazed, in other cases dry and brown. Tonsillar enlargements were occasionally present. Dullness of hearing was a nearly constant symptom. Free perspiration was present in many cases, and sudamina covered the
chest and neck. Bed sores were not common, but occurred in four or five cases, in one case being very extensive and troublesome. Spleenatic enlargement was present in numerous cases. Subsultus tendinum was more or less constantly present, and in one case it was so constant and violent that it was impossible for the young man to handle any object or to stand upon his feet, and was out of proportion with all the other symptoms, the fever never going above 103 degrees and convalescence occurring the twenty-first day. The delirium present was generally of the mild passive form, but in a few cases positive restraint was required; in case the temperature ran high the restlessness was correspondingly increased. There was generally frontal headache during the first eight days, somnolency and indifference later on, generally followed in severe cases by more or less stupor. The pulse was not generally greatly accelerated, seldom going above a frequency of 110. In one case it was as quick as 160 per minute for some days, and in another (adults) it never was above 82. The temperature was closely studied in all cases, the nurse being required to take the temperature at morn, noon, evening, and midnight. In mild cases the morning temperature was generally about 100, the evening about 101 to 101½. Uncomplicated cases of a severe character generally gave a morning temperature of 101 to 103½, evening temperature 102 to 105. In no case uncomplicated with malaria was the temperature above 106, but in one case wherein such complication existed the temperature reached 108 and in this case dropped to 100 in the morning. This young man came very near dying in the collapse which preceded convalescence. This was the only case where the malarial symptoms persisted to the end in spite of all treatment. In no case did the fever convert into a curable intermittent or remittent, as such would have been the case, in at least some instances, had the fever been of malarial origin. No arsenic was given in any case, but in nearly every one the hair fell out; in those
who had straight hair, the new crop was generally curly, in others the reverse obtained. The shortest period before convalescence was 18 days, the longest (one case) seven months, the average time about 31 days. The youngest was 16 months, the oldest 56 years, the great majority were between 15 and 30 years of age. The married were 28. There were 59 males, and 43 females. In the two fatal cases, in one death was caused by intestinal perforation, in the other intestinal hemorrhage was the immediate cause of death.

CAUSATION.

This fever is said to be caused by filth, sewer gas, decaying vegetable or animal matter, etc., etc., but I could not trace it to any such source. The individuals attacked were generally of the better classes of our people, living, with very few exceptions, in good comfortable houses, which were cleanly and well ventilated, and their surroundings all that could be desired. The water supply was abundant and pure. More cases occurred on the high than on the low lands. Among those first attacked was a family recently from Ohio, and who resided in a new house built on elevated ground surrounded by rolling prairie. The house was new and clean, the furniture was new and clean, a well was made and it afforded the purest of water, and yet of this family of nine persons the only one that escaped the disease was the husband and father, he being past 50 years of age and therefore not so susceptible to the disease. One of the daughters died from hemorrhage, and one was sick for seven months.

TREATMENT.

Holding to the belief that the so-called typhoid fever (enteric fever is the proper term) is nothing more or less than a specific inflammation affecting more especially the small intestinal glands, more particularly those known as the glands of Peyer; that all the processes gone through with at the
seat of the disease were of inflammatory character, there being first hypersemia, then active congestion, and consequent blood stasis infiltration of the tissue, followed generally by ulceration; that the intensity of the fever generally bore some definite relation to the extent of the intestinal lesions present in each case, and that the fever was caused by the intestinal disorder, and not that the fever produced the intestinal lesions; believing that the fever was recovered from as soon as the ulcerations healed, being in this sense self-limited, and further being well satisfied that there was no known means of cutting off the disease in a summary manner, I did not regard it as my duty to make any violent efforts toward subduing the fever, but rather to endeavor to conduct my patients safely through the disease; believing that of all means adopted to prevent a fatal termination none were of such importance as the systematic reduction of body heat, or rather the preventing of an inordinate rise in temperature, thereby lessening the rapidity of tissue metamorphosis, and thereby saving to the patient much of strength and vitality, I adopted the following plan of treatment:

And how, do you ask, did I go to work to keep the fever in due bounds? I made use of an antipyretic, not antipyrene nor quinine. You would regard a fireman as a very foolish man who would go to work throwing bottles of quinine or antipyrene into a burning building in order to quench the flames, you would say he should use water. Water is what I used and still use in order to reduce body heat, to put out the fire of a fever or an inflammation. It is nature's great dilutant, nature's greatest antipyretic.

I was firmly of the opinion that if the temperature was held below 103° there was scarcely any danger to life. I made use of water, to which a small quantity of bi-carb. soda was added. If the temperature was, say 101°, a folded towel wet with tepid water was laid upon the abdomen.

If the fever was increasing, the hands and face were fre-
quently bathed. If the rise continued, the whole body was sponged; if this was not sufficient, the temperature of the water was lowered, and used more frequently. If this failed, or rather was insufficient, the whole bath was used, and in this manner, without the use of the whole bath, except in but a few cases, I was enabled to keep the temperature within proper bounds.

In one instance in which it seemed almost impossible to hold the temperature below 106°, the weather being very warm, and the patient occupying a very ill ventilated room, I surrounded his bed with tubs of ice, with the effect of reducing the temperature of the room to 80° and holding down his temperature to 103°. This was greatly to his comfort, and his friends followed out this plan as long as was necessary.

Lemonade, the acid partly neutralized with soda bi-carb., was given in nearly all cases, especially when the skin was dry. In case the kidneys were inactive, sweet spirits of nitre was added to the neutral mixture.

In relation to internal medication, in all those cases showing any symptoms of malarial influence quinine was given in moderate doses, generally to an adult in quantity of three grains every two hours from midnight until noon, and in every case but one it seemed to promptly succeed in the removal of the malarial element. But here its influence for good ended, and if its use was persisted in after this result was obtained it did harm. Stimulant doses of the quinine were used in some cases during convalescence, but as a rule the infusion of serpentaria, or the tr. gentian co., were more useful.

In all cases where the tongue was red and glazed, or dry, the oil terebintha in the form of an emulsion was given; it seemed to do much good, and I soon came to the conclusion that it had some especially beneficial effect upon the intestinal lesions. If diarrhoea was present a quantity of tr. opii was added to the turpentine emulsion. This generally sufficed to control the bowels, but in some cases astringents were required.
In cases of intestinal hemorrhage, the aromat. sulph. acid was used and always seemed to give good results.

In one case ergot was given, but the hemorrhage persisted; a change to the acid treatment gave prompt control; restlessness and coma vigil were relieved in an extremely satisfactory manner by chloral hydrate.

The diet is of prime importance in this disease. I am satisfied it is the too common practice to force the feeding.

When there is a total absence of desire for food, I do not force the patient to eat; loading the stomach at such a time does harm instead of the good intended. When the digestive organs are again in condition to discharge their functions the sensation of hunger will return, and then we should guard the feeding. I regard good, pure, fresh, cold milk as the one article at all times suitable food for the sick; it contains all the elements upon which vital activity depends. In this fever I generally give it in suitable quantities every four hours.

Alcoholic stimulants are rarely required in well managed cases, but extreme prostration would be an indication for their use.

Since 1880, I have seen comparatively few cases of enteric fever, in all about forty in number. They have been treated in accordance with the plan briefly detailed above, and with results entirely satisfactory, but one death occurring, and I can see no reason why I should adopt the plan of treatment advocated by some German authorities, namely: large doses of calomel for the first three or four days; and I have observed that where this plan was followed the results were very unsatisfactory; neither can I endorse that awkward, dangerous, I might say foolish, plan of giving enormous doses of quinine for its antipyretic effect. It only reduces the temperature while its paralyzing effect upon the motor centers lasts. I can readily see, however, where either of those plans of treatment would be admissible, namely: cases of malarial fever, which disease is frequently mistaken for enteric fever by those who
are not close observers, and who are unscientific enough to blunder along through their professional careers without calling to their aid that priceless diagnostic contrivance, the fever thermometer.

By Dr. P. S. Leisenring, after the reading of the paper: Mr. President, I agree in the main with the sentiments expressed by the writer of the last paper. Typhoid fever, as he states, I think is almost a misnomer in Nebraska, so far as my experience has gone. We used to have it in Pennsylvania. I think I can recall not more than one or two cases of the so-called typhoid fever in the eight years that I have been in Nebraska, and these were somewhat modified. As to his treatment, I also endorse that in the main, particularly that part of it which is in opposition to the present mode of giving large doses of quinine. I am opposed to these excessive doses of quinine in fevers of any kind, even in malarial attacks. I think that, by giving an ordinary dose of three or four grains, we can have the same effect; in fact I have had the very effect in giving ordinary doses, frequently repeated, as in giving large doses. Some of our physicians give as high as thirty or forty grains.

The mode of keeping down the temperature I endorse. The paper as a whole I endorse.

By Dr. Lanphear: I would like to know what name the Doctor gives the fever, if he does not recognize it as typhoid fever.

By Dr. Leisenring: I call it enteric fever.
PSEUDO MEMBRANEOUS ENTERITIS.

BY G. L. PRITCHETT, M.D., FAIRBURY.

While this disease was described many years ago, and is said by some writers to be not one of the class of rare affections, the rarity with which it is met in private practice and the still rarer mention made of it by writers in current medical literature makes it of sufficient interest to call your attention to it. The best history of croupous inflammation of the intestines to which I have had access is by Dr. Philip S. Wales, in Pepper’s “System of Medicine.” The first separate account is accredited by Dr. Wales to Dr. Good in 1822. Bartholow refers to De Costa’s as one, if not the best, of later descriptions of this affection. It is remarkable how many standard works make no mention of this disease.

Watson, in his classical work, makes no mention of it. Neither does Hartshorne, in his admirable little work, “The Essentials of Practice.” Nor does Tanner, in his more pretentious “Practice.” Davis, in his late volume, while devoting a lecture to diseases of the intestines, has not a word on this special form of their diseases. With the exception of the article by Wales in Pepper’s “System,” and an article in Bartholow, I have searched in vain in those works to which I have access for a mention of this most obstinate and troublesome complaint.

While I have been a constant and somewhat careful Journal reader for a number of years, I fail to recall a single article on the subject.

In the Proceedings of this Society of last year a case was reported as having followed a confinement. This case terminated in an abscess, followed by recovery—a termination
referred to by Bartholow. Since reading that report I have been led to doubt the correctness of classifying it with the disease as described by Bartholow and Wales. The disease as described by them is idiopathic, while the case reported by Dr. Ballard seems to have depended on a traumatism, occurring during gestation or delivery.

The subjects of this disease usually, if not always, belong to the class of nervous temperament. Of the cases which I have seen, four in number, all have been of that temperament.

Women largely predominate, according to Wales and Bartholow, and of my four cases three were women. All of them were of slender build, inclined to be tall, and wanting in muscular development.

Two were blondes, and two of the brunette type. Two were less than thirty years of age, and two less than forty years old.

The histories given by the subjects were that they were all below the standard of vigorousness during childhood and youth. The establishment of menstruation was attended with difficulty in the case of all the women, and subsequent ovulation was irregular or painful. One of the cases suffered from membraneous dysmenorrhoea for several years, one from extremely painful periods until the internal os uteri was repeatedly dilated, the remaining one from great irregularity as to time in menstruation.

The man suffered from various functional nervous diseases, and some sexual debility. Of the four the man was the only one who consulted me for the intestinal trouble; the uterine symptoms were of so much more prominence in the cases of the ladies.

All of the women have received some benefit from treatment of their menstrual irregularities, as evidenced by improvement in their general health, and what local difficulties were recognized were either relieved or very much benefited.
Spinal irritation was a prominent symptom in all of my cases. One of the ladies had symptoms of hemiplegia. The initial symptoms of the disease are those of general debility, accompanying the more serious of constitutional diseases, the neurological element showing itself strongly. Anorexia was almost constant with two of the ladies; the other had a voracious appetite, craving the richest and most indigestible articles of diet.

The man had alternately anorexia and an insatiable appetite. Departures from a plain diet invariably brought as its consequence an attack of pain. All of them were sufferers from constipation to a greater or less extent, and want of attention to the condition of the bowels aggravated the attacks.

The symptoms of the paroxysms were a general feeling of uneasiness, with back-ache, pain across the loins, anorexia, or perverted appetite. Sometimes a severe aching of the whole head, and particularly of the occiput, frequently extending to the back of the neck. A feeling as if the bowels were obstructed, followed by a sense of numbness extending over the whole body and extremities, followed by rigors of greater or less severity. A boring pain in the abdomen, near the umbilicus, passing through to the back, with an acute sense of soreness or rawness in the intestines.

Sometimes severe nausea comes on as the attack progresses, accompanied by vomiting. The bowels at this time are always constipated, unless under the influence of a cathartic.

The action of the heart is rapid, and the pulse particularly weak and thread-like. As the paroxysm passes off the action of the heart slows down and the pulse becomes tense and full.

The mental distress of the sufferer is pitiable to behold. A sense of impending danger or dissolution takes possession of the patient, and no assurances from the attendants or friends or recollections of former experiences will remove it until the attack is relieved, when frequently a corresponding
exhilaration will follow, and the person who a few hours before was in the mire of despondency will be lifted to the highest pinnacle of expectant happiness. Occasionally the action of the kidneys will be restricted, and it may be suppressed for a few hours. Spasm of the spincter of the urethra may require the use of the catheter to empty the bladder.

There may be an annoying vesical irritation, with frequent desire to micturate, the act accompanied by much pain. Suppression of the function of the kidneys for a few hours I have noticed occasionally, and imperfect action may extend over several days. The patient's abdomen during the attack swells up, and conveys a peculiar tense, doughy sensation to the touch. The transverse and descending colon can be mapped out with an unusual degree of distinctness.

A great degree of tenderness of the abdomen exists, the patient using as little covering as is permissible on this account, but unlike in peritoneal inflammations, prefers to lie on the back with the limbs extended.

There are no symptoms of colic, except the pain; no attempt at relaxation of the abdominal muscles. There are frequently tonic contractions of the flexors of the upper extremities and a disposition to throw the head and shoulders backward.

To one who has practiced medicine in the malarial regions of the East, the first impression on seeing a paroxysm of this disease would be that they had a case of pernicious intermittent fever to deal with, the expression of the patient, great prostration, and rigors being very similar, but lacking usually the severe vomiting and diarrhoea which accompany congestive chills.

Following an attack of pain the patient begins to pass larger or smaller quantities of the discharges peculiar to this disease—a thick, tenacious membrane occurring in shreds and larger pieces, sometimes perfect casts of several inches of the large intestines. Some writers mention them as being
many inches in length, but I have not seen such specimens. The membrane frequently has a peculiar fleshy appearance on one side, as if there had actually been an extension of the circulation to it. At other times it has a shrunken appearance, as if it had been detached for some time, which I think quite probably is the case. It varies in thickness from a line to three or four lines. It is entirely unlike the mucus and lymph of dysentery, either chronic or acute.

I approach the subject of treatment, particularly by medication, with some misgivings, as I am not able to offer any suggestions which have proved of curative value so far as I am able to follow the effect of their administration. Much can be expected from special diet and general hygienic supervision.

Of all the medicines I have used, tonics seemed to accomplish most, and particularly the class known as nerve tonics, strychnia leading. Small doses of arsenic I have thought useful, as well as full doses of physostigma. Very much can be done to prevent the paroxysms being severe, and, it may be, their frequency. I have found castor oil with turpentine, in active cathartic doses, taken when the first symptoms of a paroxysm appear, of chief importance. No other laxative or cathartic has answered me nearly so well as this. During the paroxysms, morphia, hypodermatically, should be given as freely as may be required to secure relief from the pain. While I have tried nearly all other sedatives and opium administered in other ways, I have learned to rely entirely on my hypodermic syringe when sedatives were required. Hot applications to the abdomen and extremities assist in making the patient more comfortable, but morphia to relieve the pain, and castor oil and turpentine to shorten the paroxysms are the essentials of medication in this complaint.

The hygienic surroundings should be the best attainable, perfect ventilation of the rooms, and in suitable weather living out of doors, suitable clothing for the weather, with
woolen undergarments, particular attention to keeping the skin active and the feet warm and dry; change of air and scenery has had a marked beneficial effect on those of my patients who were situated so they could indulge in such luxuries, clear, cool, dry atmosphere conducing to their comfort. I would advise high latitude and altitude as suitable climate for the summer, and a low latitude and high altitude for the winter. One of my patients thought he received great benefit from staying in the pine and fir forests of northern Minnesota one summer; he also ate as much fir gum as its effect on his kidneys would allow him to.

Bartholow thinks the balsams hold out some prospects of good from their use. While I have used them, their effects seemed very temporary and their action on the kidneys has precluded their use often in a short time.

Upon the subject of the etiology and pathology of this disease I have said nothing, as there is nothing but conjecture to offer. The opportunity to obtain morbid specimens seems to have been rare, and as to the cause of this ailment, all writers seem to be in ignorance. My observations in the limited number of cases I have seen would lead me to look to the central nervous system as the probable seat of this obscure and intractable disease.

I hope this short and imperfect account, drawn entirely from my experience and study of four cases of this complaint, may lead to a discussion which will develop some more benefit for them in the way of treatment than I have been able to give them in the past.

Note.—Since writing the above, nearly two years ago, I have been able to add another case of this disease, making five in all. Three of the first four cases are making steady progress toward recovery. In one of those there has an ab-
cess formed and discharged into the descending colon as near as it was possible to determine, followed by improvement.

One was apparently benefited by blisters applied over the spinal column.

I still stand by my observation in regard to treatment and give strychnia the first place. I regard the disease as a neurosis of the spinal cord and neighboring ganglia. My first case was apparently relieved in about three months' treatment, following the foregoing theory of the ailment.
NEPHRITIS.

BY A. BOWEN, M.D., NEBRASKA CITY.

On June 3d, 1884, I was called to Bertha K., a German domestic, who described herself as having been obliged early in the preceding March to leave her place of service by taking a severe cold, which had never loosened its hold upon her.

It is a very unsatisfactory proceeding to arrive at any accurate knowledge of the history of a medical case from the lips of a person unacquainted with the language in which you address them. As a general rule, they give an affirmative answer to every question they do not fully understand, and they do this from motives of politeness. They dislike to appear ignorant or indifferent, very much in proportion to your efforts to make them understand.

She complained of pain in her head and back, and there was general anasarca; but this alone gave no special clue to the disease, for it was plain to be seen from her pasty complexion and general appearance that she was of a leucophaematitic habit. One appearance attracted my attention, I may say, riveted it. The eyes were protruding, and a vague and uncertain stare led me to question her with regard to her sight, which I found was very deficient and getting worse. These symptoms led me to suspect albuminous retinitis, and the most cursory examination of her urine confirmed my suspicions. Fully one-half of the bulk was albumen, and there were innumerable casts developed by the microscope. It was acid in reaction, and varied from a smoky appearance to that of sour porter. It finally became very difficult for her to void it, and I was obliged for a full week to draw it with the catheter, while teaching her sister-in-law to perform
this office for her. I found no relief to her symptoms from mild purging and diuretics, and about June 20th I administered drastic doses of podophyllin and jalap, as uræmic convulsions had set in. She had, I think, fourteen, and the case seemed very grave. From this time there was something of amendment, sufficient to encourage me to further efforts in the same direction with active cathartics, and digitalis, iodide potash, and warm baths. As soon as the worst symptoms subsided, I found benefit from Wyeth’s preparation of calisaya and iron. After a few months my patient seemed restored to a perfect state of health, and remains so to the present time, having married and become the mother of children, without a symptom of further nephritis.
THE TWENTY-THIRD CENTURY OF MEDICINE.

BY J. S. LEONHARDT, M.D., OF SEWARD, NEB.

"And the vale of Siddim was full of slime-pits."—Gen. xiv. 10.

The student of history will discover among the many vocations that have entered the magic, sorcery, and general intellectual bankruptcy of the Middle Ages few callings emerging more conspicuously great than the profession of medicine.

To-day, on the boundary of a large and splendid domain rescued from error, stands its temple, in strength and beauty like the Alhambra of old—at once a fortress and a palace. Why should it not eternally abide, and, as it has been in the past, so be in the future, a monument to the triumph and glory of unfettered thought? There is no reason why, from the lantern in its dome, towering high above and far beyond the lesser lights of the other professions, it should not forever lighten the unexplored waters of the future with an unsullied, unvarying light.

Thus stands the temple of medicine, founded on the rock of ages and dedicated to humanity; her numberless niches sheltering the sacred ashes of a multitude of chivalric men, who have dared to cast the gauntlet of defiance into the very jaws of death, who in a thousand hand-to-hand encounters with life's fell enemy have wrested fellow-men from his cold, merciless grip or robbed him of his terror. From its portals, leading down the vista of centuries till lost in the twilight of fable, may be traced its broad, well-defined line of progress; like the course of a great river, with few tributaries and a single unfailing source—not full of uncertain wanderings, but rectilinear—through many unwholesome marshes and stagnant lagoons inhabited by the superstitions and
frauds of the ages from fetichism to homoeopathy. But alas! Bright lights cast black shadows. On the restless ocean of thought, fading away into the viewless distance, illumined by that lantern in the dome of the temple, one may now discover many piratical crafts, armed with assumption and proselytism, plundering the merchantmen of medicine, freighted with valuable cargoes as essential to our well-being and progress as were the corn-ships of Africa to ancient Rome. On the mainland stalk undismayed, because unchallenged, horrid and infernal Gorgons and Medusæ, carrying high their hideous hydra heads, depredating and destroying. To all this must be added a spirit of sedition, pervading, perhaps, not the sanctum sanctorum, but many of the temple inmates; it may be as unseen as it is unheard, yet, silent as it is, it lies very deep, and may one day be sorely felt. To consider a few of these "shadows" and to suggest a "dispellant" is the object of this attempt.

By that unmanly host prowling the intellectual deep, is meant that class of medical tradesmen who, by parading themselves in the garb of a physician, ply a business in diseases and drugs after the manner of a politician or social trickster; that smiling class who for sordid gain will pander to and court all sorts of "rings" and collusions, thus prostituting a profession of which they are not fit or worthy to be called the slough. It is that class which the London Medical Times charges with "professional myopia" because they lose sight of all dignity and rectitude in their mad wild chase after wealth, adulation, and the fruition of selfish motives; that class which in old England has been infected with American strikism, and has there struck for royal recognition as a titled class. They are in America also, and their ready acclimatization without loss of fertility or quality is equaled only by that of weeds or other noxious elements. Dr. A. L. Gihon, of Baltimore, in an address before the ninth annual session of the Academy of Medicine, also notices this same
medical adventitious product. He recognizes in the tendency of the times a disposition to belittle the profession of medicine to a trade in medicine; deplores the indignity and suggests that those who persist in the methods of the shops be catalogued as such. It is a class that would cause Martial to say: "Their existence is proof sufficient of the emptiness of heaven.

They could not thrive
If there were any God alive."

One may find them in the crowded marts busy as an Austrian Jew or a Venetian merchant, operating great benevolence, wisdom, and utility; a sort of three headed monster, in their hands the motto of a region over whose craggy entrance is inscribed a dark and deadly legend. Again they may be found attending some fashionable church, peradventure they are members; or basking in the smiles of some upper ten circle, in both of which they perhaps keep themselves prominent by donations and the frequent calls that unavoidably detain or interrupt their presence. So conformable to existing environments is their social polymorphism that the name "Aleibiadeans" might be universally accorded them. After one Aleibiades, who is known to have been more of a Boetian in gymnastics than the Thebans themselves; a better jockey than any Thessalian, and more courageous than a Lacedaemonian; one who out-drank the Thracians, and out-loved the Lesbians, whose chief morality consisted not so much of chastity as in not being caught. These conjurers in medicine know well how to use books, magazines, and specimens to peculiar and unpredestined ends. They make a most formidable and often obscene display of surgical instruments and appliances for similar ends. They likewise evince a consummate skill in the arrangement of chairs around a table in the center of the room in order to have it inferred that a most delicate and protracted operation has but just been completed. They are skilled in a terrible but euphonious nomenclature;
they would not presume to administer a dose of santonine, extract a tooth, or leave town for a day without informing thousands of unoffending and defenseless readers of the fact.

Now this would appear amusing did it not have a gloomy significance; it means that the patricians in medicine are calmly permitting a species of professional prostitution to go unquestioned, which, while it may not directly affect them, will, by spreading its nefarious influence, sap the life as it now does the strength of that growth which they so much laud and so little appreciate. I speak advisedly when I thus charge the dictators of the profession with a sin of omission, for surely it would seem that some Æsculapian Pompey would else have rid the waters of these pirates ere now.

From these we naturally come to that branch of their tribe infecting the land, and which represents one of the Gorgons mentioned above. These are the "quacks," the "scalper deformity," medical vampires who, like the Scythians of the past, came no one knew whence, bearing a destruction peculiarly their own; pitched their tents among the ignorant and susceptible, and grew "sleek and round-bellied" in a land overflowing with plenty. These nomads consist of several families, the most prominent being the "cancer," "pile," "rupture," "female weakness," "youthful indiscretion," "free prescription," "G. G.," etc., etc., doctors (?) So wide spread are these omnivorous ghouls that an area beginning on the west coast of Europe, extending from Sweden to Australia, thence in a parallel eastward to the place of beginning would hardly contain the acreage of their field.

The continuity of this vast belt has been threatened in Pennsylvania, New Jersey, and a few other states, in the form of a crusade or else a board of medical examiners. This affects only individuals, and I am not aware of any similar demonstration having been directed against the many institutions of cure thriving under the name and sign of "Inebriates' Retreat," "Lying-in Homes," etc., etc.; nor those gigantic
institutions of many of our larger cities which send out tons upon tons of (often vulgar and always worthless) printed matter in the form of "medical adviser," "marriage guides," "guides to wealth," "advice to the unmarried," "guides to love," etc., etc., all claiming to be "worth millions to any one;" or else great folio posters adorned with caricatures so vile and execrable that they would be a discredit to both the ability and the sense of a Kiowa Indian artist. These banks of villainy and cupidity may be defined as the crystallization of all the vicious potentiality of nomadic quackdom, the centralization of the democracy of medical adventurers. And yet they could give very fair reasons for their existence, even on the score of morality and utility; they could, if required, bring in the testimony of the great majority of both the religious and secular periodicals. The first might have for its excuse the fact that it is another means of directing mankind to the other world and enlightening its readers concerning the uncertainty and shortness of this life. For the secular press there is excuse or mitigating circumstance. If, perchance, the moral judge deemed the testimony inadmissible on the ground of its being hearsay, still in the plea it could be said, and with much showing of truth, that among physicians, often of the highest rank and in good repute, medical ledgerdemain is practiced as a fine art, one of the accomplishments, as it were, of an education medically supreme; that often the chosen leaders of regular monthly or annual sessions owe their official elevation and majesty to allied sleight of hand; that the inharmonious conventions of the regular profession, owing to assumed and assimilate tact, often lead the confiding and unsuspecting into dire and calamitous committals. They could comment with much sinister effect on the anomalous but interesting spectacle which the foremost society of the new world now affords.

Another one of these malformations is the credulity of the medical man of to-day, which encourages and supports those
immense manufactories in which the ingenuity and capital of so many individuals and corporations is engaged; I mean the oleo-acidine-elixio-food-peptone concerns. Sad comment on rational medicine and pharmacy that they are! Individually and collectively we have striven to educate the laity respecting the dangers and evils of the many-faced nostrum; preached to them that disease is not an entity, but a shadow—"the shadow of death"—nor treatment a stock of receipts; and yet, have not very many of us taken the "free sample" bait, and introduced combinations of similar stuff under a new name, and seen—to our disgrace be it said—these same preparations standing side by side with "Jayne's Expectorant," "Hall's Lung Balsam," "S. S. S.," etc., etc., their gold and saffron tinted labels bearing the same omnigenous nosology. Over them might be written: "In these has rational medicine been displaced by puerile credulity, and rank empiricism let loose upon the land." Our humility should be infinite, to thus aid the patent medicine traffic, which flourishes among us to-day as proudly as it did in ancient Greece; which boasts a patronage larger and more remunerative than the followers of Sims, Parker, and Gross. It is unpardonable. Who have committed this great moral and professional crime? Who have outstripped Pandora in her folly—opened the abyss of suffering and death—and then fled? Who are they that have written testimonials to be printed and reprinted in pamphlets beautifully bound in gold, crimson, and bronze? Ye gods of the medical press, have you competed with the religious and secular press in questionable advertisements, and, like them, made the bold-faced type of advertisers more consoling than the text? I blush to have to answer for them, that they have! And yet part of this very article, under the name "Quid Faciendum," when presented to two leading medical journals, was refused space. One excused itself for the reason that too many similar communications were sent in, and that to publish one of them was to invite a class of
articles to which the editor could see no end! The other de­sired to limit the use of his journal to practical articles only! I beg to refer the reader to No. 31 in the following list of journals. I hope they will one day see a spectre more terri­ble to them than was the gory-locked ghost of the dead king to his lecherous and guilty brother.

During the past few years my table has been the recipient of a number of medical journals of every kind, "good, bad, and indifferent." For the sake of making charges more spe­cific, as well as the desire to give all an opportunity who wish to verify the charges hereinafter made, I present the following numbered list of journals, with their per centum of questionable advertisements, though some of which have cur­tailed the advertising department recently:

<table>
<thead>
<tr>
<th>NO.</th>
<th>NAME OF JOURNAL</th>
<th>PER CENT.</th>
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<tbody>
<tr>
<td>1.</td>
<td>Louisville Medical News</td>
<td>50</td>
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<tr>
<td>2.</td>
<td>Medical Analectic</td>
<td>40</td>
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<tr>
<td>3.</td>
<td>Kansas City Medical Index</td>
<td>37</td>
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<tr>
<td>4.</td>
<td>Cincinnati Medical News</td>
<td>26</td>
</tr>
<tr>
<td>5.</td>
<td>Journal of the American Medical Association</td>
<td>23</td>
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<tr>
<td>6.</td>
<td>Medical News</td>
<td>36</td>
</tr>
<tr>
<td>7.</td>
<td>St. Louis Courier of Medicine</td>
<td>24</td>
</tr>
<tr>
<td>8.</td>
<td>Archives of Medicine</td>
<td>26</td>
</tr>
<tr>
<td>9.</td>
<td>Northwestern Lancet</td>
<td>40</td>
</tr>
<tr>
<td>10.</td>
<td>Journal of Materia Medica</td>
<td>46</td>
</tr>
<tr>
<td>11.</td>
<td>Medical World</td>
<td>46</td>
</tr>
<tr>
<td>12.</td>
<td>Kansas City Medical Reporter</td>
<td>25</td>
</tr>
<tr>
<td>13.</td>
<td>New York Medical Journal</td>
<td>41</td>
</tr>
<tr>
<td>14.</td>
<td>Leonard's Illustrated Medical Journal</td>
<td>56</td>
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<tr>
<td>15.</td>
<td>The American Medical Weekly</td>
<td>41</td>
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<tr>
<td>16.</td>
<td>Medical Gazette</td>
<td>33</td>
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<td>17.</td>
<td>California Medical Journal</td>
<td>17</td>
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<tr>
<td>18.</td>
<td>Denver Medical Times</td>
<td>42</td>
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<tr>
<td>19.</td>
<td>The Physician's Magazine</td>
<td>22</td>
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</tbody>
</table>
What an array, and what a pity! Here is an average of over 36 per cent of questionable advertisements in 33 medical journals, many of them ranking high as such among the profession. It is bad enough to find a catalogue of books and a medical work in the same binding; if instead you should find over 36 per cent of the whole work advertisements of things and stuffs, would you not tear it out?

By way of contrast, let us see what other leading journals of a non-professional character carry in the way of similar advertisements:

<table>
<thead>
<tr>
<th>NO.</th>
<th>NAME OF PUBLICATION</th>
<th>PER CENT</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>The North American Review</td>
<td>.05</td>
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<tr>
<td>2.</td>
<td>Science</td>
<td>.11</td>
</tr>
<tr>
<td>3.</td>
<td>Littell's Living Age</td>
<td>.04</td>
</tr>
<tr>
<td>4.</td>
<td>Humboldt's Library</td>
<td>.05</td>
</tr>
<tr>
<td>5.</td>
<td>Frank Leslie's Popular Monthly</td>
<td>.06</td>
</tr>
<tr>
<td>6.</td>
<td>The Popular Science Monthly</td>
<td>.11</td>
</tr>
<tr>
<td>7.</td>
<td>Deutsch-Americainsches Conversations Lexicon</td>
<td>.02</td>
</tr>
<tr>
<td>8.</td>
<td>The Princeton Review</td>
<td>.00</td>
</tr>
</tbody>
</table>
Here we see an average of only 11 per cent in twenty periodicals of high standing. This shows that the medical press is over 300 per cent worse than the secular. You may wonder what is meant by "questionable advertisements." I think it can be defined to your satisfaction—advertisements that encourage unprofessional practice. In order to treat all fairly, I will number every journal that contains a "remedy" advertisement, so that all who may wish to examine the material from which the following is collated may easily do so:

- Acid mannate—3, 9, 11, 7, 4, 2, 6, 12, 30, 31, 14; 32.
- Acid phosphate (Horsford, pat. 1868)—6, 7, 14, 23, 25, 27, 30, 31.
- Aletris cordial—2, 3, 4, 6, 7, 11, 12, 9, 14, 32, 30, 31.
- Alimentary elixir—4, 28, 30.
- Ammonia phenate—11.
- Antiseptic powders, tablets, liquids, etc.—11.
- Arthrosia—30.
- Avenasativa—4, 11, 14, 19, 23, 24, 27, 33.
- Beef bone, pulverized—11, 12, 15.
- Beef extract (Cybil's)—5, 11, 12.
Beef fluid (Johnson's, pat. 1878)—25.
Beef peptonoids—1, 2, 4, 6, 7, 9, 11, 13, 14, 18, 20, 23, 24, 25, 28, 30, 32, 33.
Beef, iron, and cocoa—19.
Beef, peptonized (Rose's)—5, 31.
Beef, powdered—5, 11, 12.
Beef, peptone—14.
Beef, pepsine, and cod liver oil—15.
Beef, soluble and peptonized—13, 23.
Beef solution—5, 6.
Beef tonic, liquid (pat. 1878)—6, 7, 25, 31.
Beef tonic, peptonized (pat. 1876)—8.
Baker's bitters—8.
Boro-glyceride—19.
Bougies, medicated—30.
Bromidia—3, 9, 18, 20, 25, 27, 31.
Bromodyne—10.
Buckthorn cordial—2, 5, 6, 10, 11, 13, 15, 25, 26, 30, 31, 32.
Bulb suppositories—11, 14, 26.
Cascara sagrada—3, 4, 5, 19, 20.
Celerina—1, 2, 3, 4, 6, 7, 9, 11, 12, 14, 18, 20, 23, 25, 26, 30, 31, 32.
Caulocorea—23, 32.
Chondroleine—26.
Coca-calisya, fluid—2, 32.
Coca-calisya, ferro-phosphate—2, 32.
Coca ointment, etc.—2, 32.
Cocalac—20.
Coca mariani—11.
Coca elixir, pale, etc.—11.
Coca elixir, E. A. Holland & Co.—19.
Coca wine—11, 19, 32.
Cod-liver oil, emulsion—11.
Cod-liver oil, emulsion (Scott & Brown, pat. 1876)—2, 5, 6, 10, 11, 13, 15, 23, 25, 26, 28, 30, 31, 32.
Cod-liver oil, emulsion, etc.—3, 11, 25, 31.
Cod-liver oil, hypophosphite lime, and soda—10.
Cod-liver oil, lactophosphate of lime—15.
Cod-liver oil, malt lime, and soda—11.
Cod-liver oil, pure (pat. 1874)—11.
Cod-liver oil, palatable—6, 8, 13, 14, 27.
Cod-liver oil, peptonized, and milk—2, 4, 6, 7, 11, 14, 30, 32.
Codothedral compound—11.
Compound mixture, guiac and stillingia—2, 11.
Copapaiba, cubebs, etc., capsules—6, 11.
Copaphine—19.
Corydalis, compound—19.
Dyspepsia compound—19, 33.
Digestylin—11.
Disinfectant tablets, liquids, pastiles, lamps, etc.—11.
Doverina—14.
Elixir, hypophosphites (19 combinations)—24.
Embalming fluid—11.
Effervescent hydrobromate of caffeine and potassii bromide—4, 11, 14, 32.
Ergotine—4, 28, 31.
Farr’s uterine and vulvar appliances—4, 11, 12, 14, 30, 32, 33.
Fellows’ hypophosphites (!)—2, 3, 4, 5, 6, 7, 9, 11, 12, 14, 15, 18, 20, 23, 25, 28, 30, 31.
Firwein (trade-marked, 1875)—10, 26.
Food, Horlick’s—3, 5, 7, 16, 22.
Food, Mellin’s—1, 2, 3, 5, 6, 13, 15, 24, 25, 30, 31, 32.
Food, Murdock’s liquid—4, 6, 7, 23, 25, 31.
Food, Ridge’s infant—6, 7, 11, 14, 31.
Frangulaxine—14.
Franklinism—11, 32.
Gastropeptics—11.
Gluten flour—2, 9, 31.
EIGHTEENTH ANNUAL SESSION.

Glycerole, ferrous chloride—19.
Glyco-phenique, and many preparations thereof—11.
Grape-juice, unfermented—11.
Health preservers—2, 7, 11, 13, 14, 25, 30, 32, 33.
Horse radish elixir—22, 28.
Hypophosphite preparations (pure)—15, 19.
Hyroleine—7, 11, 15, 18, 20, 24, 25, 26, 27, 30, 31, 32.
Ingluvin—6, 11, 14.
Iodia—9, 20, 23, 25, 27.
Lactated food—6, 11.
Liquor carbonis detergens—19.
Listerine—2, 3, 6, 7, 9, 11, 13, 18, 20, 25, 27, 31, 32, 33.
Lithiated hydrangea—2, 3, 6, 7, 11, 13, 18, 20, 25, 30, 31, 33.
Malt essence—6.
Malt, granulated, fluid, powdered, etc.—19.
Maltine extract—4, 5, 8, 9, 18, 22, 23.
Maltine (16 combinations)—1, 4, 6, 7, 9, 13, 14, 15, 18, 20, 22, 23, 24, 25, 26, 27, 28, 32, 33.
Malto-cocoa (17 combinations)—19.
Malto-pepsine—2, 10.
McDade’s prescription—1, 3, 12, 21, 32.
Mathey-caylus, gluten capsules (containing copaiba in 22 combinations)—31.
Milk food (Nestlé’s)—11, 25, 31.
Milk, Anglo-Swiss—3, 5, 6, 7, 14, 15, 20, 31, 32.
Milk of magnesia—11, 13, 14, 27.
Milk, pepto-genetic, and digestive ferments—5, 6, 30, 31.
Mineral earth—2, 3, 5, 7, 11, 19, 30.
Nicolo—18.
Oleo-chyle—4, 11, 14, 30, 31, 32.
Ominico—6, 11, 31.
Oxygen gas machines, etc.—11, 19.
Papine—3, 7, 18, 20, 30, 31.
Peacock’s bromides and fucus marini—2, 6, 11, 31.
Pelletierine—4, 28, 31.
Pelvic pessary (perfect)—11.
Phosphates (Wheeler’s tissue)—7, 31.
Phosphopeptine—2.
Pepticin—19.
Peptonoid iron, wine, beef, cod-liver oil, powders, etc.—33.
Pepsines, all the best, and infinite in variety—in all of them!
Pepto-lactine, simple and compound—19.
Petrolei, petrolatum, etc.—8, 31.
Pills, Blanchard’s—4, 28, 31, 32.
Pills, phosphori, digestiva, etc.—4, 11, 20, 22, 32.
Pinus Canadensis—1, 2, 3, 4, 6, 7, 9, 11, 12, 20, 25, 27, 30, 31, 32.
Platt’s chlorides—11, 13.
Phosphorole (trade-marked, 1879)—22.
Quineptus (at first a remedy)—11.
Soaps: alum, arnica, boro-glycerine, camphor, carbolic acid, chamomile, chamomile with sulphur, eucalyptole, naphthole, naphthole with sulphur, salicylic acid, sublimate, tar, pine needles, pine oil, pine extract, etc.—6, 17, 31, 33.
Swift’s adjustable tips and holders—11.
Syringes, “Ladies,” “Pallas”—2, 7, 11, 14, 30, 41.
Syrup, hypophosphite, compound, C. P. McArthur’s—1, 3, 7, 9, 18.
Syrup, hypophosphite, compound with lime, soda potash, and hydrastis—11.
Syrup, hypophosphite, compound, quinia, strychnia et manganeose—3.
Syrup, hypophosphite, compound (in 12 combinations)—24.
Syrup, nascent phenic acid—11.
Syrup, sulpho-phenique—11.
Syrup, iodo-phenique—11.
Svapnia—7.
Tamar Indien (grillon)—31.
Thymoline—11.
Tongaline—3, 4, 6, 9, 20, 21, 32.
Uterine supporters (Bunn’s)—11.
Uterine supporters, flexible, non-irritating (Narcott’s)—11.
Uterine supporters, soft rubber and silver wire (Herrick’s)—4, 11, 21, 26, 30.
Uterine supporters, spring stem (Stauffer’s)—11, 22, 31.
Uterine supporters (Hastings & Garson)—2, 11.
Uterine supporters, irrigators, hypodermic syringes, and buggies!—11.
Uterine supporters, stem (Dr. J. W. Dawson’s)—2.
Uterine supporters, elevator (Dr. Wadsworth’s)—14, 25, 32.
Uterine supporters (McIntosh’s)—9, 12, 13, 14, 18, 23, 25, 26, 27, 30, 31.
Viburnum, compound—6, 11.
Vini mariani—2, 6.
Victor’s baby food—14.
Vitalized phosphates—2, 13, 27.
Whiskey, Duffy’s pure malt—2, 7, 30.
Wine of the purified hypophosphites of lime and soda—11.

BEWARE OF FRAUDS!

In order to more fully show the meaning of these advertisements, we will select only 16 of these vital nostrums, and index the diseases, diseased conditions, dispositions, “phobias,” etc., in which they are recommended as highly useful, if not curative. They are numbered as before, the better to facilitate reference in the index of their diseases.

1. Fellows’ hypophosphites.
2. Kennedy’s pinus canadensis.
3. Celerina.
4. Aletris cordial.
5. Peacock’s bromides.
6. Peacock’s fucus marini.
7. Acid mannate.
8. Hayden's viburnum, compound.
10. Ingluvin.
12. Iodia.
14. Listerine.
15. Phenic acid.
16. Lithiated hydrangea.

### INDEX OF THE DISEASES TREATED.

<p>| Nostrum— | Nostrum— |</p>
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<th>Almanac No.</th>
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<td></td>
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<td>After pains.......................8.</td>
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<td>Albuminuria.......................2, 16.</td>
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<td>Amaurosis .........................5.</td>
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<td>Amenorrhcea.......................4, 13.</td>
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<td>Anæmia.............................1, 13.</td>
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<tr>
<td>Angina pectoris...................1, 5, 8.</td>
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<tr>
<td>Anus, fissures of..................2.</td>
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<td>Aphonía ...........................1.</td>
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<td>Apoplexy .........................1, 5.</td>
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<td>Appetite, loss of..................1.</td>
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<td>Appetite, morbid, of pregnancy......8.</td>
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<td>Asthenia (nervous) or general debility.................1, 8, 13.</td>
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<td>Asthenia (nervous) of lawyers, etc..............................3.</td>
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<td>Assimilation, imperfect...........1.</td>
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<td>Asthma.........................1, 5, 15.</td>
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<td>Bile, excretion of</td>
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<td>Bile, secretion of</td>
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<td>Biliousness</td>
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<td>Bladder, affections of the</td>
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<tr>
<td>Blepharospasm</td>
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<td>Brain and nerve indispositions</td>
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<td>Bronchial affections</td>
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<tr>
<td>Bronchitis</td>
<td>1, 15</td>
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<tr>
<td>Bronchitis, chronic</td>
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<tr>
<td>Bronchitis, capillary</td>
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<tr>
<td>Broken heart (!)</td>
<td>1</td>
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<tr>
<td>Burns</td>
<td>2, 15</td>
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<td>Cachexias</td>
<td>12</td>
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<td>Cancer</td>
<td>8, 11</td>
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<td>Catarrh</td>
<td>13, 14, 15</td>
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<tr>
<td>Congestions</td>
<td>7, 13</td>
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<td>Congestions of the spine</td>
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<td>Congestions of the uterus</td>
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<tr>
<td>Constipation</td>
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<td>Consumption</td>
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<td>Convalescence</td>
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<td>Convulsions</td>
<td>8, 11</td>
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<td>Cough</td>
<td>15</td>
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<td>Cramp</td>
<td>8, 13</td>
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<td>Cystitis</td>
<td>5, 16</td>
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<td>Debility</td>
<td>1, 3, 12</td>
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<td>Delirium tremens</td>
<td>8, 11</td>
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<td>Dementia</td>
<td>13</td>
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<tr>
<td>Diabetes</td>
<td>15, 16</td>
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<tr>
<td>Diarrhea</td>
<td>2, 8, 9, 13</td>
</tr>
</tbody>
</table>

* According to the nomenclature recommended by the Royal College of Physicians and Surgeons, the bladder is subject to 14 distinct diseases.

† There are 18 distinct bronchial affections.
<table>
<thead>
<tr>
<th>Condition</th>
<th>Journal No.</th>
<th>Almanac No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphtheria</td>
<td>1, 13, 14, 15.</td>
<td>1</td>
</tr>
<tr>
<td>Distress after eating</td>
<td>8</td>
<td></td>
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<tr>
<td>Dropsy</td>
<td>2, 3</td>
<td></td>
</tr>
<tr>
<td>Dysentery</td>
<td>2, 13, 14, 15.</td>
<td>3, 5, 10</td>
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<tr>
<td>Dysmenorrhœa</td>
<td>3, 4, 8, 13.</td>
<td>14</td>
</tr>
<tr>
<td>Children's diseases</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Children of European parents born in India</td>
<td>1</td>
<td></td>
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<tr>
<td>Cholera</td>
<td>8, 15</td>
<td>5, 10</td>
</tr>
<tr>
<td>Cholera infantum</td>
<td>8, 10, 15</td>
<td>5</td>
</tr>
<tr>
<td>Cholera morbus</td>
<td>8, 14</td>
<td>5</td>
</tr>
<tr>
<td>Chorea</td>
<td>1, 13</td>
<td>2</td>
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<tr>
<td>Chlorosis</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Chronic chills</td>
<td>1</td>
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<tr>
<td>Chronic congestion of the larynx</td>
<td>1, 9, 13.</td>
<td>1, 13</td>
</tr>
<tr>
<td>Colds</td>
<td>1, 2, 3, 8, 10.</td>
<td></td>
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<tr>
<td>Cold feet and hands</td>
<td>8, 13</td>
<td>10</td>
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<tr>
<td>Colic</td>
<td>8, 11</td>
<td>5, 8, 10, 11</td>
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<tr>
<td>Dyspepsia</td>
<td>1, 2, 3, 10, 14.</td>
<td>2, 3, 5, 6, 7, 10, 11, 13, 15, 16</td>
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<tr>
<td>Dystrophia</td>
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<tr>
<td>Eclampsia</td>
<td>5, 8</td>
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<tr>
<td>Eczema</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>Enteralgia</td>
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<tr>
<td>Epilepsia</td>
<td>5, 11, 13</td>
<td>2</td>
</tr>
<tr>
<td>Erysipelas</td>
<td>14, 15</td>
<td>2, 3, 6, 8</td>
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<tr>
<td>Expectoration, profuse</td>
<td>2</td>
<td></td>
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<tr>
<td>Fractures</td>
<td></td>
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<tr>
<td>Fevers</td>
<td>1, 5, 8, 10.</td>
<td></td>
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<tr>
<td>Gastralgia</td>
<td>8, 10, 13</td>
<td></td>
</tr>
<tr>
<td>Gastritis</td>
<td>10</td>
<td>5</td>
</tr>
</tbody>
</table>

* Of which there are 49 pertaining exclusively to infancy and childhood.
<table>
<thead>
<tr>
<th>Disease</th>
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<th>Nostrum—Almanac No.</th>
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<td>*Glandular disorders</td>
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</tr>
<tr>
<td>Gleet</td>
<td>2</td>
<td></td>
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<tr>
<td>Gonorrhoea</td>
<td>2, 4.</td>
<td></td>
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<tr>
<td>Gout</td>
<td>15, 16.</td>
<td>3, 6, 9, 15.</td>
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<tr>
<td>Hæmoptisis</td>
<td>1.</td>
<td>4, 14.</td>
</tr>
<tr>
<td>Hay fever</td>
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<td>1.</td>
</tr>
<tr>
<td>Hemorrhage</td>
<td>1, 2.</td>
<td>14.</td>
</tr>
<tr>
<td>Headache</td>
<td>3, 5, 11, 13, 15.</td>
<td>2, 3, 5, 6, 9, 10, 11, 14, 15, 16.</td>
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<tr>
<td>Hydrophobia</td>
<td>11.</td>
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<tr>
<td>Hysteria</td>
<td>3, 5, 8.</td>
<td>5.</td>
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<tr>
<td>Impotence</td>
<td>3.</td>
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<tr>
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<td>1, 9.</td>
<td>2, 3, 8, 10, 11, 13.</td>
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<tr>
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<td>15.</td>
<td>1.</td>
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<tr>
<td>Inebriety</td>
<td>3, 12, 13.</td>
<td></td>
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<tr>
<td>Insomnia</td>
<td>1, 8, 11, 13.</td>
<td>5.</td>
</tr>
<tr>
<td>†Internal pains of all kinds</td>
<td>8.</td>
<td>5.</td>
</tr>
<tr>
<td>Jaundice</td>
<td>2, 3, 6, 10, 11.</td>
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<tr>
<td>‡Kidney diseases</td>
<td>16.</td>
<td>2, 3, 6, 7, 14, 15, 16.</td>
</tr>
</tbody>
</table>

Liver, inflammation and ulceration of: 2, 3.

Leucorrhœa: 2, 4, 8, 9, 12, 14. 2.

§Lung and throat diseases: 1. 1, 4, 10.

Malarial diseases and complications: 6, 14, 15. 6, 7.

Mania: 5, 11, 13, 14. §

Marasmus: 10. §

* These include diseases of the bladder, breasts, kidneys, liver, gall-bladder, lymphatics, mesenteric and salivary glands, pancreas, spleen, thyroid, reproductive organs, supra-renal capsules, etc., an aggregate of not less than 141 diseases!
† These are too numerous to mention (!)
‡ There are not less than twenty of these.
§ There are 50 diseases common to these organs.
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Measles</td>
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<tr>
<td>Melancholy</td>
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<td>5, 6, 10, 11, 16.</td>
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<tr>
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<tr>
<td>Menorrhagia</td>
<td>1, 4, 8.</td>
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<tr>
<td>Memory, loss of</td>
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<td>Menopause</td>
<td>4, 5.</td>
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<tr>
<td>Menstruation, scanty, excessive, or indifferent</td>
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<td>2.</td>
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<td>Mental depression</td>
<td>8.</td>
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<tr>
<td>Metrorrhagia</td>
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<tr>
<td>Miscarriage, to prevent</td>
<td>4, 8.</td>
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<td>Morbid cravings of pregnancy</td>
<td>5.</td>
<td></td>
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<tr>
<td>Mumps</td>
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<td>9.</td>
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<tr>
<td>*Nervous system, diseases of</td>
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<td>2, 5, 7, 10.</td>
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<tr>
<td>Neuralgia</td>
<td>1, 3, 8, 11, 13.</td>
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<td></td>
<td></td>
<td>14.</td>
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<td>Night-mare</td>
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<td>Night sweats</td>
<td>1, 2, 8, 9, 13, 10,</td>
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<tr>
<td></td>
<td>15.</td>
<td></td>
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<tr>
<td>†Nutrition, faulty</td>
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<td>7.</td>
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<td>Ocular paralysis</td>
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<td>Opium habit</td>
<td>3, 13.</td>
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<tr>
<td>Overites (?)</td>
<td>8.</td>
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<td>Ovary, congestion of</td>
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<td>Ozoena</td>
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<tr>
<td>Paralysis</td>
<td>1, 3, 13.</td>
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<tr>
<td>Peritonitis</td>
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<tr>
<td>Phthisis</td>
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<tr>
<td>Phthisis, incipient</td>
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<tr>
<td>Piles, protruding, itching, or indifferent</td>
<td>2.</td>
<td>2, 3, 6, 11, 12, 14</td>
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</tbody>
</table>

* Of these there are 60 without counting a single variety.
† This subject is endless. All vital phenomena are included, for nothing is done in the body that does not involve destruction and therefore displacement, i.e. nutrition.
<table>
<thead>
<tr>
<th>Condition</th>
<th>Nostrum—</th>
<th>Nostrum—</th>
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<tbody>
<tr>
<td></td>
<td>Journal No.</td>
<td>Almanac No.</td>
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<tr>
<td>Pleuritis</td>
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<tr>
<td>Pneumonia</td>
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<td>1, 4</td>
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<tr>
<td>Prolapsus uteri</td>
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<tr>
<td>Prostatitis</td>
<td>3</td>
<td></td>
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<tr>
<td>Pulmonary diseases (see &quot;lung diseases.&quot;))</td>
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<tr>
<td>Puerperal mania</td>
<td>13, 15</td>
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<tr>
<td>Rapid growth</td>
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<td>Rickets</td>
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<td>Reflex vomiting of pregnancy</td>
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<tr>
<td>Rigors</td>
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<tr>
<td>Rheumatism</td>
<td>15, 16</td>
<td>2, 3, 4, 6, 7, 9, 12, 14, 15.</td>
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<td>Scalds</td>
<td>2, 15</td>
<td>9, 12, 14.</td>
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<td>Scarlet fever</td>
<td>13, 14, 15</td>
<td>10, 11</td>
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<tr>
<td>Sea-sickness</td>
<td>10, 11</td>
<td>5, 7</td>
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<tr>
<td>*Scrofulous diseases</td>
<td>1, 12</td>
<td>2, 10, 12, 13.</td>
</tr>
<tr>
<td>Senile debility</td>
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<tr>
<td>†Skin diseases</td>
<td>1, 12, 15</td>
<td>2, 3, 6, 9, 10, 12, 13, 14, 16.</td>
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<tr>
<td>Small pox</td>
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<td>11</td>
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<td>Sore throat</td>
<td>2, 12</td>
<td>1, 9, 13</td>
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<tr>
<td>Spasms</td>
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<td>Spasmodic convulsions</td>
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<td>Spermatorrhæa</td>
<td>3, 9, 13</td>
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<td>Spleen, enlargement of</td>
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<tr>
<td>Sterility</td>
<td>4, 8, 13</td>
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<td>Strichnia poisoning</td>
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<tr>
<td>Strumous diathesis</td>
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<td>Sunstroke</td>
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<tr>
<td>Syphilis</td>
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<td>2, 13</td>
</tr>
<tr>
<td>Tabeo-mesenteric diseases</td>
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<td></td>
</tr>
</tbody>
</table>

* The name of many an obscure disease.
† These are about 57 in number.
NEBRASKA STATE MEDICAL SOCIETY.

<table>
<thead>
<tr>
<th>Disease</th>
<th>Nostrum—</th>
<th>Nostrum—</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Journal No.</td>
<td>Almanac No.</td>
</tr>
<tr>
<td>Tetanus</td>
<td>5, 11</td>
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<tr>
<td>Tetanus, infantile</td>
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<tr>
<td>Teething of children</td>
<td>5, 9</td>
<td>5, 8</td>
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<tr>
<td>Tubercular diseases</td>
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<tr>
<td>Tumors (fibroid)</td>
<td>5</td>
<td>3</td>
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<tr>
<td>Typhoid fever</td>
<td>4, 14, 15</td>
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<tr>
<td>Ulcers</td>
<td>2, 12</td>
<td>2, 9, 10, 11, 12, 13, 14</td>
</tr>
<tr>
<td>*Uterine diseases</td>
<td>4, 5, 8, 9, 12, 13</td>
<td>10, 11, 12, 16</td>
</tr>
<tr>
<td>Uterine displacements</td>
<td>4, 8, 14</td>
<td>2</td>
</tr>
<tr>
<td>Urinary calculus</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>†Vaginal diseases</td>
<td>2, 12</td>
<td></td>
</tr>
<tr>
<td>Vesical irritation</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Whooping cough</td>
<td>11, 13, 15</td>
<td>1, 4, 8, 12</td>
</tr>
<tr>
<td>Worms</td>
<td>3, 8</td>
<td></td>
</tr>
<tr>
<td>Yellow fever</td>
<td>15</td>
<td>10</td>
</tr>
</tbody>
</table>

Here we see over 540 separate diseases, treated by means of 16 preparations of the “oleo-clixo-acidine-food-peptone” kind; nearly half the diseases that “the flesh is heir to” gracefully yielding to these nostrums. The remaining 606 diseases that complete the whole number of known ills, and which seem to be either unpopular or else lost sight of, should certainly soon disappear from the world before the other 200 infallibles that 33 medical journals are kind enough to post physicians on. If the remaining 200 are of equal potency (and they each claim to be the *ne plus ultra* of their kind), then they should cure 12 times the trouble and suffering that the 16 annihilate, or 6,480 diseases, etc., which is over five times as many diseases as are known! The only alternative reasoning that can solve the paradox, then, is that

* There are not less than 23 of these.
† Of these, gynecologists name 12.
there are for each disease five specifics! One is as reasonable as the other. But this is not all. I know not how many extra treatises (?) have been sent out broadcast through the land by humanitarian manufacturers, but can testify to the following, which are but a small per cent of the number that have been received and consigned to the waste basket before the present article was thought of:

<table>
<thead>
<tr>
<th>Title and Subject</th>
<th>No. of Professional Testimonials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monographia Syphilitica, “McDade’s Prescription”</td>
<td>21</td>
</tr>
<tr>
<td>Purgatives in Pregnancy, Acid mannate</td>
<td>38</td>
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<tr>
<td>The Opium Habit, Avena sativa</td>
<td>54</td>
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<tr>
<td>Bromidia (the Hypnotic), Bromidia</td>
<td>69</td>
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<td>The Physician’s Almanac, Lactated food</td>
<td>71</td>
</tr>
<tr>
<td>Antiseptics, Internally and Externally; Listerine</td>
<td>80</td>
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<tr>
<td>(No name), Scott’s emulsion of pure cod, etc.</td>
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<td>Catalytic, Peacock’s fucus marini</td>
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<tr>
<td>Nervous Diseases, Celerina</td>
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<td>Papine (the Anodyne), Papine</td>
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<td>Uterine Diseases, Aletris cordial</td>
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<td>Neuroses, Peacock’s bromides</td>
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<td>Diseases of the Mucous Surfaces, Kennedy’s pinus can-</td>
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<tr>
<td>Syr. Hypophos., Fellows’, Nervous, infantile, senile and pulmonary diseases</td>
<td>232</td>
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<tr>
<td>Handbook of Hayden’s Viburnum Compound, Viburnum compound</td>
<td>425</td>
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<tr>
<td>“The Proof of the Pudding is the Eating,” Pepsine and malt (dyspepsine)</td>
<td>495</td>
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Think of it; 2,579 professional testimonials, some of them are from men that are eminent. I challenge the laity to equal this asininity!

Let us see how all this compares with so-called “patent medicines,” those of good age and wide notoriety. I beg the
pardon of this assembly for the desire on my part to inflict additional humiliation, but allow us to compare. In order to treat all impartially we will take sixteen of the principal "almanac remedies" and number them just as we did the others:

1. Ayer's Cherry Pectoral.
2. Ayer's Sarsaparilla.
3. Ayer's Pills.
5. Jayne's Carminative Balsam.
8. Castoria.
10. McLean's Strengthening Cordial.
12. McLean's Volcanic Oil Liniment.
13. Dr. Pierce's Golden Medical Discovery.
15. Green's August Flower.

By referring to the second column of the index of diseases it can readily be seen how they compare. The almanac medicines bring out some diseases with common names, and introduce only ten diseases on which the oleo-elixo-acidine-food-peptone race is apparently (not really) silent; while on the other hand the almanacs are silent on not less than seventy-four. This shows that the professional compounds, Ceteris Paribus, are much worse than the patent medicine department. It has been estimated that about 4,400,000 dollars is annually spent by patent medicine firms. It is an undeniable truth that the oleo-elixo-acidine-food-peptone firms are the most liberal advertisers, so that it is safe to say that about a billion dollars are annually spent in this manner. Four
Chicago fires to support every year. Our national debt to be wiped out in less than two years. The proceeds of the first are said to equal the money value of 500 prescriptions annually for each of our 90,000 physicians, a loss of 45,000,000 dollars yearly. Next come the oleo-etc., etc., etc., etc., fellows for their little $50,000,000.

It is no wonder that so many drug stores are for sale and doctors so plenty that a few get hurt in almost every railway accident. Then while the exponents of rational medicine wage such a merciless warfare against the almanac nostrum, are they not really observing a less deformity without the ranks than within them? Honor bright, are there not greater discrepancies in the profession than out of it?

France has awakened to the infamy of this and the patent medicine business, and her statesmen in meditations lawful have enacted and decreed that “no compound should be sold unless the vender has a diploma.” In one country at least has the royal road to treatment been blockaded, and I take it that those firms who prepare compounds for the druggist, who by selling the same may condense, centralize, or vary their profits, are included in the meaning of the French edict. Here they exist by the score, manufacturing “sarsaparillas,” “cathartic pills,” “liniments,” “cough syrups,” “worm medicines,” etc., and printing the retailer’s name on the labels or wrappers of them, thus making the inducement to buy and dispense them over the counter almost irresistible to many druggists. To the effects of all this these manufacturers seem oblivious. It is their mission, they claim, to annihilate the patent medicine evil; they cannot rest until the simple formula of each compound, couched in the simple orthography of botany, shall have displaced all “quack and secret nostrums;” to accomplish which, they assert their willingness to “fight the devil with his own weapons,” if necessary. Unprecedented warfare; reciprocal justice, indeed.

Another one of these monstrosities is an hermaphroditism
of charity and utility which finds expression in the indiscriminate tenderness of so many free hospitals and dispensaries. Of late the value of these have been found to be of a somewhat equivocal character, impartial investigation having shown that the good done humanity by means of these institutions is often accomplished at so great a cost to the profession that it is a question whether the scope and operation of their liberality should not be much modified and limited. That medical almsgiving may exceed the sphere of charity cannot be denied, for where indigence and consequent suffering is greatest, this fact, paradoxical as it may at first thought seem, is all the more apparent. In a recent visit to Europe I made it a special order of business to visit the medical departments of many of the great universities, and a few of the many free hospitals and dispensaries from Edinburg to Palermo. If in the visits any one thing impressed itself on my mind more indelibly than another, it was the immense amount of professional service rendered gratuitously the multitudes that swarm in the populous cities. The effect is, that private free hospitals and dispensaries exist in every large city on the continent, where at stated intervals medicine and treatment are given free of charge to all who may wish to avail themselves thereof or profit thereby. If questioned as to the cause and motive of this method of practice, they cite in answer the existence of similar but far greater establishments upheld by the state or one of its numerous departments; that by no other known procedure is a lucrative practice so certainly obtained, since in such is recognized by the masses not only good-will and charity, but skill. One must confess that their reasoning is good and their conclusions by no means a *reductio absurdum*. It is but human that the poor should flock to free institutions, and that the wealthy avail themselves of the services of those whom much experience has made authoritative and perhaps famous.

Again we look and see that modern sphinx, homeopathy,
the most unmingled and unatoned-for offense that blots the present century; the phoenix of credulity, the pet of theology, and the darling of prosperity. Scattered here, there, and everywhere, may be seen those lesser evils, perhaps, that group themselves under various medical and metaphysical creeds, dogmas, "opathies," and "isms;" singularly, the adopted fondlings of a host of preachers and sterile women; collectively, a part of the omniscient "counter-prescribers," trade tools, and tow lines.

That person must be obtuse indeed, who in all this villainy, perfidy, cupidity, and fraud can discover nothing significant; who can see craftiness and dishonesty at a premium, while sterling worth writhes under the cruel heel of adversity, and yet perceive nothing ominous—no sign of approaching calamity.

It is to the young men of the land, who have yielded to the fascination of the healing art, that the destiny of medicine must be intrusted. In pursuance of that trust we see many of them giving the most honorable promise, and touching tokens of a deep realization of the meaning and extent of such a confidence, bring to the acquisition of a high and arduous calling the resources of a profound and varied scholarship, great earnestness of heart, and the enduring virtues of sobriety, fidelity, and integrity. All this they consecrate and pledge to the due performance of that charge in particular and to mankind in common. Let us follow them into the field of practice (which to-day is rather an arena in which "matches and over-matches" are pitted) in which they must battle for existence against all sorts of sophistry, quackery, intrigue, vice, gossip, and slander—obstacles never heard of before. On the one hand, standing in an unbroken phalanx, are the huge private and corporate institutions of cure, decked with the twinkling glitter of filched gold; again and again they send forth their mercenary pickets, foragers, and scouts. On the other hand, and numerous as the Tartars of old, are
congregated in a vast herd all those unfortunate mortals who can appreciate only the most vile and diabolical materia medica, or who respect only the rankest imposition and mystery. Insinuating themselves among the rank and file of the true blue are homeopaths, electro-homeopaths, hydropaths, electro-pathos, electro-biologists, magnetists, faithists, spirit doctors, counter prescribers, medicinal preachers, women, sooth sayers, fortune tellers, clairvoyants, mediums, the receipt fiend, etc., etc., "ad nauseam; each equipped with a peculiar and quick acting venom.

But shaking most their almost invincible spirits is the unbroken silence that characterizes the masterpieces of the fraternity, who, safely intrenched in the retreats of Helicon, drinking the waters of Aganippe, are calmly viewing the struggle beneath and around them—a struggle in support of that professional dignity and grandeur heard from their own lips, when they declared from the rostrum that the strength and establishment of medicine was as fixed and immovable as the pillars of Hercules! From the temple of medicine come voices from the dead—the mighty dead—speaking of sacred legend, alma mater, professional and manly honor; but, alas, they herald an army, naked and astride the blast, whose only help must come from the living present, from the overlook ing heights. Adown the steep mountain's side, at a breakneck speed, comes a messenger, the only one they ever sent, and in his hand he bears a scroll inscribed with this strange device: "THE CODE"!

For a time only can the uneven battle continue; many must soon retire, irreparably wounded in humanity and pride, deeply conscious of the insincerity of the medical profession to its members. Those who have been morally slain, of course remain in the field; others, that are oblivious to all else save the profession, may remain also, but they are not with the majority. No one will ever know what these last martyrs are doomed to suffer, for they will not, neither can
they, ingratiate themselves into the manifold ignominies and juggleries of the day. Plots are formed and damnable schemes contrived by the gossips—those weeds that are the hemlock and the deadly nightshade of civilization; they are promulgated by the scandal-mongers—those cursed serpents that glide in and out of every grade of society, leaving poison in their wake, and living on the hellish work of plucking hard-earned laurels from off innocent brows and setting a blister there; and then it is all believed by those who should, because they might, know better. Is there no brother that will shield another from the unpitying finger of scorn? Must it indeed be that integrity and manliness should be pitted against the same venality, intrigue, and murder that stigmatized the physicians of the time of Cæsar? Must one have to be in league with the devil in order to escape dishonorable mention or oblivion?

“Oh, judgment! Thou art fled to brutish beasts,
And men have lost their reason.”

How long, think you, will men continue to gird themselves for the fight against death, to be the target of, if not vanquished by, unwarlike ambuscades? Are all these indignities to be answered with mocked indifference or stolid silence, and medicine be allowed to return again to that chaos from which it came? Is competition one day to be part of the secret of medical success, and the methods of the shops to become the legitimate methods of practice? Is there no relief to come till anarchy, riot, and bloodshed shall bespot a trade which once was the foremost calling in the whole world—the only vocation that contained the limit of human possibility? It cannot be said that these dangers do not exist, or if, that they are not so stupendous as herein set forth. To claim that a sort of medical nihilism is not developing would simply be absurd or stupid.

Whence is help to come? To the masses we cannot appeal; accomplished as the laity may be in classics and philosophies,
in the laws that govern life and death, the rule is childish ignorance. For the same reason, nothing can be expected from legislative bodies who owe their official being to the suffrages of this very class and others much inferior. In evidence of which could be mentioned the repeated times when such deliberative assemblies have disgraced themselves by granting to medicine what appears rather more like toleration than the protection they themselves enjoy. Here they meditate over all sorts of "pretense," and they consider every one of them criminal, but medical pretense escapes their omniscience annually! Perhaps they do not know the value of human life, or if, discern in some other vocation a more certain, and therefore desirable, protector of life. They may not know that Frank Hamilton stamped out an epidemic of cholera in New York in three days, though they love to quote how Horatius held the bridge! It may be that the names of Linaeae, Vesalius, Harvey, Boylston, the two Hunters, Haller, Pinel, Jenner, Rush, Cooper, the two Bells, Majendie, Brown-Sequard, Mott, Simms, Gross, Parker, and a thousand more, are simply names to those outside the pale of medicine; that what they did for suffering and decrepit mankind has either never been informed them or else been ungratefully forgotten.

* The political economist, in estimating the powers of a nation, considers two factors, principally—the number of its people and the value of their property. He recognizes that every dollar earned and every new value created adds to the power of that nation. He admits that every improvement of the physical, moral, and intellectual condition of the individual adds to the energy, productive force, and wisdom of that nation. He is as willing to admit that every dollar wasted, every criminal act, every insincerity, fraud, or bankruptcy, every idiot, cripple, and lunatic, every case of consumption,

* For much of that pertaining to the value of a human life the writer is indebted to a dissertation by Dr. Middleton, of Iowa City, Iowa.
cancer, fever, or intemperance, detracts a certain amount from the strength, effectiveness, and wisdom of that nation. He knows from calculation that in the ideal, perfect state every person born should reach the age of twenty, when his productive period should begin, and continue fifty years, with the labor of five years capable of supporting him for eight, and then live to his eighty-first year, when he might without loss to the state make room for the generation succeeding. He is aware that the statistics show a fearful shortcoming of these figures; that but one-fourth enjoy the full working period of their lives in America; that in other lands, where degradation and want cover the people like a curse, it often sinks to less than one-tenth; that of all these, a large portion are constantly sick. The mortality bills of England show that one-fourth of the three per cent that die every year die from diseases that are preventable; that for every death there are from twenty to thirty taken ill; that every case of sickness costs an average of fifty dollars in money and 730 working days.

Let that one who can handle billions and trillions estimate the amount of capital and degree of power thus taken out of that nation's wealth and resources. Are not these appalling facts known to the statesman, as well as to the political economist and physician? And yet to-day that profession, which within the historical period has added over thirty-five years to the average longevity of man all over the civilized world, will not be heard in its own defense, or if, hardly listened to with common respect. *Quid faciendum?*

We read in the legendary history of Greece of the existence of a horrible creature, whose abode lay in the region of darkness; that ever and anon, at uncertain intervals, it came forth from under the black cover of its hiding place and committed fearful ravages among the people of the West; that it became the task of one Perseus to rid the world of that deformity which had menaced the peace and security of the
inhabitants of the sunset land so long; that he was sent on
his mission of extermination by Athene, who presented him
with a shield and mirror; that in addition to this Hermes
gave him wings and Hades a helmet; that after consulting
the Gree, he went and slew the monster—a thing so terrible
that but to look upon it was to become stone. Great and
extraordinary as was the victory, it was not considered a
miracle, for what could withstand the wisdom of Minerva,
the dispatch of Mercury, and the invisibility of Pluto?

Let us emulate the prowess of the royal man, go forth as
one man against these modern Gorgons, armed with that
wisdom still inherent in the profession, the dispatch of Mer­
cury, and that profound, unwavering determination which is
always silent and invisible; but before we go let us also con­
sult the Gree.

The remainder of the learned professions have no formal
inventory of fees; they charge for all work that is not stereo­
typed, purely formal, or ritualistic, according to the gratitude
or appreciation of the recipient or the conscience of the em­
ployer. Now this is in strange contrast with the practice of the
medical profession, whose members, from the most powerful
pact to the isolated, unknown country practitioner, all charge
in conformity with a certain fee bill, which, for an arbitrary,
mathematical estimate of earned wages, is the most meaning­
less catalogue of phrases and equations extant. If the un­
spoken pecuniary hint of the ecclesiast and the self-arbitra­
tment of the barrister are uniformly just, surely the abnegation
and humanity of the physician should be respected as being
equally righteous and worthy of confidence. I confess that
to me no greater incongruity is conceivable than that one
man should be willing to trust another with his life but not
with his pocketbook. This once accomplished, everything
will be in readiness to attack the Gorgons.

Paracelsus and Cagliostro were miracles of imposition, but
can hardly be held accountable for their serious and multiform
transgressions; they, like Nero or St. Basil, but truthfully reflect the "intellectual temperature" of their age. The modern quack can take no such shelter when the myriad lights of physical, social, and moral scientists bespangle the firmament of human understanding with the present ineffable glory. If they thrive it is because of the ignorance of the laity, and it should be made part of the duties of the officers of the law to bring the strong arm of the law to the rescue of these deluded mortals, to protect them from medical pitfalls and Scythians as it does from other dangers and evils—physical, moral, intellectual morgues and lepers that exist in large centers of population. In regard to medical charities, there can be no question as to the fact that many of them are shortsighted and misdirected benevolences; many of them actual financial ventures under the ambiguous name, charity; others, again, simply dens of vice and crime; that as a class they rob the young physician of a class of patients that would otherwise come into his hands; that they prompt him to imitate their methods; that they induce him to compete for patients and the treatment of diseases. For these reasons, it is my firm opinion that these should be under the control of the medical department of the government or state, and all such hospitals, dispensaries, retreats, homes, etc., etc., not for incurables, the product of military or naval service, old age, mental alienation, and crime, or those incorporated with and in a school of medicine, are ventures of speculation, or, at best, ill-directed benevolences, and should be made to "pass muster" before the proper medical officials of the state or government.

Sharing in, and subservient to, the sanction of such a department, state or national, should be the colleges of medicine and surgery. These should be supplied with teachers of approved capacity, able to impart the knowledge they possess; whose duties should comprise also that of choosing from among applicants for matriculation only men and women of good
sense, health, morality, and education. Until this recognition is obtained, and ideal approached, it would detract nothing from the prestige or dignity of each and every school of medicine to antedate this medical inquisition; that when one of their graduates practices medical sleight-of-hand, deceit, or brazen-faced fraud, due proof of the same having been forwarded to them, that culprit’s name should not only be erased from among those of the alumni, and his diploma revoked, but published, with the nature and style of his professional sins, in his place of abode or elsewhere, as long as he shall follow the “error of his ways,” there or elsewhere.

When all this has once been attained, the true position of the profession of medicine will be defined; then the old tyranny will be broken, and the anarchy of transition passed away; then must vanish all that which now distorts and corrodes the highest calling man can follow. But when shall it be said that the profession, as one man, lifted itself up in its colossal greatness and long-treasured indignation, and “thrice armed,” hurled its mighty weight against all this fraud and hypocrisy and villainy, which in one awful throe disappeared from the surface of the earth it had cursed so long?
THE DIAGNOSIS OF DIPHTHERIA.

BY W. O. BRIDGES, M.D., OMAHA.

An apology might seem necessary for the selection of diphtheria as a topic on which to read a paper before this society, but as it is intended to be confined to the diagnosis, I trust the necessity for an apology will be no more than apparent. While the books, medical periodicals, and society papers teem with various methods of treating diphtheria, it is seldom that one reads concerning its diagnosis, and yet I believe today more and greater mistakes are made in the latter than in the former.

While in attendance upon lectures in one of our most prominent colleges, my ideas of the exactness of our science and art were somewhat disturbed by the diverse statements of two of the most noted professors in this country: the one, "that nearly fifty per cent of all cases of diphtheria die under any treatment," and the other, "that he had lost but one case of the disease in fifteen years' practice, and that he saw only toward its termination." His specific was bromine. It is needless to say that under such teaching I went into the practice of medicine without well-defined ideas on the subject. In my first few months I lost three cases of diphtheria in one family, no one of which was ill longer than five days; this, too, in the same state where I was taught to cure all my cases. Then it was I began to realize the reason of the diversity of the statements before alluded to. These two men practice in the same city, among the higher classes, as well as in the same hospitals, and yet while one believed diphtheria to be one of the most fatal diseases in spite of any treatment, the other claimed to cure all his cases with bromine. Gentlemen,
why this difference? I believe the secret laid in the diagno-
sis. One differentiated his true diphtheria, and the other treated 
all cases of throat affection showing any grayish or yellowish 
white spots as this formidable disease. This difference pervades 
our entire profession, and I believe is responsible for the many 
cure-alls which have been from time to time advocated in 
ably written papers. During the past season throat affections 
have been largely prevalent in this community, affecting 
adults as well as children. It has been my lot to see a good 
many cases, and I am sure that I have not treated more than 
two cases of diphtheria in the past six months. In conver-
sation with some of my professional brethren, reports have 
been made of a good deal of diphtheria, and in reply to the 
question concerning non-diphtheritic throat affections, they 
had seen very few cases. Here again we have a discrepancy, 
and I believe diagnosis again to be responsible. Several 
years since, when diphtheria was more generally considered a 
constitutional disease originally, great stress was laid upon 
the height of fever, the rapidity of pulse, albuminuria, en-
largement of cervical glands, and a furred tongue, with diffi-
culty in swallowing, in making a diagnosis; but since all these 
conditions are found in many cases of non-diphtheritic throat 
affections we have to go further and investigate the throat 
lesion.

The question of general symptoms hardly needs considera-
tion in diagnosis, and were it not to mention the fact that an 
occasional case occurs in which there is very little, if any, 
throat lesion when the constitutional symptoms, with the 
prevalence of diphtheria, have to settle the diagnosis, I would 
not consider it necessary to refer to them. Whether diphthe-
ria be primarily a local or constitutional disease, is a point 
which we will not discuss here, but it seems as though the 
upholders of the one theory obtained as satisfactory results 
from treatment as the other. Almost at the same time ap-
peared two papers in prominent journals, the one from a man
who had cured all his cases with large doses of iron, chlorate of potash and glycerine, and the other from one who had never lost a case in many treated with local applications of lunar caustic. How many cases of follicular tonsilitis and ulcerative pharyngitis assisted in making up these reports are not stated. The only sure diagnosis of diphtheria is to be based on the presence of a membranous exudation. Its main peculiarity which stamps it as diphtheritic is, that it forms a part of the surface in which it is infiltrated, and that it is naturally exfoliated only as the result of a necrotic process going on beneath it. If any time an attempt be made to remove it before the suppurative process is complete, it is accomplished with some difficulty, and always with a loss of substance of the mucous membrane, oftentimes to the extent of considerable oozing of blood. Even if removed when nature is almost ready to accomplish the purpose, the epithelium will be found wanting, corresponding to the extent of surface involved. Anatomically, this is a very different condition from the accumulated secretions which are found in the throat in simple catarrhal affections, and which I maintain are so generally diagnosed as diphtheritic. These latter are mere secretions, either poured out of the follicles of the tonsils, or accumulating on a mucous membrane, which is stimulated to increased activity by a simple inflammation. They never form a part of the mucous membrane, and are readily removed without loss of substance. With these distinctions, it seems as though it should not be difficult to discriminate a diphtheritic exudation from the various accumulated secretions, the result of a tonsilitis or pharyngitis. Then why is it not done? Simply because the necessary trouble is not taken. The man who confounds these affections, and calls the most of it diphtheria, relies too much on inspection. There are stages of a follicular tonsilitis in which the appearances to the unaided eye are very suggestive of diphtheria, and particularly so if the secretions be confined to one tonsil at the time of inspection. There
may be a temperature of 104, rapid pulse, headache, furred tongue, tenderness at the sides of the neck, and difficulty in swallowing, all common to both affections. You may say there is a difference in the character of the affections which can be detected by the eye. It is true that the secretions from a tonsilitis, or a pharyngitis, are pultaceous in nature, and the diphtheritic exudation membraniform, and that sometimes if the former are seen early in their appearance, inspection will suffice, but the physician does not see his cases in their commencement, in the majority of cases.

Now, having a case which to many is diphtheria easy enough, but to some of us only suggestive, if we take the trouble to ascertain whether the abnormal appearances can be removed readily by means of a probe, syringing, or spraying, we can be positive as to its nature without jumping at a conclusion, which may unnecessarily create alarm to both the patient and the household. Only a few days ago I was called to see a lady, who has a houseful of boarders, suffering from sore throat of twenty-four hours' duration. She had fever, a pulse of 110, furred tongue, and headache. On inspection, the right tonsil was somewhat enlarged, and over its convexity was a grayish-white deposit, about the size of a dime. The throat was reddened, and the left tonsil participated, without showing much change, and no deposit. On careful examination, I made a diagnosis of follicular tonsilitis, and prescribed accordingly. The next morning there was nothing to be seen of the tonsillar secretion of the day before. The tonsils were still somewhat enlarged, and the general symptoms had not entirely subsided. The following day a servant in the family was affected in a similar way, but I was enabled to see her when the different points of follicular secretion with intervening healthy looking surface left no room for doubt about diagnosis on simple inspection. Two days later a second servant was similarly affected. Both of these girls had quite sharp general symptoms, and recovered in
four or five days. These were cases of follicular tonsilitis, and yet with many I am sure a diagnosis of diphtheria would have been made in the first instance, and it corroborated by the development of the two other cases on the ground of contagion. The household would have been alarmed, the boarders and roomers taken to their heels, and the poor landlady out several hundred dollars. I have seen cases, where I did not feel quite positive on simple inspection, present a very different phase after simply gargling with salt and water, which removed all secretion from the tonsil, or the pharynx. I desire to quote a few authorities on this important subject:

Flint's Clinical Medicine: "An accumulation of follicular secretion may, on superficial examination, present an appearance not unlike that of a diphtheritic exudation; it is confined chiefly or exclusively to the tonsils; it is pultaceous, not membraniform; it may be seen to dip down into the follicular depressions; it may be wiped away, whereas an exudation is torn off in strips. If the layer be thrown off within twenty-four or thirty-six hours, this is proof of its having been a secretion, and not an exudation."

J. Solis Cohen in Pepper's system: "In follicular or lacunar tonsilitis, the deposit can be wiped from the surface, and does not tear from the surface in strips, as is the case with the pseudo membrane of diphtheria. There is no abrasion of the mucous membrane beneath the deposit."

Jacobi in Pepper's system: "Spots which are easily washed away, or which can be removed with a brush, or squeezed out of the follicles of the tonsils, soon announce their true character. Fever is not always a prominent symptom of diphtheria. As a rule, simple diphtheria of the tonsils is accompanied by very little fever."

Oertel in Ziemssen's Cyclopaedia: "Catarrhal anginae are most frequently looked upon as diphtheritic processes; in them a hyper secretion from the tonsils takes place with moderate redness and swelling. A small part of the secre-
"tion is generally forced out of the follicles as a yellowish, sticky mass, and forms about the latter a thin layer that can be easily removed with a brush." By far the best article which I have read on this subject is a paper read before the N. Y. Academy of Medicine several years ago, by Dr. C. E. Billington, a man who has studied diphtheria very closely in a large dispensary practice. He writes: "But by far the most frequent occasion of error in diagnosis is the very common affection known as acute catarrhal or follicular tonsilitis. The patches of secretion vary in size from that of a silver three-cent piece to that of a dime. They are often rather firm in texture and may bear a striking resemblance to diphtheritic membrane. If this appearance is accompanied, as it sometimes is, with grave constitutional disturbance, distress, and prostration; if there is some enlargement of the cervical glands; if there is fetor of the breath, the practitioner, who has not studied this subject carefully and well naturally supposes he has not only to deal with a case of diphtheria, but with a grave one, and is delighted at his success in curing it in two or three days, as he is certain to do, if his remedy is not more formidable than the disease. In the rare cases in which the greater portion of the tonsil is covered, the investment may be seen to be rather coarser in texture than true diphtheritic membrane. It presents also the appearance of being spread superficially over the mucous membrane rather than in intimate contact with it, and this appearance indicates the reality, which is the most important element in the diagnosis. If a portion of it be scraped off, which can be easily done with a suitable instrument, the unimpaired surface of the mucous membrane beneath it is evidence of its non-diphtheritic character, or preferably a smart syringing with salt and water will usually at once clear up the diagnosis."

These remarks apply as well to those cases of pharyngitis, in which there are whitish patches of follicular secretion, or
smearings of white tenacious mucus. Their true character may also be ascertained by the means before referred to.

Now, with reference to the too common use of the word diphtheritic, as applied to bad cases of simple throat trouble. The remark is often heard from the physician: "That is not a case of true diphtheria, but it is a diphtheritic throat." What is meant by this, I know not, but I desire to enter a protest against this use of the term. The word diphtheria is a bugbear in any of its applications, even to the physician, and a case is either diphtheria or it is not. A true diphtheritic exudation in the throat, with little or no fever, is just as much a case of diphtheria as though the temperature was 104, and the other constitutional symptoms accordingly severe. And a severe pharyngo tonsilitis, exhibiting the most diffuse, accumulated secretion, accompanied by severe, general symptoms, is no more diphtheria than it is small-pox, hence it becomes us, as honest, scientific physicians, to discriminate between these lesions, and call things by their right names. Again is the common error made in the severe angine of scarlet fever, of diagnosing the complication of diphtheria. That this combination does occur occasionally, I will not deny, but I do not believe it as frequent as it is diagnosed. In scarlatina anginosa the tonsils and pharynx become covered with a dirty, grayish looking secretion, which to me resembles more the exudation of diphtheria than those before alluded to, but the diagnosis is readily determined by the syringe. In a recent severe case of scarlet fever at about the fifth day, I was quite surprised on making my daily inspection of the throat to find the tonsils covered with a suspicious looking grayish substance. On using the atomizer with a spray of lime water and carbolic acid in the throat, the secretion was completely washed away, and my mind was easy.

Time will not permit me to enter into the question of diagnosis of diphtheritic laryngitis from the various forms of croup, a subject which is of sufficient importance for a paper in itself.
ANTIFEBRIN AS AN ANTIPYRETIC.

BY C. P. HARRIGAN, M.D., OF OMAHA.

Mr. President, Ladies, and Gentlemen:

Fever, one of the most potent factors in the destruction of the human economy, is an enemy which must be combated with an effective, decisive, and reliable weapon.

Whether it be necessary to continue the administration of an antipyretic for a short or long period of time, the intelligent, conservative physician is most careful that the agent used shall be devoid of all immediate or remote deleterious effects upon the various tissues of the human body.

Antifebrin is a neutral body, prepared by heating aniline with acetic acid. It is not acted upon by hydrochloric or sulphuric acid. The alkalies do not affect it unless greatly concentrated.

It appears as a fine crystalline powder, giving a moderate burning sensation to the tongue.

Chan and Hеппе, of Straussburg, who first introduced this drug some few months ago, found it to be soluble at a temperature of 60° F. in 160 parts of water, and at 212° F. in 25 parts of water. It is soluble in ether and the alcoholic liquids.

The chemical composition of aniline is N, H, C, H, C, H, O, hence its chemical classification is among the acetyl-milides or phenyllacetamides, thus greatly contrasting with the other antipyretics which either belong to the phenols or the chinoline order.

Prof. Kreiger, of Straussburg, in his recent experiments, discovered that the drug was possessed of pronounced antiseptic virtues. The dose is given at ii. to viii. grs., according
to the age of the patient. My experience with antifebrin is limited to the following six cases:

**Case I.** Girl, age 8 years, typhoid fever. On my first visit to this case, on April 6th at 2 p.m., the temperature in the axilla registered 105°F., pulse 140. Prescribed antifebrin in iv. gr. doses every two hours.

The following day at 10 a.m. axillary temperature 100°F.; 5 p.m. 102°F., and from this time on during the course of the disease, the temperature did not exceed 103°F.

Its action upon the heart seemed very much like that of digitalis.

From one to two hours after the administration of the drug, there was copious sweating, followed by refreshing sleep.

No disturbance of stomach, no other disagreeable symptom manifested. The appetite improved, the quantity of urine increased.

**Case II.** Man, age 33 years. On April 10th suffered from a dorso-illium dislocation of the femur, which was reduced by manipulation. Cold packs were applied to the hip joint, and prescribed a cathartic. On making my visit the next day, the thermometer in the axilla showed 106°F. Gave antifebrin in viii. gr. doses every two hours. Six hours later temperature had fallen 5°F., and patient feeling comfortable. The marked nervousness, one of the prominent features of his condition in the morning, had completely disappeared. Fever continued for three days, but never reached above 100°F.

**Case III.** Male, age 38 years; laborer. On April 12, date of my first visit, found patient suffering from pneumonia, limited to the lower lobe of right lung, the patient complaining of intense pain in this region. Temperature 105°F., viii. grains of antifebrin every two hours reduced temperature to 100°F. in four hours, with freer and easier respirations, pulse slower with increased tension. There was profuse sweating. During the entire progress of this case thermometer did not register above 101°F.
Case IV. Boy, age eighteen months, taken sick on the 13th day of April, with the following symptoms: Onset sudden, pronounced chill and vomiting, convulsions, delirium, and muscular twitchings; a marked inflammation of throat and neighboring glands, the pressure of these swollen glands causing a great difficulty of breathing and of deglutition. Temperature 107° F., pulse 160 beats per minute. I gave antifebrin in one grain doses every two hours. In four hours temperature had fallen 5° F. Forty-eight hours afterwards a purple rash appeared over the neck and chest, in a few hours spreading over the surface of the entire body. Diagnosis, scarlatina maligna; antifebrin was continued and the temperature did not at any one time exceed 104° F. The drug was well borne by the stomach. The pulse reduction was in proportion to the reduction of temperature, respirations reduced and freer. The patient perspired copiously, and enjoyed quiet and undisturbed sleeps. Convalescence is now fully established and the only noticeable sequela is a paralysis of the vocal cords.

Case V. March 28, P. B., age 30 years, contractor, consulted me in regard to attack of intermittent fever, from which he had been suffering for some six weeks. I ordered x. gr. antifebrin to be taken three hours before the anticipated paroxysm each day for one week, and report to me at the end of this time. At the expiration of the week he reported but one paroxysm. I ordered him to follow my previous instruction for another week, which he did with no manifestation of the fever.

Case VI. Katie D., age 14 years. Pneumonia, limited to the right lung, temperature 103° F. on my first visit, which was the second day of this month. I prescribed viii. grs. every two hours; six hours later temperature 101° F. In this case the cyanosis of face and lips is very marked, but there are no apparent serious symptoms. This case being under observation yet, I am not prepared to say that I am to
have the same happy results which favored me in the other five cases.

The modus operandi of the physiological action of antifebrin is not fully explained.

In the April number of the *Therapeutic Gazette*, Dr. E. W. Evans, of Easton, Penn., gives an elaborate contribution of his experiments with antifebrin upon the healthy animal.

In summing up his observations he states that in all of his experiments where doses were employed relatively equivalent to those which have given such satisfactory results clinically, that the temperature invariably fell; the smallest reduction being .4° F., while in one case it was 1° F., and this in the normal animal, certainly a most favorable indication of its possible action in fever.

My brief observation of antifebrin in these six cases is corroborative of the observations made by Chan and Heppe of Straussburg.

In all of the six cases with the reduction of temperature, the pulse fell from 20 to 40 beats per minute, with an increase in the tension, strength, and volume. In four of the cases slight cyanosis of the face and lips was observed, and in two of the cases it was well defined. In each case profuse sweating followed the administration of the drug. In five out of the six cases there was a marked increase in the quantity of urine passed.

My object in presenting this paper is more to elicit the observation of those gentlemen present who have had a clinical experience with the drug, than for me to present anything of more interest than has already been published in the various journals of this country. But from the many favorable reports I have read, together with my own personal observations, I certainly recognize antifebrin as one of the safest and most reliable antipyretics at our command.
THE USE OF ANTIPYRIN.

BY A. B. ANDERSON, M.D., PAAWNEE CITY.

The regular profession, as a rule, are conservative in their use and adoption of therapeutic agents.

Antipyrin has been before the profession now several years, and experience has shown it to be a valuable remedy, and yet I venture the assertion that not one in three physicians have even tested its merits.

I am led to this conclusion by conversation and correspondence with a good many general practitioners.

In view of the preparation of a paper upon the subject, I have sent some thirty letters of inquiry to as many different physicians in the different parts of the country, asking for their experience with antipyrin. The letter of inquiry embraced the following:

1st. What is your opinion based on your experience of antipyrin as an antipyretic?

2d. In what doses do you use it?

3d. In what class of cases does it give you the best results?

4th. Have you observed heart failure as an effect?

5th. Is its action on the febrile condition uniform?

6th. Any additional facts of interest relative to the use of antipyrin.

From the thirty letters of inquiry, all of which contained stamped and addressed envelope for a return reply, I received thirteen answers.

I take a charitable view in case of delinquents, and take it for granted that they have no experience to report.

Out of the thirteen who kindly reported to me, three have never used it. One of these treats chronic cases entirely, and
consequently has not much occasion to use it. There is a striking similarity in the reports of those who have had the kindness to give me the benefit of their experience.

In reply to my first inquiry, namely, "What is your opinion of antipyrin as an antipyretic?" Dr. Weinstein, of Terre Haute, Ind., says: "I do not think it worthy of entire confidence."

Dr. Van Horn, of Jerseyville, Ill.: "I think it a good antipyretic."

Dr. F. S. Raymond, of Tipton, Tenn.: "The most reliable and certain in its action of anything I ever used."

Dr. Jno. A. Robison, Rush Medical College, Chicago, says: "The best yet known."

Dr. Hastings, of Olatha, Kan.: "I have had good results from it."

Dr. Peebles, David City, Neb.: "It has exceeded my expectations as an antipyretic."

Dr. S. Henry, of Camp Point, Ill.: "I have not entire confidence in it."

In reply to the second inquiry, "In what class of cases does it give you the best results?" two say, puerperal fever; one, infectious diseases; one, continued fever; one, malarial fever; one, "any sudden rise of temperature."

In regard to dosage there is considerable variation. Five to 15 grs., 5 to 10 grs. every hour till 30 grs. have been given, 20 grs. per hour till three doses are given, 20 to 30 grs., 10 grs. every two hours, 10 to 15 grs., constitute some of the answers received.

Only one reports any cases of heart failure, which he attributes to the effect of the drug. The universal experience recorded by my reporters is, that it brings down the temperature without regard to cause.

My own experience corroborates, in the main, the statements made by those who have reported their experience to me.

It is more certain in its action than the cold pack, and no
more depressing. The temperature is controlled without regard to cause; and in judicious doses I have never seen it depress the circulation to any alarming degree.

It is my opinion that it has been used in too large doses. I never give over ten grains, and repeat that according to circumstances. This dose, in the different kinds of cases in which I have used it, has always been sufficient to produce the desired effect, and is only repeated as the temperature rises. Is it a safe remedy to leave in the hands of inexperienced nurses? I think it is as safe as veratrum, gelseminum, or aconite. My rule is, unless I have an experienced nurse with a fever thermometer, to say to the nurse, "Repeat this every four or six hours to produce and keep up perspiration." So far I have had no trouble. Of course it is much more satisfactory to test the temperature and administer by that.

Of its mode of action it is not my purpose to write. I only know that it is a most active, diaphoretic, diuretic, and antipyretic. Whether its action as the latter is dependent upon its ability to produce the former condition, would be interesting to know, however, not entirely essential to my use of the drug. Below I append the report of some cases in which I have used the drug:

CASE I. Was one of relapsing fever, for which I had used quinia with no apparent benefit, for several weeks, the fever repeating itself in about weekly cycles in spite of treatment. Antipyrin was given in two ten gr. doses at intervals of three hours during the afternoon of each day. The result being a temperature of 98 to 99 degrees instead of 103 to 104 under quinia. This was repeated almost daily for more than a week, during which time eliminants were also used. The patient made a very slow recovery. The only advantage which he seemed to derive from the antipyrin was the very decided comfort expressed by the patient while taking it. Doubtless this was due to the lowering of the temperature and the action upon the mouth and skin.
CASE II. Was one of malarial fever, onset gradual. Was called on the fifth day. Patient had been cold and hot alternately during this time, gradually growing worse. Found him with temperature 104 degrees, tongue coated brown and dry. Gave quinia grs. 4 every three hours, alternating with ver. viride and sweet spirits of nitre; also, pill imp. cathartic No. ii. Next day found the patient about the same; tem. 103, tongue dry, bowels had moved from the cathartic, and the kidneys were acting better. The following day the same record of temperature and general symptoms were made. As this case occurred during a time when fevers were running a very protracted course, and as there did not seem to be much improvement under the treatment, I determined to add antipyrin to my medications; gave 10 grs. at 2 p.m., with tem. 103 degrees, repeated the dose at 5 p.m., the patient also taking quinia, 3 grains, every 3 hours. At 6 p.m., tem. 99 degrees, tongue moist, pulse 96. I continued the quinia through the night and gave one 10 gr. dose of antipyrin at 3 p.m. of the next day. At 6 p.m. tem. was 99 and pulse 72. This plan of treatment was continued about four days, giving quinia regularly and one or two doses of antipyrin during the afternoon, as the fever demanded it. Duration of sickness, three weeks. Two weeks under treatment.

CASE III. Mrs. P., age 26, married 5 years, first pregnancy; was confined on the 16th of January, 1887; attended by Dr. C.; I was called on the 21st. Patient had a chill the previous night. Found her as follows: Dorsal decubetus, great tenderness over lower parts of abdomen, especially in right iliac region. Tem. 104, pulse weak and frequent, and countenance pale and anxious. Complained of difficulty in breathing. Examination showed no trouble with the lungs; diagnosis, puerperal fever. Treatment, gave opium for pain, quinia and digitalis for the pyrexia, and hot fomentations for the bowels.

22d. Found patient feeling somewhat better. Pulse stronger; countenance brighter; tem. 103.
23d. Patient worse; tem, 104; pulse 130 and weak; difficult breathing; excessive tenderness over lower part of abdomen; no general peritonitis. Vaginal douches of hot carbolized water were ordered previous day, but were not very well carried out; lochia virtually stopped; vagina hot and dry. Gave five gr. of quinia, with five drops tinct. ferri chloride every four hours, with digitalis and whiskey alternated.

Jan. 24th. Patient slightly better; tem. 103; pulse 96, and feels more comfortable; unable to pass water. Used the catheter, and continued former treatment. Was called again in the night. Attendants thought patient was dying. She had evidently had a chill, which was followed by a high fever and oppressed breathing.


26th. Same treatment continued.

27th. Patient so disgusted with quinia in the various forms in which I had administered it that she refuses to have any more of it. Also refuses milk and whiskey. Changed to 10 grains of quinia, dissolved in hydrochloric acid, every six hours, giving some grape wine instead of the whiskey.

28th. Had a prolonged chill from 5 to 8 p.m.; tem. 104 at 6 o'clock, and patient complaining of being cold. Ten grs. of quinia were given at 6 p.m., dissolved in hydrochloric acid. Vaginal discharge purulent and offensive. Catheter used twice daily and turpentine stupes to abdomen.

29th. Same condition, and no particular change in treatment.

30th. No chill to-day but high temperature, 105, great depression; pulse 120, and weak.

31st. No change; tem. 104; countenance anxious, watches every move I make, evidently trying to read my prognosis. Temperature has not been under 104 at any time during the last three days. Patient has had 10 grs. of quinia every six hours during that time; somewhat cinchonised. Determined to drop the quinia as it has utterly failed to control the high
temperature. Gave 10 grs. of antipyrin at one o’clock P.M., and waited its action. At 2 P.M. tem. was down to 102, and patient feeling better. I directed the nurse to repeat the dose at 6 P.M., if the temperature was not below 102. Left also sol ferri nitrate, to be given in 5 grs. doses every three hours.

Feb. 1st. Found the patient feeling much better; is stronger; has taken some nourishment with relish; tem. 102. Nurse says the temperature was down below 100 all night, and rested well. I ordered 5 grs. of antipyrin and repeated at intervals of 4 or 6 hours, to keep the temperature at or below 100.

Feb. 2d. Patient still better; tem. 100.5 at 4 P.M.; pulse 96; skin moist; has a relish for food; takes buttermilk and gruel; has taken 5 gr. doses of antipyrin in the last 12 hours; has taken no quinia in 48 hours, and has no chill; kidneys act naturally to-day; some pain; bowels move well every other day by enema.

Feb. 3d. Patient doing well every way. Was called in the night to use catheter. Drew one-half pint of rather highly colored urine. Prescribed nitre, tr. iron, and nux. vom.; tem. 98 1/2, pulse 96. From this time patient made rapid and uninterrupted recovery.

This, with a number of other cases, has proven to my mind that in antipyrin we have an invaluable remedy in puerperal fever. Say what you may about removing the cause of disease, experience plainly teaches us that we must attack the symptoms. In a great many of these cases the fever stands as a barrier before us in our attacks upon the disease, and when we control this condition, we save the powers of the patient to resist and meet other complications that may arise. When Dr. Thomas would use rubber coil, I would use antipyrin.

Dr. Fordyce Barker recommends when quinia fails to control the pyrexia, to use Warrburge’s tincture.

I would say when quinia fails, and it generally will fail in
puerperal cases, give antipyrin. If you give it as a specific, you will be disappointed; but if you give in moderate doses to bring down the fever, to moisten the skin, to act on the kidneys, to increase the secretions of the mouth, you will not be disappointed, or your experience will not accord with mine.

Case IV. Was one of measles, complicated by pneumonia; girl, age sixteen years, rather delicate, been sick for five or six days, eruption fairly out, but looking somewhat dusky; pneumonia of right lung, entirely hepatized; tem. 104, pulse 132, respiration 50, wild delirium. Gave quinia, grs. 4, every 3 hours; ver. vir. gts. 2, every 3 hours; tongue dry and furred, teeth covered with sordes. April 4th, tem. 103, pulse 130, respiration 50, sweating slightly, still delirious, tongue very dry, no change in physical signs over right lung. Gave 5 grs. antipyrin, to be repeated in 4 hours if not sweating freely; also quinia and digitalis. 5th, tem. 98½, pulse 120, sweating freely, tongue moist, less delirium, patient feeling much better, cough not very troublesome, slight rusty sputa. Have been using counter-irritants and poultices on right lung. To-day left quinia, digitalis, and carbonate of ammonia to be given regularly, and antipyrin if tem. runs high. 6th, tem. 99½, pulse 108, respiration 44, tongue somewhat dry, skin moist, has had three doses of 5 grs. each of antipyrin during the last 24 hours. Find to-day moist rales over lower lobe of right lung, not expectorating. Delirium at night, treatment continued. 7th, tem. 100, pulse 108, respiration 40, tongue fairly moist, very thirsty, has had 15 grs. of antipyrin since my last visit yesterday. Treatment is continued. 8th, tem. 101 at 2 o'clock P.M., respiration 40, pulse 120, tongue somewhat dry, patient feels some better, no delirium; gave digitalis and quinia, and ordered no antipyrin unless skin became dry or patient restless from fever. 9th, patient slept well all day, had no antipyrin, tem. to-day 101, pulse 120, respiration 40, moist rales over whole surface of
right lung, expectorating more, patient rational. 10th, patient every way better, tem. 98½, pulse 120, respiration 30, and some solid food, expectorating well. Have been giving, during the last three or four days, squills, ammonia, ipecac, and belladonna to promote expectoration and relieve the cough. This case from this time steadily advanced to complete recovery.

In summing up, let me say that I think in antipyrin we have a most valuable remedy in many diseases. By its use we are in a great measure able to control high temperature, thereby enabling us to treat the case more successfully. Again, we should recommend that only sufficient quantity be given to produce the desired effect, 10 grs. being generally sufficient to hold the temperature down several hours. Thirdly, we think the depressing effect upon the heart, which has been feared by many, is altogether unlikely to occur with moderate doses.
DIFFERENTIAL DIAGNOSIS OF SMALL-POX.

BY C. M. G. BIART, M.D., OF OMAHA.

In presenting a paper on the "Differential Diagnosis of Small-pox" for the consideration of this learned body, I am frank to acknowledge the subject a trite one, and offer the recent misadventures in the East—which would seem to indicate a lack of thorough familiarity with it, at least under certain circumstances—as an apology for its presentation.

With the features of a typical case of small-pox you are all perfectly familiar. I will therefore not waste your valuable time with a description of its mode of invasion, order of evolution, etc., but will at once proceed to describe the differential diagnosis between it and such eruptive diseases, with which atypical and irregular cases of small-pox especially, may, on account of their many similar features, lead to deplorable error.

Varicella looks very much like modified variola in its mode of development as well as the anatomical form of its lesions. Usually the systemic disturbance is mild, but sometimes runs high; in varicella, however, the rise of temperature is subsequent to the appearance of the eruption, rather than previous to it, as is the case in small-pox. The vesicles of varicella are soft, superficial, mature rapidly, and attain their maximum development in one or two days. An important point is, that they appear in successive crops, so that they may be found in all stages of development, whilst in small-pox they appear in one crop. The vesicles of varicella are occasionally umbilicated, but they are unicellular, and hence their contents may be evacuated by a single puncture.

Measles. The initial eruption of some cases of small-pox
often cannot be distinguished from that of measles, especially the variety called morbilli papulosi, although the period in the latter disease is somewhat longer. The large, soft, and high colored papules of measles contrast with the pale, hard, shotty small-pox papules; in 36 hours or less the measles become macular and the small-pox papules show evidences of vesication, when of course all doubt is at an end. Besides the above differential points, we note the absence of the lumbar pains of small-pox, and the presence of the symptoms referred to mucous membranes peculiar to measles, and its maximum temperature during the height of the eruption.

There are cases of hemorrhagic small-pox, which may be confounded with measles, the patient dying before the appearance of a vesicle or other positive sign of small-pox.

Scarlatina. A copious erythematous rash resembling scarlatina sometimes precedes small-pox. When this rash is confined to the lower portion of the abdomen and the anterior portion of the thighs, we certainly have small pox; but when the eruption invades other portions of the body, as it sometimes does, the character of the sore throat and the typical strawberry tongue of scarlatina must be remembered as important diagnostic signs.

The appearance of a papular rash on the third day would of course settle any further doubt.

Acne has been mistaken for small-pox when the patient was suffering coincidently from some febrile attack. In acne suppuration occurs at the summit of the lesion only, comedones will be present; this, together with the age and course of the eruption, is sufficient to prevent mistakes.

Purpura, hemorrhagica and simplex, may be differentiated from small-pox in that in the former the eruption first appears on the lower extremities, seldom extending to the upper ones or the trunk. The sudden appearance of the eruption and the absence of subjective symptoms are also important points.
Typhus fever is differentiated from hemorrhagic small-pox from the fact that in the latter disease the spots are larger and that hemorrhages in the conjunctivae and from the mucous membranes also occur. In H. small-pox the patient generally dies before the seventh day, the time that the typhus eruption makes its appearance. As other diagnostic features we have the active delirium of typhus and the clear mind of small-pox.

Syphilis. The slow development of syphilitic lesions, their peculiar grouping, and the absence of the constitutional symptoms peculiar to small-pox, are sufficient to differentiate it from that disease.

Papular eczema is seldom preceded with febrile reaction of any consequence. The mucous membranes are not implicated, the papules are intensely red and itchy and irregularly distributed.

Sudamina. In sudamina the vesicles attain their complete development in a few hours, remaining unchanged during their entire course. They are superficial and exist in greatest abundance upon covered parts of the body.

Glanders in its early stages is very likely to be mistaken for small-pox by one not familiar with the former disease. The febrile symptoms are the same, there is also lumbar pain and hard infiltrations in the skin. These infiltrations, however, quickly suppurate, leaving deep inflamed ulcers. The eruption in glanders does not come out in one crop as in small-pox, and on careful examination we will find some lesions which are altogether too large to be mistaken for small-pox pustules. In suspected cases occurring in grooms and stablemen we should be on our guard, remembering the characteristically quick ulceration that occurs in glanders.

In concluding I wish to state that in forming a diagnosis I would take no heed of any vaccination marks, should they be present, no matter how well formed, no matter what their number. I have on several occasions vaccinated badly pitted
men and women and obtained a typical vaccinia. Nor yet would I exclude small-pox on the only ground of a supposed or real attack of that disease, there being on record enough cases of reinfection to warrant the greatest caution.
Consumption is a disease whose fatality is so great that no excuse is necessary for any attempt to cast an additional ray of light upon it. In a review of the history of its treatment, one is impressed with the variety of expedients that have been resorted to. From the administration of the greatest variety of drugs by the stomach it has passed to attempts at local treatment by external applications, by the inhalation of medicated sprays, of compressed air, of rarefied air, and the latest and most startling novelty, the injection of sulphureted hydrogen per rectum.

The discovery of the bacillus of Koch suggested new ideas as to the pathology of consumption, and new lines of treatment, and the ultimate results of this discovery cannot even yet be definitely stated. In recent years, constantly increasing attention has been given to the climatic treatment of this disease, the profession being driven to it perforce by the comparative failure of all other therapeutic measures that have been employed. Extensive and valuable studies have been carried on by the American Climatological Association, and by others, and still much remains to be learned upon the subject.

The writer of this paper having been a resident of Omaha for two and one-half years, has been strongly impressed by the apparent immunity from consumption of the residents of this city, and by the favorable course that many cases under his observation have taken upon coming to Omaha from
other places. For my own information I began to look carefully into the matter, and I present to-day the results of my investigation, hoping they may prove to be of interest to others:

In the current periodical literature one continually sees clinical reports and climatic studies from various parts of the country—East, West, South, and North, but I am not informed of any recent publication concerning the great central territory of the Missouri valley, in its relation to the disease or group of diseases known as consumption. About a dozen years ago a report on climatology and prevailing diseases was submitted to this society by Dr. James H. Peabody, chairman of the section, but at that time the data upon which to base a conclusion were of necessity very meagre. In the present investigation I have taken as a basis the mortality records of Omaha from April, 1879, at which time the ordinance creating these records was first enforced, through the efforts of our worthy President, Dr. Richard C. Moore, up to the present time, thus covering a period of eight years. By a comparison of these records with those of other cities I have endeavored to arrive at some knowledge of the relative healthfulness of Omaha as regards consumption. I hope at a future time to prepare a clinical report, which may still further elucidate the subject, but for the present I omit all clinical evidence.

Through the kindness of Drs. Moore and Leisenring, who have held the position of city physician during the period covered in my work, I have obtained copies of their monthly reports, and I present first a summary of the results of my study of these in the form of a table:
### Table No. 1, showing estimated population of Omaha, with death rate from all causes, and also from consumption, from April 1, 1879, to January 1, 1887:

<table>
<thead>
<tr>
<th>Year</th>
<th>Estimated Population</th>
<th>Whole No. of Deaths</th>
<th>Deaths in Every 1,000 Population</th>
<th>Deaths from con.</th>
<th>Deaths from con. in 1,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1879</td>
<td>26,215</td>
<td>282</td>
<td>14.34</td>
<td>28</td>
<td>1.06</td>
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<tr>
<td>1880</td>
<td>30,518</td>
<td>462</td>
<td>15.4</td>
<td>39</td>
<td>1.27</td>
</tr>
<tr>
<td>1881</td>
<td>39,500</td>
<td>540</td>
<td>16.61</td>
<td>37</td>
<td>0.93</td>
</tr>
<tr>
<td>1882</td>
<td>49,710</td>
<td>590</td>
<td>11.87</td>
<td>48</td>
<td>0.97</td>
</tr>
<tr>
<td>1883</td>
<td>52,470</td>
<td>556</td>
<td>10.59</td>
<td>59</td>
<td>1.12</td>
</tr>
<tr>
<td>1884</td>
<td>55,230</td>
<td>731</td>
<td>13.23</td>
<td>52</td>
<td>0.94</td>
</tr>
<tr>
<td>1885</td>
<td>59,616</td>
<td>582</td>
<td>9.74</td>
<td>44</td>
<td>0.73</td>
</tr>
<tr>
<td>1886</td>
<td>70,410</td>
<td>585</td>
<td>8.30</td>
<td>65</td>
<td>0.93</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td></td>
<td>12.51</td>
<td></td>
<td>0.945</td>
</tr>
</tbody>
</table>

In this table I have shown for each year covered by the mortality record, the estimated population, the number of deaths from all causes, the average number of deaths from all causes in 1,000 population, the number of deaths from consumption, and the average number of deaths from consumption in 1,000 population. The estimate of the population which I have used is that furnished me by Mr. Wolf, editor of the Omaha City Directory. I have found it difficult to obtain statistics which are at all general, from which I could gain the same information respecting other cities. Some of those in existence, like those of Omaha, have never been published, and others are to be found only in the reports of the boards of health of cities, towns, and states. The publications of the National Board of Health and the United States census, I have found most complete. Those of which I have availed myself for the purposes of comparison, and which are, perhaps, as conclusive as a greater number would be, are two publications only. In the mortality tables of the United States census of 1880, under the heading of "Grand Groups," is to be found a statement of the number of deaths, with their causes, in fifty of the principal cities of the United States, for
the census year ending May 31, 1880. These are arranged in groups, without regard to size, but with respect to location. Of these there are fourteen groups, containing from one to eight cities each. Three groups, which include Buffalo, Chicago, Cleveland, Detroit, Milwaukee, Rochester, Toledo, Cincinnati, Dayton, Louisville, and Denver, have an average mortality from consumption of 1.74 in 1,000 population. This is almost 25 per cent more than the mortality of Omaha for the same period of time, and reference to the table shows that the mortality for 1880 was greater than that of any other of the years recorded. Of the remaining 39 cities, the average mortality is 2.45 times as great as that of Omaha. The average of the whole number is more than twice that of Omaha.

In the report of the National Board of Health for 1885 is to be found an appendix presenting a tabulated statement of mortality in cities and towns of the United States in 1884. For the purpose of comparison I have selected thirty cities, some of which are larger and some smaller than Omaha. Of these, six, viz.: Boston, Cambridge, Lowell, Providence, New Haven, and Fall River, are New England cities; six, viz.: New York, Philadelphia, Baltimore, Brooklyn, Newark, and Paterson, are situated in the Middle Atlantic States; six, viz.: Richmond, Charleston, Atlanta, New Orleans, Galveston, and Memphis, are in the Southern States; six, viz.: Buffalo, Pittsburg, Cincinnati, Cleveland, Chicago, and St. Louis, are in the Lake Region and upper Mississippi Valley; and six, viz.: Minneapolis, St. Paul, Denver, Omaha, Oakland, and San Francisco, are in the Western and Pacific States. Thus I have covered every portion of our country.

These cities I have arranged in a table which shows in each group the average of population, number of deaths from all causes in 1,000 population, number of deaths from consumption in 1,000 population, the relation of the rate of mortality from consumption to that of Omaha for the same year, and finally the average of the thirty cities in each of the
above points. For convenience I have added a statement in regard to Omaha.

Table No. 2, showing the average death rate in 1884 from all causes and from consumption in six cities:

<table>
<thead>
<tr>
<th>CITIES</th>
<th>Population</th>
<th>Deaths from all causes in 1000 Population</th>
<th>Death from consumption in 1000 Pop.</th>
<th>Rate from consumption greater than in Omaha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Of New England States</td>
<td>130101</td>
<td>22.6</td>
<td>2.89</td>
<td>3.07 times</td>
</tr>
<tr>
<td>Of the Middle Atlantic States</td>
<td>591914</td>
<td>22.3</td>
<td>3.01</td>
<td>3.02 &quot;</td>
</tr>
<tr>
<td>Of the Southern States</td>
<td>86103</td>
<td>26.1</td>
<td>3.38</td>
<td>3.59 &quot;</td>
</tr>
<tr>
<td>Of the Lake Region and Upper Mississippi Valley</td>
<td>303041</td>
<td>19.6</td>
<td>2.21</td>
<td>2.35 &quot;</td>
</tr>
<tr>
<td>Of the Western and Pacific States</td>
<td>104472</td>
<td>15.5</td>
<td>1.85</td>
<td>1.96 &quot;</td>
</tr>
<tr>
<td>Average of 30 Cities</td>
<td>243106</td>
<td>21.2</td>
<td>2.67</td>
<td>2.83 &quot;</td>
</tr>
<tr>
<td>Omaha</td>
<td>55230</td>
<td>11.8</td>
<td>0.94</td>
<td></td>
</tr>
</tbody>
</table>

Now a glance at the table will show that the lowest average mortality, 1.85 in 1,000 population, is found in the Western and Pacific cities, and that this is almost twice that of Omaha, while Omaha is itself one of the six cities whose average is taken. The difference is slight between the New England and Middle Atlantic cities, but each of these groups has an average more three times as great as Omaha. The average of the thirty cities taken together is 2.83 times that of Omaha. One important point not shown in the table is this: that of these thirty cities there was not one that had as low mortality from consumption as had Omaha for the same year, and that, with six exceptions, the mortality was more than twice as great.

In order to learn whether the lower mortality of Omaha as compared to the cities above mentioned depended upon its smaller size, I selected indiscriminately from the same list ten cities ranging from the size of Omaha to one-half its size. Of these the average mortality from consumption was 2.57
times that of Omaha. The statistics which I have cited all point to the same conclusion and I do not detain you with more.

Now it may be urged that the average age of the inhabitants of Omaha is below that of most of the cities with which comparison has been instituted, and that as Omaha advances in years the percentage of deaths from this cause will increase. But consumption is not a disease of old age but rather of youth. Cases in which the ages of patients are between twenty and thirty years greatly preponderate over the number in any other decade of life and the disease is rare in advanced life. Whether the disease is inherited or the vice of constitution which leads to it, unquestionably a very large proportion of the cases of consumption possess the seeds of their malady in their early childhood. So that even supposing we take the population of Omaha as we find it, its average youth would tend to increase the ratio of deaths from this cause rather than to diminish it. But, on the other hand, it must be borne in mind that only a small percentage of the present population of Omaha is native to Omaha, and consequently the large element in the causation of the disease, of heredity and early surroundings, must have been encountered elsewhere. Look for example at the deaths from consumption which occurred in 1880. The whole number was thirty-nine. Of these, seventeen were under twenty-five years of age, and twenty-two over twenty-five years. At the birth of the youngest of those aged twenty-five years or over, viz., 1855, there were in Omaha but nine buildings of all sorts,* so that it is at once shown that above seventy-seven per cent of the deaths for 1880 were not native to Omaha, and of the remaining number it is strongly probable that very many were not.

So in 1885 there were forty-four deaths, of which twenty-two, or fifty per cent, were under thirty years of age, and thus not of the native population. If this line of reasoning be carried

*Johnson's History of Nebraska.
to its legitimate conclusion it becomes evident that as the ratio of the population native to the place becomes greater, the influences which hold the mortality so low at present will, if continuing to act, by exerting their power upon the constitution from and prior to birth, serve to still further reduce the ratio of deaths from this disease.

I am aware that great danger of falling into error awaits any one pursuing the study of a subject by means of statistics. That "figures do not lie" is true in a sense, and yet in such a study as the present so many influences have a bearing, and there are so many sources of misinformation, and so many opportunities for wrongly estimating these are possible, that even figures may be made to grossly misrepresent. With these things in mind I will not attempt a definite statement by way of conclusion at this point; but when every allowance is made it seems evident that Omaha is exempt from the ravages of consumption to a very remarkable degree.

Now, granting that my conclusion is correct, it becomes a matter of great interest to discover to what this immunity is due. In reviewing the commonly accepted causes of consumption as applied to the inhabitants of this city, there appears no adequate cause for it save the nature of the climate and soil. Climate has long been regarded as one of the most powerful influences in the production of pulmonary consumption. While all acknowledge the potency of climate, a diversity of opinion exists respecting the influence of the various elements that go to make up a climate; and, as is true in the study of most diseases, the weight of opinion has experienced numerous fluctuations in regard to it.

Dr. Jaccond, in his "Lectures on the curability of phthisis," states that information derived from writings upon this subject cannot take the place of knowledge derived from direct observation. He states further, that the impressions made upon the organisms by different climates are, to some extent, independent of the certain and described phenomena which constitutes the climatology of a region. It is vain to seek in the
table of atmospheric changes for the explanation of that special impression which the climate of a region makes upon the affected organism—an impression which, in fact, is undefinable, and of which the cause cannot be ascertained; it must be felt to be understood. This fact constitutes one of the fundamental difficulties of the climate problem. As a consequence of this, one class of observers maintain that high altitude acts favorably upon the diseased lung by relieving it from undue pressure; while another holds that the benefit comes on account of the rarity of the air inducing more rapid respiration. Others contend that solar radiation is the great curative agent; while purity of the air and consequent freedom from germs is that to which still others pin their faith. Heat, cold, absence of humidity, and porosity of soil, have each their advocates.

In order to see at a glance the nature of the climate of Omaha, and to enable one to compare it with the climate of other places that are considered to act favorably upon the disease, I have compiled, in the form of a table, certain deductions that I have made from the observations of the United States signal service at this point. Since the interest for the most part centers in but a portion of the year, I have restricted the statements of my table to the months of November, December, January, February, and March.

Table No. 3, compiled from the observations of the United States signal service in Omaha:

<table>
<thead>
<tr>
<th></th>
<th>Mean Temp. deduced from 15 years' observations</th>
<th>Normal precipitation from 16 years' observations</th>
<th>A. humidity in percentage of saturation from 10 years' observations</th>
<th>A. for 11 years of the sum of the clear and fair days</th>
<th>Mean maximum Temp. from 10 years' observations</th>
<th>Mean minimum Temp. from 10 years' observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>November</td>
<td>35.2</td>
<td>1.32</td>
<td>68.38</td>
<td>21.4</td>
<td>69.</td>
<td>6.5</td>
</tr>
<tr>
<td>December</td>
<td>24.9</td>
<td>1.02</td>
<td>72.67</td>
<td>20.5</td>
<td>59.6</td>
<td>-5.5</td>
</tr>
<tr>
<td>January</td>
<td>20.4</td>
<td>0.589</td>
<td>74.37</td>
<td>19.8</td>
<td>52.</td>
<td>-10.</td>
</tr>
<tr>
<td>February</td>
<td>26.5</td>
<td>0.504</td>
<td>71.99</td>
<td>19.5</td>
<td>56.</td>
<td>-3.9</td>
</tr>
<tr>
<td>March</td>
<td>35.6</td>
<td>1.488</td>
<td>67.4</td>
<td>21.4</td>
<td>71.8</td>
<td>3.</td>
</tr>
<tr>
<td>Year</td>
<td>49.32</td>
<td>35.45</td>
<td>68.24</td>
<td>21.1</td>
<td>77.6</td>
<td>22.3</td>
</tr>
</tbody>
</table>
In an examination of this table one is not impressed by any feature of the climate as being extraordinary, or as probably sufficient to account for the immunity from consumption we have found. The mean temperature is low, though not excessively low. The range between maximum and minimum temperature is a wide one, and the mean minimum temperature indicates severe weather. One point, however, not appearing by the table, is worthy of note, i.e., the comparative infrequency of extreme changes during the winter months. For all admit that evenness of temperature is of the utmost importance whether it be high or low.

One of the most striking constituents of climate indicated in the chart is the small aqueous precipitation. For January and February combined it is only a little above one inch, and for the five months under consideration it is less than five inches, while for the year it is $35\frac{3}{4}$ inches. This feature of the climate is a strong one and no doubt has a decided influence upon its effects. A comparison of the humidity as indicated in the table in percentage of saturation, with the temperature and precipitation, is very puzzling and requires an explanation. The percentage of saturation as given for March and November is 67.11 and 68.38, respectively; while for the remaining three months it is from four to seven per cent greater. For the other seven months of the year, during the same period of observations, the percentage of saturation ranges from 60.74 in April, to 69.91 in July. In other words, during the three winter months, when the temperature is lowest, the percentage of atmospheric humidity is said to be greater than during the remaining seven months, when the precipitation is more than fifteen times as great.

As this state of things is in direct violation of the physical laws which govern atmospheric humidity, an error is at once apparent. A suggestion of Mr. George Haas-Hagen, the United States signal officer now stationed in Omaha, will serve to locate the mistake. In order to determine the dew
point (or point of complete saturation) two thermometers are placed upon a revolving apparatus, the bulb of one of these having been wetted with water. By the difference in the temperature indicated by these, the rapidity of evaporation is measured, and from this deductions made. During warm weather this method is reasonably correct, but when the temperature is low it is found that the moisture becomes ice almost the instant it is exposed, and in such a case the variation between the two thermometers is scarcely perceptible. This would indicate almost complete saturation, which is very wide of the truth. I have inserted the results of these observations in the chart, because no climatic statement is considered complete without the percentage of saturation being indicated. As a matter of fact they are wholly unreliable, and the same may be said of this portion of the signal service record in all stations when the temperature is low.

Of nearly equal importance with the slight humidity in Omaha is the number of fair and clear days. This ranks unusually high, and is of great utility, by affording opportunity for out-of-door life. The month of March in particular, which, with its cutting damp winds and rain and sleet and constant change of temperature, in a large part of our country is the month most to be dreaded by consumptives, in Omaha is one of the most salubrious months of the year. The precipitation is less than 1.1 inches, and its fair and clear days, 21.4, almost equal in number those of midsummer.

The altitude of Omaha is about 1,100 feet above sea level. The prevailing winds for the month under discussion are from the north and north-west. The best that can be said of these is that, while they are often strong, the great extent of sparsely settled prairie over which they blow must insure a high degree of purity and constant renewal.

Dr. Henry I. Bowditch, in his address on consumption before the Massachusetts Medical Society in 1862, states that
soil moisture is one of the chief causes of phthisis, and that localities where there is a dry soil are comparatively free from the disease.

Dr. Buchanan, in his "Report to the privy council," states that dampness of soil is one of the most prolific causes of phthisis to the inhabitants living upon it.

Lænnec, in his work on "Diseases of the Chest," relates an instance, in his experience, of a nunnery of which he had charge for a period of ten years. During that time he witnessed the deaths of the entire membership three times, from consumption. It was afterwards discovered that this nunnery was built in a clay cup, which caused such constant dampness in the buildings that they were abandoned. It appears certain that one of the most fatal conditions is that in which the air is laden with moisture due to an impervious subsoil. This ground air seems to be filled with germs of special vitality. Hence the nature of the soil of the place is of the utmost importance in its bearing upon health.

The soil of Omaha and the surrounding country—and for a description of this remarkable geological formation I quote from the work* of Professor Samuel Aughey: "This deposit is in some respects one of the most remarkable in the world. It prevails over at least three-fourths of the surface of Nebraska. It ranges in thickness from 5 to 150 feet. I have compared many specimens taken 300 miles apart, and from the top and bottom of the deposits, and no difference could be detected by the eye or chemical analysis. Over 80 per cent of this deposit is very finely comminuted silica, and about 10 per cent is composed of the carbonates and phosphates of lime. Its drainage, which is the very best possible, is owing to the remarkably finely comminuted silica of which the bulk of the deposit consists. Where the ground is cultivated the most copious rains percolate through the soil, which in its lowest depths retains it like a sponge. Even the unbroken prairie

* Sketches of physical geography and geology of Nebraska, 1880.
absorbs much of the heavy rains that fall. On the other hand, the extremely wet season only damages the crops over the low bottoms subject to overflow. Owing to the silicious nature of the soil they never bake when ploughed in a wet condition, and a day after heavy rains the plough can again be used. From 12 to 24 hours after the heaviest rains the roads are perfectly dry. The soil is very easily worked, yielding readily to the spade or plough. Excavation is remarkably easy and no pick or mattock is thought of for such purposes."

The physical characteristics and geological history of this deposit are a very interesting study, but enough has been said to indicate the remarkable surface drainage which prevails wherever this deposit is found. In a word, there are no swamps or marshes, no collection of water remains nearer the surface than the bottom of the loess deposit, and to that depth (40 to 100 feet or more) wells must be sunk, in order to obtain it.

In closing I would offer the following conclusions:

1. The inhabitants of Omaha enjoy an immunity from consumption to a remarkable degree.

2. This is in part accounted for by the number of pleasant days and the small humidity of the climate.

3. The loess formation, which covers a large portion of Nebraska, and to some extent adjoining territory, furnishes the ideal of perfect drainage, and thereby contributes more than all else to the above immunity.

4. Since the meteorological phenomena of this climate necessitate conclusion 3d, therefore is furnished an additional argument in favor of the bad effect of surface ground water in the production of consumption.
Without taking up your time with the subject of the pathology of this affection, considering it myself to be identical with that of the recent views of Koch and others on tuberculosis in other organs, occasionally commencing primarily in the larynx, as it does in joints, the testicle, etc., sooner or later making its appearance in the lungs, but in the vast majority of cases having its starting point in these organs.

There are only two recorded cases of tuberculosis of the larynx where from the history of the cases and on post mortem examination it was demonstrable that the disease commenced primarily in the larynx: the first of these is reported in Orth's Text Book of Pathological Anatomy, p. 319; the second in the Deutsche Medizinische Wochenschrift (No. 28, 1886), by E. Frankel, of Hamburg. This last case was a 31 year old patient, who had been under observation since 1880. There was defective mobility of the left vocal cord with indistinct contour. The right vocal cord was uneven and of a dirty red color. Under local treatment there was improvement, except the hoarseness, which increased during the years 1881 and 1882. In January, 1882, the tubercular process attacked the posterior wall of the larynx, and the condition remained unchanged until 1885. From this time on the destructive action in the larynx increased, and in the secretion hawked up tubercle bacilli were present. Death occurred in January, 1886. On post mortem examination the lungs were found to be normal. The ulceration had caused a deep destruction of the larynx and there were tuberculous ulcerations in the trachea. In the peri-bronchial tissues there were separate fresh nodules, but no caseous or
broken down herdes—lymphatic glands of the lung hilus, normal on both sides. Pleura, liver, intestines, testicles free from tubercles.

We have all seen lungs on post mortem examination which have been the seat of a tuberculous process, where healing has taken place, or at least where there has been an arrest of disease, and it is not at all uncommon to find the cicatrices of tuberculous ulcerations in the larynx and trachea of subjects who have died of pulmonary tuberculosis, or having it, died of some intercurrent affection.

This being the case, the early recognition of tuberculous infiltration or ulceration in the larynx cannot be overestimated, and I wish here to direct the attention of those members who are not familiar with the laryngoscope, and who are in the habit of classifying laryngeal troubles chiefly under three heads, viz., syphilis, tuberculosis, and chronic laryngitis, being guided in their choice by the general condition of the patient, to the comparative simplicity of the instrument, the ease with which a sufficient knowledge for the diagnosis of the commoner disorders of the larynx can be acquired, and the self-satisfaction and confidence resulting. The introduction of the use of cocaine has so simplified the examination of the naso-pharynx and larynx that any practitioner, with the aid of a text book on this subject, can soon feel at home. Few instruments are necessary and their cost inconsiderable.

The cardinal points in the diagnosis may be briefly summarized. The subjective symptoms generally commence by a tickling sensation in the larynx, with repeated attempts at clearing the throat, and short, dry cough. The voice remains normal, except after straining, when it may become temporarily hoarse, and in time this becomes more or less permanent. As the disease progresses this hoarseness is lost and the voice becomes whispering, and in cases where the vocal cords are seriously ulcerated, a peculiar coarse, rasping tone is present, due to a vicarious action of the false vocal cords. Pain in
deglutition and coughing is present when the epiglottis and arytenoid region is very oedematous, and there may be pain shooting towards the ears during efforts of coughing. When the oedema is of a high grade, or where there is marked peri-condritis there is more or less dyspnœa.

The laryngeal picture may show in the commencement of this affection only a general pallor of the mucous membrane, or, at most, a few small elevations generally unilateral. This condition calls for a rigid search for the physical signs of commencing tuberculosis in the lungs, although their recognition in many cases cannot be positively determined until the laryngeal affection is far advanced. There may be a partial paralysis of the recurses on one side early in the disease caused by a beginning infiltration of the lung on the same side (Bresgen).

The most characteristic, and to my mind important, early change is an irregular, pale condition of the mucous membrane between the arytenoid cartilages, resembling somewhat small sphygmographic tracings, not, however, to be confounded with a condition due to a thickening of the mucous membrane found in chronic laryngitis, where there is an uneven piling up of the to-be-cast-off epithelium.

These pointed elevations, as shown by Schröetter, become the upper border of an ulcer.

The vocal cords are either pale or congested, with a usually uneven contour; the edges of one or both may have an appearance resembling the edge of a hacked knife blade.

The false vocal cords on one side may have a granulated appearance, and entirely hide the corresponding true cord from view.

Before any marked change takes place in the cords there can sometimes exist general oedema of the epiglottis, aryteno-epiglottic ligaments (usually one sided), and of the arytenoid region; this may be accompanied by a pericondritis, or either may exist alone. Sooner or later, if life is prolonged, this oedematous area ulcerates in part or generally.
Tuberculosis can almost always be differentiated from syphilis of the larynx. In the latter the concomitant symptoms of the disease are usually present. The mucous membrane is characterized by congestion, local symptoms are acute, ulceration is unilateral, seldom multiple. The epiglottis is more often attacked and its upper surface is the usual seat of ulceration; in tuberculosis the lower surface. Syphilitic ulcers are usually unilateral and much larger than those of tuberculosis, and are surrounded by an area of redness.

Gummatous ulcerations are well defined, and have the appearance as if cut out of an inflamed area, as on the skin. Lupus, it is said, never attacks a mucous membrane primarily, and the ulceration of malignant disease is usually preceded by a tumor of rather rapid growth, and has a peculiar odor, pain is constant and lancinating, glandular enlargement is usually late in making its appearance (Mackenzie). When doubt exists as to differentiation between tuberculosis and syphilis, whether or no an infiltration is discoverable in the lungs, the specific treatment for syphilis should be tried, for syphilis of the lungs is often mistaken for tuberculosis, or one or both may exist simultaneously in both larynx and lungs.

The diagnosis having been made, the question of treatment presents itself. This is mainly local, observing, however, the general principles in the management of pulmonary tuberculosis where this complication does not exist. We should, however, caution our patients against cold climates, but rather recommend mild, moist ones.

The local treatment consists principally in the inhalation of medicated steam or of medicated vapor; a recent invention of a Boston house fulfills this last remarkably well. The objection urged against sprays, etc., are overcome by this invention, the medicament being so finely vaporized that condensation is delayed and the vapor reaches the remote divisions of the bronchii. Infiltrations partially ulcerated are best treated by
the local application of chromic acid, used after first melting on the laryngeal probe. Iodoform blown over the ulcerated surfaces has a happy effect, and has been regarded by some as a specific. Iodol is also being used with advantage.

The most recent application of note is lactic acid, used pure or diluted. This drug has been injected into the infiltrated masses with benefit; its use, however, is too recent to determine its value as compared with other remedies.

My own preference in the treatment of this infirmity is, 1st, the local use of mild sprays, snuff-waters, and powders to the naso-pharynx—this will always be found to lessen the laryngeal symptoms, and I regard the principle of the utmost importance, as in my observation it is the key to the successful management of all sub-acute and chronic inflammations of the larynx—hot solutions, more or less concentrated, of bicarb. of soda, with some such stimulant, as muriate of ammonia, added, I believe the best for this purpose. By the adoption of local measures the long list of so-called cures will be lengthened, and in every case will bring comfort to the patient. Cases of far progressed laryngeal involvement, causing much pain and dyspnœa, especially where the lungs are not markedly complicated, demand, in my opinion, tracheotomy. This gives rest to the larynx and relief from the horrible sensations of suffocation. Cocaine and morphine should be locally applied to relieve painful deglutition. Bergeon's method is too recent to call for more than passing notice, yet much may be expected from it.
SECTION
ON SURGERY.

REPORT ON SURGERY.
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REPORT ON PROGRESS IN SURGERY.
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REPORT ON SURGERY.

BY DR. E. W. LEE, OMAHA.

To make a complete and satisfactory report on the progress of surgery, since the last meeting of this society, would occupy the attention of one individual from the last meeting to the present one. For the world is full of surgeons, and each one is constantly striving to devise something new. This desire to accomplish something that no one else has tried has done much to promote the progress of this great science and art. There are so many special branches of surgery that one cannot give each even a passing notice. The progress in abdominal surgery, for instance, covers more ground than can be devoted to the whole subject of general surgery.

In this report I will attempt to show what has been done in the various departments, only in a general way, as time will not permit of going into detail. Many men can practice medicine, and with apparent success, in the majority of cases, but it is not every man, who can make a successful surgeon. The physician can prescribe for a patient, the patient take the medicine, get over his trouble, and patient and physician both conclude the medicine wrought the cure; when perhaps the physician’s diagnosis of the case was far from being correct, and the medicine had no effect whatever on his trouble. This good fortune cannot come to the surgeon. Nature will not restore a fractured limb to its former shape and form, nor will it remove those morbid growths which the surgeon so often successfully removes. A surgeon’s work will always show, be it either good or bad.

SURGERY OF THE BRAIN.

Operations on the brain do not demand more skillful surgery than other regions of the body, yet the surgery of this
organ is still in its infancy. This is due to the uncertain knowledge we have of the exact physiological functions of the brain. When the diagnosis of a tumor is made, or a foreign body is located exactly, its removal is not such a difficult matter. During the last year physiological and experimental science have removed many of these difficulties, and now surgeons stand in a position to relieve many serious conditions, arising from tumors, etc., of the brain, which a few years ago seemed impossible. I can now report a tumor of the brain having been properly diagnosed, its location exactly determined by the symptoms produced. The case is as follows, and taken from the New York Medical Record, volume 29, page 45:

The patient was an inmate of the hospital for "Epilepsy and paralysis," at Regent’s park, and was under the care of Dr. Hughes Bennet and Mr. R. J. Godlee; a farmer, aged twenty-five, who had been in good health until three years before. He then began to suffer from paroxysms of twitchings in the left side of face and tongue. Attacks of general convulsions, with loss of consciousness supervened, and for two and one-half years he continued to suffer from local spasms and epilepsy. Then spasmodic twitchings of left arm appeared, and the general convulsions ceased. After several months the arm became paretic, and the left leg began to twitch. The patient suffered from violent headaches, attacks of vomiting, and had a double optic neuritis. The conclusions drawn by Dr. Bennet were:

First—That there was a tumor in the brain.
Second—That this growth involved the cortical substance.
Third—That it was probably of limited size, as it had destroyed the centers presiding over the hand, and only caused irritation without paralysis of the centers of the leg, face, and eyelids, which surround it; and
Fourth—That it was situated in the neighborhood of the upper third of the fissure of Rolando.
It was decided to attempt its removal. Accordingly on the twenty-fifth of November Mr. Godlee trephined the skull, and removed a triangular piece of bone over the region corresponding with the upper part of the fissure of Rolando. After the bone was removed, the dura mater slit up, and the cortex exposed, no tumor was visible. The ascending frontal convolution, however, seemed to be somewhat disturbed. An incision, about an inch long, was therefore made into the gray matter, in the direction of the blood vessels, and one-fourth of an inch below the surface a morbid growth was found. This was carefully removed, and proved to be a hard glioma about the size of a walnut. The superficial part of this was distinct from the brain matter, and was easily enucleated. The hemorrhage was arrested by means of the galvano-cautery, and the wound brought together by sutures. Since the operation the condition of the patient has been satisfactory. The temperature did not rise above 100 degrees F. The mind has been clear, the lancinating pains, vomiting, and convulsions have ceased. A hernia cerebri has formed, however, and the paresis of the left leg has increased. The outcome of the case will be watched with the greatest interest, as an opening of a new field for the display of diagnostic acumen and surgical skill. We say this while fully aware that the case in question is really alike, in some respects, to others that have been operated upon for traumatic epilepsy.

"Another case," Medical Record, May 15, 1886: A few years ago a man was admitted into the Middlesex hospital, under Dr. Caley, suffering from coma, which had supervened upon a long standing, purulent discharge from the ear. There were no localizing symptoms. Mr. Hulke trephined the skull, in the lower part of the temporal fossa, and, by means of a director, explored the temporo-sphenoidal lobe, without result. The operation was unattended with ill results, but after the patient's death, a few days later, an abscess was found in the cerebellum. Quite recently a woman was
under Dr. Caley's care with similar history and symptoms, and intra-cranial suppuration was diagnosed. Mr. Hulke determined to explore the brain. In this instance he made an aperture in the cerebellar fossa of the occipital bone, and through a small incision in the dura mater he passed a director through the cerebellum in all directions, but without striking an abscess. Finding that the symptoms were unrelieved, he subsequently trephined the temporal fossa, and opened an abscess in the temporo-sphenoidal lobe. We believe these cases will be duly reported to one of the medical societies.

There is a field of limitation of the operative surgery of the human brain, as well as other portions of the body.

Dr. J. B. Roberts gives us a few suggestions and rules, which it will be well to remember, in operative procedures about the brain, i.e.:

First—The complexus of symptoms called "compression of the brain," is not due so much to displacing pressure exerted on the brain substance as it is to some form or degree of intra-cranial inflammation.

Second—The conversion of a closed simple fracture of the cranium into an open compound fracture by incision of the scalp, is, with the improved methods of treating wounds, attended with very little increased risk of life.

Third—The removal of portions of the cranium by the trephine, or other cutting instruments, is, if properly done, attended with but little more risk of life than amputation of a finger through the metacarpal bone.

Fourth—In the majority of cranial fractures the inner table is more extensively shattered and splintered than the outer table.

Fifth—Perforation of the cranium is to be adopted as an exploratory measure, almost as often as it is demanded for therapeutic reasons.

Sixth—Drainage is more essential in wounds of the brain than in wounds of other structures.
Seventh—Many regions of the cerebral hemispheres may be incised and excised with comparative impunity.

Eighth—Accidental or operative injuries to the cerebral membranes, meningeal arteries, or venous sinuses should be treated as are similar lesions of similar structures in other localities.

Ninth—The results of the study of cerebral localization are more necessary to the conscientious surgeon than to the neurologist.

A. Cranial fractures.—Closed simple fissured fractures:
1. No evident depression, no brain symptoms, no operation.
2. No evident depression, with brain symptoms, incise scalp and trephine.
3. With evident depression, no brain symptoms, incise scalp and possibly trephine.
4. With evident depression, with brain symptoms, incise scalp and trephine.

Closed simple comminuted fractures:
5. No evident depression, no brain symptoms, incise scalp and probably trephine.
6. No evident depression, with brain symptoms, incise scalp and trephine.
7. With evident depression, no brain symptoms, incise scalp and trephine.
8. With evident depression, with brain symptoms, incise scalp and trephine.

Opened compound fissured fractures:
9. No evident depression, no brain symptoms, no operation, but treat wound.
10. No evident depression, with brain symptoms, trephine.
11. With evident depression, no brain symptoms, possibly trephine.
12. With evident depression, with brain symptoms, trephine.

Open compound comminuted fractures:

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13. No evident depression, no brain symptoms, probably trephine.
14. No evident depression, with brain symptoms, trephine.
15. With evident depression, no brain symptoms, trephine.
16. With evident depression, with brain symptoms, trephine.

_Punctured and gun-shot wounds:_
17. In all cases and under all circumstances, trephine.

_B. Intracranial hemorrhage:_
Trephine for the removal of clot and arrest of bleeding when the probable seat of hemorrhage is ascertainable and the clot is believed to be a localized one.

_C. Intracranial suppuration:_
Trephine, and make, if necessary, exploratory punctures in all cases of abscess.

_D. Epilepsy following cranial injury:_
Remove portions of cranium in selected cases.

_E. Insanity following cranial injury:_
Remove portions of cranium in selected cases.

_F. Cerebral tumor:_
If can, localize it, and if it is probably superficial, remove bone, and excise growth if it is found.

Another case will close this portion of the report.

Successful cerebral surgery. In the _Lancet_, May, 1885, Dr. MacEwen reports the case of a man, aged thirty-six, who, in August, 1883, fell down-stairs, and was rendered unconscious for twelve hours. In November, 1883, the patient was admitted into the Glasgow Royal Infirmary, with impairment of power in the left arm, accompanied by muscular twitchings and pricking sensations in some parts. A lesion was diagnosed in the motor cortex of the upper half of the right ascending frontal convolution, probably due to the irritation sat up around extravasation of blood, due to the previous injury. In December, the author trephined, and found a membrane-like patch over the surface of the brain, involving
the arachnoid and pia mater along with the external surface of the gray matter. There was also blood effused into the substance of the brain in the ascending frontal convolution. All this was removed, the bone was replaced, after having been broken up into several small pieces, and the wound was dressed with eucalyptus gauze. The patient made a perfect recovery, without a bad symptom, and two months afterward was able to do his ordinary work.

Removal of an endocranial tumor by Dr. Durante, of Rome Medical Review, February 27th, 1886: The patient was a middle-aged woman, with a fusiform sarcoma arising from the dura mater at the base of the left anterior lobe of the brain. The growth caused left exophthalmous, loss of sense of smell on the left side, and mental hebetude. The patient made a good recovery.

ABDOMINAL SURGERY.

It is in this branch of surgery that the greatest and surest advance has been made. The peritoneal cavity is now opened and operated in with as little danger to life as the amputation of a limb. In our large hospitals, and among our noted surgeons, laparotomy is an almost every-day occurrence. It was at one time supposed that abdominal surgery must be confined to the female, as that of the male was not suitable for operations. It was not long ago that patients suffering from intestinal obstruction and morbid growths were turned away to die, if they could not be relieved by medication, but this generation finds the surgeon prepared, not only to prolong life, but to cure (by removal of these abdominal conditions) his patient.

Prof. Donald MacLean, of the University of Michigan, has, before his present class in surgery (within the last seven months), made fourteen laparotomies (eleven recoveries and three deaths), and as he states with no other antiseptic precautions than thorough surgical cleanliness. These cases were
eleven ovariotomies, two hysterotomies, and one abdominal section for encysted peritoneal abscess.

Gynecological. I. Fifty cases of abdominal section, with remarks on laparotomy, by James B. Hunter, M.D., of New York. Of the cases reported, 27 were cases of ovariotomy, as usually understood by that term, of which 23 recovered and 4 died; 17 were extirpations of ovaries and fallopian tubes, of which 12 recovered and 4 died; 5 were extirpations of uterine fibroids, with 4 recoveries and 1 death; and 1 was for the relief of pelvic abscess, terminating in recovery. In all 50 operations, with 9 deaths. Details of a large number of cases that presented features of special interest are given. The author advises that, where there have been extensive adhesions separated, or where any portion of a cyst remains, or where there is a very large pedicle, the use of a drainage tube is advisable, the best tubes being those of glass, of small caliber, perfectly straight, and without opening at the side. He considers a carbolized spray to be invaluable in the operating room, but on no account to be allowed to play directly upon exposed abdominal viscera.

New York Medical Journal, April 4, 1885, case of laparotomy for peritonitis from perforation, death nine weeks later, by Prof. M. Oberst, Halle: Gives several reasons why probabilities of washing out and drainage are favorable only where either there is an encapsulated abscess, or no extensive adhesions between the loops of intestines have formed. In the first form good results have been obtained. In peritonitis from intestinal perforation the diagnosis is fairly sure. Mikulicz last year reported such a case operated 72 hours after its occurrence. He removed about a quart of pus, and sewed up a 6x4 cm. defect in a loop of the ileum. Cured.

Oberst reports the following case: Man of 48 years. Scrotal hernia for 22 years. While at hard work he tumbled to the ground, tearing the truss in two. Intense pain immediately. Rupture prolapsed, several attempts at reduction.
Vomiting etc., ensued. Admitted to hospital in state of collapse four days later. Abdomen distended and painful to touch. Much swelling of right half of scrotum, extending into abdomen. Herniotomy disclosed feculent matter in the otherwise empty sack. Incision was extended as high as umbilicus—in all some 30 cm. in length. More feculent pus ran from this free opening. Intestines distended, covered with fibrinous exudation, and loosely glued together. Deep down, a loop was found with a hole size of an nickle or sixpence, through which thin feces passed into the abdominal cavity. Here he severed the gut and sewed the two ends to the front wall. Anus preternaturalis. The exudation, pus, etc., was cleaned out as much as possible, the cavity washed out with one-third per cent salicylic acid, deep drains introduced, and the necessarily hurried operation ended by sewing up the incision. Patient’s condition did not warrant any attempt at suturing the gut. He began to improve. After first five days, no pain or fever. Washed out through the drains three times daily with the salicylic. At first considerable suppuration. Tubes removed in fourteen days. Nutrition, however, proved difficult. Patient lost strength. Hyprositic pneumonia and decubitus hastened the end. Autopsy showed no fresh peritonitis, old enclosed collections of pus along the lower border of left lobe of liver, more or less connective tissue adhesions, etc.—Cent. f. Chirg., 1885, May 16, No. 20. Brooklyn: W. Browning.

Gastrostomy and its results, by D. D. G. Zesas: No new cases of his own, though two apparently new ones from Lindner. Yet, despite these and some other cases not given by Gross (v. Am. Jour. Med. Sci., July, 1884,) the latter’s collection is much the larger. This obviates quoting Zesas’ deductions, though he gives references and some details. Gross added 207 gastrostomies (167 times for cancerous stricture, 37 for cicatrices). Z. finds but 163, counting an added case (129 and 32 respet. and 2 in syphilitic trouble).—Arch.

Gastro-enterostomy combined with resection of the pylorus. Billroth, B., has many times done gastro-enterostomy when an exploratory operation showed the pyloric disease to be too extensive for its removal, and the after-union of the stomach and duodenum to be possible. Sometimes the cases were successful, the patients living for two or three months without pain; sometimes the cases were failures. He has lately made a great advance in a case by first performing gastro-enterostomy, and, secondly, removing the cancerous pylorus without any attempt to unite the stomach to the duodenum. He merely closed up with sutures the ends of the stomach and duodenum, so that the latter remained merely as a kind of continuation of the common bile duct, and no longer a passage for food. The patient was doing well five weeks afterwards. Perhaps the main indication for the procedure was the freedom to be obtained from the effects of hemorrhage, and of fetid discharge from the cancer mingling with the food.—Proceedings Royal Medical Society, Vienna, Feb. 20, 1885. London: C. B. Keetley.

Colotomy, with delayed opening of the intestine, by Mr. Davis Cooley: At the meeting of the Clinical Society of London, on the 13th of March, this paper was read, based on three successful cases of left lumbar colotomy, in which the opening of the intestines had been delayed for one, four, and six days, respectively, after the bowel had been found. The object in dividing the operation into two stages was to allow of the beginning of the reparative process of the wound, and thus to diminish the risk of peritonitis, or of suppuration in the planes of the connective tissue near the wound. To secure the protruding bowel, and yet prevent extravasation of its contents, or strangulation of its walls, a clamp has been devised, in which two pairs of wiry studs placed on the approximating steel bars, were made to grasp the bowel at two points.
In two of the three cases this instrument had been used, and rapid repair, with very little constitutional disturbance, had been the result. The method was suggested as likely to be of service, if it were desired to remove part of the entire circumference of the bowel, either for malignant tumor, or as a method of trying to bring about a more serviceable artificial anus than the operation of colotomy usually affords. The loop of the intestine might be drawn out in the first stage of the operation, held there by the clamp, and, in two or three days afterwards, removed, or completely divided, as the case might be.—Lancet, 1885, March 21st.

Laparotomy for the removal of a hairpin from the sigmoid flexure, by F. Bryant, F. R. C. S. (London): The patient was a somewhat delicate lad, aged nine years. Six months before admission to the hospital, he had pushed up a hairpin, three and a half inches long, into his rectum. Two or three days afterwards, he felt pain, but no advice was sought until two and a half or three months had elapsed. “At this time he was suffering from severe abdominal pain, coming on in paroxysms; sometimes he was screaming all night.” The pin could be just felt with the point of the finger, per rectum, but could not be grasped so as to be removed. Up to this time, he had been able to go to school, although now and then obliged to stay at home from the pain. The pain, however, increased, and for two and a half months before admission to hospital, he had been confined to the house. Thrice during this period he had fainted from the pain, and he suffered much from the sickness, and from pain in the lower part of his abdomen, on the left side. There were also sharp, twinging pains in his arms and legs. “After a motion he is better for a few days.” At times he has bladder symptoms, and he has to micturate suddenly, and oftentimes when in these pains, he is very helpless. Sitting over warm water relieves him in these paroxysms. “Lately he has slept in bed, in a sitting posture.”
On admission, the abdomen was distinctly full in the hypo-gastric and both inguinal regions; also in the upper part of scrotum and region of pelvis, simulating hernia. Percussion note dull in pelvic region, elsewhere resonant. Both inguinal regions, especially the right, very tender to touch; and a hard body can be made out on the left side, below and an inch internal to the anterior superior iliac spine. Mr. Bryant, two days afterwards, cut directly down upon this hard body; the peritoneum was opened, and the bowel incised over the hard part, which proved to be the pin. It was then extracted. The bowel was sewn up with fine cat-gut sutures; the wound in the abdominal wall was washed with iodine water, and also sewn with cat-gut. Dressing of iodoform gauze and cotton wadding was applied. Patient at first suffered from peritonitis, and had afterwards a sharp attack of pleurisy and bronchitis. In five days, however, he began to improve, and in three weeks he was discharged, with the wounds healed, and otherwise apparently well. During the progress of the case, cold was applied to the wound with one of Leiter's coils. The bowels were moved by an enema on the eleventh day after operation.—*Med. Press and Cir., 1885, March 18th.*

Edinburg: Charles W. Cathcart.

A series of one thousand cases of abdominal section: This is the last report of Larison Tate's operations. This report shows a general death rate of nine and three-tenths per cent. Mr. Tate remarks that if he lives to make another such a series the death-rate will be much lower, as this report includes his early operations. These abdominal sections were made for many different conditions, as it includes 340 ovariotomies, 94 exploratory incisions, 54 for hysterectomy, in fact for most every curable abdominal operation. This report is hard to compare as it is the only one which covers so many cases.

Laparotomy for perforation of the stomach and intestine: According to Mikulicz, laparotomy is indicated in all cases
of perforation of the stomach or intestine due either to direct or indirect violence, or to some pathological process. Existing peritonitis should not contra-indicate the operation, as it may be thus effectually treated. The main contra-indication to laparotomy in such cases is extreme exhaustion. In the first of his reported cases, the author of this paper had to deal with perityphlitis, which after a time became complicated by constipation, vomiting, and other symptoms of intestinal obstruction. Laparatomy was performed and an incision six inches in length made in the linea alba. The abdominal cavity contained about two pints of very fetid fluid. The intestine, though bound down by numerous adhesions, showed no signs of any disturbance in the circulation. The patient died five days after the operation, and on post mortem examination the seat of perforation in the intestine was first discovered.

The second case was that of a young man, who, after having suffered from diarrhoea during six weeks, became constipated during the seventh week, and presented symptoms of ileus. The case was diagnosed as one of volvulus. On the performance of laparotomy, one pint of turbid serous fluid was found in the abdominal cavity. A volvulus was found, and the obstruction removed. The patient recovered from the more direct effects of the operation, but after an interval of a few weeks succumbed to inter-current pneumonia. The patient in the third case was a young man who, having been disturbed during sleep, and having suddenly sprung out of bed, was seized with intense pains in the umbilical regions, and presented symptoms of obstruction. Sixty hours after the onset of these symptoms the patient came under the care of Prof. Mikulicz, who diagnosed intestinal incarceration, and at once performed laparotomy. In the abdominal cavity he found about a pint of bad smelling pus, and some undigested pieces of potato. On the left side, just above the brim of the pelvis, a perforation six millimetres in length,
and four millimetres in breadth, was observed in a knuckle of the ilium. The mesenteric glands were much swollen, and as no other cause of the lesion could be determined, Prof. Mikulicz came to the conclusion that this case was one of perforating ulcer from typhoid fever. The edges were refreshed and brought together in the long axis of the opening by a dozen sutures of silk. The subsequent course of the case was satisfactory, although the abdominal wound opened up and gave exit to a considerable quantity of pus. In the fourth case, laparotomy was performed for rupture of the stomach. The openings existed near the diaphragm, in the smaller curvature. The patient, whose stomach had been much distended, and whose abdominal cavity was filled with portions of food, died three hours after the operation.—Centralbl. fuer Chirurgie, No. 45, 1884.

Progress in General Surgery.

Communications from the Surgical Clinic of the University of Tokio, Japan, by Prof. J. Scriba:

a. The first of this series of papers contains a contribution to the knowledge of the etiology of acute myositis. The author gives four cases, in all of which multiple inflammatory processes in the striated muscles suddenly appeared after a slight suppuration in the form of an abscess or furunculus had been developed in the skin or mucous membrane, and while the process of reparation was going on. This acute inflammation of the muscular substance proper, would, under proper and sufficiently early treatment, pass away again, or else lead to suppuration and finally heal without detriment to the muscle, regeneration having taken place.

The author believes the disease arises from some condition of the blood, and is occasioned by the invasion of micro-organisms in a manner analogous to that of acute osteomyelitis the product of the inflammation being either serous or purulent in character. He suggests the term “infectious myositis” for the affection. The symptoms consist in a hard
swelling, preserving the exact shape of the muscle, which is itself painful to the touch, and the surrounding parts of which show no sign of sensitiveness nor inflammation.

b. Elongation of a muscle by means of pedunculated muscle flap. In an old case of compound fracture of both bones of the forearm, which had healed with contracture of the flexors of the fingers and cicatricial involvement of the tendons, the author, after making incision, united several severed tendons which had remained ununited, but found that the extensor digit. commun. muscle could not be united to its tendon on account of loss of substance of the latter, so as to elongate the muscle. He therefore divided it in its upper portion transversely half way through, and splitting the muscle longitudinally for some distance down, turned the flap thus formed back and united its (proximal) end to the free end of the tendon. Union took place by first intention, and free motion of the fingers was made possible.

The author is of opinion that such plastic operations could not be done with healthy muscles; but in this case the muscle was hard and shrunken.

c. On peculiarities of the Japanese skull due to race, as affecting surgical methods of operation. In performing the operation of excision of the superior maxilla, the author found the fossa pterygo-palatina too narrow to admit a small, straight saw in order to pass it through the foramen sphenopalatinum, and found it necessary to divide the alveolar process off from the superior maxillary bone. On examination he further found that this anomaly was one of race, the patient being Japanese. He therefore describes the differences of skull formation between the Caucasian and Mongolian race. He advocates performing the resection of the superior maxillary bone after O. Weber instead of after v. Langenbeck. In the latter case the saw must be introduced into the apertura pyriformis (in operations upon Japanese
subjects) in order to sever the alveolar process from the body of the bone.

The operation of *resection of the second branch of the fifth nerve* likewise demands some modification when the patient is Japanese, and, not only for such cases but for Europeans as well, the author recommends the following method:

The first incision is to be made through the skin and tissues, including the periosteum down to the bone, commencing a little below the external palpebral ligament and extending perpendicularly downwards to the lower margin of the zygomatic process of the superior maxilla. A second incision is then carried from the upper end of the first one to the middle of the zygomatic process of the temporal bone, also severing all the tissues excepting the temporal muscle in the middle portion. After dividing the periosteum, the zygomatic bone is then to be separated from the skull, its union with the superior maxilla being divided with a chain saw, the zygomatic process of the temporal bone being cut through with a chisel. The whole flap, together with the loose zygomatic bone, can then be turned downwards, the margins of the inferior orbital fissure chiseled off, and thus access gained to the foramen rotundum. The nerve is then to be drawn out and cut off and the flaps replaced.

He further advises a modification of *infra-orbital neurectomy* after v. Langenbeck for Japanese subjects. After exposing the point of egress of the nerve (for. infra-orb) the author inserts a long, narrow blade of a scalpel (instead of a tenotome) close to the lateral part of the inferior orbital margin 2.5, or 3.5 centimetres into the orbita, keeping close to the external wall, and then, lowering the point, divides the parts in the fissure. The nerve can then be extracted through the infra-orbital foramen.

*d. Contributions to the etiology and therapy of aneurisms.* The author treated seven cases, six of which were cured or improved and one of which died which had been treated by
Reid’s method of compression. He is in favor of operative treatment, generally speaking.

In Japan the disease is frequently caused by endarteritis syphilitica, the pathological anatomy of which the author describes in detail. He suggests the following method of treatment:

Indirect compression should be tried in all cases, if necessary, with the assistance of narcosis. If a nurse can be had, digital compression after Burke-Esmarch, if not, instrumental compression with a stick or Bulley’s apparatus, is to be used.

Uninterrupted elastic bandaging after Reid is considered very dangerous, but very effective, and perhaps more suitable for traumatic aneurisms than for other kinds.

In all cases in which compression fails, Anel-Hunter’s ligation at the nearest healthy point to the sac is recommended. Extirpation of the sac is indicated (1) in rupture of the aneurism; (2) in all arterio-venous aneurisms, if after ligation at a central point the pulsation and bruit continue; (3) in cases where Anel-Hunter’s method is not successful, or where there is any recurrence; (4) in aneurisms of small arteries; (5) in arterial angiomata.

Ligation of the efferent vessels after Brasdor-Wardrop is to be performed only when a central point can not be reached, and all efferent branches are accessible.

For ligatures the author prefers silk which has been boiled for ten minutes in a one per cent solution of corrosive sublimate and preserved in the same solution until used, and then rubbed with iodoform powder.

The author publishes thirteen pages of tables showing the results of different methods of treating aneurisms, and adds an extensive list of the literature of the subject.—Deutsch. Zeitschr. f. Chir., Bd. 22, Hft. 5 and 6, October, 1885.

II. Contributions from the Mansfield Hospital for Miners at Hettstedt, by Dr. Hildebrandt.

He gives his experiences during the year 1884 in the
above-named hospital, and publishes the more interesting cases occurring during this time, representing chiefly injuries and accidents to miners.

Sawdust as a wound-dressing: As a former assistant of Volkmann, he had essayed dressing the wounds in the same manner at Hettstedt as he had been accustomed to do at Halle, but being somewhat limited as to means, he found he had to abandon expensive dressings, and, instead, adopted sawdust, and with capital results.

He had the sawdust sifted, then steamed in a close box for several hours, and finally moistened with a two-pro-mille sublimate solution. This he applied to the wound, wrapped in sublimate gauze. In this manner he treated sixty major surgical operations, including nine compound fractures, and only once disturbance occurred in the course of healing, erysipelas having set in through the patient's opening the dressing.

Four tuberculous and osteomyelitic foci were treated with scraping out and application of Pacquelin's cautery. Skull fractures all ended fatally, excepting one, which was trephined. The indication in this case was not given by a depression, but a few hairs were observed in a fissure. The author expresses himself in favor of trephining, if the fissure appear in the least unclean, or liable to become septic. One laparotomy, for removal of gall stones in the gall bladder, was successful. Five cases of nerve stretching, with good results, are recorded, and one case of ligaturing the external iliac artery and vein at the point of union with the common iliac did excellently. *Deutsch. Zeitschr. f. Chir., Bd. 22, Hft. 5 and 6, October, 1885.*

New York: W. W. Van Arsdale.

NERVOUS AND VASCULAR SYSTEMS.

1. Nerve suture, by Dr. Nicaise, Paris. The case is reported of a young woman who accidentally severed the median nerve at the wrist by falling through a window. The
wound healed in eight days, but, from the time of the injury, there were anaesthesia and paralysis of motion in the parts below, supplied by this nerve. Six weeks after the accident she entered the hospital. The scar was tender, and pressure on it caused tingling and numbness in the outer half of the hand. The cut ends were found to be bulbous, and so markedly degenerated that a considerable ablation of nerve was required in order to reach the healthy tissue. The freshened extremities were brought together by fine catgut stitches, passed from the sides of the proximal portion to the lowest level of its cut surface, and by tracks symmetrical with these through the distal portion. The Lister dressing was applied, and the parts immobilized in a plaster splint. The pain was at first severe, preventing sleep. Sensibility began to appear in the thumb the next day, and improvement continued so rapidly that the patient was discharged on the thirteenth day, able to use considerably the previously crippled hand. Four months afterwards the parts which had been anaesthetized were sensitive to pricks, but not to the touch of a blunt object. There was no pain in the limb; but when the thumb was pricked, not only was the impression felt at the point touched, but a pain was experienced at the shoulder. Nicaise believes that immediate union of the nerve filaments does not occur in man. Degeneration takes place in the parts of a nerve peripheral to its section, though it is held by some pathologists that not all the axis-cylinders are involved in this process. In this case union and partial restoration of sensibility were achieved long after the receipt of the wound, and when degeneration had obviously occurred. Though suture undoubtedly had a salutary effect on the distal parts, it could not by itself have induced regeneration so rapidly. Brown-Sequard asserts that the irritation of the central end of the process of sutureing increases the functional activity of the anastomotic nerve filaments which supply the uninjured trunks, and are distributed to the paralyzed parts. Though any irritation of the central parts may
answer the purpose, the surgeon should select that which is demonstrably the most certain and permanent, namely, suture, which, thanks to the antiseptic method, is free from danger. Trepier criticises this theory. To his mind neuritis alone explains the phenomena, which he analyzes with great skill and force. He agrees, however, that suture should be performed at as early a date as possible after the injury. _Rev. De Chirur_, 1885, No. 7. Portland: F. H. Gerrish.

**HEAD AND NECK.**

1. On operations for the removal of adenoid growths in the naso-pharynx. By Dr. J. Gottstein, Breslau. There are three methods for the operative removal of adenoid growths in the naso-pharynx, apart from those employed for their destruction by caustic means and the galvano-cautery, namely: first, by the snare; second, by the forceps; third, by the curette. Up to the present the removal with the curette, especially that of Lange, seems to have found most favor. The author has constructed an instrument which has, he thinks, some advantages over those in present use. To a handle of wood, ten cm. in length, is affixed a shaft of steel, seven cm. long, the end of which is pear shaped and fenestrated and bent to nearly a right angle to the shaft. There is a slight upward curvature in the shaft, close to this pear shaped end. The latter is three cm. in height and 2.55 cm. in width at its broader or upper part, its outer surface, i.e., that which comes in contact with the pharyngeal wall, being flat and smooth, whilst the inner upper edge of the window-like opening is sharpened. The manner of operating with the instrument is as follows: The tongue being depressed, the instrument is passed under the velum, and its end pressed firmly against the pharyngeal wall, at the place where it is desired to operate. By so doing the adenoid growths are squeezed through the fenestrated end of the shaft, when, by a firm traction downwards, they are shaved cleanly off.
This procedure may be repeated several times without withdrawing the instrument, although the author agrees with Simon that it is better not to attempt too much in one sitting. The instrument is also useful in excising Luschka's tonsils. It differs essentially from the instruments of Lange or Meier, inasmuch as those were simply curettes, whereas that of the author acts on the principle of a tonsillotome or laryngo guillotine. Tearing of the mucous membrane is avoided by the clean cutting of the sharp edge, the hemorrhage is usually slight, as is also the reaction. The author uses no chloroform, and rarely has any assistance in operating. Berlener Klin. Wochenschrift, No. 2, Jan. 11.

2. On blood cysts of the lateral regions of the neck. By Prof. Dr. Gluck, Berlin. In a paper read before the Berlin Medical Society on November 18, 1885, the author, after touching somewhat on the etiology of these blood cysts, described a case operated by himself, in which the results were most favorable. Blood cysts, he says, are tumors which contain only fluid blood, communicating directly with some large vein; they may be emptied by pressure and quickly re-filled on removal of the latter. It happens sometimes that a cystic ectasia takes place in the center of a pharyngeal arch, both ends of which have become obliterated. Such seems to have been the origin of the case here reported, although its character was changed to that of blood cyst through the communication existing with the common jugular vein, a fact, he says, heretofore unobserved, the contents of such pharyngeal-arch cysts being usually of a serous or mucous character. The sac itself was formed of connective tissue, having a roughened, wart-like inner surface. The papillary excrescences on this inner surface consisted, microscopically, of villi, which somewhat resembled, at first sight, those of the intestinal tract, and were covered with cylindrical epithelium, stratified. The patient, a girl, æt. 16, had first noticed the swelling some ten years previously, and had remarked that its size
varied at times, and that it appeared to be erectile. The tumor was easily compressible, filled up again quickly on removal of the pressure, and on puncturing was found to contain pure blood. When Valsalva's experiment was performed, a bluish swelling in the lateral region of the neck was easily observed. The free communication with the common jugular vein rendered ligature of the latter necessary before removing the cyst, which was successfully accomplished according to Wolff's method. A large hemorrhage from the jugular was controlled by ligating its central end, which had been dissected free, in case this emergency should arise. Tampons prepared in iodoform-ether were used, and under this treatment the wound healed rapidly. No relapse occurred. A similar was operated by Von Langebeek in 1880, which has never been published. The sac here was varicose ectasia of the wall of the vein, common jugular. The author's case is the nineteenth which has been reported, and the sixth in which the operation proved successful. It is an interesting case from many standpoints. The unusual character of the cyst and its communication with the jugular make it interesting, as the latter fact would tend to show that in all probability numerous blood cysts of the neck are of congenital origin and really pharyngeal-arch cysts. The case may also be regarded as of still further importance, inasmuch as we find that no coagulation of blood, flowing over a surface rough with wart-like excrescences, etc., took place; but that it was, on the contrary, in a perfectly fluid state, as was clearly demonstrated by the violent squirting after incision of the sac. This is contrary to the generally accepted theory of Brucke, according to which all elements, excepting the normal endothelium of the interna, act as foreign bodies in the blood channels, causing coagulation of blood in their neighborhood. Operations on blood cysts are, technically speaking, among the most difficult in surgery. The danger, however, with proper observance of antiseptic measures, is not great. Extirpation
of such cysts is indicated in cases where their size is large, causing inconvenience by pressing on the nerves, trachea, etc. The author furthermore believes that their extirpation is necessary from a prophylactic standpoint, inasmuch as from the proliferating of these pharyngeal-arch cysts a carcinoma may take its origin. Volkmann, rightly judging of the genesis of the latter, called them bronchogenous carvinoma. *Deutsche Med. Wochenschrift*, No. 5. Feb. 4, 1886. New York: C. J. Colles.

3. Congenital cyst of the neck, by M. Monod, of Paris. M. Monod had treated by injection with liquid chloride of zinc, a cyst of the neck, with viscous contents, in a little girl. Cure was accomplished at the end of a month, after sloughing of a considerable extent of skin, but in six months, a relapse ensuing, M. Dubar excised it by the bistoury, with some difficulty, owing to cicatricial adhesions. Another relapse in some months was treated by excision, and this time cure was established at the end of a year. This course is common in cysts of the neck, and the main interest of the case is in the histological details given by Mr. Dubar. The tumor removed after the first recurrence was formed by a sac sending into the depths of the neck a prolongation, closed at the bottom by a collection of epithelial cells, so that the caustic injection had been forcibly stopped—an arrangement showing the inefficiency of this mode of treatment. The small tumor removed at the second operation was a cyst lined by ciliated columnar epithelium, and having epithelial shoots ready to invade the neighboring tissues. M. Dubar hence concludes that the tendency to recurrence of cysts of the neck is due to the structure of their walls and their property of pushing out epithelial prolongations. In consequence, their removal should be widely made beyond the limit of the tumor. M. Monod restricted this last explanation as applicable only to cysts already operated on. For virgin cysts, exact and complete removal would be sufficient. *Societe de Chirurgie de Paris*, July 22, 1885.
CHEST AND ABDOMEN.

1. Cases of explorative laparotomy, by M. Lucas-Championniere, Paris. 1. Tumor in the right side, explorative laparotomy, pedunculated hydatid cyst recognized and removed. The patient had a tumor of which the diagnosis was obscure, but by elimination a tumor of the kidney was supposed. Laparotomy was performed on July 10th, as the most certain and expert way to verify the diagnosis. The kidney of the opposite side, the integrity of which should always be determined before removing the unhealthy kidney, was found atrophied, while the right one, found with some difficulty, was hidden behind the liver. The tumor, everywhere adherent, was fixed by a pedicle to the anterior border of the liver. It was removed without many difficulties, but a portion of the wall, too adherent, was left attached to a piece of intestine. It was a hydatid cyst of the liver, pedunculated. Several similar cases have been noticed recently. The patient operated on twelve days ago is going on well.

2. Tumor of the right side, exploratory laparotomy, pyelo-nephritis recognized, nephrectomy twenty days after. A woman, admitted to the hospital with a large tumor in the right side, very painful, and of difficult diagnosis; a nephritis or suppurated perinephritis suspected. A puncture gave issue to a litre of pus, but did not determine more precisely the diagnosis, and on May 21, an exploratory laparotomy was decided on. Pyelo-nephritis was recognized, and the abdomen reclosed. On the 13th of June the removal of the kidney was effected, through a slightly oblique incision behind the external border of the right rectus, the peritoneum being easily separated as far as the kidney, the size of which would have prevented removal by the lumbar method without costal section. The ureter and thickened fragments of the capsule were also removed. A slight tear in the peritoneum, caused during its separation, was sutured. Healing was complete,
without suppuration, the twenty-first day, the patient passing 1,500 grammes of urine per day. Societe de Chirurgie de Paris, July 22, August 19, 1885. London: P. K. Abraham.

EXTREMITIES.

1. An operation to correct deformity resulting from extensive loss of skin in the arm, by Mr. Joseph Bell, Edinburgh. Patient came to hospital requesting amputation for results of cicatricial contraction after phlegmonous erysipelas of arm. Mr. Bell determined to shorten the limb instead. He removed the lower three inches of the humerus, including the condyles. The result was a useful arm, with all the elbow movements, and now quite healed. Edinburgh Medical Journal, September, 1885. London: C. B. Keetley.

GENITO-URINARY ORGANS.

1. Two rare varieties of rupture of the bladder, by Dr. A. Pousson. The question is raised of the possibility of an absolutely spontaneous rupture of the bladder, that is, rupture without pathological alteration in its walls and without traumatism. The author adduces testimony to show that the tear may result from either the contraction of the abdominal walls on a full bladder, or the contraction of the walls of the bladder itself. In support of the first explanation of the accident, cases are cited in which men lifting great weights felt a sudden pain in the hypogastrium, and could not urinate afterwards. Death speedily ensued, and rupture of the bladder was found at the necropsy. The violent straining with the abdominal muscles on a full bladder was the cause of the injury. The sphincters are held with peculiar firmness during muscular efforts, and thus the overload of urine cannot escape through the urethra. If there happens to be a stricture of the urethra, the danger is so much the greater.

The theory of the causation of rupture by the second method is upheld by a new view of the physiology of that viscus. It
is maintained that the hypertrophoid bladder walls are as capable of spontaneous rupture as those of the heart and gravid uterus. In experiments on the heart, it is shown that the thinner walled cavities rupture most easily from external violence, but the thicker from their own contractions. The hypertrophy of the bladder, on account of stricture, may justly be compared to the hypertrophy of the heart, arising from valvular lesion. Desmos has demonstrated that the contractions of an inflamed bladder are as sudden as those of striated muscles, and occur very frequently. Distention invites contraction, and when there is an obstacle to the discharge of urine, by way of urethra, rupture occurs. Even for a long time after anaesthetization, these spasmodic and irregular contractions do not cease. Numerous cases are reported bearing upon this theory, notably one in the hands of Verneuil, where a gentle injection of only 125 grammes, was immediately followed by a bursting of the bladder, and one in which Guyon was preparing to perform hypogastric lithotomy. The latter had thrown 200 grammes of boric solution into the bladder and 300 grammes of fluid into the rectal balloon, but the vertical globe did not appear. A little more fluid was injected into the bladder, and the hypogastrium was distended for a moment, but then suddenly became flat. Death occurred in twenty-two hours, and the necropsy showed the walls of the bladder to be 8 m.m. thick, with an anterior perforation 12 m.m. long.

The following classification is suggested:

From direct cause.

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| Rupture healthy bladder .......... | By perforation. |
|---|
| Rupture, diseased bladder........ | By contraction of its walls. |
The term "spontaneous rupture" should be discarded, as it explains nothing and satisfies nobody. "Rupture from idiomuscular contraction" is suggested as a suitable substitute.

Rupture by action of the muscular walls can not be prevented by the surgeon in ordinary cases; but, by emptying their bladders, he can protect his patients against the danger of sudden contractions in the excitement period of anesthesia. If there is a tight stricture and the bladder is full, hypogastric aspiration should first be practiced. No careful surgeon will puncture a bladder with the beak of a catheter; but it is possible for a bladder to contract upon the instrument and thus be perforated. That an irritable bladder can rupture itself should warn us against an approved surgical procedure, the distention of small and irritable bladders by forcible injections. Anesthesia should be complete before any operation of the bladder, so that the liability to contraction may be reduced to a minimum. It is better lithotrity almost dry, and to replace supra-pubic lithotomy with perineal, than to subject a patient to much risk of rupture by distending an irritable bladder.

The prognosis is far less grave in extra than in intra-peritoneal rupture. In the former case, if a free perineal opening is made in the bladder, the chance of recovery is greatly augmented.—Rev. de Chir., 1885, No. 11. Portland: F. H. Gerrish.

II. Diagnosis and treatment of intra-peritoneal wounds of the urinary bladder, by W. A. Stein, M.D. (New York): After calling attention to the great fatality of these lesions, referring to the fact that in the great majority of cases the coats of the bladder were healthy at the time of the injury, and that neither thickness of the vesical wall nor the absence of distention of the bladder were necessarily a safeguard against rupture, although usually efficient, he reviews the symptoms in detail; inability to walk or to stand; severe pain over the epigastrium; incessant desire to micturate with
inability to void the smallest quantity of urine, or possibly but a few drops mixed with blood, with constitutional symptoms of great prostration rapidly ensuing; the inconstancy and unreliability of the most constant symptoms are emphasized and the completion of the diagnosis is recommended by digital exploration, in the female through the short urethra, and in the male through a small, median perineal incision. In case of a question between intra and extra-peritoneal laceration, a supra-pubic incision will dissipate all doubt. Should the injury be extra-peritoneal, the incision will have done no harm, and should it be intra-peritoneal, it will have been the initial step to a laparotomy. Referring to the utility, as curative measures of catheterization, paracentesis of the recto-vesical cul-desac, and lateral cystotomy, he comes to laparotomy, the advantages of which are: (1) That it permits direct inspection of the seat of the lesion and the appreciation of concomitant injury to other parts. (2) That it permits the removal from the peritoneal cavity of extravasated urine and blood. (3) That it permits cleansing and disinfection of the peritoneal cavity; and (4) That it permits the accurate closure of the vesical wound, preventing further effusion of urine, thus meeting all the indications which may secure success.—New York Med. Rec., 1886, Feb. 6. J. E. Pilcher (U. S. Army).

III. Three cases of supra-pubic lithotomy, by Dr. Orlowski (Warsaw): The author calls attention to certain details of the operation of supra-pubic lithotomy. Having encountered a case in which the peritoneal fold reached down as far as the pubic symphysis, he insists on the use of a grooved director in incising the abdomen, both because it lessens the danger of wounding the peritoneum and because it shortens the operation.

Instead of using hooks and retractors to hold the bladder in the wound, he passes a silk thread for the distance of three centimetres through the muscular layer of the bladder wall,
and uses it to draw up the bladder. The main advantage consists in the space gained for operating.

The suture of the bladder should be performed after Gely’s method “en-pique entrecoupee,” and not neglected, as in France. By means of the suture the after-treatment may be shortened by ten days, thirty instead of forty days being then only required for convalescence. He allows infiltration of urine to be the most frequent cause of death, but denies that it is more frequent after suture of the bladder wound, than without it.

The following are the cases which present considerable interest:

I. Patient aet. 70; great debility; chronic bronchial catarrh; enlargement of prostate; stone in the bladder. Lithotrity unsuccessful on account of hardness of stone; next day, (July 1) operation. Rubber bag in rectum filled with 440 cem. water; bladder distended with 250 cem. Incision through abdominal wall and bladder in median line, removal of stone. Two drainage tubes placed in bladder, and one in abdominal wound, which was closed with sutures. Lister’s dressing. Evening temperature, 37° 5 C.; 3d, dressed; 7th, sutures removed; 11th, tubes having accidentally fallen out, left off, and catheter placed in bladder. General health very good; 13th, acute pneumonia; 22d, death. Wound was in good condition. No post mortem.

II. Case of stricture of urethra, aet. 33. Patient having introduced elastic bougie, No. 14, fell asleep and on awaking found it had entered the bladder, July 22; 28th, operation similar to first, but that bladder wound was sutured with cat-gut (Gely’s suture); eight sutures. Catheter retained in bladder; 30th, catheter changed. August 1, wound dressed and catheter renewed. From 3d to 10th urine flowed from the wound; 12th, catheter removed; 17th, dismissed cured.

III. Patient aet. 64. Lithotrity one year and a half and again one week previous to admission. Great pain and de-

IV. The flaying of the male genital parts, by Dr. O. Kappeler. The author gives nine cases (among them two new ones of his own) of injury to the male organs consisting in the stripping off of the skin covering them. In all cases the patient was caught by some revolving piece of machinery, his clothes torn off, and with them more or less of the skin of the genital organs; only in one case these organs themselves were injured. No deaths occurred.

The object of the author is to throw some light on the prognosis and treatment of such accidents.

In his own two cases recovery ensued by the union of the inner membrane of the prepuce with flaps taken from the skin of the neighboring parts.

In case, then, that the internal lamella of the prepuce exists and can be turned back, with or without incision in the median line, and if there is sufficient skin of the scrotum or of the mons pubis present to permit of a union with it, recovery progresses without further assistance, and without loss of urinary or genital function.

If the skin of the scrotum and mons pubis be wanting, still a good recovery is possible, especially with the help of plastic operations, but the penis, though it may perform its functions, will be dwarfed, provided the internal preputial layer be preserved.
If the internal membrane of the prepuce be torn off as well, little is to be expected in the way of restitution. Hard cicatrices cripple the member and prevent coition. In these cases transplantation is moreover extremely difficult, as gangrene of the flaps almost always occurs.

As to injuries to the scrotum, a very little scrotal skin suffices to cover the testicles.

If no skin at all be present the testicles are gradually, in the course of a week, drawn up the external inquinal ring by the action of the cremaster muscle. In this case the testicle may pass under the pubic skin, or heal by cicatrization, but it is also possible that the latter process is long delayed, and that the cicatricial pressure necessitates the removal of the testicle.

Primary plastic operations are indicated as soon as the entire skin of the scrotum has been torn away; secondary operations become necessary if the testicle remains without cicatricial covering.

In both cases of the author's, coition was possible, but the generative functions had ceased on account of azoospermia. The latter fact is difficult of explanation since no atrophy of the organs was noticeable. *Deutsche Zeitschr. f. Chir. Bd., 23. Hft., 1 and 2, December, 1885.* New York: W. W. Van Arsdale.

V. Alveolar Sarcoma of the Bladder. Operation by Mr. Langton (St. Bartholomew's Hospital). The diagnosis of this case was made partly by the aid of the sound and partly by the character of the haematuria (sometimes absent, and always worse toward the end of micturition). After performing median urethrotomy, Mr. Langton was just able to reach and remove by the use of a steel scoop a tumor of the size of a walnut, growing from the bladder wall one inch and a half behind the prostate. The patient, a man aged 25, made a good recovery. The tumor was composed of a number of cells containing alveoli.
The author remarks on the necessity for suprapubic incision in cases of tumor springing from the anterior wall, and also discusses the nature of the various forms of vesical new growths. In his case the situation had been determined by the greater resistance to movement of the sound on the left side of the base of the bladder. *Lancet, Dec. 28, 1885.* London: J. Hutchinson, Jr.

VI. Treatment of Spasm of the Sphincter Ani by Forcible Dilatation, by T. Pridgin Teale, F. R. C. S. Speaking of the use of dilatation in painful ulcer of the anus (fissure), Mr. Teale says:

"It is now some twenty years or more since I first heard of the then new method of forcible dilatation of the sphincter ani as a substitute for division by the knife. From that time I have abandoned the knife, and have invariably employed dilatation alone.

The advantage of this mode of treatment, Mr. Teale explains as follows: "In the first place, it has introduced a more exact, and, as it seems to me, a more scientific method of dealing with the variable condition of sphincter which are found in such cases. The educated dilating fingers of the surgeon have a far better consciousness of the amount of resistance to be overcome, and of the degree of the relaxation to be demanded and attained than can be attained by the use of the knife."

The second class of cases in which Mr. Teale dilates are pure cases of spasm of the sphincter, causing habitual constipation, long delay at the water-closet, retention of flatus in the colon, and colicky pains in the left loin, in which no fissure or ulcer can be discovered.

The third, cases in which a ring of cartilaginous hardness is felt, some resistance from the anus, far more unyielding than the ordinary sphincter in fissure, and needing all the power of, sometimes proving almost too much for, the surgeon’s fingers to break through.
The fourth class of cases is that of slight internal bleeding piles.

The fifth, cases of deeply extending fistula in which free division into the rectum would involve a risk of permanent incompetence of the anus. Here, after full dilatation, partial slitting up of the fistulous sinus, according to Mr. Teale, suffices. He says: "The enforced quiescence of the sphincter allows the rectal end of the sinus to heal. In attempting this, it is necessary to make the skin opening large like the base of a triangle, of which the rectal end of the fistula forms the apex, care also being taken to vigorously scrape away all granular lining of the fistulous track by Lister's scraper or Volkman's spoon."

Lastly, Mr. Teale is of opinion that in all operations on the rectum and anus dilatation of the sphincter is an essential, almost an indispensable element in, the treatment.—*Med. Times, November 28, 1885.*

**Bones, Joints, Orthopaedic.**

I. Treatment of Infantile Paralysis, by Dr. William Murrell (London). During the acute symptoms, which last generally three or four days from the onset of the attack, and are marked by febrile disturbance, an elevation of temperature of three or four degrees, the author advocates rest in bed in a darkened room and the lightest possible diet, such as peptonized milk, or milk and soda water. To cut short the fever he recommends tincture of aconite, four or five minims in two ounces of water, one teaspoonful to be given every hour for three hours, then every alternate hour until three more doses are taken, and subsequently every three or four hours until the temperature is normal.

Convulsions should be treated by large doses of bromides by mouth or rectum.

When the acute stage is over the child is allowed to get up, and is placed on a liberal diet.
Counter-irritation is applied to the spine, either by small blisters or by tincture of iodine and physostigma in one-fiftieth of a grain dose of the extract, taken three times a day, and the frequency of administration increased until one pill is taken every three hours. After the first six weeks the 1-200 of a grain of phosphorus should be added to the physostigma; the use of these drugs should be continued for many months.

But the point of Dr. Murrell’s treatment lies in the employment of massage, which should be used not only to the spine and back, but to the paralyzed limbs. The methods known as effleurage, friction, petrissage, and tapotement are particularly recommended by him, and applicable in sittings of ten minutes each from one to six times a day.

The rationale of this line of treatment Dr. Murrell explains as follows: “It is true that we have to deal with a condition dependent, pathologically, on degeneration or destruction of the large multipolar ganglion cells of the anterior cornua, but if we can only keep up the nutrition of the parts in the affected limbs until other cells in the cord take on the function of those which are useless, the patient will be restored to health.”

The keeping up of the nutrition is evidenced by a rising of temperature in a limb after massage, and by the contraction of muscles by means of electricity, both of which points should be tested after every sitting.—Lancet, 1885, Dec. 26.

II. Treatment of Spurious Valgus in the Female. By F. King Green (Bath). This consists in supporting the flattened instep directly from the hip, an India rubber accumulator being introduced to render the support elastic and equable.

The apparatus consists of a triangular shaped piece of stout jean, ten inches by three and a half, attached by its base within the shoe to the outer side, about half an inch above the junction of sole with outside leather. The sole of the foot rests upon this piece of jeans, which, when tension is made upon it by the cord above, gives the requisite support to the
arch of the foot. An extra stout, brown leather shoe lace is now firmly bound to the apex of the triangular piece of jeans below, and passed through a ring (the outstanding ring of a jack-rod) which projects from the garter, and still higher is connected by means of another ring with a piece of India rubber cord, one-third of an inch thick, firmly fixed above to the front and back of the corset by a Y-shaped piece of strong webbing. The amount of elastic support to the instep can be regulated to a nicety by the patient herself when attaching the boot lace to the ring of the elastic cord.

Mr. Green recommends a broad belt suspended from the shoulders by braces as a substitute in the male for the part played by the corset in the female.

The great advantage of Mr. Green's apparatus over any others that we are acquainted with for the treatment of flat foot lies in this: The amount of support required can be regulated to a nicety by the patient herself, who can tighten or loosen the cord attached to the jeans below at its point of junction with the ring of the elastic cord. This advantage cannot be overrated, and has been fully appreciated by the patients on whom I have applied the apparatus at the National Orthopaedic Hospital in Great Portland street, London.—Lancet, 1885, Dec. 26. London: W. J. Roeckel.

III. Non-Union of Fractures, with a Consideration of some Modern Methods of Treatment. By G. R. Fowler, M.D. (Brooklyn, N. Y.) Classifying the conditions under which non-union is found, (1) delayed union, (2) union through the medium of fibrous connecting bands, (3) pseudarthrosis, he proceeds to consider the etiology under the heads of (I.) constitutional causes: (a) Rachitis, (b) syphilis, (c) tuberculosis, (d) general carcinoma, (e) scurvy, (f) pregnancy, (g) chronic alcoholism, and (h) acute infectious fevers. (II.) Local disturbances: (a) Excessive comminution of the fragments, in which cases ultimate non-union is uncommon and pseudarthrosis still more rare; (b) considerable displace-
ment of the fragments, occurring from a failure in reduction or inefficient reduction, the callus from the two extremities of the bone not meeting; (c) interposition of soft parts between the fragments, a more common cause of non-union than formerly supposed; (d) too early moving of the fragments—here pseudarthrosis is most frequently found; and (e) cases for which no rational explanation can be found. The methods of treatment may be considered under two heads: (1) Non-operative methods, consisting of (a) rubbing the ununited ends together and applying a fixed dressing; (b) injection of irritating fluids or subcutaneous punctures, which are open to the objection of not being applicable to fractures in the vicinity of joints; and (c) the "percussive method" of H. O. Thomas, consisting of percussing the parts about the seat of fracture with a small copper mallet faced with rubber for from five to ten minutes at a time at intervals of forty-eight hours or longer, until undoubted evidence is afforded of a renewal of active hyperaemia and engorgement of the parts; it is believed that all cases of the first class and most cases of the second, when not due to constitutional causes, will be amenable to this treatment. (2) Operative methods, mainly directed to cases in which non-union is due to (a) longitudinal dislocation of the fragments and the occurrence of adventitious processes of the aponeurotic structures, leading to muscular attachment above and below the false point of motion; (b) interposition of the soft parts between the ends of the fragments; (c) oblique fractures with smooth surfaces; and (d) cases of osteomyelitis, necrosis, and abscess about the ends of the fragments. Referring to the ivory peg method of Dieffenbach and its modifications without approval, he describes Brainerd's method of perforating the fragments with a small drill, and this failing, he would freshen the ends of the bone and unite the periosteum, uniting the fragments by wire suture or not, according to the exigency of the case, all with antisepic precautions. Cases in which this cannot be done be-
cause of excessive loss of bone substance, should be treated by bone transplantation, according to the methods of Macewen or Von Nussbaum.—N. Y. Med. Jour., 1886, Feb. 6. J. E. Pilcher (U. S. Army).

GYNECOLOGICAL.

I. The Recurrence of Parovarian Cysts after Simple Puncture. By M. Terrillion (Paris). In a rapid review of the subject it was established that MM. Panas and S. Duplay's observations in support of the definite cure of these cysts by simple puncture referred to tests which had not been followed long enough. Koeberle first, and then MM. Lucas-Championnere, Terrier, and Polaillon, from the fluid analyzed, showed the characteristic composition, limpidity, little solid residue, and absence of free albumen.

Obs. I. Parovarian cyst. Two punctures. No return six months later. Woman æt. 51. Observed the tumor two and a half years. Sept. 5, 1883, puncture; gave 13 litres of pale yellow fluid. October, 1884, a second tapping gave 11 litres of the same liquid. Six months afterward, no appreciable return.

Obs. II. Parovarian cyst. Two punctures. Recurrence probable. Puncture. Apparent cure for seven or eight months. Second tapping, October, 1884. On recent examination a slight commencing tumefaction.

Obs. III. Parovarian cyst. Puncture. Return. Ovariotomy. Cure. Woman æt. 24. The tapping gave eight litres of limpid liquid. Return in 15 or 18 months. Ovariotomy. No adherence; no pedicle; peeling off from the broad ligament easy enough; Fallopian tube and ovary removed with the cyst. The intra-abdominal wound was constricted by suture with several threads, and left in the abdomen. The patient left the hospital quite cured in five weeks.

months. Ovariectomy. Operation rather difficult; had to give up the removal of the whole sac; the borders of the part left sutured to the abdominal wall. It retracted so rapidly that the patient left cured on the twenty-fifth day.

Obs. V. Parovarian cyst. Puncture. Return. Ovariectomy. Cure. Woman aet. 31, married. After the second tapping, examination of the abdomen revealed the existence of a second cyst and of uterine fibrous bodies. Another recurrence took place, when ovariectomy was performed and the patient cured.

Obs. VI. Parovarian cyst. Two tappings. Return.

Obs. VII. Parovarian cyst. Puncture five months ago. No actual return.

In considering these observations with all those published; which do not give more than ten or twelve cures by simple puncture in cases which have been watched for a long enough time, one may say that in parovarian cysts cure by simple puncture is rather the exception, and recurrence after tapping, the rule.

M. Desormeaux has been able to observe sufficiently long three patients who have remained cured of parovarian cyst: two after puncture and iodized injection, and one by spontaneous inflammation and disappearance.

M. Terrier has seen but one case of cure after puncture, and M. Terrillon’s communication only confirmed his ideas. He was astonished at hearing of parovarian cysts included in the broad ligament. Neither himself nor MM. Lucas Championierre and Perrier had met such—there was always a pedicle more or less broad.

M. Terrillon: The cases of inclusion in the broad ligament are very rare, but there are examples in the work of Hegar and Kaltenbach.

M. Terrier remarked that some patients remain cured for years after puncture of a large cavity of a multilocular cyst. He had operated three years after puncture on a dermoid cyst
of the ovary, the patient having had two children in the interval. He had several times seen a multilocular cyst remain stationary after puncture—there is generally in these cases a large cavity and a small polycystic mass.

M. Th. Anger had twice performed ovariotomy for parovarian cysts refilling after puncture. One of the patients was cured; the other died. In the last the ovary, quite distinct from the cyst, was left in the abdomen; it became inflamed, severely painful, and at the autopsy was found peritonitis and a suppurating ovaritis.

M. Chauvel had seen again this year a patient who had been tapped in 1882 for a parovarian cyst, and who presented no trace of a return. She was before the society in July, 1882.

M. Polaillon in 1880 punctured a parovarian cyst which gave eight litres of pure, limpid liquid. The woman seemed cured for three years; then abdominal pains came on, and ovariotomy was performed five years after the puncture. The cyst was sessile and not included in the broad ligament; the base could not be removed, and was sutured to the abdominal wall. The patient was cured by suppuration and retraction of the cavity.

II. Vaginal Hysterectomy for Cancer. By M. Trelat (Paris). The case of a woman aet. 38, who had had six children and two miscarriages. Last winter complained of dullness and wasting. Chronic metritis recognized. Some months afterward a recent epithelioma of the neck of the uterus was recognized. The uterus large and very mobile. Vaginal hysterectomy was decided on, because of the recent onset of the affection, which gave more hope of survival, and of the size of the uterus, which led one to fear its encroachment.

Operation July 2d. The patient sat up the second day. The first tube was removed on the fifth and the second on the eighth day, with all the vaginal dressings; then only wash-
ings of perchloride solution, soon replaced by chloralized water, because of the smarting and irritation produced by the perchloride. The patient had been up now for five days, and would be considered as cured.

From the operating points of view the pulling down of the uterus was very easy, as well as its separation from the bladder and rectum. To enter the peritoneal cavity the cul-de-sac must be opened by a pair of scissors, because the finger has a greater tendency to tear than to perforate. The uterus was very large, and could not be circumscribed with the finger; but with difficulty it was possible to pass the ligatures round the broad ligaments, and this is certainly the most laborious part of the operation, and requires modification. Before dividing the broad ligament it must be secured by three or four ligatures in chain, to combat its elasticity, which, in this case, caused the ligatures of the two sides to slip, after division of the ligaments, so that it became necessary to ligature separately all the vessels which were exposed.

Two histological examinations at the College of France and at the Charite, showed the existence of a prominent epithelioma, lobulated, horny, and mucous, limited to the inferior third of the neck. The patient is therefore in the best condition for a permanent cure.

M. Terrier gave some details of a second vaginal hysterectomy which he had lost. The friability of the neck had rendered the pulling down very difficult and fruitless; even after freeing it before and behind, traction of the body by Museux' forceps only brought it down after destruction of the cellular adhesions which held it at the back. The broad ligaments were divided after placing on each two ligatures in chain, which was sufficient. However, on careful examination, the stoppage of hemorrhage seemed perfect. Drainage and iodoform dressing were employed. As an incident of the operation, an omental hernia was produced. For three days the patient progressed well, in spite of rapid pulse and disturb-
ance; then a pallor of the face was observed, indicating inter-
mental hemorrhage; the condition became worse, and the pa-
tient died on the seventh day from subacute peritonitis. At
the autopsy a litre of blood was found in the peritoneum, the
hemorrhage coming from the upper part of the left broad lig-
ament, of which the ligature had given away. In this case
M. Terrier regretted that he had only used two ligatures for
the broad ligaments instead of three at least, and that he had
employed, instead of simple silk, silken cord, which fastens
badly and does not remain tight. As regards the hemor-
rhage, it is especially necessary to guard against the vaginal
arteries, altogether at the lower part of the broad ligament,
which may easily escape. The specimen showed epithelioma
of the neck, some doubtful portions had been left, and the
glands were enlarged up to a certain height of the broad
ligaments.

III. Removal of two Sessile Cervical Fibroid Tumors by
The operation was done as a forlorn hope to relieve a patient
rendered desperate by protracted hemorrhage and abdominal
pain, caused by two fibroid tumors of the cervix uteri, an
operation for the relief of which had been refused by several
distinguished surgeons. On abdominal section the tumors
were found to be broad-based flat fibroids, deep down in the
aerolar tissue. The peritoneum was incised and stripped off
from the tumors which were then enucleated and torn loose
with an ecraecur. The free hemorrhage following their re-
moval was controlled with a Pacquelin cautery, ligature at
such a depth in the pelvis being impracticable, and the cau-
terization itself being very difficult and rendered justifiable
only by an accurate knowledge of the anatomy of the parts.
The toilet was made with great care and the abdominal wound
closed by silver sutures, leaving a curved drainage tube about
a half inch in diameter at the lower angle, draining the retro-
uterine cul-de-sac. Through this tube the pelvis was irrigated
daily with warm carbolized water, to which the writer attaches
the utmost importance in securing the favorable result.—Am. Jour. Obstetrics, 1886, Jan.

IV. Artificial Vesico-Vaginal Fistula for the cure of Chronic Cystitis. By Dr. A. V. Macan (Dublin). With the same success that has attended perineal drainage of the bladder, the author has made a free opening between the base of the female viscus and the vagina in two cases. The first is especially noteworthy from several points of view.

A woman, set, 38, had suffered for five years from a vesico-vaginal fistula (high up) as a result of severe labor. A large calculus had formed (owing probably to the stagnation of urine below the fistula), which was removed with much difficulty through the urethra by the use of lithrotrity and Bigelow's evacuator. Three months later Dr. Macan succeeded in closing the fistula after two operations; but as chronic cystitis came on and resisted all ordinary treatment, the vesico-vaginal septem was divided and the two mucous membranes sutured in order to prevent both hemorrhage and premature disuse of the wound. Much thick membrane, due to the irritating action of the urine, was subsequently removed from the vagina below the fistula. The cystitis gradually subsided, and in February, 1885, the opening which had existed for four months was closed. "The cystitis was thoroughly cured."

The writer observes that had he known the size of the stone he would have performed vaginal lithotomy in preference to lithotritry. Dublin Journal of the Medical Sciences, October, 1885.

SYPHILIS.

1. Syphilitic Pseudo-Paralysis in infants. The recorded cases of this obscure and rare affection are chiefly due to French observers, especially M. Parrott and Dreyfus, Val-lex in 1834 being the first to notice it. In the present clinical review it is asserted that there are always present certain
features which help in its diagnosis from infantile diphtheritic paralysis. These are (1) occlusive limitation to the extremities (generally to both upper ones), (2) pain and more or less swelling (especially towards the end of the affected limb), (3) good muscle reaction to electricity, and perfect retention of sensation. Several of the infants presented evidence of inherited syphilis (including swelling at the epiphyseal lines in the "paralyzed" parts), in other cases syphilis was inferred from the parents' history, whilst a third group included instances of powerlessness in a limb after one of its chief bones had been fractured or some other traumatism sustained. In the latter, syphilis was assumed as a hidden cause. This surely seems unnecessary. The inability of young children to localize the pain felt after a traumatic lesion of arm or leg (e.g. fractured clavicle or displacement of the articular ligament) and the resulting powerlessness of the whole limb, are matters of every-day observation.

The paralysis in the more undoubted cases comes on insidiously during the first few months of life, and has been twice noted at birth out of a total number of fourteen cases mentioned by Dreyfus. It usually persists until the infant's death, a fatal issue being almost constant in those affected at the hospital in which M. Parrott made his well-known researches. If, however, mercurial treatment is carried out with great care as to feeding and hygiene, it appears that several cases had recovered. M. Millard asserts that these infants tolerate well mercury given by the mouth (in the form of syrup de Gibert).

It may be that many of the cases of "syphilitic pseudo-paralysis" are of a reflex nature and due to weakness or actual displacement at epiphyseal line, and this view is confirmed by the greater frequency of the affection in the upper limbs. Both the cause and the effect may be at times symmetrical.—Progres Medicale, 1885, Nov.

II. On the Recurrent Chancre, etc., by J. Hutchinson,
F. R. S. (London). A fact of importance from several points of view was almost simultaneously noticed by M. Hutchinson and Prof. Fournier (London Hospital Reports, 1886, and Archiv. Gen. de Med., 1886), that syphilitic subjects may, at a varying period from infection, usually a few years, present indurated sores which so closely simulate fresh Hunterian chancres as to mislead even careful observers.

The recurrent chancre ("pseudo-chancere indure" of Fournier's) is nearly always solitary and is usually situated on the prepuce or some other part of the penis, though it has more than once been observed on the scrotum. There is of course no reason why it should not occur on the site of extragenital primary sores, and in one of the author's cases it was found in the scar of a former vaccination chancre. A bubo is a very rare accompaniment, but in other respects the semblance is very close, the sore being sometimes very hard, as a rule rounded or oval, and secreting little if at all. The recurrence is never followed by the appearance of secondaries, may develop without the least fresh exposure to contagion, may be accompanied by other late or tertiary lesions, and as a rule, quickly subsides under specific treatment. It may, however, relapse again and again. It is an interesting example of what Mr. Hutchinson has urged for long with regard to the phenomena of the tertiary stage, that they are often a sort of relapse or redevelopment in the site of early manifestations of syphilis (e. g., secondary periostitis and tertiary periosteal gummata).

It is important to remember in practice that the penis is no more exempt from tertiary ulcers and indurations than is any other part of the surface of the body.—Medical Press, 1885, Oct. 28.

III. Treatment of Syphilis with the Aid of Sulphurous Waters. By MM. Lambron and Doit. The late M. Lambron and his successor have published the results of their extensive experience at the springs of Luchon; and although
nothing really new will be learned from them as to the methods of treatment, it is interesting to note how far they confirm the prevalent ideas as to the use of sulphurous waters. Mercury and iodide are respectively their main supports in the treatment of early and late syphilis, sarsaparilla is prescribed with each, and frequent sulphurous baths and potions are added, the latter being taken at the same time in the day as the specific drugs. Prolonged treatment (at intervals for two years at least) is advised. The iodide is at first given in seven-grain doses, and its taste, as of the nauseous bromide of potassium, is to a great extent concealed by the use of strong syrup of bitter orange peel. From personal experience the annotator can confirm this statement, and it is a pity that the preparation has not been transferred from the French pharmacopoeia to our own.

The authors agree with the old doctrine that a day at the mineral baths acts as a touchstone to reveal latent syphilis; that the use of the waters increases the specific effect of mercury and iodide, whilst it aggravates primary sores or acute secondary lesions. Mercurial salivation and syphilitic cachexia are both improved by a visit to Luchon; and when mercury has been given for long, and seems to have lost its effect, the use of sulphurous waters will, it is asserted, "break up the combination of albumen and the metal," and set the latter free to act. It will be noticed that these conclusions are hardly more free from apparent contradictions than those of former observers.—Gaz. des Hopitaux, Oct. 24 and 31, 1885. London: J. Hutchinson, Jr.

Remarks of Dr. Lowry: As I make no pretensions to surgery, it may be wondered why I should be so ready to occupy the floor. I had as well dismiss prejudice and criticism by saying at once that not being a surgeon, I am, however, interested in diagnosis. About the latter part of December or first part of January, 1884 and 1885, Mr. Bennett performed the operation which, I presume, is the one to which
Dr. Lee refers, at University College Hospital. I was present at the time. Of Mr. Caley's and Mr. Hulk's case I had not heard. Dr. Caley, I believe it was; I think I may say without disregard to the profession that he was about the most limited man at Middlesex Hospital. Later, about March, I think, there was a case in London that Dr. Lee did not report. It was by Dr. Ferrier; he was the physician who had access to the Zoological Garden, and has made very extensive experiments on monkeys, with a view of localizing the brain function. He diagnosed a case of tumor of the brain in Queen's College Hospital; the operation was performed by Sir Joseph Lister. When I left London the patient was doing nicely. I am sorry to say I have not kept track of it since. I am glad to see that Dr. Lee thinks sufficiently of my friend, John Roberts, of Philadelphia, as to quote him as an authority. I knew him intimately as a student years ago. I thought him one of the most promising young men in this country.
Mr. President and Fellow-Members:

Upon receiving notice that I had been chosen chairman of the section on surgery by a committee whose duty it is to select chairmen for the several sections, I resolved to return, in recognition for the courtesy shown, all that my poor ability, conscientiously aided, could produce.

Conscious of the poverty of my own resources, I endeavored to rescue myself from censure and the society from shame by calling to my assistance one who is trained in research and observation, Dr. A. S. v. Mansfeld, of Ashland; and one who has ready and at command the record of the entire surgical work performed along the whole B. & M. R. R. R. system in Nebraska, Dr. T. P. Livingston, of Plattsmouth.

In addition to this, every individual member of this Society was solicited by means of printed blanks, which they were asked to complete in the manner indicated and return one week before the meeting now in progress should convene.

I supposed that a method had been hit upon which would easily and certainly bring before this body the records of a large amount of work performed in this state by its surgeons; a method which would demand no tiresome or painstaking application from any single contributor, and yet one which, by their kind assistance, would make it possible to present in a form and manner a real synopsis of Nebraska surgery of which our Society would need not be ashamed. In this bit of medical strategy I was sorely disappointed. Indeed, so unqualified was this literary mutiny that I should have been compelled to consider the silence of those solicited homicidal were it not
really suicidal, and for the fact one of my predecessors had been subjected to a similar "expectant plan of treatment," I can but reiterate what he has said concerning the abstemious habits of those to whom he came for aid in his excellent and masterly report for 1884.

It is a fallacy on the part of the members to think that because a committee is annually appointed on the several sections, that on them alone falls the work, and that all the rest have little or nothing to do. The wrong they do the Society and themselves in this manner is a most grievous one, and, professionally speaking, it should alone constitute the unpardonable offense. I wish to speak directly, and shall not attempt to obscure my feelings in this matter. Neither the admonition uttered in 1884, the absence of a report on Progress in Surgery one society year, the small size of our transactions, their long period of incubation, and their reprint character when brought to the light of day, nor the labor-saving circulars which at least once lay before you all, has done more than wring a few responses from an unwilling many. Has there been no work to do in this great state, or have the advertisers, the homeopathists, and the "mind healers" captured everything? You dare not trust your action to answer! Personally, I pray the gods to let me officially die if thereby a new life should come to those who have contributed to my inanition, and acting upon the advice of Hesiod, I shall make it my business to answer that prayer myself.

The profession at large has responded much more liberally—may I be pardoned for suggesting a comparison—in answer to blank cards and letters of inquiry sent to representative medical men, colleges, and societies in every important city in almost every state and territory in the United States. Maryland is too homeopathic for a regular society; no data were obtainable concerning Washington, Mississippi, and North Carolina; Idaho, Utah, Wyoming, Nevada, New Mexico, and Indian Territory have no territorial organizations. They were questioned as follows:
1. What anaesthetic do you generally use?
2. Have you employed or do you recommend rectal etherization?
3. What antiseptic do you prefer?
4. What material do you prefer for splints?
5. Have you employed, or do you recommend laryngeal intubation?
6. Have you employed, or do you recommend (a) antipyrine, (b) hypnone, (c) urethran, (d) or trypsine?

I received numerous replies, for which I am truly grateful. Allow me then to call your attention to the result of this foreign correspondence, it being a general or bird's-eye view of some of the surgical methods and means current in the twelve-month just passed, as well as a glance at professional nostrums throughout the United States, and by way of explanation to say that they are answers received from men eminent in their chosen field, some of them the greatest America has produced, many of them the equal of any in the world.

**Anaesthetics:**

- Chloroform ................................................................. 25
- Sulphuric ether ......................................................... 54
- *Various* ..................................................................... 4

**Rectal Etherization:**

- Have employed, or recommend it ......................... 4
- Have not employed, or do not recommend it........... 62

**Splints:**

- Wood ................................................................. 35
- Plaster of Paris.......................................................... 47
- Felt ........................................................................ 8
- Levis' ................................................................. 4
- Tin ........................................................................ 4

*The A. C. E. mixture—twice.
Ether and chloroform combined—once.
Hydrobromic ether oz. 1, 1 once.
Chloroform oz. 3, 1 once.
Alcohol oz. 4, 1\nM. S. Teaspoonful in Hutchinson inhaler usually sufficient for short operations.
Pasteboard ................................................................. 4
Iron wire (gauze) ......................................................... 3
Rubber ........................................................................... 1
Ahl’s .............................................................................. 2
Silicate of potash ........................................................ 5
Starch .............................................................................. 3
Copper ............................................................................. 1
Sand bags ....................................................................... 1

Antiseptics:
Hydrar. bichlorid .......................................................... 61
Carbolic acid .................................................................. 39
Iodoform .......................................................................... 14
Labarraques Sol ............................................................ 4
Boric acid ......................................................................... 3
Hot water .......................................................................... 2
Chloral ............................................................................... 2
Iod. Hydrar. Sodii .......................................................... 1
Perox. Hydrogen ................................................................ 1
Boracic acid ...................................................................... 1
Hydronaphthl ................................................................... 1
Phenique .......................................................................... 1
“Listerine” ........................................................................ 1
“Platt’s chlorides” ........................................................... 1

Intubation of the Larynx:
Having performed or recommending it ..................... 13
Not having performed or not recommending it .......... 56

Antipyrine:
Employed or recommending it ...................................... 43
Not employed or recommending it .................................. 45

Hynone:
Employed or recommending it ...................................... 2
No answer ......................................................................... 86

Urethran:
Employed or recommending it ...................................... 4
No answer ......................................................................... 84
TRYPSINE:

Employed or recommending it........................................ 2
No answer.................................................................86

A personal letter from Dr. R. F. Weir, of New York, in regard to the above, reads as follows:

**NEW YORK, Nov. 21, 1886.**

My Dear Dr.—In reply to your questions I would note:
1st. Rectal anaesthesia has been abandoned as unsafe.
2d. Ether is used by me exclusively for general anaesthesia, cocaine for local anaesthesia, hypodermically.
3d. Corrosive sublimate and iodoform are the antiseptics relied on for wound dressings.

Yours respectfully,

R. F. Weir.

Dr. Leonhardt, Seward, Neb.

Another from Dr. Sutton, of Pittsburg, reads as follows:

**PITTSBURG, PA., Jan. 12, 1887.**

Dear Dr.—In my private hospital I use only Squib’s aether, administered from a towel thrown over the face and kept wet.

I do not use any aether per rectum and see no advantage in the method. I use no antiseptics (*See Medical and Surgical Reporter, Jan. 1, 1887, page (11) eleven*). The ice cap, quinine, and digitalis are the only refrigerants used. I have tried anti-pyrine, it reduced the temperature and upset the stomach.

I do no general surgery and use no splints.

With kind regards, very truly yours,

R. Stansbury Sutton.

Another, as follows:

**NEW YORK, Nov. 23d, 1886.**

My Dear Doctor—No progress has been made in rectal administration of ether. I gave it that way about thirty-five
times and had one accident, in the last case. The patient had a severe dysentery, and died of exhaustion, but as post-mortem showed old ulceration in the lower bowel, the ether probably was not the sole cause of death. Others, however, in various hospitals, had accidents from the rectal method that caused us generally to abandon the method. I was disappointed at the failure of the plan, for nothing could be more agreeable for both patient and operator than the use of ether that way. I devised an apparatus for regulating the quantity of vapor, and for warming it, but did not use it. It has been used (rectal etherization), and I believe is still, in operations about the face and mouth.

My own opinion is that if a limited quantity of ether vapor were used, and the bowels not distended by it—the ether being supplied only as fast as it was absorbed—that there would be no more danger than in the usual method of its administration.

Yours very truly,

JAMES B. HUNTER.

From the above one may infer that ether is the preferable anaesthetic, although quite recently a reaction in favor of chloroform has commenced in the East, and in Kansas City it is used almost entirely; that the bichloride of mercury is the preferred antiseptic; that plaster of Paris for dressing and securing fractures is used very generally; that intubation of the larynx for diphtheritic or other stenosis is in its period of transition. It must not be forgotten that the replies regarding the last four preparations are very significant.

But little has been said about cocaine in the past year, except that it has been made synthetically by Merck, of Darmstadt, and called benzoic methyl-ecgonine, although some prefer the more euphonious name of methyl-benzo-methoxyethyl-tetra-hydropyridin carbo-oxylate; that its antidote in case of poisoning is chloral, and that a 1 per cent solution of aconi-
tine may be very properly substituted for it in local anaesthesia.

I am much indebted to Dr. George Cupples, of San Antonio, Texas, for a copy of the "Report of Special Committee on Surgery," appointed by the state society, of which he was both chairman and reporter. The report fills a quarto volume of seventy-six closely printed pages, a great labor of compilation, tabular and classificatory, perfectly done. I believe that it includes all the reported surgical work ever done in that state. It is the work of one hundred and thirty-eight contributors in answer to fifteen hundred postal cards and over seven hundred letters; it bears upon its face the stamp of truth, and is therefore worthy of confidence. I trust a synopsis of that magnificent record may not prove uninteresting—a record that no state would need to be ashamed to own.

**Summary of Operations and Results of 4,293 Cases Reported by Special Committee on Surgery of the Texas Medical Association for the Year 1886.**

<table>
<thead>
<tr>
<th>Description</th>
<th>Number of Operations</th>
<th>Recoveries</th>
<th>Deaths</th>
<th>Ratio of Recoveries</th>
<th>Ratio of Deaths</th>
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<tbody>
<tr>
<td>Amputations and disarticulations</td>
<td>704</td>
<td>596</td>
<td>108</td>
<td>84.65</td>
<td>15.34</td>
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<tr>
<td>Resections in contiguity and continuity</td>
<td>109</td>
<td>107</td>
<td>2</td>
<td>98.16</td>
<td>1.83</td>
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<tr>
<td>Ligation of arteries</td>
<td>75</td>
<td>64</td>
<td>11</td>
<td>89.33</td>
<td>14.66</td>
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<tr>
<td>Tumors, noteworthy for size, character, etc</td>
<td>95</td>
<td>84</td>
<td>11</td>
<td>88.42</td>
<td>11.57</td>
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<tr>
<td>Operations involving head and neck</td>
<td>289</td>
<td>235</td>
<td>54</td>
<td>81.31</td>
<td>18.68</td>
</tr>
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<td>Operations involving thorax</td>
<td>162</td>
<td>143</td>
<td>19</td>
<td>88.27</td>
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<td>Operations involving abdomen</td>
<td>242</td>
<td>212</td>
<td>30</td>
<td>87.60</td>
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<td>Operations involving rectum and anus</td>
<td>469</td>
<td>465</td>
<td>4</td>
<td>99.14</td>
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<td>Operations involving male genital and urinary organs</td>
<td>695</td>
<td>657</td>
<td>38</td>
<td>94.53</td>
<td>5.46</td>
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<tr>
<td>Operations involving female genital and urinary organs</td>
<td>851</td>
<td>797</td>
<td>54</td>
<td>93.65</td>
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<td>Operations involving (a) bones, (b) joints</td>
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<td>83</td>
<td>11</td>
<td>87.68</td>
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<td>42</td>
<td>1</td>
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<tr>
<td>Operations on special organs of sense</td>
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<td>180</td>
<td></td>
<td>100.00</td>
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<tr>
<td>Miscellaneous operations</td>
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<td>277</td>
<td>7</td>
<td>97.56</td>
<td>2.43</td>
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<tr>
<td><strong>General total</strong></td>
<td><strong>4293</strong></td>
<td><strong>3943</strong></td>
<td><strong>350</strong></td>
<td><strong>91.84</strong></td>
<td><strong>8.15</strong></td>
</tr>
</tbody>
</table>
**Summary of Operations, Major and Minor, Recoveries and Deaths, with Ratio in each Class.**

<table>
<thead>
<tr>
<th></th>
<th>Number of Operations</th>
<th>Recoveries</th>
<th>Deaths</th>
<th>Ratio of Recoveries</th>
<th>Ratio of Deaths</th>
</tr>
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<tbody>
<tr>
<td>Major operations</td>
<td>2080</td>
<td>1749</td>
<td>331</td>
<td>84.08</td>
<td>15.91</td>
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<td>Minor operations</td>
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<td>2194</td>
<td>19</td>
<td>99.14</td>
<td>0.85</td>
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<tr>
<td>Grand total</td>
<td>4293</td>
<td>3943</td>
<td>350</td>
<td>91.84</td>
<td>8.15</td>
</tr>
</tbody>
</table>

**Summary of Cases of Secondary Hemorrhage, Tetanus, Gangrene, Pyæmia, Septicæmia, and Erysipelas, with Ratio of Recoveries and Deaths.**

<table>
<thead>
<tr>
<th></th>
<th>Major Operations</th>
<th>Minor Operations</th>
<th>Total Operations</th>
<th>Number Cases</th>
<th>Recoveries</th>
<th>Deaths</th>
<th>Ratio of Recoveries</th>
<th>Ratio of Deaths</th>
<th>Ratio of Deaths to total number Operat'ns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary hemorrhage</td>
<td>2080</td>
<td>2213</td>
<td></td>
<td>38</td>
<td>30</td>
<td>8</td>
<td>78.94</td>
<td>14.28</td>
<td>21.05</td>
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<td>Tetanus</td>
<td>14</td>
<td>0</td>
<td>14</td>
<td>12</td>
<td>2</td>
<td>2</td>
<td>90.90</td>
<td>9.09</td>
<td>100</td>
</tr>
<tr>
<td>Gangrene</td>
<td>10</td>
<td>7</td>
<td>17</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>50.00</td>
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<td>50.00</td>
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<tr>
<td>Pyæmia</td>
<td>11</td>
<td>0</td>
<td>11</td>
<td>7</td>
<td>0</td>
<td>7</td>
<td>9.09</td>
<td>90.90</td>
<td>90.90</td>
</tr>
<tr>
<td>Septicæmia</td>
<td>13</td>
<td>9</td>
<td>22</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>90.90</td>
<td>90.90</td>
<td>90.90</td>
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<tr>
<td>Erysipelas</td>
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<tr>
<td>Total</td>
<td>4293</td>
<td>3943</td>
<td>4293</td>
<td>93</td>
<td>47</td>
<td>46</td>
<td>50.53</td>
<td>49.46</td>
<td>1.07</td>
</tr>
</tbody>
</table>

**Anaesthetics Used, with Results.—1886.**

<table>
<thead>
<tr>
<th>Anaesthetic Used</th>
<th>Number of Operations</th>
<th>Deaths Before Operations</th>
<th>Deaths During Operations</th>
<th>Alarming Symptoms</th>
<th>Death Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloroform</td>
<td>3179</td>
<td>1</td>
<td>12</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>Ether (after operation)</td>
<td>122</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloroform and ether</td>
<td>132</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Chloroform and alcohol</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Various</td>
<td>26</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cocaine hydrochlorate</td>
<td>85</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3547</td>
<td>1</td>
<td>15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
When used they were as follows: Carbolic acid, 1,010 times; boric acid, 33; hydrg. bichl., 31; iodoform, 45; listerine, 6; zinc chloride, 3; salicylic acid, dry, 2; carbolic spray, 27; iodine, 6; permanganate of potash, 4; chloral hydrate, 1; bromo-chloratum, 1; bal. Peru, 1; total, 1,171.

I am also indebted to Dr. H. DeW. Carvelle, of Manchester, N. H., for a copy of the transactions of their State Medical Society for the year 1886, its ninety-sixth annual convention. The great medical struggle in that state is against a strict and literal interpretation of the supreme code of ethics. I am somewhat surprised to hear this of so steady and conservative a people. The chairman of the section on surgery testifies to the efficacy of antiseptics, when he says that formerly it was rare for him to obtain primary union after amputations, while now it is common. The bichloride is preferred to carbolic acid. The report shows no great amount of work done in that state; perhaps a Nebraska lethargy may have come upon them.

In addition to these, I have been favored with monographs, reports, and reprints from many private practitioners, which can be noticed incidentally only, for which I am very thankful.

In answer to the blanks sent to the 230 members of this society, I have received what is arranged in the following table.

I beg of you to never again permit the opportunity to pass unnoticed to present the whole state work in tabular form:
### A Table Showing the Reported Surgical Work Performed in Nebraska from June 1, 1886, to May 1, 1887.

<table>
<thead>
<tr>
<th>Lesion</th>
<th>Treatment</th>
<th>Operator</th>
<th>Age</th>
<th>Sex</th>
<th>Days treated</th>
<th>Anaesthetic</th>
<th>Antiseptic</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laceration of muscles in gluteal region</td>
<td>Removal of condemned tissue; drainage</td>
<td>M. L. Hildreth, Lyons, Neb</td>
<td>24</td>
<td>M</td>
<td>46</td>
<td>E.</td>
<td>Hg. bich.</td>
<td></td>
</tr>
<tr>
<td>Disease of submaxillary gland and tissues, with necrosis—malig.(?)</td>
<td>Removal of tissues</td>
<td>Same</td>
<td>46</td>
<td>M</td>
<td></td>
<td>E.</td>
<td>Hg. bich.</td>
<td>Anaesthesia preceded by morphia and atropia, hypodermatically—death in four months*</td>
</tr>
<tr>
<td>Paraphymosis</td>
<td>Two lateral incisions and cold applications</td>
<td>Same</td>
<td>4</td>
<td>M</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paraphymosis</td>
<td>Two dorsal incisions and cold applications</td>
<td>Same</td>
<td>7</td>
<td>M</td>
<td>6</td>
<td>E.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Felon—thumb</td>
<td>Incision</td>
<td>Same</td>
<td>35</td>
<td>M</td>
<td>3</td>
<td>C. F.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Palmar abscess—deep</td>
<td>Lance and probe</td>
<td>Same</td>
<td>12</td>
<td>M</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Felon</td>
<td>Lance and poultice</td>
<td>Same</td>
<td>40</td>
<td>F</td>
<td>10</td>
<td>Cold and carb. acid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condition</td>
<td>Treatment</td>
<td>Healing Notes</td>
<td></td>
<td></td>
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<tr>
<td>------------------------------------------------</td>
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</tr>
<tr>
<td>Contused wound of eye-lid and nose</td>
<td>Sutures and bismuth dressing</td>
<td>10 M, 5 Listerine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scalp wound</td>
<td>Sutures and collodion</td>
<td>28 M, 4 Listerine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Axillary abscess—large</td>
<td>Incision</td>
<td>6 M, 8 Listerine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Cicatrix over thumb</td>
<td>Manipulation</td>
<td>4 M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abscess under sternomastoid muscles</td>
<td>Incision</td>
<td>5 M, Carb. acid</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hematoma—orbit of eye</td>
<td>Incision</td>
<td>4 M, 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fracture of both bones of leg—compound</td>
<td>Antiseptic air-tight compress over wound; box splint</td>
<td>17 M, Wound healed by first intention</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Abscess of lung, opening into bronchitis, followed by pleuritis and effusion</td>
<td>Aspiration of effusion</td>
<td>22 M, 35, Death</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Submaxillary abscess</td>
<td>Incision</td>
<td>4 M, 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rupture of extensor tendons of thumb</td>
<td>Approximation of ends by extension splints</td>
<td>64 M, 7, Power of extension not quite complete</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Palmar abscess—deep</td>
<td>Incision</td>
<td>10 M, 4 E.</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>LESION</td>
<td>TREATMENT</td>
<td>OPERATOR</td>
<td>Age</td>
<td>Sex</td>
<td>Days treated</td>
<td>ANESTHETIC</td>
<td>ANTI-SEPTIC</td>
<td>REMARKS</td>
</tr>
<tr>
<td>--------------------------------------------</td>
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<td>--------------------------</td>
</tr>
<tr>
<td>Fracture of radius—epiphyseal</td>
<td>Palmar splint</td>
<td>Same</td>
<td>8 M</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Whitlow</td>
<td>Deep incision</td>
<td>Same</td>
<td>38 M</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>Aborted the disease</td>
</tr>
<tr>
<td>Cellular inflammation of palm of hand—traumatic</td>
<td>Multiple incisions</td>
<td>Same</td>
<td>31 M</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>A bad case</td>
</tr>
<tr>
<td>Crushing of terminal phalanx of finger</td>
<td>Expectant</td>
<td>Same</td>
<td>30 M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Dislocation of external end of clavicle</td>
<td>Bandages; splints; adhesive strips</td>
<td>Same</td>
<td>40 M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two cases of mammary abscess</td>
<td>Incision and strapping</td>
<td>Same</td>
<td>25 F</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Abortive treatment tried, but failed in</td>
</tr>
<tr>
<td>Axillary abscess</td>
<td>Poultice and incision</td>
<td>Same</td>
<td>18 F</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td>Succeeded in abortive treatment</td>
</tr>
<tr>
<td>Whitlow—three cases</td>
<td>Early treatment</td>
<td>Same</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Succeeded in the abortive treatment all</td>
</tr>
<tr>
<td>Condition</td>
<td>Treatment</td>
<td>Age</td>
<td>Result</td>
<td></td>
<td></td>
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<tr>
<td>-----------------------------------------------</td>
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<td>------------------------------------------------------------------------</td>
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<tr>
<td>Fracture of the external malleolus</td>
<td>Retention bandage</td>
<td>45 M</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Lymphangytis of the arm—extensive</td>
<td>Rest and poultices</td>
<td>25 M</td>
<td>Result of an abrasion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contused wound of face</td>
<td>Sutures and antiseptic compresses</td>
<td>16 M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Fracture of clavicle—external end</td>
<td>Axillary roller pad</td>
<td>35 M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contused wound of face</td>
<td>Sutures and antiseptic dressing</td>
<td>20 M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whitlow</td>
<td>Early incision</td>
<td>22 M</td>
<td>Aborted</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple wounds of face—contused</td>
<td>Sutures and antiseptic dressing</td>
<td>26 M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laceration of perineum—second degree</td>
<td>Immediate operation</td>
<td>19 F</td>
<td>Union: one deep suture</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gunshot wound of elbow</td>
<td>Removal of external condyle and head of radius</td>
<td></td>
<td>Articulation of ulna and humerus intact</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute inflammation of bursa over olecranon</td>
<td>Incision</td>
<td>5</td>
<td>A complication of case immediately above</td>
<td></td>
<td></td>
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</table>
A TABLE SHOWING THE REPORTED SURGICAL WORK PERFORMED IN NEBRASKA—Continued.

<table>
<thead>
<tr>
<th>LESION</th>
<th>TREATMENT</th>
<th>OPERATOR</th>
<th>AGE</th>
<th>SEX</th>
<th>DAYS TREATED</th>
<th>ANESTHETIC</th>
<th>ANTISEPTIC</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cervical abscess</td>
<td>Deep incision</td>
<td>Same</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fracture of radius—lower third</td>
<td>Wood splint</td>
<td>H. Link, Millard, Neb</td>
<td>32</td>
<td>F</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fracture of humerus—upper third</td>
<td>Papersplints and starch bandage completely encasing it</td>
<td>Same</td>
<td>9</td>
<td>M</td>
<td>30</td>
<td></td>
<td></td>
<td>Was not &quot;laid up&quot; a day</td>
</tr>
<tr>
<td>Fracture both bones of forearm—lower third</td>
<td>Thin wood splints and bandage</td>
<td>Same</td>
<td>3</td>
<td>F</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fracture of external condyle of humerus into joint—wound</td>
<td>Reduction; dressed antisepically; quinia and Dover's powders first 8 days</td>
<td>Same</td>
<td>32</td>
<td>M</td>
<td>C.</td>
<td>Boracic acid</td>
<td></td>
<td>Separation of cartileges of joint; 4 inches of flesh wound; great displacement; flexion almost perfect; very satisfactory result</td>
</tr>
<tr>
<td>Fracture of both bones of leg, at upper and lower thirds; great contusion and loss of tegument</td>
<td>Light bandages and wood splints, 8 days; free use of warm water; leg suspended from chair, swinging</td>
<td>Same</td>
<td>25</td>
<td>M</td>
<td>40</td>
<td>Boracic acid</td>
<td></td>
<td>Results perfect; the skin came off 3x5 inches; denuded surface kept antiseptically clean</td>
</tr>
<tr>
<td>Condition</td>
<td>Treatment</td>
<td>Patient Details</td>
<td>Outcome</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
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<td>----------------------------------------------</td>
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</tr>
<tr>
<td>Colles’ fracture</td>
<td>Light wood splints and free use of warm water</td>
<td>Same 60 F 40</td>
<td>Motion perfect</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Compound fracture of leg—lower third</td>
<td>Pasteboard splints and starch bandage</td>
<td>Same 12 M 35</td>
<td>Boracic ac.</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Ovarian cyst—dermoid</td>
<td>Laparotomy; varied antiseptic precautions; salicylic cotton dressing</td>
<td>A. B. Anderson, Pawnee City, Neb F A. C. E. mixture</td>
<td>Good result; had been treated by a quack for a week</td>
<td></td>
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</tr>
<tr>
<td>Carcinoma of mammary gland</td>
<td>Amputation; varied antiseptics; iodoform dressing</td>
<td>Same F C. and E.</td>
<td>Cyst generally adherent; contained about five gallons of fluid, two bunches of hair, and several teeth; used solid drainage tube; pedicle enclosed in wound</td>
<td></td>
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</tr>
<tr>
<td>Abscess of hand—traumatic</td>
<td>Incision; drainage; antiseptic dressing</td>
<td>W. O. Bridges, Omaha, Neb 14 M 14</td>
<td>Axillary infiltration removed; had existed two years; healed by first intention when flaps touched; pain in womb resembling “after pains”</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Urethral caruncle and stricture</td>
<td>Removal of growth and rapid dilation of stricture</td>
<td>Same 48 F 30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lesion</td>
<td>Treatment</td>
<td>Operator</td>
<td></td>
<td></td>
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<td>---------------------------------------------</td>
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<tr>
<td>Psoas abscess from Pott's disease</td>
<td>Drainage and antiseptic dressing</td>
<td>Same</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Fracture of three ribs and rupture of liver</td>
<td>Rest, opiates, and stimulants</td>
<td>Same</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Compound comminuted fracture at metacarpal and phalangeal articulation</td>
<td>Loose fragments removed; fixed position; drainage and antisepsis</td>
<td>Same</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Abdominal wound — punctured</td>
<td>Rest, cleansing, and tight dressing</td>
<td>Same</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Cystic adenoma of breast</td>
<td>Amputation of gland; antisepsis</td>
<td>Same</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Pott's disease — cervical region</td>
<td>Extension by brace and support of head</td>
<td>Same</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Remarks:**
- Death; post mortem
- Ankylosis of joint
- No pus whatever
- Improvement
<table>
<thead>
<tr>
<th>Condition</th>
<th>Procedure Description</th>
<th>Operator</th>
<th>Age</th>
<th>Gender</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>White swelling—knee joint</td>
<td>Amputation, after an attempt to cure by drainage and irrigation</td>
<td>Same</td>
<td>7 F</td>
<td>67</td>
<td></td>
</tr>
<tr>
<td>Colles' fracture</td>
<td>Anterior and dorsal splints</td>
<td>F. D. Haldeman, Ord, Neb</td>
<td>26 M</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>Dislocation of humerus —subglenoid</td>
<td>Reduction, with extension; foot in axilla</td>
<td>Same</td>
<td>35 M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intussusception — ileo-caecal</td>
<td>Resection of four inches of colon and ilium; strict antisepsis</td>
<td>Same</td>
<td>41 M</td>
<td>1 C</td>
<td></td>
</tr>
<tr>
<td>Dislocation of head of radius—partial</td>
<td>Reduction; pad on head of radius, secured by continuous bandage</td>
<td>J. S. Leonhardt, Seward, Neb</td>
<td>9 M</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Paraphymosis</td>
<td>Numerous dorsal and lateral incisions; invulsion by fingers and thumbs</td>
<td>Same</td>
<td>8 M</td>
<td>1 C</td>
<td></td>
</tr>
</tbody>
</table>

Reduction; pad on head of radius, secured by continuous bandage

J. S. Leonhardt, Seward, Neb

Resection of four inches of colon and ilium; strict antisepsis

Same 41 M 1 C.

Reduction; pad on head of radius, secured by continuous bandage

J. S. Leonhardt, Seward, Neb

Numerous dorsal and lateral incisions; invulsion by fingers and thumbs

Same 8 M 1 C.

Oil, so generally recommended, was wiped off in order to get a better hold; would recommend alum

Death from tubercular meningitis; extension from suppuration; otitis and necrosis of temporal bone; autopsy

Death six hours after, from shock; operated twelfth day of illness —first day seen by operator; bowel gangrenous and ruptured at two places; median section

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<table>
<thead>
<tr>
<th>LESION</th>
<th>TREATMENT</th>
<th>OPERATOR</th>
<th>Age</th>
<th>Sex</th>
<th>Days treated</th>
<th>ANAESTHETIC</th>
<th>ANTI-SEPTIC</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epithelioma of cheek</td>
<td>Excision</td>
<td>Same</td>
<td>36</td>
<td>M</td>
<td>14</td>
<td>Hg. bich.</td>
<td></td>
<td>Healed by granulation</td>
</tr>
<tr>
<td>Acute periostitis—4th metacarpal bone</td>
<td>Incisions; iodine irrigations; removal of exfoliations and curettage of rough surfaces</td>
<td>Same</td>
<td>60</td>
<td>M</td>
<td>60</td>
<td>Hg. bich., I-2000</td>
<td></td>
<td>Pyæmia in third week; result unsatisfactory; ankylosis of joint and deformity of finger; too conservative</td>
</tr>
<tr>
<td>Fracture of tibia (greenstick) at lower fifth, and fibula—upper fifth</td>
<td>Corrected curve and fixed in modified Bavarian splint</td>
<td>Same</td>
<td>11</td>
<td>M</td>
<td>21 C.</td>
<td></td>
<td></td>
<td>Great nervousness from anaesthetic; fracture changed to simple by setting</td>
</tr>
<tr>
<td>Fracture of both bones of the forearm—lower third (greenstick)</td>
<td>Corrected curve, and secured in plain plaster splint</td>
<td>Same</td>
<td>7</td>
<td>M</td>
<td>22</td>
<td></td>
<td></td>
<td>Converted into simple fracture by setting</td>
</tr>
<tr>
<td>Sebaceous cyst of back</td>
<td>Evulsion of contents, and mechanical irritation of cyst walls</td>
<td>Same</td>
<td>32</td>
<td>F</td>
<td>3</td>
<td></td>
<td></td>
<td>Dangerous symptoms from anaesthetic—too rapidly given; “dry treatment” of penis</td>
</tr>
<tr>
<td>Paraphymosis</td>
<td>Incisions and returning through locked fingers</td>
<td>Same</td>
<td>4</td>
<td>M</td>
<td>1 C.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procedure</td>
<td>Treatment</td>
<td>Duration</td>
<td>Notes</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Puncture of posterior wall of vagina, from elbow of fetus</td>
<td>None</td>
<td>Same</td>
<td>23 F</td>
<td>Hot water</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Denudation of palmar surface of three fingers</td>
<td>Replaced tegument; salicylic bandage</td>
<td>Same</td>
<td>26 M</td>
<td>Hg. bich.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific inguinal phagedenic ulcer — both sides</td>
<td>Iodoform solution in stronger ether — $\frac{5}{i}$</td>
<td>Same</td>
<td>16 F</td>
<td>Iodoform</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dislocation backwards of the cuneiform, semi-lunar, unciform, and magnum bones</td>
<td>Reduction, secured by dorsal and palmar pistol splints</td>
<td>Same</td>
<td>14 M</td>
<td>Same</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deep abdominal scrofulous abscess</td>
<td>Laparotomy, drainage, and irrigation</td>
<td>Same</td>
<td>4 F</td>
<td>Cocaine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fracture of femur — lower third</td>
<td>Pasteboard splints, plaster bandage, extension and counter-extension, by long lateral splint secured with perineum band, and shot-bag</td>
<td>Same</td>
<td>56 F</td>
<td>Same</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Avoided the hg. bich., on account of the ragged rupture, and increased power of endosmosis during involution

The glands were not removed; they healed in with the remainder of the $3x8$ in. ulcers

Slow to regain strength — similar case recorded by Maisonneuve

Great shock and prolonged prostration

Limb had been affected with fugitive pains for many years; after ten weeks dressings removed; considerable shortening; bone greatly enlarged from osteitis
A TABLE SHOWING THE REPORTED SURGICAL WORK PERFORMED IN NEBRASKA—Continued.

<table>
<thead>
<tr>
<th>LESION</th>
<th>TREATMENT</th>
<th>OPERATOR</th>
<th>Age</th>
<th>Sex</th>
<th>Days treated</th>
<th>ANESTHETIC</th>
<th>ANTI-SEPT C</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sebaceous cyst—cheek</td>
<td>Enucleation</td>
<td>Same</td>
<td>28</td>
<td>M</td>
<td>3</td>
<td></td>
<td>Hg. bich.</td>
<td>Healed by first intention—axe wound</td>
</tr>
<tr>
<td>Incised wound of scalp and pericranium</td>
<td>Sutures, and antiseptic cold water dressings</td>
<td>Same</td>
<td>14</td>
<td>M</td>
<td>4</td>
<td></td>
<td>Hg. bich.</td>
<td></td>
</tr>
<tr>
<td>Laceration of index finger—second phalanx</td>
<td>Amputation</td>
<td>Same</td>
<td>6</td>
<td>M</td>
<td>6 C.</td>
<td></td>
<td>Hg. bich.</td>
<td>Primary union</td>
</tr>
<tr>
<td>Multiple abscess of breast</td>
<td>As many incisions</td>
<td>Same</td>
<td>19</td>
<td>F</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Noli me tangere</em></td>
<td>Antiseptic and experimental</td>
<td>Same</td>
<td>54</td>
<td></td>
<td></td>
<td></td>
<td>H$_2$O$_2$</td>
<td>This antiseptic used for the double purpose of cleansing and the hope of some catalytic action</td>
</tr>
</tbody>
</table>
ANÆSTHETICS, when used were as follows:

- Chloroform .............................................. 4 times
- Ether ......................................................... 4 "
- Chloroform and ether combined ................. 1 "
- A. C. E. mixture ......................................... 1 "
- *Various................................................. 2 "

ANTISEPTICS, when used, were as follows:

- Hydrar. Bichlorid..................................... 10 times
- Carbolic acid ........................................... 3 "
- Boracic acid ............................................ 3 "
- Iodoform .................................................. 2 "
- "Listerine"................................................. 5 "
- Peroxide of Hydrogen ............................... 1 "
- Hot water ................................................ 1 "
- Boric acid ................................................ 1 "

SPLINTS, when used, were as follows:

- Wood....................................................... 6 times
- Plaster of Paris......................................... 3 "
- Simple starch bandage .............................. 2 "
- Pasteboard ............................................... 2 "

*This may be in accordance with the French method of 1884, which was to precede chloroform narcosis with atropia, morphia, and water, hyperdromatically; claims rapid anaesthesia, perfect quiet, safety, and quick return to consciousness.
Summary of operations and results of 83 cases reported from June 1, 1886 to May 1, 1887, in Nebraska.

| Amputations, dislocations, and fractures | 23 | 22 | 1 | 95.65 | 4.35 |
| Operations involving head and neck | 10 | 9 | 1 | 90.00 | 10.00 |
| Operations involving the thorax | 1 | | 1 | 100.00 |
| Operations involving the abdomen | 7 | 6 | 1 | 85.81 | 14.19 |
| Operations involving the male genital and urinal organs | 4 | 4 | | 100.00 |
| Operations involving female genital and urinal organs | 3 | 3 | | 100.00 |
| Operations on organs of special sense | 2 | 2 | | 100.00 |
| Miscellaneous operations | 33 | 33 | | 100.00 |
| General Total | 83 | 79 | 4 | 95.18 | 4.82 |

I offer the above without comment. The results will bear comparison.

I had intended to confine this year’s report largely if not entirely to Nebraska surgery, but for reasons already given, it is necessary for me, as it had been for my predecessors, to draw liberally upon foreign sources. Somewhat of an effort has been made to limit the scope of this report to what has been done in the year last past, and to American work, but this has not been accomplished entirely.

GENERAL PRINCIPLES.

The general principles of surgery have become extended and made quite philosophical if not scientific. And in proportion as the inflammatory process has been made more subjective, has the area of cures enlarged.

Dr. Wm. C. Wile, a most scientific and classical man, of Newtown, Conn., in a paper read before the British Medical Association at Brighton, last August, adopts from Pilcher’s “Treatment of Wounds,” and Dr. Strieker’s article on the
subject in the International System of Surgery, the latest information and belief regarding the successive changes which occur during the healing of a wound. It is in substance as follows:

Repair begins upon the cessation of the hemorrhage, the blood coagulating in the ends of the capillaries, thus producing an obstruction to the blood current, the contents of the capillaries cause expansion of these vessels on account of the increased pressure and relative amount of blood; exudation of plasma now takes place from the engorged vessels, which infiltrates the adjacent tissues, constituting effusion and covers the wounded surface, first as may be seen in wounds where opposition has not been maintained. This exudation consists of coagulable lymph and few or many leucocytes, and is appropriated by the cellular elements of the tissues. "Under its stimulus these normal tissue cells, which had become contracted and fixed, enlarge, absorb the basis substance in which they are embedded, multiply by segmentation, and again become amoeboid and capable of development and organization into new tissue, the characteristic of which is that it is composed of amoeboid cells, separated by narrow traces of intermediate or basis substance, and that these cells or masses tend to multiply actively by segmentation and a power of differentiation inherent in themselves, produce the development and growth of the different organs and tissues of the body. * * It is proper to say, therefore, that the divided tissues which are in process of reunion return, as a preliminary step, to the embryonic state. By the proliferation of the tissue cells thus revivified new cells are developed, and the process of cell formation continues till the break has been repaired." Then follow vascularization and the connective tissue transformation of this new tissue.

Dr. C. B. Hammond, of Nashua, N. H., in his report on surgery before the medical society of that state, quotes from an article by Dr. S. C. Gordon, of Portland, Maine, on "A
new surgical dressing for wounds,” a means of scientifically combating external inflammation. The inference, based on what is now believed to be known of the inflammatory process, and in perfect keeping with the above pathological synopsis, is so logically probable, and the means employed so simple, that I recommend it to this society with the utmost confidence.

He says: “Excess of blood beyond what the nutritive process can utilize, interferes with normal repair. Excess of any portion of the blood acts in the same manner. Consequently, effusions of serum in the wound or beneath the united surfaces must necessarily prevent the nutritive process from being completed in the shortest possible time. The germ theory has, in my opinion, no place as applicable to vital issues. It is only when morbid products, or products capable of becoming so, are allowed to remain in or around such tissues, that the influence of “germs” is appreciably noticed; hence wounds that have been thoroughly cleansed, and are kept so by absolutely thorough drainage cannot and do not take on an unhealthy or suppurative action. * * * In all cases there must be a certain amount of vascular tension due to needle wounds and strain upon the tissues by tying or twisting sutures, and for a period (varying in time in different cases) a certain amount of effusion of serum in the parts in immediate contact, and whatever will best accomplish drainage from this portion of the wound tends to prevent decomposition in the superficial wound itself.” For this purpose he uses glycerine, ordinary commercial glycerine with 2½ per cent of boracic acid in it. By its strong affinity for water it induces an osmosis from the surcharged vessels and lymph spaces with which it may be in immediate contact. This is his manner of using it: Cleanse the wound with water hot as can be borne, pads of absorbent cotton wrung out of the same hot water are saturated with the glycerine and applied to the wound and for some distance around, over this a layer of dry cotton and a bandage, the whole to remain four or five days.
He claims to not even have a blush around the suture holes or a drop of pus, when this method is followed. In one case, he says, “From each pad a large amount of water ran for two days, saturating the bandages even.”

We know that the hydrogogue property of glycerine, when locally employed, has been used a long time among gynaecologists with excellent effect. Why not employ it for similar purposes elsewhere? I believe that in the present treatment of wounds a reaction from dogmatic antisepsis, or more properly speaking, “Listeroid” empiricism, may be detected; this is entirely natural; but it is to be regretted that many men, and able ones too, are advocating and practicing not simply rational antisepsis but no antisepsis. While there may be an element of truth underlying this movement, it is my opinion that that part which has the greatest velocity is certainly retrogressive, and I wish to address myself to such of my fellows as may be in danger from this recoil. It might be suggested that von Kern, in the early part of this century, recommended and practiced the open treatment of all wounds. But that was in the infancy of surgery, and men should put away childish things.

True the Cambridge Hospital in England, and Dr. R. W. Krönlein, of Zurich, employ the open treatment; but they first thoughtfully cleanse the wound and then coat it with balsam Peru and oiled silk, and provide for drainage! But it might be said that the action of the Moscow committee contains no unspoken explanation for the wholesale condemnation of all “Lister dressings” as injurious! Is it a political prejudice or simply the other end of an extreme which in Germany makes the omission of antiseptic precautions a cause of action for malpractice? The founding of a Bacteriological Institute at Irkutsk in Siberia, and another at Kharkov in Russia, may soon modify this hostile feeling into indifference at least.

A plea in favor of a “let-alone” policy was made before the American Medical Association at its last convention by
Dr. Gustave Zinke, of Cincinnati. He reported a death caused by vaginal irrigation, after an apparently normal accouchement, and a similar case occurring in the practice of Dr. John Cleveland, of the same city; and he incidentally remarked that the mortality among lying-in women in the charity and maternity hospitals of New York was fifty per cent greater in cases where vaginal irrigation was employed than in places and practices where it is not employed. His large obstetric experience certainly entitles him to respectful audience, and yet, in all candor, if we are to understand sepsis to really mean sepsis, there ought to be no conflict of opinion concerning the principles which govern its prevention. If the mortality rate is so high in lying-in hospitals, where vaginal irrigation is religiously observed, why does that great institution at Paris, the Hospital Lariboisière, which contains nearly a thousand beds, in which 3,000 women are delivered annually, use a solution of the biniodide of mercury, and Tarnier, in his private hospital, the Maison d’Accouchements, the permanganate of potassium. Why does the Bohemian government make a course in bacteriology compulsory upon the medical undergraduate? This may not answer the position taken by the opponents of the germ theory, but it strengthens that of its adherents infinitely.

Prof. A. Weismann (Biol-Central-Blatt, iv., p. 577–591, et seq.) shows conclusively that it is the lowest organisms which specially concern the surgeon, because they are always present in ill-conditioned wounds, etc. He says: “The unicellular animals are never so modified by the transformation of matter that life becomes impossible. They have no physiological death; their bodies are immortal.”

I recommend to this society an “unconditional” conspiracy against this monopoly of physical immortality being held by or for any sort of infinitesimals.

Among the antiseptics and germicides, the mercurial ones seem to lead in both agreeableness and potency. Salol, a deriv-
native from salicylic acid, contains about 38 per cent of synthetic carbolic acid. This may explain its power as a germicide, but condemns its internal administration to the extent of four grammes daily, as has been given.

Corrosive sublimate and sugar was revived last summer by Dr. Heidenreich. Drs. Fischer and Luke, of Geneva, employed the sugar, naphthaline, and iodoform mixture, perhaps not on account of the sugar, though.

The peroxide of hydrogen seems to be coming into favor; while it promptly cleans any foul wound or cavity by effervescence, it is a question whether it really is as destructive to micro-organisms as it appears to be.

Aseptol, which is orthophenol sulphuric acid, and known since 1841, is being revived in France; it is more powerful and less escharotic than carbolic acid, and less potent and more disagreeable than the mercuric chlorides.

Formic acid has been found to prevent the success of cultures of pyogenic micro-organisms; it may prove to be an excellent disinfectant.

Hydro-naphthol next claims attention. Says the editor of the Medical World:

“We desire to call the attention of our readers to this new antiseptic, as one destined to win a far higher place than most of the new compounds recently produced by the searchers in organic chemistry. It is non-corrosive, non-poisonous, and inodorous. Its antiseptic power is far greater than that of carbolic acid. It is not decomposed by the products of putrefaction. It is not volatile at ordinary temperatures. The vapor is not harmful when inhaled. It will not injure colors or fabrics. It is soluble in 1,000 times its weight of water; and this strength is sufficient to indefinitely preserve organic substances from decomposition; and yet has no injurious effect on living tissues. It will not injure the edge of the surgeon’s instruments. It is freely soluble in alcohol, ether, chloroform, glycerine, benzole, and the fixed oils. Mixed
with absorbent powders, like fuller's earth, it can be dusted over wounds or dressings, like iodoform, a two per cent mixture being strong enough. Any of the ordinary substances used in dressing wounds may be soaked in its alcoholic solution and dried, the crystals of hydronaphthol adhering to the tissues of the dressing.”

Concerning the several other germicides, antiseptics, and disinfectants, as well as additional matter regarding wound treatment, I shall content myself with referring to Dr. Mansfelde's paper on that subject, to be read before the present meeting, and his monograph, reprinted from the Medical and Surgical Reporter for July 24th, 1886.

I will venture to say this much more on the subject: He who can actually operate aseptically is greater than he who uses antiseptics. For this idea I am indebted to a most excellent article by Dr. Frederic S. Dennis, which appeared in Vol. VII., No. 8, of the Journal of the American Medical Association.

In the Lancet for August 21, 1886, a wound dressing is described as it is used by Dr. Perez, of Seville, Spain.

“Bibulous paper heated to 110°C., soaked in a solution of carbolic or boracic acid or corrosive sublimate. This is placed over the wound in about eight layers, and covered with a sheet of gutta percha or mackintosh, the whole being secured by an India rubber bandage.” For this dressing is claimed cheapness, portability, and efficiency. (Nothing is said about practicability.)

Dr. H. O. Marcy, at the September meeting of the Gynecological Society of Boston, exhibited specimens of prepared wool for surgical use. Cotton, while absorbent, will mat and "smother" a wound; this wool, freed from oil and all other impurities, is also absorbent, does not mat, admits of better drainage, while at the same time retains various medications better.

In the treatment of pus accumulations, some progress has
been made. Dr. Eliot, of Washington, D. C., writes that a cloth saturated with turpentine very generally dispels or aborts a mammary abscess. He was led to try this treatment from the good results obtained by means of such an application to abscesses elsewhere, also in felons. (Since then Dr. Fol, of Geneva, has found that turpentine is a sure preventive of pure rabies bacillus culture.)

In the treatment of cold abscesses the Medical Record for March, 1887, recommends aspiration and the injection into the cavity of a four or five per cent solution of iodoform in ether. The French use iodol in such cases, perhaps to avoid the offensive odor of the iodoform rather than from any superior medical property.

A new caustic for epitheliomatous growth is mentioned in the Medical Record for Sept. 9, 1886. It consists of a mixture of calomel and benzol. No data exist of its real value, however.

A novel use of the actual cautery has been made by Bloebauem, of Coblenz, and a certain Italian physician, in the treatment of exudative diphtheria. Great success is claimed. It has met with the approbation of Prof. Henoch, of Berlin. The Pacquelin cautery is the one employed.

In order to avoid the shock incident to severe or prolonged surgical operations, transfusion of blood has often been performed. Dr. A. G. Miller, of Edinburgh, has, at least in one case, practiced a somewhat novel procedure.

In a case of hip-joint amputation, occurring in a very unfavorable subject, the blood-shed was caught in a vessel containing a solution of sodium phosphate, and reinjected into the circulation through the deep femoral vein. The result was a very happy one, and would seem to justify a repetition of this mode of transfusion under similar circumstances.

It is my opinion that the blood being a tissue of the body, transfusion has a place in reconstructive surgery, and for the same reasons and purposes that obtain in those operations
known as plastic. It is, indeed, an interesting, and always will be a difficult operation; one that for centuries has been equally abused by surgeon, priest, and lawyer, and one that only quite recently has assumed its place among the legitimate operations in surgery. Perhaps you will excuse one for expressing an opinion on a procedure which he has never employed, but it is offered with the same candor, and perhaps as much reason, as opinions on religious or legal questions are given by men who may never have stood in the pulpit or sat on the bench.

Transfusion of blood, it seems to me, can have but one reasonable use in prospect—that of ingrafting into a tissue from which a part has been lost, or, more properly, destroyed, which cannot be reproduced from or by the parent tissue, for the full performance of whose functions the part lost is necessary. It matters little what name may be given to that aggregation of symptoms which its absence produces. With this view of the subject, it is not difficult to name the elements which determine its probable success, which, it would seem, are the same, and governed by the same laws that govern the success of a transplantation of any other tissue—the amount must not be too large, it must be alive, and it must be healthy. It is difficult enough to accomplish this on the surface; great then must be the uncertainty of a transplantation of tissue where these indications can only be met approximately. I believe that transfusion should never be employed to simply bridge over a dangerous condition following hemorrhage, auto-transfusion, inversion, or, more properly, the injection of a six per cent solution of sodium chloride is just as good, often better, and always less dangerous. Blood of itself has no particular or peculiar vital property or power that is not held in common by other composite tissues. It does not follow from Immermann’s 114 recorded complete recoveries in 243 cases of transfusion, and the report of Roussel, claiming that from 1820 to 1875 transfusion saved
not less than 80 lying-in women, 30 cases of hemorrhage from war wounds, etc., that the same results might not have been obtained by some other method, nor that a greater ratio of recoveries would not have followed the intravenous or other injections of saline solutions.

Early in 1886 Dr. F. B. Harrington read a paper before the Boston Society for Medical Improvement, in which ten more cases are added to Dr. Bull's nineteen, in which the intravenous injection of Schwartz's solution had been used as a substitute for transfusion of blood. The author's figures are not quite plain to me, but I can understand from them at least that the number of recoveries is astonishingly great. He thinks that the peril of, and the amount of blood lost by, the patient should determine the operation after all ordinary means have been tried.

The case reported by Dr. Charles W. Rook, of Quincy, would illustrate the extremes in loss of blood and quantity of solution to be administered, in which, during a single hemorrhage, one hundred and ninety ounces of blood had been lost, and eighty ounces of the saline solution had been injected.

In order to accomplish intravenous injection it is necessary to first find an available vein; this cannot always be easily done, the loss of blood may have been too sudden, too great, or dissolution too far advanced. In such cases Prof. Monti, of Vienna, advises the subcutaneous injection of the salt solution, and Dr. Rutgers gave in such a condition, following post partum hemorrhage, an intraperitoneal injection of thirty ounces of distilled water containing ninety grains of sodium chloride and five grains of sodium hydrate. Both methods have been followed by splendid results. The manner in which the operation is performed is substantially this: The solution should be kept at a temperature between 100° and 104° Fahr.; a graduated reservoir containing the same should be elevated from eighteen inches to four feet above the site of
injection; a rubber tube and a small canula for intravenous, a medium-sized aspirator needle for subcutaneous or intraperitoneal work, completes the apparatus. A vein is selected on the arm, as if for phlebotomy, opened, the canula inserted, and a ligature passed to prevent regurgitation. The solution must be passed slowly, the reservoir must be low. When a sufficient amount has passed, withdraw the canula and tighten the ligature. In subcutaneous work the greatest height is required; the location selected is the abdominal wall to either side of the linea alba. It has been employed in collapse from any cause, iodoform poisoning, poisoning from illuminating gas, peritonitis, shock, hemorrhage, and septicemia.

While thus speaking of reconstructives, it might not be out of place to mention a food of value in the preparation of patients about to undergo some important operation, a practice heartily concurred in by the British Medical Association, and one which commends itself as reasonable, at least. Raw milk, to each pint of which has been added 15 grs. of sodium bicarbonate and 5 grs. of extractum pancreatis; this is placed in hot water for thirty minutes, to undergo partial digestion, it is then taken out and kept on ice until used. Mutton and beef are preferable to lamb and veal. A patient who has been restored by means of appropriate feeding to general or relative physical health will quite probably withstand a greater injury and effect a more rapid recovery than one who encounters some major operation without this advantage.

GENERAL SURGERY.

I am well aware that, while it may be difficult to find a work on general surgery that does not treat upon such subjects as rabies, glanders, etc., there are critics who will object to my including a few remarks upon kindred affections in this report on progress in surgery. But I am constrained to meet this anticipated objection, not more for the philosophical reason that no correct idea of a part can be framed
without a correct idea of the correlative whole, than for the sake of surgeons generally, who take such deep interest in all of the zymoses.

Notwithstanding the anti-vaccination leagues that have sprung up in England, and the intense opposition manifested against this mode of prophylaxis in Canada and among the less informed in our own country, vaccination and inoculations still continue in the achievement of fresh victories in new fields everywhere in the whole world, even into the uttermost isles thereof.

During the year last past but little has been published on the subject of inoculation against yellow fever. Dr. Domingo Frere, of Rio Janeiro, published his experiments about two years ago, saying that in the three months preceding March 22, 1885, 1,109 of all nations and ages had been inoculated with the attenuated virus of yellow fever, and that none had died. How quickly Spain sent a commission to investigate his claims, the alacrity with which the Emperor of Brazil had 600 men, who were working in a highly infectious locality, inoculated, and the triumph with which this mode of prophylaxis emerged from the test—but four or five taking the disease where formerly one-third succumbed to the yellow scourge; how the Governor of Mexico, in imitation of the Brazilian emperor, had the whole garrison at Vera Cruz treated according to Dr. Carmona's system; how, in Brazil, of 3,051 that had been inoculated, embracing all nations, ages, and conditions in life, some of whom were already in the second stage of the disease, none died, while among those in the same district that were not inoculated 278 had died—is now a part of medical history.

The news was carried by M. Rebourgeon, one of M. Pasteur's assistants, before the Biological Society of Paris; a committee was appointed to investigate the method, consisting of MM. Brown-Sequard, Cornil, Duval, Bourquelot, and Maurel. I do not know that they ever reported.
In July, 1886, and probably in answer to resolutions passed by the American Public Health Association, a bill passed the United States Senate authorizing the president to appoint a similar committee.

So the matter rests to-day. Perhaps the absence of yellow fever has, in a measure, crippled these various committees, but it would be unreasonable to think that a prophylactic method to which in Rio Janeiro alone 6,051 had submitted, 166 of whom had lived in houses where from one to five had just died of the disease, and none have died from the disease guarded against, should have resulted from chance or Divine interposition. Dr. Frere's method consists of an injection into the arm in the region of the deltoid, with a Pravaz syringe, of fifteen minims of the attenuated culture of the spores of the disease.

Early in 1885 Dr. Jamie Ferran, of Tortosa, Spain, wrote to the French Academy of Medicine that he had found by experiment that guinea pigs, when inoculated with the virus of cholera, weak enough not to kill, yet sufficiently strong to produce the characteristic symptoms of cholera, they subsequently were able to resist an ordinarily fatal injection. From this a series of inoculations began, which ended with the inoculation of the human as a method of prophylaxis against cholera.

Its efficacy for this purpose was unequivocally demonstrated at Alcira, Spain, a town of 16,000 inhabitants, during an epidemic of true cholera. During the first eighteen days of May, 1885, 5,432 submitted to inoculation. Among those not inoculated 64 took cholera, and 30 of them died; of those inoculated, seven took cholera and none died. Again, figures taken a few months later, show that in a non-inoculated population of 33,000, 1,050 took cholera and 550 died. Among 12,640 inoculated persons 68 were taken with the disease and 14 died. Among 3,634 re-inoculated 39 took cholera and seven died. Late in 1886, Dr. E. O. Shakes-
peare, who was appointed by the United States government to investigate cholera and a means of prophylaxis, reported very favorably upon the Ferran method, saying it has proven itself six times more effective than hygiene.

Rabies, which in the old world has existed from time immemorial sporadically, and frequently in the form of widespread epidemics, and since the beginning of the eighteenth century in the New World, with its horrible course and almost inevitable end, is now being subjected to a mode of prophylactic warfare which may prove as beneficial to the race as did that waged against variola in the century just past. During the last year the periodicals, both secular, religious, and indifferent, have been full of literature on the subject of hydrophobia, pro and con, serious and careless.

M. Louis Pasteur’s first inoculations were made on two rabbits, December 11th, 1880, from the saliva of a child supposed to have died from rabies. The next we hear of him is in connection with the first human being ever inoculated, the now famous Joseph Meister, aged nine years, in July 1885. In a lecture at the Paris exhibition for hygiene last July, by M. Grancher, the medical assistant of M. Pasteur, it was stated that all persons who came to be treated were divided into three classes:

1st. Those who have been bitten by dogs positively rabid, having communicated rabies to other animals.

2d. Those bitten by dogs pronounced rabid during life or after death by veterinarians.

3d. Those bitten by dogs of which nothing is known.

This certainly bears the candor of an honest search for the truth. The death rate, based on 1,335 cases at that time was as follows:

1st class, after inoculation, 1.04 per cent; statistical death-rate 16 per cent; 2d class, after inoculation, .46 per cent, when bitten in the face or hands, the death-rate is 80 per cent; after inoculation it is 1.80 per cent in the 1st class, and 75 per cent in the 2d class.
The normal death-rate from wolf bites is 66 per cent; after inoculation it is 14 per cent.

In an incredibly short time after the lecture, $113,719 was subscribed for the purpose of prosecuting these investigations; the amount has now increased to nearly $1,000,000, $20,000 of which came from the Czar of Russia, and the government ceded to the society of the Pasteur Institute the land on which it now stands, which has since grown by purchase to 11,000 square meters. The sultan of Turkey bestowed upon the venerable savant the order of Majidie and a gift of $2,000, a most enthusiastic and substantial endorsement. January 2d, 1885, a Pasteur Institute was incorporated in New York City, and on the last day of the same year another at St. Louis, but how they have languished! Dr. Valentine Mott, July 5th, 1886, performed the first inoculation in the United States, with a virus culture of the 110th attenuation, and since then the two Institutes and their purpose have been drowned in an awful silence. Not so in France. Almost every country on the globe has sent patients to Pasteur for treatment, all agreeing that the death-rate was much lower after a course of inoculations than before or without it. In a letter to Dr. Davis, of Philadelphia, M. Pasteur presents in tabular form the work and its results from July, 1885, to September, 1886, as follows:
In two months the number was increased to 2,490, and by April 1st, 1887, 500 or 600 more had been added. His method of propagating the virus is not known in detail, but is said to be as follows: A rabbit is inoculated with “rabie vaccine” by trephining; a second rabbit is then inoculated from the spinal cord of the first, and so on in series. The “vaccine” sufficiently virulent to kill a rabbit in seven days is what is then employed. Small pieces of such cords are suspended for desiccation in small flasks containing pieces of caustic potash. Each day it is so kept, it is said to become less potent, and in twelve days is supposed to have lost all virulence. The process known as the intensive for severe cases is as follows:

First day, medulla virus twelve days old, at 11 o’clock; ten days old at 4 o’clock; eight days old at 9 o’clock. Second day, at same hours, with cords of the six, four, and two days age respectively. Third day, medulla virus one day old.
Fourth day same as the first day, and so on till on the seventh day, when a four days old medulla is used; eighth day a three days old medulla; ninth day a two days old medulla, and on the tenth day a one day old medulla is used. The process may be repeated two or three times.

I am aware that his theory is not in all parts entirely logical, and that some of his ideas seem like notions, yet I am studiously trying to teach myself to adhere more closely to facts than to theories, regardless of the somewhat ambiguous saying of Disraeli, that "few things are more deceptive than facts unless it be figures." From the beginning this man Pasteur was a discoverer. The "left-handed" tartrate, before his time, was unknown, and he first drew a line between organic and inorganic chemistry; the nature of fermentation was not understood till he demonstrated it. Have any of his previous discoveries been disproven? It seems to me this, his system of inoculation against anthrax tried with such unqualified success in Madras upon the recommendation of Mr. M. J. Mills, is entitled to much weight in passing judgment upon his system of inoculation against rabies.

**SPECIAL SURGERY.**

It may be of interest to mention that in the past year two cases of *Actinomycosis hominis* have been recorded. This disease, known as "big head" in cattle, may infect the human, showing itself in suppurative and metastatic abscesses.

The first case was reported by Dr. A. Schirmer at the Sept. 6th, 1886, meeting of the Chicago Medical Society; the second was reported about a month later by Dr. A. J. Ochsner. The committee on pathology reported the examination of the first case as follows: "The patient is a man about 25 years old, emaciated and feeble. The lateral diameter of the neck is considerably increased by inflammatory thickening of the superficial cervical tissues, which are hard and unyielding; on
either side of the neck is a ragged scar and small fistulous openings, from which issues a slight serous discharge. The jaws could be separated only to a slight extent; but, so far as could be determined, the mouth and throat presented nothing abnormal; no carious teeth were detected. Dullness on percussion and broncho-vesicular breathing were found over the apex of either lung; on the left side in the supra clavicular region and first intercostal space anteriorly, on the right side down to the third rib. The patient coughs frequently, and occasionally raises considerable sputum. About an ounce of sputum was collected, from which slides were prepared and several specimens of actinomyces were detected."

The society voted $50 to Dr. Ochsner and two other members for the purpose of making a series of experiments, including cultures and inoculations.

I am indebted to Dr. Charles W. Dulles, of Philadelphia, for his monograph on "The Mechanism of Indirect Fractures of the Skull," based on actual experiments and the study of such accidents clinically. I shall not abridge by one word the conclusions its author has drawn from these various experiments and the study of seventy writers, who have written directly or indirectly on the subject. He says:

"The analysis of these 119 cases shows that 111 present fissures which correspond to what might be expected from an application of the principles of the 'bursting theory,' and only eight seem to contradict it. This result, which has surprised me by its apparent completeness, seems to establish this theory by the best test which we can apply to it, so that it appears to rest upon a very firm tripod of reason, experiment, and clinical observation.

"I trust that it will not be supposed that, in making so much of the bursting theory in this paper, I have overlooked the fact that there are fractures which cannot be accounted for by it. There are some fractures in which the force applied is so great, and acts in such a manner, that the skull is crushed so
as to hide any evidence of the play of its elastic properties, the fracture being of a comminuted sort; and there are others in which, as I have noted in passing, one segment of the skull seems to be shoved over the other by forces of pressure and counter-pressure, which require some study before their mode of operation can be understood. In this connection it is of importance to learn in any case the position which the skull has held in relation to the spinal column or to any body capable of exerting counter-pressure. No less is it important not to overlook the counter-pressure which is caused by the simple *vis inertia* of the skull and its contents.

"But it would be impossible to speak of all the influences which may modify the strict application of any one theory in regard to fractures of the skull. I have laid before you all the evidence which I now can in regard to this matter, and I must close with the expression of my own conviction, that the supreme law governing the production of indirect fractures is that which depends upon the fact that the skull is practically a hollow elastic case, approximately oval in shape, and which may be briefly formulated as follows: When a sufficient force is applied to any curvilinear part of the skull, if this part do not give way immediately, the axis of the skull lying in the same line as that of the applied force is shortened; all the axes lying in planes at right angles to this line are correspondingly lengthened, with a proportional lengthening of their circumferences, and separation of their meridians, so that the direct depressing force is converted into an indirect disruptive force acting at right angles to the direction of the former. The effect is to produce a fissure, or fissures, which will have a general meridional direction.

"The application of this law is subject to certain modifications, due to the anatomical and architectonic peculiarities of the skull, its coverings and contents, and to certain exceptions due to the amount and velocity of the force applied, as well as to the coming into play of peculiar counter-forces."
His work is a most recent and valuable contribution to our present meagre fund of knowledge concerning this class of cranial injuries.

For a dissertation on the subject of "Venous Tumors of the Cranium," I am under obligations to Dr. Wm. M. Mastin, of Mobile, Alabama. It is impossible for me to do justice to his production by synopsis, other than in his own words, which I take the liberty to transcribe.

"1. Cranial venous blood tumors, communicating with the dural circulation, are to be classified into three divisions, namely: the congenital, spontaneous, and traumatic.

"2. These classes are divided, upon both anatomical and pathological grounds, into two species or varieties: a, the diffused, produced by a perforation of the cranial plates and the wall of the subjacent sinus, resulting in a limited extravasation of blood beneath the scalp, and thus forming a blood cyst in direct or immediate communication with the affected sinus; and b, the venous or vascular, in which the tumor is directed, formed at the expense of the venous coats, and includes in its scope the sinuses, the vena emissaria, and the diploic vessels.

"3. The venous type is the commonest in point of occurrence, and of this type varicose involvement of an emissary vein is the most frequent form, whilst the diffused is the rarest of all the varieties.

"4. The diffused variety is especially characteristic of the spontaneous and traumatic groups. The venous or vascular type occurs most frequently in the congenital class, but at the same time is often met with in the spontaneous division.

"5. The medium of communication with the intracranial circulation is, in the very large majority of instances, represented by the superior longitudinal sinus, particularly its central and posterior portions. The emissaria santorini most often implicated are, probably, the superior or posterior parietal emissaries, which pair, also, are the most constant
and uniform in their existence. When the diploe is involved the frontal region is the usual seat, no instance of a similar occipital formation having been observed.

"6. In a casual relation, some morbid action in the venous walls is notably prominent in the congenital class. In the spontaneous group, atrophic or rarefying osteitis ranks first as a cause, and venous disease secondly, and in the traumatic division, direct injury, which nearly always means fracture, is the only etiological factor.

"7. Palliative measures for retarding or arresting the progress of the growth, and certain forms of compression, intended to act as a curative agent, are useless applications, the latter, in addition, being capable of producing alarming head symptoms, and hence may be harmful.

"8. General surgical interference is not called for, because the history, nature, and progress of the lesion is opposed to indiscriminate operation, being of that character to render such treatment unnecessary. When, however, operation is deemed expedient, or is demanded, the following methods seem to be open for adoption:

"First. If the growth be either of the diffused type, or that form consisting of a varix-sinis, exposure and ligation of the pedicle (if such exist), or, if necessary, deligation of the sinus in its course, the trephine being boldly employed to furnish requisite space for the necessary attending manipulation. The lateral ligature and suture, when applicable, are preferred to complete ligation.

"Second. If the tumor be composed of varicose emissary vessels, or, perhaps, of diploic dilatations, either electro-puncture or strangulation of the base are justifiable procedures, but preference is given to electro-puncture."

The author in drawing the above conclusions is fortified by a bibliography of over fifty titles.

It would seem that the ancient and honorable operation of "trepanning" is at present being neglected, especially is this
noticeable in fractures with depression, and used only after unfavorable symptoms appear, evidencing non-accommodation of the brain to the encroachment, or else in the search for intracranial foreign bodies, tumors, or pus. It seems further that several deaths have thus occurred which might have been avoided by the prompt employment of the trephine. A notable exception to this is the case reported by Dr. J. H. Wilson, of Beaver, Pa., in which the depressed temporal bone was made to act as a compress over the ruptured arteria meningea media. Two years have since passed and no untoward symptoms have manifested themselves.

The Medical Record for June 26, 1886, contains an account of a patient who was operated upon by Dr. C. L. Dana, of New York City, for the relief of an aggravated case of epilepsy, following an injury to the back of the head, caused by a fall during a fit. The operation of trephining, elevating a piece of depressed bone, and removing of several spicula was performed without general anesthesia. A 4 per cent solution of cocaine was injected hypodermatically at the site of operation, which was on the left side of the occipital bone, near its junction with the temporal and three inches to the left of the occipital protuberance. A linear depressed fracture was found. The patient did not suffer much during the operation, which was followed by the most signal benefit. Cerebral surgery has now become intensely scientific, and mankind owes to Dr. David Ferrier a debt of gratitude that never can be paid. A subject so intricate and complex as the diagnosis of brain lesions, and the successful surgical interference possible—nay, probable—when localized, challenges the admiration of every thoughtful person.

Dr. N. Senn writes quite lately from Glasgow concerning surgery of the brain as done by that "master of subcutaneous incisions," Dr. Wm. MacEwen. A boy aged seven years had suffered from purulent inflammation of the middle ear; cerebral symptoms manifesting, the mastoid process was opened by
another surgeon, but without any benefit. When Dr. Mac-Ewen saw him, "he showed distinct signs of mental perturbation; the pulse was slow and the temperature subnormal." There was slight ptosis on the affected side. Cerebral abscess was diagnosed. The head was shaved and disinfected, and the trephine applied at a point an inch above and an inch behind the external meatus. "When the disc of bone was removed the dura mater appeared tense, but otherwise normal. No cerebral pulsations. A thoroughly disinfected needle was inserted and passed in a downward and forward direction toward the petrous portion of the temporal bone, the supposed seat of the abscess. About an inch from the surface pus was found. The abscess was incised and about an ounce of cream-colored pus escaped. For the purpose of securing more efficient drainage a very small trephine was applied over the former site of operation and an opening made in the floor of the abscess cavity. The middle ear was thoroughly scraped out with a Volkmann's spoon and thoroughly disinfected. The first trephine opening was closed with bone from the disc removed, an aperture sufficiently large being left for drainage. Another drain was introduced from below, thus securing efficient, thorough drainage. The effect of the operation was marvelous. The stupor disappeared promptly and full consciousness was restored in a few days."

While we stand thus admiring the valor and skill of our transatlantic brethren, let us not forget that, should a question of priority ever arise, Dr. Wm. Detmold, of New York City—the introducer of orthopaedic surgery into this country—diagnosed the existence of a purulent collection in the brain and successfully removed the same fifty-seven years ago!

At the 1886 meeting of the British Medical Association, Mr. Victor Horsley gave several practical hints on cerebral surgery.

On the day preceding the operation the head is to be shaved, well washed, and antiseptically treated; the usual purgative
is to be given, and immediately before the operation a free alvine discharge again induced. Morphia is then administered hypodermatically, and the patient anaesthetized with chloroform, to avoid the cerebral hyperemia which would result from ether. He condemns the cruciform incision, recommending in lieu the semi-lunar, which, when turned back, holds itself. The first incision should not extend deeper than to the periosteum, then through the periosteum. He advises two trephine holes, two inches in diameter (!), one at each end of the condemned area, and the removal of the bone between the two openings with a Hey’s saw. The dura mater should be incised around four-fifths of the area exposed, so as to render it possible to stitch the edges together afterwards. If the brain bulges into the opening, it is good evidence that the proper locality has been struck. In dressing the wound, drainage should be continued for only twenty-four hours. The remainder of the treatment is general.

Mr. Horsley reported three cases of operation on the brain for epilepsy; in one the patient recovered, in one a tumor was removed, and as the brain substance around it appeared dusky and rather livid, he removed all the part apparently diseased. Microscopical examination showed that the tumor was of tuberculous origin. Since Mr. Horsley’s paper was read, he has operated on another case of tumor of the brain. The patient was a man who was absolutely hemiplegic for a month, and had passed into a semi-comatose condition, and before the development of these symptoms he had suffered from fits and a terrible pain in the head. Mr. Horsley trephined over the motor region of the right hemisphere, and removed a tumor weighing four and one-half ounces. On the day after the operation the patient was perfectly rational and free from pain. On the fourth day the wound was healed. The successful outcome of the four operations gives all the more value to his admirable paper, which may be found with an able discussion in the British Medical Journal for October 9th, 1886.
In connection with these brilliant operations must be mentioned two of Prof. Garretson, of the Medico Chirurgical College, of Philadelphia (a school possessing the most learned and experienced faculty of any institution of medical learning in the United States), one being a resection of the superior maxillary nerve for neuralgia, and the other exsection of the whole of Meckel’s ganglion.

Perhaps the surgical treatment of epilepsy first proposed by Dr. Brown, of Calcutta, and which consists of ligating the vertebral artery, may yet accomplish much towards conquering this intractable disease.

The question of the value of surgical interference in the treatment of epilepsy is one that has never been fully settled.

It is true, that where depressed bone is found as the cause of the epilepsy, no one at the present time questions the necessity of relieving the pressure, but the operation of ligating one or more of the large vessels furnishing blood to the brain for the relief or cure of epilepsy is a procedure concerning which opinions are at present at wide variance. But few cases have been reported where this operation has been performed for epilepsy, so that as yet scarcely any sufficient and reliable conclusions can be drawn. From a study of these cases, however, Dr. J. L. Gray thinks that the following conclusions are warranted (Neurol. Review, July, 1886):

1. Ligation of the vertebral arteries should take its place as a recognized procedure in the treatment of certain cases of epilepsy.

2. The operation should be confined to those cases in which the exciting causes of the attacks come from some region outside the brain.

3. The arteries should be tied as high up as practicable, and the ligatures should include all the fibres of the sympathetic accompanying the vessel.

4. Where the side of the brain which is first invaded by the disease can be determined, the artery of that side should be ligated.
5. Where the invasion of the disease is apparently bilateral, both vertebrals should be ligated.

6. This operation should not be done as a substitute, but as an aid to other forms of treatment for the relief or cure of epilepsy.

The important region of the spine seems to bid defiance to the very best intentions of the surgeon. Especially is this true of fractures. The difficulty may be described in a few words, the impossibility of sufficiently immobilizing the parts.

Dr. H. O. Walker, of Detroit, has reported seven cases, all terminating fatally in from twelve hours to four days. Gun-shot wounds in this region evince their customary delay and certain fatality. The surgical treatment of spina bifida results as formerly; excision may be followed by primary union in the most favorable cases, yet, as one has said of the success of his operation, "death followed too soon after the operation for us to dissociate the one from the other."

However we may applaud the courage which enables a surgeon to therapeutically attack the heart, we should not permit our praise to attack ourselves, for there are very few who may dare to operate in so difficult and bloody a field.

The subject of aneurism never fails to interest. Although many improvements, based upon a better knowledge of the subject have been devised and tried, yet death too often follows, and at times, no doubt, is hastened by the very measures adopted to avoid it.

Dr. Richard Barwell, of London, treats thoracic aneurisms by passing about ten feet of the best steel wire, very thin, into the sac, where it is intended to form a coil. A current of electricity from the positive pole of the Grenet battery and twenty cells of the Coxeter's battery is then passed through this for upwards of an hour. One case seemed to respond nicely, but the patient subsequently died from the development of another tumor. Dr. Joseph Ransohoff, of Cincinnati, follows practically the same treatment. It is the old story of coagulating the diverted blood.
Dental surgery has made great progress, notable—the transplantation of teeth, sponge-grafting for loss of alveolar or gum tissue, and the treatment for cleft palate. In cleft palate the patient must be taken in infancy, when the bones are pliable and can be more easily approximated by mechanical pressure frequently repeated, etc., etc.

Mr. Jordan Lloyd, of London, describes a method of controlling hemorrhage from the tongue during partial or complete excision, which, if practical, and I see no reason why it is not, is very valuable. "The patient is placed under ether, a gag adjusted, the left index finger is carried well to the bottom of the glosso-epiglottidean pouch, defining clearly the hyoid bone with its cornua, the front of the epiglottis and the back of the root of the tongue. A stout, long, well curved, mounted needle, threaded with medium-sized whipcord, is entered from the front of the neck, in the middle line, immediately above the hyoid bone; one feels for the point of the needle with the left finger, as the instrument is pushed through the root of the tongue. In this way the epiglottis is protected from injury, and nothing more than the lingual tissues are transfixed; then hook up the loop of thread with the left finger and pull it well through and out of the mouth, withdraw the needle, liberate the thread from it, and cut through the loop. Now enter the empty needle at the same point of puncture, through the skin only, and pass it subcutaneously to the right until its point is opposite the upper border of the root of the great cornu. Care must be taken to keep just under the skin, and so avoid the lingual artery. Now turn the point inwards above the great cornu, so as to enter the bottom of the side of the pouch and feel for the point of the needle with the finger. Thread one of the ends of the cord, which is in the mouth, through the needle, and withdraw. This casts a loop around the right half of the tongue. The left half may be dealt with in a similar manner."
I consider this method of preventing hemorrhage a good one, and especially to be recommended when a greater part of the organ must be removed as in cases of true epithelioma, etc., which was successfully done last summer by Dr. R. F. Weir, of New York City, after the Kocher method.

Among the interesting contributions to minor surgery may be noticed that of Dr. E. C. Morgan, of Washington, D. C., a major historical and professional research on the question of "Hemorrhage following Uvulotomy." Galen shortened the uvula by pulling the hair of the head until the scalp left the cranium! (He mentions no alternative for bald heads.) Mesue used a golden scalpel, the Arabians caustics and red-hot irons. From the time of Hippocrates to the present this little dependent thing has been pinched, squeezed, crushed, coaxed, tied, cut, and burned off! In Persia, where sore throat is very common, and the uvula consequently often hangs over the border line of comfort, almost everybody submits to the operation some time in life, in order to avoid suffocation (!) It is performed by the barbers.

In Iceland it has been practiced from the earliest known times. It is supposed to prevent sickness of all sorts and indispositions of any kind—angina pectoris, inanition, etc. The peasants are the operators. We amputate for pathological enlargements or malignant destruction. It is best to cut low, and if the arteries seen by Dr. J. W. Farlow on the posterior walls of the pharynx can be discovered, it would be wise to use the clamp, since death has resulted from hemorrhage after the operation, owing, it is said, to the anomalous blood supply of this part of the palate.

A great amount of work has been performed in abdominal surgery in the past year, and it will be necessary, in order to escape the charge of prolixity, to run some risk in brevity and professional economy.

For malignant disease of the oesophagus, or non-malignant stricture, cicatricial stenosis of the pylorus, for forming a gas-
tric fistula in cases of cancerous stenosis or syphilitic stricture, the "two sittings" method seems still to be preferred. The greatest success is obtained, as might be expected, for the removal of foreign bodies from the stomach, for digital divulsion—Loreta's operation of pyloric stenosis—Credé, of Dresden, having performed direct gastrotomy 27 times with 23 recoveries. I am glad to know that operations performed for the purpose of possibly prolonging life a very short and uncertain length of time, in patients afflicted with necessarily fatal diseases, are being very generally denounced.

The exact spot where the opening should be made into the stomach is still a subject for discussion; every part of the organ has been opened, for good reasons given, and most excellent results obtained.

Pylorectomy is asked to wait for greater diagnostic acumen; notwithstanding Billroth's brilliant operation in 1882, in this country, it is not yet considered a justifiable operation for malignant disease in that part of the organ.

Gastro-enterostomy, an operation which opens a direct communication between the stomach and some part of the small intestines, is said to be easy of execution and to have a wide range of application. Three recoveries out of four operations would seem to establish it among the warrantable operations.

The Langenbeck operation, in 1880, of duodenostomy, as an improvement on or substitute for gastrostomy, has fallen.

Jejunostomy, as a substitute for gastrostomy, gastro-enterostomy, or even duodenostomy, is performed high enough to allow the food to become mixed with the hepatic, pancreatic, and most of the intestinal secretions. It has done much good, but it is asked to wait better information concerning its indication.

Enterectomy has not been performed often in the past year. An operation having so great a mortality rate, caused, no doubt, by the desperate character of the lesion or disease de-
manding it, has yet very much to commend itself. When performed for the removal of malignant growths, the successes have been more numerous than when done for imaginated adhesive intestine. Since 1876 there have been collected 121 enterectomies, 36 were for intussusception in every case found gangrenous, 70 per cent resulted in death or formation of fecal fistula, the remainder for wounds, artificial anus, stenosis, and tumors. The death-rate was less than 50 per cent. He, with Von Bergmann and Billroth, decide against primary typical enterectomy and enterorrhaphy in cases of gangrene resulting from strangulated hernia, and intestinal strangulation, in which cases they advise the establishment of a preternatural anus. Among the major resections may be mentioned one by Billroth, in which five feet of small intestine was removed successfully from a girl, aged 22 years. Koeberle, in 1881, removed over six feet of small intestine from a patient, same age and sex, also successfully. Kocker successfully removed nearly four and a half feet (160 ctm.) of small intestine for gangrene, resulting from strangulated hernia. His success is attributed to the large amount he removed. Baum removed nearly four feet (137 ctm.) of small intestine from a woman, aged 45 years. The patient died afterwards from emaciation.

There is a limit, however, to resection of intestine, says an eminent authority. "There is no case on record where the caecum, including the valve and adjacent portion of the ilium, with the reunion of the ilium with the colon, has been attended with a satisfactory result."

After gangrene in these parts, it is especially discouraged. The very best that can then generally be done is offered in ileo-colostomy. A success now and then in cases that cannot be called "select," causes one to feel hopeful of attaining a greater number ultimately—colectomy offers no such encouragement.

Laparo-colotomy has taken the place of colotomy, ordinar-
ily, because it prevents the accumulation of irritating discharges, etc., in the rectum. The colon is divided low down, the distal end closed by inverting the margins deeply and applying sutures. The proximate end is then stitched to the wound. This is known as Madeling’s method, and is followed by most surgeons who perform this operation.

Our surgeons generally pray that there may be no delay in all such cases when they tend towards that condition which makes intestinal surgery so desperate; that great nicety in localizing the exact pathological seat should not be sought when it would occasion delay, nor should the operation be abandoned if it should appear that the part to be operated on has a covering of peritoneum.

Crede concludes from the study of 30 cases of splenectomy, 18 deaths, 16 from hemorrhage and 2 from shock, that the indications for the operation are now settled. “Adults tolerate the removal of the spleen without permanent ill results. The functions of the lost organs are performed by the medullary tissue in the bone and the thyroid gland.”

In this connection it might be well to note that Dr. A. Ethernod has recently confirmed the results of Tizzoni, Griffini, and others, that the spleen, even when totally extirpated in the fox or dog, the animals show a partial regeneration of the removed organ.

The records of four splenectomies have come to my knowledge during the past year. One performed by Dr. J. R. Nilsen, of New York City, November 21st, 1886. It was for the removal of a floating hypertrophied organ, followed by recovery. One by Dr. W. W. Penn, of Texas, which was, surgically speaking, accidental. An abscess was opened, and the spleen escaped through the incision!

The two other cases, one by Prof. Aceci, of the University of Genoa, the other by Dr. Wm. H. Myers, of Fort Wayne, Indiana, are fully reported, and on account of the rarity of these operations I shall quote liberally from the record. In
the first the patient was a thin girl, aged 17 years, in bad physical condition. An abdominal tumor had existed since birth. The spleen was floating and enormously enlarged. Under strict antiseptic precautions the abdomen was opened in the linea alba from above downwards, through the umbilicus, a distance of $9\frac{1}{4}$ inches. “On opening the abdomen serious signs of suffocation compelled the suspension of the operation nearly thirty minutes. Anaesthesia having been commenced with bichloride of methylene, chloroform was substituted for it. A triple catgut and carbolized silk ligature having been applied to the pedicle, it was dropped in. The peritoneum was sutured separately. The abdominal walls were brought together by three metallic points, after Billroth’s method. The splenic artery was larger than the subclavian. The operation, including the whole interruption, lasted an hour and a quarter. Violent delirium and nervous phenomena simulating angina pectoris soon followed. For two days the pulse could not be counted, and the respiration varied from 70 to 80 per minute. The treatment was by oxygen and nutritive clysters.” On the eighth day the wound was first dressed, and it was found that almost the whole wound had suppurred. Erysipelas supervened. Patient got well! The organ weighed over 77 ounces. The recovery was complete in every way. The other and last case was also a case of wandering spleen, but one that had suppurred, and was discharging through three sinuses.

The skin was cleansed over the tumor and for some distance around with a 1-20 solution of carbolic acid. Placed under ether, an incision six inches in length was made in the linea alba. Upon opening the peritoneum, there was a free discharge of sero-purulent fluid. “The tumor was now freely exposed, and proved to be a displaced and wandering spleen, indurated and greatly enlarged, lying in a peritoneal abscess.” (?) The pedicle was transfixed with a needle threaded with a double thread of silk, ligated in two portions, cut short,
and dropped back "into the cavity occupied by the spleen." Drainage tube in place, the wound was closed with sutures which included the peritoneum; the surface was again washed with carbolized water and protective gauze placed over the incision, all secured by a snug-fitting flannel bandage. The patient made an uninterrupted recovery.

Splenectomy for visceral injury shows splendidly; twenty cases, all recovered.

We have in St. Louis Dr. Augustus Bernays, the rival in boldness, and perhaps success, of the nimble-fingered Tait, of Birmingham. He divides the operation of cholecystotomy into "ideal," making the incision in the linea alba, removing the obstructions, and returning the gall-bladder; "natural," which corresponds with Billroth's direct method for gastrostomy; and "simple," which is really a cystectomy.

I append his personal communication:

Dear Doctor—In answer to your inquiry, I will say that I have performed ideal cholecystomy only once, Tait's cholecystotomy also but once. Both cases recovered. In two other cases I found no gall stones; both cases also recovered easily from the laparotomy. I have never performed cholecystectomy.

I always use purified chloroform, made by Mallinkrodt, of this city, in all surgical operations.

I will send you reprints or copies of all my writings, and will gladly furnish you any other information that you may desire to have.

Yours very truly,

A. C. Bernays.

To Dr. J. S. Leonhardt, Seward, Neb.

The procedure which has for its object the opening of the abdominal cavity for the purpose of clearing up a doubtful diagnosis, the removal of abdominal or pelvic growths, foreign substance, the reparation or perhaps removal of some
contained viscus, was christened by Dr. John Ashhurst, Jr.,
and is the leading surgical topic of the day. Says Dr. Den­
nis: "It is a source of national pride that laparotomy in pen­
etrating and visceral injuries of the abdomen was conceived, de­
veloped, and perfected in America." So flattering has been
the success attending this operation when done for intestinal
wounds, that one who will not operate early in such cases,
knowing what has been done by Bull, Hamilton, and Bill­
roth, is morally guilty of criminal neglect. Dr. T. Gaillard
Thomas has said that after an experience extending over
twenty-three years, and embracing 700 or 800 cases, he has
never once regretted having opened the abdominal cavity,
but often has regretted not having opened it. He has briefly
outlined the scope of laparotomy as follows:

1. Wounds and injuries of the abdominal viscera.
2. Intestinal obstructions.
3. Presence of stones in the bladder or kidneys.
4. The accumulation of blood, pus, or serous fluid from
any source.
5. The existence of a neoplasm in any part of the ab­
domen.
6. The occurrence of serious organic changes in certain of
the viscera for their exploration or removal.
7. Ectopic gestation.

In every man or woman dying, or in danger of dying, from
an obscure intra-abdominal trouble, an exploratory incision
should be made and the diagnosis should, if possible, through
it, by touch, or touch and vision, be perfected.—SUTTON.

Dr. Thomas S. K. Morton, of Philadelphia, reported be­
fore their county medical society, January 26, 1887, on the
historical and surgical aspect of "Abdominal section for
Traumatism."

"The total number of cases is 57; of these 36 died and
21 recovered. Mortality 63 per cent. These 57 cases were
done by 42 operators, viz.: Twenty-three United States oper­
ators did 35 operations, with 11 recoveries and 24 deaths. Mortality 67 per cent. Nine English operators did 10 cases, of which 3 recovered and 7 died. Mortality 70 per cent. Two Australian operators did two operations, with 2 deaths. Two French operators did two operations, with two deaths. Two Russian operators did two operations with two recoveries. One German and one Swiss, each did an operation with success. One Italian operator did two operations with two recoveries.

"Of the 57 cases, 38 per cent were for pistol or rifle shot wounds; 35 per cent for stabs; 17 per cent for ruptured bladder, and 10 per cent for ruptured intestine.

"Operations were done according to the years, as follows: 1862, 1; 1876, 1; 1879, 1; 1882, 1 (the first successful one); 1883, 7; 1884, 5; 1885, 13; 1886, 29."

Schram has collected 190 cases of intestinal obstruction in which laparotomy was performed, the per cent of deaths was 64.2. It is claimed that this large ratio of deaths is due to delays. The diseases were as follows:

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<tr>
<th>Disease</th>
<th>Cases</th>
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<tbody>
<tr>
<td>Invagination</td>
<td>27</td>
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<tr>
<td>Bands or intestinal diverticulum</td>
<td>49</td>
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<tr>
<td>Adhesions</td>
<td>16</td>
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<td>Hernia reduced <em>en massi</em></td>
<td>11</td>
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<tr>
<td>Tortions</td>
<td>10</td>
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<tr>
<td>Knotting of bowel</td>
<td>12</td>
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<tr>
<td>Internal Strangulations</td>
<td>12</td>
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<td>Foreign bodies</td>
<td>7</td>
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<tr>
<td>Neoplasms</td>
<td>38</td>
</tr>
<tr>
<td>Unknown</td>
<td>8</td>
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The attempt to relieve an intussusception by external taxis, rectal injections, anaesthesia, etc., may be in order when adhesion has not taken place between the *intussusception* and *intussuscipiens*. Yet all delays are dangerous; laparotomy, with enterectomy, artificial anus, etc., should not be put off
too long. In 57 such cases where this operation was performed, reduction was effected in 26—18 children, 4 recoveries; 8 adults, 5 recoveries. All children under the age of six months died.

The treatment of peritonitis by abdominal section was first practiced by Dr. Wiltshire in 1868. About five years later Mr. Lawson Tait followed, and he has since then practiced it in 44 cases with complete success in 41 of them. Mr. Frederick Treves, of the London Hospital, and Mr. Howard Marsh, of St. Bartholomew's, London, have adopted it. Great credit attaches to English surgeons for advances in this direction.

Dr. John C. Reeve, of Dayton, Ohio, reported before the American Gynaecological Society, in session at Baltimore last September, the treatment of chronic suppurative peritonitis by means of laparotomy. The abdomen was hard and painful, pus had been passed per rectum, and the patient was much emaciated.

"The operation was performed June 23, 1886; on opening the peritoneum all the parts were found matted together. The abdomen was washed out by allowing water to run into it from a pipe and then syringing out what remained. Finally a cavity was reached in the left lumbar region. It was impossible to attach the wall of this cavity to the abdominal wound, and as the condition of the patient was by this time alarming, a drainage tube was inserted and the abdominal incision closed with sutures. In the course of several hours the patient gradually rallied from the operation. The temperature did not go above 100° Fahr. The cavity was washed out with a solution of tr. of iodine in water, the upper two-thirds of the abdominal wound failed to unite. On the 14th day a large quantity of fecal matter came through the wound. This continued to recur." The patient finally died. The result was largely the result of her own desire to avoid surgical interference, which was accordingly deferred too long.
A few "pointers" on the manner of performing abdominal section might not be out of order, and I will take the liberty of quoting from Dr. R. S. Sutton's remarks made before the Pittsburgh Gynaecological Society last December. A surgeon whose range of abdominal work is so wide, and whose success so flattering as his, is certainly entitled to audience. He says:

1. Have the patient clean from head to foot, and the surface of the abdomen especially clean, made so by soap and water and a brush. Surround the parts with clean towels fresh from the hot iron.

2. Have your hands and forearms scrupulously cleansed with soap and water and turpentine.

3. Have your instruments clean and immersed in hot water.

4. Thoroughly etherize your patient.

5. Make an incision two inches long; before opening the peritoneum secure every bleeding vessel. Pass in two fingers and make search.

6. If you fail to gain the desired information, withdraw your fingers, pass in a sponge, locate it directly under, below and above the wound, and enlarge the latter with a clean cut over the sponge to a length sufficient to let in your hand. Secure all bleeding vessels, withdraw the sponge, and pass in the hand and complete the search. Through such a wound much may also be seen. Never make a longer cut than is necessary, and make a clean cut.

7. Before closing the abdomen, cleanse the cavity thoroughly, but be gentle in your use of the sponge; if you deem it necessary, pour in a pitcher of clean, warm water and wash the cavity out. Gently sponge it dry. In closing the wound, pass the sutures over a flat sponge laid beneath the wound.

8. Reject the use of carbolic acid or bichloride of mercury in your operations; they are useless, and a source of danger.
They may be useful in cleansing your hands prior to operating, but they are to be kept out of the peritoneal sac. Keith, Tait, Bantock, and others abroad have proved the worthlessness of carbolic acid, and I have for some time been satisfied from experience that they are right.

"9. Never permit any one but the operator to pass a hand into the cavity, unless his hand has been prepared by a careful cleansing with soap and water and brush, and with turpentine or a 1:2000 solution of bichloride of mercury. Even a 1 in 20 per cent solution of carbolic acid is not reliable for this purpose.

"10. In tying the sutures, dry the lips of the wound as you go along with a bit of iodoform gauze."

I am much indebted to Dr. James B. Hunter, of New York, for a pamphlet sent me, treating on the cause and prevention of persistent pain following laparotomy, especially when the patient submitted to the operation for the relief of pain. It is his opinion that if after twelve or eighteen months the pain still continues, a second operation for the relief of that may be warrantable. From this valuable paper the following conclusions may be drawn:

"1. All cases of abdominal section done for the relief of pain should be carefully followed up for at least two years, and not counted as cured simply because the operation has not been fatal.

"2. Peritonitis following operation is to be dreaded as much for its remote consequences as for its immediate danger.

"3. Extreme caution is demanded when the operation is undertaken when there exist the physical signs of chronic peritonitis.

"4. Secondary operations, as a rule, are of no value, although occasionally they may afford relief.

"5. When the operation is done for the relief of pain, a guarded prognosis should be given. There are certain chances that a perfect cure will not result, even if the operation itself is entirely successful."
Among the causes of persistent pain may be mentioned peritonitis, subacute or chronic, adhesions, a nervous diathesis, and defect in the abdominal wound.

The subject of hernia is full of interest to the general surgeon because it is common, and because it may become very serious. Of the 756,893 deaths reported to the census bureau in 1880, 1,236 resulted from hernia, one-ninth of which were children less than one year old. Dr. Baxter's tables show that of 334,321 recruits and substitutes examined by the recruiting officers during the war of the rebellion, more than 17,000 were rejected on account of hernia. George Hamilton, of Liverpool, estimated that one million and a quarter of English people were ruptured. In Philadelphia alone two factories sell annually a quarter of a million of trusses.

Last November, Dr. P. S. Conner, of Cincinnati, read a very interesting paper on "Strangulated Hernia, with a Report of Thirty-three Herniotomies." He says: "The more I see of hernia, the more I am convinced that, if the protrusion does not go back readily and speedily, the best interests of the patient will be subserved by an early operation."

It is not the operation of herniotomy per se (although from fifty to seventy per cent of those who submit to it die) that kills, but rather the delay in its performance that influences, nay governs, the mortality. In the thirty-three herniotomies reported, 36.4 per cent recovered.

I must not tarry long with this interesting subject. Suffice it to say that not only is herniotomy becoming more common, but the radical cure is being widely recommended and frequently practiced, fulfilling the prophetic words of Sir Spencer Wells, who, many years ago, said: "But the surgeon who cures hernia radically with certainty and safety, is a greater public benefactor than he who saves the life of his patient in strangulated hernia, as he not only relieves a larger number of his fellow creatures from the suffering and inconvenience of wearing a truss, but he averts the danger of strangulation.
to which they are continually exposed in a greater or less degree through every period of life."

Tetanus, which has followed herniotomy with considerable regularity, has been very successfully treated by Dr. J. S. M'Ardle, of St. Vincent Hospital, Dublin, by the hypodermatic injection of half a grain of curare. Great dyspnœa and heart failure may follow, but recovery is very certain.

We all know the frequency of nasal catarrh, and perhaps some of us may make use of the suggestions of Dr. C. C. Rice, of New York, in which Dr. McKenzie and others of the American Laryngological Association concur. He suggests that the hypersensitive anterior hypertrophy be removed by galvano-cautery, or else stimulated to absorption by a milder current.

Dr. John O. Roe, of Rochester, N. Y., in 1883 first systematically treated the tantalizing disease known as "hay fever" by surgical interference. The congested, over-sensitive, erectile tissue over the upper and lower turbinated bones and lower part of the septum is removed either by Jarvis's wire ecraseur or the galvano-cautery.

Dr. Thomas F. Rumbold, of St. Louis, has given this subject much thought, has had instruments constructed or so modified as to make the operation quite easy of performance, and he would no doubt be happy to give any inquirer all the information he possesses on the same.

Dr. H. Moulton has reported through the official organ of the American Medical Association a case of hay fever occurring in a child eight years old. The case was surgically treated in the manner above indicated, and the patient was soon cured. I should certainly prefer it to sprays, inhalations, and other expectant plans of treatment.

In 1859, Bouchut, of Paris, brought to the notice of the profession a substitute for tracheotomy, viz.: intubation of the larynx. It was his desire not only to introduce his method, but to have everybody else quit tracheotomy. This was a
surprise to tracheotomists, and especially Trousseau, whose reputation in that line was somewhat national. The *Academie Imperial de Medicine* appointed a committee with Trousseau as chairman; it reported to the academy, which later disapproved of the operation.

Isolated instances of operations performed continued to occur subsequently, by various surgeons in different lands, until it was reintroduced and systematically performed by Dr. Joseph O'Dwyer, of New York City, and after him it was earnestly advocated and practiced after improved methods by Dr. Frank E. Waxham, of Chicago. At the June, 1886, meeting of the Chicago Medical Society, Dr. Waxham read a paper on the subject, with a report of 83 cases of intubation; the average age was three years seven months, and there were 23 recoveries. By October 23d he had operated on 96 cases, one of which was successful in an infant nine months old. He contrasted intubation with tracheotomy, showing that of 306 tracheotomies in Chicago 58 recovered, or 18.95 per cent; average age five years one month; that of the 96 cases of intubation there were 23 recoveries, or 27.71 per cent (which has since been increased by successful cases to 30.26 per cent).

Dr. Jacobi reported 1,024 cases of tracheotomy in this country and Europe, with 21.48 per cent of recoveries, but their ages ranged from 2 years upwards. I cannot explain this apparent decrease in the ratio of recoveries since 1858, when Trousseau claimed that 25 per cent recovered, nor that of Dr. Cohen, of Philadelphia, who calculated the per cent of recoveries in 5,000 operations at the same. But quite recently Dr. Wilms, of Berlin, had 31.2 per cent of recoveries, and Dr. Parks, of Chicago, claims the altogether unprecedented record of nearly 60 per cent.

I take the liberty of presenting a personal communication from Dr. Waxham on this subject.
DEAR DOCTOR—Dr. O'Dwyer's address is 858 Lexington avenue, New York. My last report shows 29 recoveries out of 96 cases, or 30.20 per cent. The chief advantage of intubation is that we can save a much larger proportion of cases than we can by tracheotomy. The disadvantage is the difficulty in performing it. While the expert will require but a few seconds, the inexperienced will often completely fail. I have known of one physician who worked three quarters of an hour and than gave up in disgust. He considers the operation a delusion and a snare. Practice on the cadaver is imperative. As a rule, my patients take an abundance of nourishment. The physician should attend personally to the feeding, as parents often fail to appreciate the necessity of keeping up the strength. I make it a rule to feed the patient semi-solid food before giving liquids, in order to give it confidence. If you give liquids first they will frequently refuse to take solid or semi-solid food, as they fear that it will have the same effect as liquids.

Of my first 17 cases there were 8 recoveries, and these patients I allowed to drink both milk and water, although provoking coughing.

You can obtain a set of instruments by sending to Sharp & Smith, 71 Randolph street, Chicago; price, $28.00.

I do not know with what success Dr. Parks has performed tracheotomy recently.

Hoping that you will excuse this hastily written letter, I remain,

Very truly yours,

F. E. WAXHAM.

The question of feeding is still an important one. Sir William Roberts, of Manchester, England, devised a method of rectal alimentation which is very ingenious, to say the least. He first used it on a patient of Dr. D. J. McKenzie's, who was suffering from cancer of the stomach.
A piece of No. 5 celluloid catheter is passed about two inches into the rectum and secured by rubber bands. A tin can filled with one pint of pancreatic digested milk is elevated from two to two and one-half feet above the hips. The milk is then permitted to run just fast enough to be absorbed by the rectum, which for that quantity requires about three hours. If rectal irritability should supervene, lower the can.

Why not try this scheme of feeding after intubation? If successful, it would answer one of the most serious objections to the operation. Yet there are other objectors and objections. Dr. J. Lewis Smith, in the October, 1886, number of the American Journal of the Medical Sciences, while endorsing intubation, claims that a smaller per cent of recoveries follow than after tracheotomy.

I see that quite recently the indefatigable Waxham has greatly modified the O'Dwyer tubes. The heads have been made smaller, and an artificial epiglottis of rubber has been provided. This would seem to obviate, in a measure, the danger of broncho-pneumonia, and the difficulty in deglutition. He has also modified the mouth-gag, counsels the the operator to protect himself by wearing rubber "stalls" over the fingers and a respirator over the mouth and nose.

Still more recently, Dr. A. E. Hoadley, of Chicago, has written an article in which he recommends deep tubing of the larynx as a substitute for intubation. His anatomical reasons seem very plausible, and he reports nine cases in which he has employed it—they all died. Yet the same sad results have been obtained by a certain surgeon who employed intubation. In conclusion, it may be said that this method of overcoming laryngeal stenosis is under active, earnest consideration, and there is not a thoughtful parent whose hopes are not with those who are seeking to perfect this method. Tens of thousands of physicians all over this broad land are hoping as fervently as they ever prayed that something may come to them that shall stay the desperation and the heartache a single death from laryngeal stenosis inflicts.
In amputations we may mention the fact that much more unfavorable cases are being operated upon with success than formerly, due no doubt to our progress in the principles as mentioned in the early part of this report. And yet conservatism seems to be gaining ground at the same time.

Dr. S. D. Ivanoff, of Briansk, Russia, recently sutured a detached thumb, three hours after the accident. Iodoform dressing, union by first intention, limited mobility, and return of sensibility was the result. This might be reasonably expected from Russian surgeons, who suicide after failure, and where the laws punish the timid or unskillful remaining! Another case which comes very near to plastic surgery occurred in the practice of M. Thomas, of Tours. A finger that had been stripped of all its integument, was glove-like reinserted, much flesh was preserved, as well as a phalanx and a half of finger.

Among the new operations may be mentioned that of removing a portion of bone in order to facilitate cicatrization in cases where there has been extensive destruction of the soft parts. The operation was probably first performed by Mr. Joseph Bell, of the Royal Infirmary of Edinburgh, May, 1885. The patient had lost the greater part of the skin of the inside of the right arm from the posterior fold of the axilla down to within a few inches of the wrist joint, during an attack of phlegmonous erysipelas. He was entered for amputation. Grafting was tried, which healed all but about three inches long by one inch broad. The lower three inches of the humerus, including the cartilages and part of the olecranon, was removed. "The result was a complete success, the patient recovered with a useful arm, soundly healed, with full flexion, extension, pronation, and supination."

Dr. Martel, of St. Malo, undoubtedly the most filthy town for its size and facilities in all France, performed a similar operation about two weeks later on the leg, also with excellent results.

This operation has not, to my knowledge, been performed
since, but it certainly must commend itself to the judicious, conservative surgeon as one more alternative in cases of great destruction of the soft parts of the extremities where amputation would seem necessary.

The fractures occurring at the elbow in young children are usually epiphysial, and should be treated accordingly.

Perhaps, as a matter of caution, it might not be amiss to call the attention of surgeons to the possibility of over extension in the treatment of fractures, especially when occurring at either extreme of life. Two cases in point have been reported; one, a child, aged six years, fractured femur, treated by extension and counter-extension, which was maintained by means of an eleven pound weight. A cure was obtained in four weeks, but it was found that the ligaments of the knee had been so stretched that the ends of the tibia and femur slid over each other with an audible sound, and hyperextension occurred when an attempt was made to stand. In the other case the patient was an aged lady, in which the same incongruous result was obtained.

In fractures of the femur occurring in young children, a condition of affairs always difficult to adjust, so difficult, in fact, that one of the leading London hospitals does not attempt to use splints in such cases, Dr. J. W. Barton, of Philadelphia, endorses the Bryant method of vertical extension. His method of employing the same is substantially as follows:

The usual adhesive plaster, carried well above the knee, the same as is used for making extension in adults in the ordinary method of treatment, is applied to each limb, to the sound as well as to the injured one. After the plaster has become firm, a light wooden frame, extending across the bed and about four feet above it, is placed in position, such a frame as is usually used for swinging fracture boxes, etc., from, consisting simply of two upright, one on each side of the bed, and a light bar connecting them. In the lower edge of the transverse bar, four iron pulley wheels are fastened,
two about the middle, a few inches apart, and one at each end, close to the upright. The limbs of the child are elevated to a right angle with the rest of the body, the cord from one of the adhesive plasters on one of the limbs is carried through one of the middle pulleys and then through the pulley at the end of the bar, then the weight is attached. The cord from the other leg is then carried in a similar manner to the other side. The heavier weight is attached to the injured limb, and only enough to the sound leg to keep it fairly elevated. The fracture will come immediately into good position, but for greater safety a few short and narrow splints should be applied around the seat of injury, supported by a light bandage. Excellent results are claimed for this method of treatment.

The fact mentioned above, that in an institution like that of St. Bartholomew's, in London, fractures of the femur occurring in infants have been treated simply by confinement on a firm bed "with the broken limb, after setting it, bent at the hip and knee and laid on its outer side," may have induced that truly Parisian innovation by M. Lucas-Championniere, who treats fracture of the radius and fibula by massage alone, without splints or other stays. It is said that he obtains good results.

Dr. Frederic S. Dennis last November read a paper before the New York County Medical Association on "Some Points of Special Interest in the Treatment of Compound Fractures; including a Report of over Five Hundred Consecutive Cases." There were 107 fractures of the skull, 47 fatal; 15 of the arm, 1 fatal; 23 of the forearm, 1 death; 53 of the thigh, 5 fatal; 150 of the leg, of which 15 required amputation, and of the remaining 135, 10 died; 37 of the hands and feet, 1 death; 23 of the shoulder, elbow, and wrist, all recovered; 40 of the hip, knee, and ankle, 4 requiring amputation, 3 proving fatal; 24 of the carpal, metacarpal, tarsal, and metatarsal bones, no deaths; 28 of the jaw, no deaths; 13 of the ribs and nasal bones, 1 death; 1 of the ilium, and 2 of
the malar bones, no deaths. In 516 cases there were thus 59 deaths, 19 cases requiring amputation.

The general mortality from compound fractures before the day of antisepsics was from 26 to 68 per cent; since then 4 per cent. In Dr. Dennis' cases "there was not a single case among the fractures of the extremities, of death from septicemia." The conclusions to be drawn from this valuable paper are, that while cleanliness and extension is absolutely necessary, no fixation apparatus should be allowed to remain longer than eight days without inspection. After perfect antiseptic dressing, there should be a sufficient support of plaster of Paris. The practice of tenotomy, when reduction is difficult in cases of oblique fracture, and Schede's method of wound treatment when blood and bloodclots are perfectly antiseptic, is recommended.

I must not quit this imperfect sketch of the treatment of fractures without noticing the extension windlass of Dr. Charles Denison, of Denver, Colorado. Although I have never used it, it is my opinion, regardless of its cheapness and simplicity, that it may prove of much value in the various fractures occurring in the extremities.

In conclusion I will say that the incomplete character of this report is exceedingly regretted. Many of you doubtless think that, considering its length, it should contain more useful matter. I am quite willing to admit this, and can only plead in extenuation of the offense my inexperience as a surgeon and my sore disappointment as a reporter.

You will miss from this report much that has been left out intentionally, such as poisoned wounds, surgery of the skin and lymphatics, foreign bodies, new instruments, neoplasms, ulcers, and fistulæ; any consideration of the surgical sequelæ of the exanthems and continued fevers, tuberculosis of bone, or of that great field in modern surgery which is purely therapeutic, and all blood-curdling exploits in laryngeal, pulmonary, and cardiac surgery.
But much more has been omitted unavoidably on account of the want of both space and time necessary to do justice to the work that has been done in the past year in the vast fields of surgery of the male and female genito-urinary systems, ocular, aural, plastic, and orthopedic surgery, etc., etc.

With this paltry excuse your committee makes its obeisance — out of existence, but not, it is hoped, out of remembrance.
CHOICE OF ANÆSTHETICS, A PROTEST.

BY M. L. HILDEETH, M.D., LYONS, NEB.

In presenting a paper before a state medical society upon the subject of anaesthetics, at the present time, the writer is perfectly conscious of the position which he assumes. He realizes the fact that he may be voted presumptuous and fresh. But there are few subjects in medical thought which are of more practical importance, and which present a greater array of conflicting ideas, dogmatic assertions, and theoretical reasonings than the subject of anaesthetics.

In looking over the current medical literature of the day, one is almost confounded with the confused mass of incongruous and contradictory statements, and these are not the emanations from the minds of unknown men, but many of them proceed from fountain heads of authority, from those to whom we are accustomed to look for inspiration and guidance.

This thought does not come with such force to the minds of those who are old in the practice, but to the young physician, just entering upon the duties and responsibilities of his profession, it comes, oftentimes, with oppressive force. How many of us have felt, when standing by the unconscious patient, the hidden dangers over which we had almost no control, and how much we have felt the need of a safe beacon-light to guide us through the shoals of uncertainty and doubt.

It matters little if a Gross or an Erichsen loses a patient now and then under anaesthesia, but woe to the young physician, who has the misfortune to encounter a like accident. He may as well reef his sails and "go west."
The discussion of the question of the relative safety of the different anaesthetics in more common use for general anaesthesia narrows down to the two principal ones, chloroform and ether, and it does not seem to the writer that this question ought to yet remain "sub judice."

In the light of the overwhelming amount of statistical evidence in existence at the present time, it would seem that the question of the relative safety of the two agents is fully established. Careful observation and tabulated facts show that for every death under ether there are four or five due to chloroform.

It cannot be justly said (although such an assertion comes from the lips of the renowned professor of surgery of the University of Edinburgh) that "the present outcry against chloroform is the result of an imperfect understanding of its physiological action, the proper methods of administering, the dangers which may accompany its use, and their treatment," for, when such men as Watson, Cheyne, Hunter McGuire, R. A. Kinloch, and a multitude of others of equal eminence and integrity, report deaths from its use, and when all of the known precautions have been observed, we can but draw the conclusion that some one is mistaken.

The day has long since passed when dogmatic assertions are accepted and pass for facts, even though they come from high authority.

It means nothing that a surgeon may have given chloroform in many thousands of cases (such was the experience of Hunter McGuire until his first death occurred) without an accident.

The fact still remains that there is one death from six or seven thousand inhalations of chloroform, and one in twenty-seven thousand etherizations.

The distinguished authority quoted above further states, that "if there be heart disease or weak action of that organ, then these are the very cases in which chloroform is most
useful,"' a statement which we believe will bear modification. The condition of the fatty degeneration of the heart is acknowledged by all to contra-indicate the use of chloroform, and is a fatty heart apt to be vigorous and strong in its functions?

His statement is certainly at variance with the more common teachings of the medical world. It is not the province of this paper to discuss the different anaesthetics, general and local, their modes of administration, danger, etc. It would be consuming time unnecessarily, and would be certainly presumptuous before this society. But the point that we would make prominent is a protest against the indiscriminate use of a dangerous means when a safer one is at hand.

No one would say that chloroform should never be used, for there are exceptional cases where it is comparatively safe, and even to be preferred. But for general use it ought to be condemned and banished, and the writer will venture a prediction that the time will come when a physician will be held accountable for accidents which it was in his power to prevent.

The employes of railroads have given to them instructions that in all cases of danger and doubt give preference to the side of safety. Why should not we be governed by the same rules? We, as they, are the custodians of life. We are aware of the fact that many, probably a majority, of the American surgeons use ether, yet we know that there are yet a great many who continue to use chloroform, and yet at the same time acknowledge that it is far more dangerous.

How often do we see physicians, and intelligent ones, too, go to the dental office and administer chloroform to patients in the chair when they know that a liberal per cent of deaths from chloroform occur in this way, and when in addition to the extra dangers of the agent used they are disregarding one of the universal rules, which is never to administer any anaesthetic for prolonged effect to a person in the erect position, and it is a common procedure with some to begin anæsthesia
with chloroform, and when the patient is partially uncon­scious, to substitute ether. This we believe to be wrong, for we know that not a few of the deaths take place when but a few drops of the chloroform have been inhaled, and we all know that the idea, which is sometimes advanced, that "there are persons who cannot be etherized," is a fallacy.

Is it right to take the risks of overpowering the nerve centers and producing death, when the extra amount of unpleasantness in the beginning of etherization is not to be com­pared with the dangers of chloroform?

Again, some of us resort to the so-called mixed method of alcohol, ether, and chloroform. Is this reasonable? Are we not adding to the dangers just in proportion to the amount of chloroform in the mixture? Experiments on animals with the mixed vapors show that they are safer than chloroform alone, but they do not show that such is the case as compared with ether.

The time has come when the voice of the profession should be raised in protest against these evils, and he should not be held blameless who, in the face of all of the facts bearing upon the subject, disregards danger and subjects his patients to the risk of death, when, by means perhaps a little more unpleasant, the same results might be accomplished with at least a mini­mum of risks.

It is to be regretted that the leaders in the profession, those who occupy positions as teachers, do not insist upon a more perfect dissemination of facts relating to this subject.

It is true that a few are crying out against it, but there are yet many who could do much to correct existing errors, whose voices are not heard.

In conclusion we refer to the summary of a discussion which took place some time ago in the Paris Academy of Medicine, upon the "dangers of chloroform, and the modes of avoiding them."

During the continuance of the discussion three deaths from
chloroform were reported from France alone, and they were in expert hands.

In the discussion, Gusselin said that "the more such accidents multiply, the more necessary it is to establish precise rules for the administration of the anaesthetic." We would say the more necessary it is to discard the dangerous agent for a safer one.

Mr. Rochart said that "the only question during the discussion had been that of death by asphyxia—death by syncope—death by intoxication—death in the first period—death in the second," and M. Le Fort gave the statistics in his own possession of two hundred and fifty deaths.

In speaking of ether, Vulpian said it was used in the laboratory and on animals because of its greater safety, and Panas recommended its use in some cases, but no one seems to have urged its use.

A reviewer tersely adds that Japan is not the only country that needs a medical missionary.

Remarks of Dr. Knapp; For a number of years after beginning my practice, I used chloroform exclusively as an anaesthetic, in cases where I deemed an anaesthetic necessary, using it quite frequently. I never had any accidents, but for the past few years the amount of literature upon the subject which I have read, has excited in my mind fears of accidents, and being governed more by my fears and the judgment of others, I have been lead to limit the use of chloroform, either to the mixture of ether, alcohol, and chloroform, or if I use chloroform in its purity to use it only when I wish to produce a limited anaesthesia, and substitute ether in all cases when I wish to produce a profound anaesthesia, or a long continued anaesthesia. I have been lead, as I have stated, to use ether in its place, not from my teaching, and not from any bad results in my practice, but simply from the accumulation of evidence from men who are using anaesthetics much more frequently than any practitioner has occasion to use.
them. I think if we are governed by the evidence of the records, we certainly, as the doctor suggests, should discontinue chloroform entirely and substitute ether in all cases. While I think a mixture of alcohol, ether, and chloroform is safe for all purposes, so far as my experience goes, yet the experience of others is very much greater than my own. For these reasons I heartily commend the paper that has just been read, and think, that as a profession, we should endorse the paper or give a reason why we do not. I should certainly like to hear the paper discussed by those who have had more experience in the use of anaesthetics.

By Dr. Stone: As with the president, I have during the last few years used ether exclusively. I do not read the signs of the times at all as the reader of the paper has read them. In my judgment the signs of the times are, that in the East the use of chloroform is almost entirely condemned. I believe that a jury, in a case where a man had lost a patient under the use of chloroform, would deem him guilty of criminal negligence. I don't believe that it is true in the West, but that is my judgment of the reading of the literature of the present day.

The doctor who read the paper did not touch upon two points to which I wish to call attention, one is as to the use of chloroform in the dental chair. Most of the chairs of to-day are made so that the patient can be put in a strictly reclining position so that it is not at all dangerous to use chloroform or ether. The greatest danger is, as doctors say, there are but two or three teeth to be taken out, it isn't necessary to give a profound anaesthesia, just give the patient a few drops and then I'll pull. That very condition of temporary anaesthesia is the most dangerous condition possible, and nearly all the deaths that have occurred have occurred in that condition. There is one danger attending the administration of ether that ought, also, to be pointed out, and that is in kidney disease, ether is much more dangerous than chloroform. A
large number of deaths that have occurred from the administration of ether have been in cases where kidney disease has afterward been discovered. So that, while we should examine the heart where we are compelled by any cause to use chloroform, we should also examine the condition of the kidneys in any case where there is the slightest reason to suspect disease of the kidneys.

Dr. Mansfelde: In order to vary the subject a little, here is a staunch advocate of chloroform. I am forced to do a great deal of surgery, and I have never used anything but chloroform, and I have never seen any indication why it should not be used. In regard to disease of the heart, I can think of nothing but a fatty heart where it is not proper, and that is a condition we very seldom know the existence of, at an operation. That might speak against chloroform, but it doesn’t. It speaks against the ignorance of the operator. He doesn’t know what condition is existing. Now the danger in the dental chair is not so much the danger induced by the position of the patient, it bears some relation to that of course, as it is the partial anaesthesia, as the speaker before me announced. It has been demonstrated by experiments on dogs under partial anaesthesia where teeth are extracted paralysis of the heart will take place. That this is sometimes the cause of death in other operations, besides the extraction of teeth, no one, who has seen chloroform given, will deny. When I give chloroform, I give it for the purpose of stopping pain to the patient. He never feels anything.

There is a danger in giving ether that the doctor did not allude to, and that is its administration to old people and children who are subject to bronchitis. It should not be given to old people and children who have bronchitis, for they are likely to suffocate before they get through, or die of bronchitis afterward as the effect of ether. Now, I think that chloroform is blamed very much for things that should be put at the door of the person who gives the
chloroform. I have been so unfortunate as to be present when chloroform was administered and I thought in justice to the doctor that the patient should die from the administration. To a seventy-year-old man, on whom I was to operate for hernia, I have seen the physician put two or three drachms of chloroform on a towel and stick it right up to the face of the patient. I suggested to him that as he might have to assist me in the operation, he had better let my student administer the chloroform. He took the hint and let him do it. I am fully aware of the justice of the reader's points. I know that, generally speaking, ether is more safe, but what I do not know is, where I am, living out in the far West, a country practitioner, to get skilled help, who is to administer ether for me, whilst I operate. I have seen but one single man in the state of Nebraska administer ether so that I would be willing to operate under the administration of that man's ether. I could have an intelligent farmer administer chloroform for me, but I would like to see the farmer who could administer ether for me. I would have to watch both him and my operation. We are living far out West, and not living in New York City. We know it is a fact that in New York City they always refer to Germany, to Heidelberg and Berlin. Out here we have a habit of referring to New York and Philadelphia. We are living out in Nebraska, and we intend to do as Nebraska does, and we cannot always have some one who is educated in regard to anaesthetics to give an anaesthetic for us.

By Dr. Hildreth: I would have some other physician give ether. I don't want to be looking around to see whether the patient is dead or alive.

By Dr. Whitten: I feel, in regard to that paper, that the general sentiment of the society has been expressed when we say we prefer ether. I think there should be exceptions. Now in a case of pylo nephritis, certainly chloroform is the safer remedy, acknowledged to be so by the profession, also
acknowledged to be the safer remedy in tubercular nephritis. Frequently in a case of parturition, when we need some remedy during the stage of removal, chloroform is certainly the safer remedy.

By Dr. Leonhardt: I am one who is in favor of chloroform. There is nothing like a division in a house. I may be in error, but I can take a patient further and nearer to the line where I want to get him with chloroform than I can with ether. I think it is more safe. That may sound inconsistent to a great many of you, but I feel that I can do so.

I have administered chloroform for four years. We often operated eight or ten times a day, and in the four years perhaps a thousand operations have been performed, and we have never had an accident. In chloroform narcosis I would produce artificial respiration, and I couldn't do that when the patient begins to die of ether. I would rather take the additional chances and give chloroform, with some chance of restoring him, with the other four or five chances of dying.

By Dr. Carter, of Omaha: When I first commenced the practice of medicine, from my teaching I was induced to employ ether exclusively as an anaesthetic. I did so for several years quite frequently, and during a period of some eighteen months I administered ether in eye surgery some forty-eight or fifty times. As you all know, as long as there is consciousness upon the part of the patient, sensation is retained, when under the administration of ether; the structures about the eye are more highly sensitive than any other portion of the body and are the last to yield to the influence of the anaesthetic, and it requires a more profound degree of anaesthesia than any other part of the body. This degree of anaesthesia renders ether a dangerous anaesthetic in eye surgery. Out of that number of cases which I have mentioned I had two cases where the patient passed into a condition of extreme gravity, and caused a great deal of alarm upon my part. One of those cases required the constant and
unremitting attention of Doctor Moore and myself for two and a half hours to prevent what appeared to be an almost fatal result. Finally the patient came around all right. The other was a little child to whom I would not have administered anæsthetic, had I not taken for granted that the patient was a fit and proper subject for anæsthesia. The physician who had been the family physician for six or seven years was present at the time, but did not wish to give the anæsthetic. I afterwards found that the child had been subject to rheumatism for a number of years, and had some trouble about the heart, and, of course, was not a fit and proper subject. I depended upon the presence of the family physician, presuming that he would not permit an anæsthetic to be given unless the patient was a proper subject. Now, with reference to the use of an anæsthetic, ether or chloroform, in the dental chair; with reference to the explanation of the additional danger which seems to attend its use in the operations of dentistry above that of other operations, one view which is gaining considerable ground is this: that the danger is due to the proximity of the operation to the nerve centres which preside over the nervous supply of the heart and lungs, and the intimate connection between the tooth and the branches of the fifth pair of nerves which are distributed to it, and the close proximity of the nerve centres renders the shock much more dangerous. In my opinion there is no additional danger in partial anæsthesia over and above that of complete anæsthesia. I think it is the location and the intimate connection with the nerve centres.

By Dr. Mitchell: It seems to me that there is a dangerous tendency in this society, among some of the members at least, to rely more upon their personal experience in matters of this kind than upon the experience and statistics of the world. I don't think any one will question the fact that statistics show conclusively that ether is very much safer than chloroform as an anæsthetic for conditions where
there are modifying circumstances and modifying conditions. It is probably true in young children, where an anaesthetic is to be used, that chloroform is equally safe with ether, or perhaps safer, and in diseases of the kidneys that have been mentioned. I believe upon our own experience, even though that experience reaches over a number of hundreds or even thousands, but we should rely more upon the statistics that have been gathered from scientific sources throughout the civilized world. I do not believe in general practice that a surgeon is justified in administering chloroform for his operations. Doctor Stone anticipated what I was about to say in his remarks on the use of an anaesthetic in the dental chair. In dental surgery generally the danger of anaesthesia is the supposition that it isn’t necessary to give but a few drops of chloroform, and, when the patient feels the proper degree of unconsciousness, to extract the sensitive or irritated molar, and everything will be over. I think there is a tendency in those cases to administer the anaesthetic, whether it be ether or chloroform, too rapidly. I believe it is the proximity of the nerve centers which supply the heart which makes the operation so much more dangerous in dental surgery. For my own part I refuse to administer an anaesthetic in dental surgery.

By Dr. Lowry: There is one thing I wish to call attention to, and that is the danger of partial anaesthesia because of the proximity of the tooth to the nerve center. The probabilities are, there is some truth in that. The explanation, as I understand it, is this: that in Martin’s physiology it has been ascertained that in any of the involuntary motions where the nerve centers are constantly in operation, if there is an additional nerve impulse sent to that center, there will be certain changes, it may be increased and it may be slower. In anaesthesia, even though it be partial, the vitality is much lowered. If at this time there be nervous impulse sent to the nerve center in pulling a tooth, then we might have stop-
ping of the heart or of respiration, and it would be so in other operations than dentistry.

By Dr. Knapp: My understanding has always been that partial anaesthesia was dangerous. The patient receives the shock of the operation as well as the effect upon the proximal nerves. I have had considerable experience in the use of ether in the eye surgery, as well as my friend behind me. In my judgment there is but one way to give ether, and that is to crowd it from the first and just as hard as you can crowd it. In twenty or thirty cases I think I have had an average of about seven minutes from the time of giving the anaesthetic until the operation was ready to be commenced. There is one thing that hasn’t been brought out and that is, that in death from chloroform the death is instantaneous and there is no remedy, there is nothing that can be done, while death from ether, even if it come, is not sudden.

By Dr. Mansfelde: Mr. Chairman, I do not want to discuss the question any further, as to the relative danger of the agents, because it is an established fact that more people die from chloroform than ether, but what I want to know is how I am going to give ether in my practice. Now I think I ought to be told. As I have already remarked, I have seen but one man in the state of Nebraska, and that was Dr. Carter, give ether satisfactorily. I want to have some one tell me how I am going to do if I can’t get Dr. Carter.

By Dr. Knapp: Send for one of the four hundred others. I would crowd it from the start, give them all they can hold and if they show any signs of vomiting crowd it faster. I would do no operating without some physician capable of crowding it that same way.

By Dr. Mansfelde: Suppose a physician wanted to perform an operation, and crowded the ether on the woman, just as much as he could possibly crowd onto her, and finally it gave out, what can he do, resort to chloroform to perform the operation?
By Dr. Hildreth: I don't believe I ever saw a patient that could not be anaesthetized to death with ether.

By Dr. Mansfelde: I beg the doctor's pardon, but I knew of an instance of the kind when I was a student. Dr. Myers, of Ft. Wayne, one of the first surgeons in Indiana, tried to take out a tumor in the neck of an old man; he gave him all the ether he could find in Ft. Wayne, and then had to give him chloroform.

By Dr. _______: I would like to suggest to Dr. Mansfelde to take all the ether in the country.

By Dr. Mansfelde: My means of conveyance would not be sufficient to carry it.

By a doctor in the back part of the room: I would just as soon be knocked senseless with a club as to be crowded to death with ether.

By Dr. _______: I remember that Dr. Holmes says in one of his lectures, that you can give a man ether and he will go into the other world with a return ticket, but give him chloroform and he is likely to have no return ticket; in ether, artificial respiration will restore life, but in chloroform narcosis, artificial respiration will effect but little.

By Dr. Hildreth: According to the statistics, death from ether is one to sixteen thousand five hundred, death from chloroform one to five thousand eight hundred. Those are Lyman's statistics.

By a doctor in the back part of the room: Does he include all that die in the dental chair, and all that die in unskilful hands.

By Dr. Hildreth: Those are the deaths that he ascribes to the use of anaesthetics.

By Dr. Leisenring: The medium course is generally considered the best; I generally use two parts of ether and one part chloroform with a very happy result; I have never seen any unfortunate results following. I differ from my brother who would depend more particularly upon the statis-
tics, I think he is mistaken, for the simple reason that he gets the statistics principally from parties who are engaged in the hospital practice, and the character of their patients is different from the patients we have in the country practice, therefore I do not depend very much upon the statistics that come from those large hospital practitioners. I would much rather depend upon the experience coming from intelligent country practitioners, that is, I would much rather take experience of this kind upon the result of an anæsthetic, than I would from a man who was engaged in a large hospital practice.

By Dr. Bridges: I think perhaps that a large proportion of the deaths that have occurred from chloroform as given by the statistics are those that have occurred in the hands of dentists where they have given chloroform in the dental chair and in an upright position, those were all included in the statistics. I was brought up in an office where chloroform was very largely given, in an office where two practitioners were together, where they had a large practice; I never saw ether given by either of them but once; chloroform was given on an average of from two to five times a week, and they never had an unfavorable result. In my own practice, for the first four years I gave chloroform exclusively, having given ether only once or twice; latterly I have been a little bit afraid, from the statistics which have been published, fearing that if I had an unfavorable result from chloroform that I would be blamed by the public and by the profession, therefore I have been inclined for the last two or three years to favor ether. Unfortunately I have had two rather unfavorable experiences, not deaths, but have been situated where I felt very, very unhappy for a few moments; in both cases I had taken all the precautions which are usually considered requisite, as forestalling any unfortunate result. I have seen one death from ether on the table in Bellevue Hospital administered by a student of Dr. Jacobi, where he operated; there is another thing that we see in the administration of anæsthetics, that some patients
are poor chloroform and ether subjects, independent of any condition that can be ascertained beforehand. I learn if I can, either from the patient or a relative, whether they have ever taken an anaesthetic before, and if, under what circumstances, and what result recurred. In the two cases where I administered ether, I considered that they were really poor ether subjects. I must state that I favor chloroform theoretically, but practically I rather favor ether, on the ground that I have stated. I think as time goes on and the deaths that occur in the dental chair are not included in the statistics, we will find chloroform falling into use and the use of ether comparatively declining.

By Dr. ——— : In the first years of my practice I gave ether, but don't like it, and the patient don't like it; it seems to me that the patients should have something to say about what they are using and whether they take chloroform or ether.

By Dr. Mitchell: In questions of this kind I don't think it's a case of likes or dislikes at all; the profession are pretty generally agreed that ether is not admissible in diseases of the kidneys. I would like to ask the gentleman if he is not aware that at the present time, in America, that physicians use more ether than chloroform.

By Dr. ———: I am aware of that. I think the time has come now when dentists refrain from using either chloroform or ether.

By Dr. Lee: The discussion on this subject has been a very interesting one. There is nothing that can be used as an anaesthetic without its being attended with a great deal of danger; there is no agent that can be used to produce that condition of anaesthesia but what should be attended with a great deal of caution, and a great deal of care. No one is justified in administering an anaesthetic, I don't care what it is, and attempting at the same time to conduct an operation. When it becomes necessary for the physician to perform an
operation he should send for help; he should exert himself considerably before he submits his patient to that danger, and himself to that risk. So far as chloroform is concerned, I think, as one of the doctors remarked, that the danger is more in the manner in which the chloroform is administered than from the agent itself. I think chloroform properly handled is as safe as any anesthetic that can be used. Now the idea that chloroform produces death suddenly, without any premonitory symptoms, I do not consider true. I have seen cases where the patient was going very rapidly into a chloroform narcosis, where, if it had not been promptly recognized, he would have died. I think if you watch your patient carefully you can discover those premonitory symptoms and avert a great deal of danger. Those bad symptoms that arise from the administration of chloroform are much more promptly recognized than those that arise from the administration of ether. Lowering of the head and lifting of the feet, drawing forth of the tongue or something of that kind will relieve immediately. One of the doctors spoke of partial anaesthesia, the danger of operating in a condition of partial anaesthesia. There is not so much danger in the sudden shock as there is in the condition of the patient during that time. In the condition of partial anaesthesia the body is either perfectly relaxed, or in a state of rigidity, or in the state of contraction; that is where the danger arises.

By a doctor in the rear of the room: I think my question was a simple one, but it hasn’t been answered yet; I would like to know whether the patient’s wishes should not be taken in consideration also; I will say that I would rather suffer the pain than to take ether.

By Dr. Lee: I should take in consideration what the patient wishes sometimes, but not always; the doctor should administer the anaesthetic himself without regard to whether the patient wants chloroform or ether. Another thing in regard to ether as an anaesthetic is, that it has very disagreec-
ble features in confinement cases. It is an agent which cannot be used around a lamp at night, because it is very inflammable, and liable to explode. Now I think in the question of the doctor consulting the patient's wishes, that the patient would at very few times want the operation performed at all, if left to him; I think the doctor must use his own judgment.

By Dr. Carter, of Lincoln: In my early practice in the East I frequently gave anaesthetics; since I have come to Nebraska I have had anaesthetics given for me. I have felt that it was my duty to choose ether because the greater weight of authority was in favor of ether as being the safest. I never went into an operation where a stranger administered the anaesthetic without I found out how it was going to be done; it makes a good deal of difference how the anaesthetic is administered. I feel perfectly safe when some men administer chloroform, and I feel very safe when other men administer ether. There is a theoretical question connected with these anaesthetics. I do not feel able to discuss it myself, but some one has drawn my attention to the fact that an anaesthetic was safe or unsafe as it contained the greater or less portion of oxygen; chloroform contains no oxygen; ether contains a small portion of oxygen; nitrous-oxide contains a large portion of oxygen. I always carry chloroform with me. Chloroform is the only anaesthetic that I think it is proper to use in lying-in cases; chloroform, I think, is the anaesthetic for children.

By Dr. Mansfelde: I want to ask Dr. Hildreth a question. It occurred to me in the discussion. In the case of the amputation of an arm, and turning and delivery, where there is no help but an intelligent old lady—the physician is all alone with that old lady—could ether be used?

By Dr. Hildreth: Was it necessary to produce complete anesthesia?

By Dr. Mansfelde: I leave that to the gentleman.
By Dr. Hildreth: That would depend upon the circumstances.

By Dr. Mansfelde: There was an amputation of the arm, turning and delivery under total anaesthesia, so that the patient didn't know anything about it until it was all over with.

By Dr. Hildreth: I believe that ether can be used in any case of obstetrics or any operation.

By Dr. Mansfelde: I say that where a physician is alone with one old lady, and he has to give the anaesthetic himself and perform the operation.

By Dr. Hildreth: I know there isn't a place in our country where you can't get help in an hour's time.

By Dr. Mansfelde: I was speaking of a case where it couldn't be done.

By Dr. Merriam: For the benefit of our worthy secretary, permit me to state the first experience I had in turning, the first year of my practice. I went several miles into the country. On my arrival I found the arm down; it had been down four hours. Two women were present who were unable to do anything. I had in my case about a drachm of chloroform; I had plenty of ether; I used the chloroform up, and alone I gave the ether, and alone I did the turning, and the case was a successful one in every respect, except that the child was dead, of course, but it was successful; but I gave the ether and did the turning.

By Dr. Mansfelde: And the amputation of the arm included.

By Dr. Merriam: The arm might have been amputated before I began turning in the first place, but it didn't make any difference at all.

By Dr. Chapin: I am surprised at our secretary. I have given ether many a time alone in cases of midwifery, and in cases where I had to use instruments; I have done it probably fifty or a hundred times, and I am surprised that the gen-
tleman should ask where we are to get our help to give ether. I give it in precisely the same way that you would give chloroform. Of course I have to work a little longer to get the patient asleep, but you can give it, and I believe that it is a little safer than chloroform. I remember one case where I gave an anaesthetic in the case of an amputation of the left thigh of an old fellow who had been accustomed to drink a good deal of whiskey; I commenced to give him ether, and I believe I gave him a pint, and then I had to resort to chloroform before I got him under the effects of the anaesthetic.
It is not my purpose in this paper to discuss the theory of antiseptics in surgery, nor the details of their employment; but rather to call attention to some of the benefits that have followed their introduction.

Whether the aseptic method of Mr. Lister, or its many modifications, or the antiseptic methods of a large number of surgeons, well represented by Mr. Bryant, or the no-method system of the great bulk of general practitioners, are the best, experience alone can decide.

It seems to me that we have at our command facts recorded by men who have made surgery what it is to-day, which clearly demonstrate the overwhelming advantages of the new method, and in the light of such facts no man who practices surgery is justified in neglecting it.

When Mr. Lister was in Edinburgh, he and the celebrated Mr. Spence worked in the same hospital and at the same time, Mr. Lister using the aseptic method, Mr. Spence a—what Mr. Cheyne calls—"Mongrel method," which consisted in water-dressings, boracic lint, etc.

I would especially call attention here to the recent article by Dr. Hamilton (Medical Record, Jan. 2, 1886), in which he points to Mr. Spence as one of the surgeons who, many years ago, recognized the necessity of the precautions which he (Hamilton) considers the essential elements in the success of modern surgery. Mr. Spence's percentage of deaths in all cases was nearly 18, while Mr. Lister's was nearly 5, and the deaths due to septic diseases in Mr. Spence's cases were 8 to 1 as compared with Mr. Lister's.
Now, as Mr. Spence is justly considered one of the greatest surgeons the nineteenth century has produced, it is but fair to presume that such statistics are evidence of something beyond the ego of the operator. Before going to Edinburgh Mr. Lister was in Glasgow, and operated in the infirmary of that city. Infective diseases were constant in the hospital; at times some of the wards had to be closed on this account. In this institution, prior to the introduction of his method, Mr. Lister had in capital amputations a mortality of 45.7 per cent, and nearly all deaths were due to septic diseases. Comparing this with the results in the same institution during the three years immediately following the introduction of the aseptic method, there was in the same class of cases a mortality of only 15 per cent. There were only two cases of pyaemia, and in one of these the condition existed prior to operation. Formerly pyaemia was common in compound fractures and other injuries, while during this period no case developed.

Another most striking example of the power of Lister's method occurred in the practice of Volkmann, of Halle. For years he had used the open method and immersion in carb. water, and for the first few years previous to his adoption of Lister's method (1872) his results were good, but owing to the over-crowding, bad hygiene, etc., of his hospital, death from sepsis became so common that he determined to close up the institution. So much was claimed for Listerism, however, that he decided to give the new method a trial before resorting to this step. His reports show that this radical measure was found unnecessary, and that by the new treatment in his first two years' work, sepsis was of the rarest occurrence, the hygienic condition of the hospital remaining as before. Later, March, '74, to March, '77, out of 139 capital amputations he had only four deaths, three being from shock (shoulder, hip, and thigh) and one from erysipelas. There were seventy-three compound fractures and twenty-four wounds of joints treated conservatively, with no deaths. Such results, or those
approximating them, can only be found in the practice of surgeons following the Listerism method or some one of its modifications, and particularly is it to be observed that no method yet discovered, short of the purely aseptic, will crush out gangrene as well as sepsis. This was proven in the practice of Nussbaum, in Munich, who, after vainly trying all but the purely aseptic method of Mr. Lister without success (80 per cent of all the wounds in his hospital being attacked with gangrene), adopted the method, and the scourge disappeared rapidly. (Cheyne's Antiseptic Surgery.)

Many other undisputed facts might be related to prove the power of antiseptics over septic diseases—particularly its prevention power. The success in wiring the patella, and the more recent wonderful success in the treatment of compound fracture (See cases reported by Wright, N. Y. Medical Journal, 1885; W. P. Verity, Journal American Medical Association, April 24, 1886), could not have been accomplished by any other than the aseptic method, and although I have myself had a failure in this last class of injuries, so far as preservation of the limb was concerned, yet I consider the method one of the most progressive and calculated to save many limbs and lives that would otherwise be sacrificed.

The war between Servia and Bulgaria has been the latest field to advance the claims of antiseptics.

The first comparative results of the employment of antiseptic treatment with that of other methods in military surgery were reported by Dr. Karl Ryheir, and embraced his experience in the war between Turkey and Russia. He reports eighteen cases of gunshot wound of knee-joint treated conservatively by primary antisepsis, with only three deaths. Forty cases treated by secondary antisepsis, that is, antiseptics not used until after sepsis had set in, with thirty-four deaths; twenty-three cases treated without antiseptics with eighteen deaths. All of first set had movable joints, no amputations being required, while 60 per cent of these treated by the other
methods required amputation, and 84.5 per cent of these died. *(Antiseptic Surgery, Mae Cormac.*

According to Maydl *(Wiener Med. Wochenschrift, No. 5, 1886)* there were no deaths from this injury in the hospitals of Belgrade, Servia, and he gives a table showing the best results hitherto published, in gun-shot fractures of bones and joints, and gives the comparative results obtained by them in Belgrade, which are markedly in their favor, this being undoubtedly due to the thorough employment of antiseptics by the surgeons of the different European governments sent to the seat of war, and who had charge of the hospitals in which most of the wounded were treated. The armies in the field were miserably equipped for taking care of their wounded, surgeons being few and unskilful and the dressings at their command of the most primitive kind, charpie being the only dressing. The wounded were heaped upon wagons drawn by oxen and hauled for days over rough roads before reaching the hospital; the great majority were suffering with septic and foul-smelling wounds when received, and it is this fact, when we consider the results obtained, which speaks so well for the use of antiseptics.

I wish, in this connection, to draw attention to the most commonly used antiseptics. Ryheir used carb. acid in the Turko-Russian war, and stated, that in cases where primarily antiseptics were not used, it mattered little whether or not, if the wounds had become septic, antiseptics were employed later, the number of fatal cases being about equal in either case.

In the recent war, iodoform was the sheet-anchor, and it rarely failed to render wounds healthy which were already septic. It seems that in some cases one antiseptic, and in others another, is to be preferred. In general surgery, according to Schede *(Berlin, Klinische Wochenschrift, No. 3, 1886)*, whose experience is broad, he having the largest number of surgical beds under his control of any surgeon in Europe, iodoform is
not reliable. Sometimes results are brilliant, sometimes delusive. In Vienna it is the antiseptic, and is applied next to the wounded surface in the shape of gauze. By the recommendations of Koch and Bergmann, Schede was able to eradicate erysipelas from his wards by substituting bi-chloride of mercury solution for that of carbolic acid.

Soon after the discovery of gunpowder, water was introduced by the Italians as a dressing in wounds, but it was thought to be without virtue until it had undergone certain "mysterious and magical ceremonies." This seems to be its position to-day. One surgeon uses it at a temperature just below the boiling point; another dissolves carbolic acid in it, etc., and few use it pure.

It has been claimed that for purposes of irrigation, non-medicated water is as serviceable as the medicated, and recent testimony is very favorable to this. Prof. A. Mosetig (Wiener Medizinische Wochenschrift, 17th April, 1886) of Vienna, the surgeon who introduced iodoform into surgical practice, discusses the subject and tabulates the results of his cases treated at Belgrade during the recent war, simple water being used for irrigation, and shows results which compare well with those of the other surgeons, who, without exception, I believe, employed solutions of carbolic acid or bi-chloride of mercury. He says, "On my arrival in Belgrade nearly all of the wounded were suffering from sepsis, and, as I was convinced would be the case, with iodoform alone, no other antiseptic being needed, as good results were obtained, as where antiseptic irrigation was added."

In so far as my information goes, no surgeon, not an advocate of the strict aseptic methods, claims to be able to procure primary union (union without suppuration) in amputations and deep wounds generally, where great care is not exercised to control hemorrhage, and to provide for the escape of blood or serum which may collect in the wound.

In the years 1884 and 1885, Prof. Albert, of Vienna,
NEBRASKA STATE MEDICAL SOCIETY.

clearly demonstrated that where a strict aseptic method was followed it was unnecessary to check all bleeding points, and that drainage tubes were also superfluous in the same class of cases.

In one case of tumor of the neck, I believe a lipoma, where no attempt was made to control the hemorrhage, the edges of the incision were closely approximated so as to prevent the escape of the blood, and in this way the lipoma was replaced by a hematomata, and disappeared in the same manner as those tumors usually do.

A large number of cases were reported treated in this way, and in less than two per cent of these did suppuration occur.

In the congress of German surgeons just held in Berlin (Wiener Med. Wochenschrift, No. 17, '86) a paper was read by Schede (Hamburg) on “Healing under the moist bloodscab.” He said: “We have in blood an unsurpassed plastic material which most effectually supplies the lost cohesion, and it is to be noted as one of the prettiest acquisitions of antisepsies that this blood is brought within the process of repair.”

Bergmann declared, “the arrest of hemorrhage to be essential to the success of antiseptics,” and this is the general opinion at home and abroad; yet he admitted that if a wound cavity be allowed to fill up completely with blood, no harm is done, perhaps the reverse, and that it is possible that the filling of a wound with blood will hereafter be regarded as less dangerous than formerly. “Still the surgeon will expect in vain to get good results who does not regard the careful arrest of hemorrhage as a cardinal principle.”

From considerable observation of the use of antiseptics I am convinced of the necessity of their general systematic employment, coupled with what is to-day considered good surgery.

If we could ever be assured of the absence of disease-producing germs, or of an inherent power in our patients to resist them, we might rely upon attentions to details, viz.
arrest of hemorrhage, accurate coaptation, drainage, and means
to secure perfect rest. This latter is of the most importance.
But we cannot have such assurance, and such a plan has
met with success in the hands of but few, and they adepts in
their art. I refer particularly to Mr. Tait and Dr. Keith.
There are no prominent general surgeons, whose work I
have witnessed or read of, who do not employ antiseptics
either with or without an occlusive dressing. All do not
believe in the germ theory, but recognize the advantages of
Mr. Lister's practice, if not the theory upon which it is based.
In a debate on antiseptic surgery before a branch of the
British Medical Association, Dec. 3, 1879, Sir James Paget
closed his remarks with these words: "And now let me end
by saying that of all the achievements of surgery during the
last thirty years, I regard the diminution of the risks of oper-
ations as by far the most important; and that, beyond com-
parison, he who has contributed most to it is Mr. Lister.
More than any he has done good both by his own work, and
by provoking others to do their best in their own ways." These remarks hold good to-day.
Gentlemen—The following case is one which stands alone so far as I know, since there is no such case on record in the medical literature which I have been able to examine. Rokitansky speaks of the possibility of the occurrence of such a case, but had never seen or known of one. Sir Wm. Fergusson says: "Fissure of the upper lip never occurs in the mesial line," Holmes' Surgery, Vol. II., page 504, gives an account of a specimen in the museum of the Royal College of Surgeons, London; but the child in that case was still-born, while the case I report is now living and is more than one year old. Dec. 14th, 1885, was called with Dr. Wilson, of Table Rock, Neb., to operate upon a case of hare-lip in a child some two or three months old. Simple inspection revealed the fact that a fissure of at least half an inch wide existed in the mesial line of the upper lip, and that the incisivum or inter-maxillary bone was absent, leaving a fissure in the superior alveolar process exactly corresponding with that in the lip. A more careful examination revealed the fact that the vomer was absent; the palate processes of the maxillary and palate bones were very rudimentary; the soft palate and uvula were absent. In fact I passed my forefinger directly in the median line from the tip of skin corresponding to the point of the nose to the back of the pharynx, and met with no obstructions whatever where the roof of the mouth should have been. Some one may well say, how did the child take nourishment? Dr. Wilson, who officiated at the confinement, procured a very large nipple, which he attached to a nursing bottle, and the child, by pressing this
nipple between the tongue and roof of the nose was able to take milk freely, and had done exceedingly well. At this time the child was well nourished and had become quite a favorite with the friends, who, at first, had hoped it would die, since it was so unsightly; but now were anxious to have something done to improve the appearance of a baby that otherwise would have been very pretty. The operation for hare-lip was performed, but was a total failure. Jan. 20th, 1886, I repeated the operation, pared the edges freely, detached the lip from the points of the alveola, introduced two pins, brought the raw surfaces together in the usual way, and had a happy result! There already existed an opening in the skin for the left nares and I formed one on the right side which looked well; but there being no support for the nose, more than soft cartilage, it was quite flat; but the appearance of the child was greatly improved, much to the satisfaction of the friends. There now seems to be a tendency for the alveolar process to unite and close the fissure there, while the palate processes are also making advancement toward the mesial line, and it may be finally that an operation can be performed which will help in forming the roof of the mouth, or an artificial palate, as made by Dr. Kingsley, can be worn with advantage. If any of the gentlemen can suggest an operation that would now be useful I should be glad to hear from them.
SECTION
ON OBSTETRICS AND DISEASES OF WOMEN.

REPORT OF PROGRESS IN OBSTETRICS AND DISEASES OF WOMEN.
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REPORT OF PROGRESS IN OBSTETRICS.
DR. MARY R. BUTIN, 1887.

REPORT OF PROGRESS OF GYNECOLOGY.
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UTERINE FIBROIDS—THEIR NATURE AND TREATMENT.
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THE PREVENTION OF PERINEAL LACERATION IN PAR- TURIATION.
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HÆMATEMESIS IN A GIRL 15 YEARS OF AGE, CAUSED BY OLIGO MENORRHŒA.
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REPORT OF PROGRESS IN OBSTETRICS AND DISEASES OF WOMEN.

BY R. M. STONE, A.M., M.D., OMAHA.

INTRODUCTORY.

At the request of Dr. Robbins, chairman of the section on obstetrics and diseases of women, I have prepared the report of progress in these fields.

While no grand discovery has been made known in either of these departments during the year, there has been a very steady growth of our knowledge, and much improvement.

I take great pleasure in saying that I believe very much better work is being done by the physicians of Nebraska in these departments than was ever done before. More study is given to them and greater interest is taken. I think the society can look with pride upon the work in this section as reported in our last proceedings, and I trust this year's work will be equally creditable.

In the preparation of this paper I have gone over most carefully all my reading of the year. I am certain that I have derived far more instruction from this preparation than from my original reading; if the paper should seem to you "stale, flat, and unprofitable," it has been by no means so to me. I sincerely trust it will merit your careful attention and prove of interest. I shall very briefly call your attention to Hegar's sign of pregnancy, dystocia from complete ossification of the fetal cranial bones, ovariotomy, and at more length present a resumé of progress in our knowledge of extra-uterine pregnancy, cancer of the uterus, diseases of the Fallopian tubes, uterine myomata, closing with a few words as to the work of Lawson Tait.
HEGAR'S SIGN OF PREGNANCY.

Hegar announced less than two years ago that he had discovered a new sign of pregnancy, by means of which the existence of pregnancy could be determined with almost positive certainty as early as in the fifth week of utero gestation. During the first six to eight weeks of pregnancy the uterine body enlarges antero-posteriorly: the uterus loses its nulliparous pear shape; the body "bellies out," as Grandin calls it, over the cervix, and the uterus then resembles an old-fashioned, fat-bellied jug. Grandin has confirmed the sign in seven cases seen in the fourth, fifth, or sixth week, where the result proved the diagnosis. Mundé has also confirmed it, and Compes regards it as a positive sign.

DYSTOCIA FROM COMPLETE OSSIFICATION OF THE FETAL CRANIAL BONES.

During the past year I have had two or three cases of labor in which there was no posterior fontanelle, and in which the bulb of one's forefinger could cover the anterior fontanelle. The labors were slow and tedious, overlapping of the parietal bones and molding were absolutely impossible, and the use of the forceps was either threatened or necessary. An examination of the cranium after the birth showed complete ossification of the cranial bones, and I so marked it in my obstetrical records as a rare cause of dystocia. Lusk says he "has never met with it and it must be extremely uncommon."

Garrigues has recently related a case in which he was compelled to use the cranioclast for this same deformity. My last case of dystocia from this cause was also complicated by an abrupt projection forward of the coccyx. I attempted in vain to fracture the coccyx and allow the passage of the head. Partridge relates an exactly similar case.
EIGHTEENTH ANNUAL SESSION.

OVARIOTOMY.

I wish only to make very brief mention of a very important point in connection with this subject that is nearer settled now than ever before.

Cohn has collated 100 cases of malignant ovarian tumors operated upon by Schroeder. In nine years, out of 600 ovariotomies there were 100 malignant tumors found. That is, one in six, and Schroeder therefore infers that the very great frequency of malignant degeneration makes the earliest possible operative removal of ovarian tumors positively indicated.

On the other hand Martin had observed but twelve malignant cases out of 191 ovariotomies, and ascribes the small percentage to the fact that he had for years been in the habit of removing ovarian tumors, even if small. And while on the subject of ovariotomy I will also say that the most unique thing of the year was an ovariotomy case of Janvrins, of New York. Six years previous his patient noticed a bundle of hairs protruding from the anus, all of which she pulled out, suffering great pain. In 1885 she was found to have a large abdominal cystic tumor; ovariotomy was performed and dermoid cysts of both ovaries discovered; from the lower border of the tumor of the left ovary sprung a diverticulum, the shape, size, and color of a pigeon's egg; this had pushed through the rectal wall, and in the rectum was covered with hairs three inches long and covered with fecal matter.

EXTRA-UTERINE PREGNANCY.

Very much attention has been paid of late years to the subject of extra-uterine pregnancy. The great difficulties surrounding the diagnosis, and the dangers and risks attending the treatment, make it a subject well worthy of careful and continued investigation. Two hundred cases have been recorded within four years. Gaillard Thomas leads the list.
of American obstetricians, having had over thirty cases under his personal observation. But a few years ago an able writer said that the history of extra-uterine pregnancy was rupture, hemorrhage, and death, or rupture, pyemia, and death.

Now it is well established that extra and intra-uterine pregnancy can co-exist.

The accepted symptoms of this condition are:

1st. Irregular gushes of blood ceasing and recurring without assignable cause.

2d. Fixed, grinding pain in one iliac fossa, and perhaps down the corresponding thigh.

3d. Paroxysmal pains occurring with severity, marked by constitutional symptoms passing away to recur with increased violence.

4th. Symptoms of abortion without a fetus, or expulsion of membranes without a fetus.

5th. And to these Dr. Maher has very recently added another, viz.: pronounced abdominal heat to be found after rupture and hemorrhage, due to the presence beneath the abdominal wall of a clot of warm blood, varying in bulk from one quart to two or three gallons.

The physical signs accompanying are:

1st. Increase in the size of the uterus, with displacement.

2d. Evidence that the uterus is empty, as shown by the sound.

3d. The presence of a tumor to one side of or behind the uterus.

To these may be added in the later stages the uterine souffle, and also of special value is a recent sign brought to notice by Egbert Grandin, of New York. He takes this position: Braxton Hicks first pointed out the fact that the intermittent rhythmical contractions of the uterus to be felt by the open hand making gentle friction over the uterus are a constant accompaniment of late pregnancy, and are absolutely diagnostic of normal uterine pregnancy; since normal
pregnancy alone furnishes these contractions and always furnishes them, Grandin maintains that when we have evidence of pregnancy, and these contractions can not be evoked by friction, we have absolute evidence from this alone that the uterus is empty, that the fetus is without the uterus, and we are at once justifiable in using the sound to prove the vacuity of the uterus.

Later experience has taught that the use of the aspirating or long hypodermic needle, to endeavor to find amniotic fluid as a means of diagnosis, is most dangerous. Thomas lost the three cases in which he tapped with the needle.

_Treatment._ All measures heretofore used in the earlier stages have been laid aside, except the use of electricity. It has been found that this agent alone is never harmful, and up to the end of the fourth month, at least, is always efficient in killing the fetus.

Thomas advises its use up to the end of the fourth month, but one case is reported from Berlin in which it was used in the sixth month and the woman recovered her health and menstruated, and the tumor decreased markedly.

Lusk and Garrignes, therefore, both advise the use of the electric current at any stage. All authorities seem now to agree that the faradaic current is preferable to the galvanic. Electrical treatment is adapted to those cases of early or late diagnosis in which the death of the fetus is desired.

_Laparotomy_ is a necessity in all cases in which there is rupture of the fetal sac and active hemorrhage, provided that when seen the added shock of the operation would not certainly cause death, and in forming judgment as to this point it should be borne in mind that the result of untreated rupture and hemorrhage is certain death.

With reference to the treatment of a case at term, the child alive but the patient not in labor, Thomas advises that laparotomy should be performed in the interest of the living child, even at increased risk for the mother. When
Thomas relates his experience, however, he narrates a case in which the child was carried dead three months beyond term; he says that had he made laparotomy and had to deal with a placenta so large, so peculiarly attached in the full tide of circulation, he had no doubt but that he should have lost his patient from hemorrhage. I cannot avoid the conclusion that Thomas did not draw the correct inference from his own experience, and that his experience does not warrant the formulation of the rule that laparotomy is justifiable in such cases, for in the case mentioned Thomas says “death would been certain had he made laparotomy,” and death, certain death, is far more than “an increased risk.”

I believe Lusk and Garrigues are right when they say that the frightful mortality of ninety-four per cent should deter any one from laparotomy under these circumstances; and I also believe that even at this period the fetus should be killed by electricity and laparotomy done subsequently, sacrificing, in accordance with the usual obstetrical rule, the less valuable life for the sake of the more valuable one.

The best authorities now agree that when the fetus dies naturally, or is killed by electricity, no effort at laparotomy should be made until septic symptoms are imminent or present, for the longer the fetus remains in the cavity the more will it be found to have undergone absorption and contraction, and the less the danger of removal. Freund, Parry, Lusk, Garrigues, and Thomas all unite in this opinion. All authorities also agree that in all cases in which the fetus is removed when the placenta is in full activity, that the placenta must be allowed to remain.

CANCER OF THE UTERUS.

The question, which has of late years attracted so much attention, still continues to attract, and authorities are not yet agreed with reference to the total extirpation or the supravaginal amputation of a cancerous uterus.
Recent statistics brought out in a discussion before the Obstetrical Society of Berlin show that there is no question but that total extirpation through the vagina is much the more dangerous procedure.

Hofmeier records 118 cases of partial amputation with ten deaths, and forty-eight cases of total extirpation with twelve deaths; a mortality of nine against twenty-five per cent. He claims that the same law holds here that holds in all surgery, that no organ or limb should be removed in toto when the purpose of the operation can be attained by the removal of a portion. Schroeder decidedly favors the supra-vaginal amputation in all cases that allow the amputation above the cancerous portion through healthy tissue. He calls attention to the fact that canceroid of the cervix is a disease of the vaginal mucous membrane, and that it spreads sidewise into the vagina and thence into the pelvic connective tissue and not at all up the cervix, and hence the vagina and not the uterus should be extirpated. German authorities agree that cervical amputation is particularly liable to be followed by recurrence if performed upon a pregnant woman.

As regards results, Hofmeier reports eighty-three cases of supra-vaginal amputation; of these thirty-five, or about forty-two per cent, had recurrence within two years; twenty-one, or about twenty-five per cent, were free from disease at the end of two years.

Of thirty-five cases of total extirpation, fifteen, or nearly forty-three per cent, had recurrence in two years, and five, or fourteen per cent, were free from disease at the end of two years.

Trèlat read a paper on the subject before the Academy of Medicine of Paris, last July, and sums up the status of affairs with reference to the two operations by saying that in Paris the opinion is gaining ground that total extirpation should be abandoned and partial amputation substituted.

But Hofmeier has within the past two months made a re-
port, which in a characteristically German manner goes to the bottom of the subject, and, strange to say, shows that there is no conflict whatever between the two operations, that each has its sphere, and the spheres are totally distinct.

He goes at once to the anatomy of uterine cancer as taught by Rugé and Veit, and shows that there are three forms:

1st. Epithelioma of the cervix, the best known and most frequent form, having cauliflower excrescences, profuse degeneration, and hemorrhages. This form extends early to the vagina and late to the uterus. Partial extirpation is pre-eminently adapted to this form, because it remains confined to the lowest part of the uterus for a long time.

2d. A second form is adenoma of the cervical mucosa, which tends to ulceration, easily spreads to the uterus, leaving the vaginal cervix long intact, and is slow in giving rise to symptoms.

3d. A third form begins as a circumscribed cancerous infiltration of the cervix ulcerating through.

Cases of the second and third forms can only be operated upon with hope of permanent success by total extirpation, because the disease readily spreads over the entire uterus and its limits at any examination can not be determined. Hofmeier performed his operations with reference to these anatomical views, supra-vaginal amputation for all cases of epithelioma of the cervix, and total extirpation for all cases of cancer of the cervical mucosa, the cervix proper, and the uterine body. And what must seem quite remarkable to us in America, who so soon lose sight of our cases, took place, he was able to follow up 138 cases of 145 operated upon. His table shows:

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<th>OPERATIONS WITHIN 1 year</th>
<th>METHOD</th>
<th>RECOVERIES</th>
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<tr>
<td></td>
<td>Partial extirpation.......51 per cent</td>
<td></td>
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<tr>
<td></td>
<td>Total extirpation.........48 per cent</td>
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<tr>
<th>OPERATIONS WITHIN 2½ years</th>
<th>METHOD</th>
<th>RECOVERIES</th>
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<tr>
<td></td>
<td>Partial extirpation.......46 per cent</td>
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<td></td>
<td>Total extirpation.........24 per cent</td>
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EIGHTEENTH ANNUAL SESSION.

Operations Within Method. Recoveries.

<table>
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<tr>
<th>Years</th>
<th>Partial Extirpation</th>
<th>Total Extirpation</th>
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<tr>
<td>3</td>
<td>47%</td>
<td>14 1/2%</td>
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<tr>
<td>4</td>
<td>38%</td>
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<td>5</td>
<td>35%</td>
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Almost all the cases that recurred after partial extirpation showed the recurrence in the first year, for only four cases had a relapse after one year, proving that partial extirpation in epithelioma of the cervix is sufficient to effect a cure.

Of the cases of total extirpation, one-half showed a relapse in the second year, whereas, had a partial extirpation been made quite all the cases would certainly have relapsed. Total extirpation was in these cases of the second and third form of cancer the only admissible operation, and proved therefore to be an indispensable auxiliary to partial extirpation, and not a competing operation, and so Hofmeier concludes that these anatomical views, promulgated years ago by Rugé and Veit, have found a novel and valuable support by this clinical experience, and that this experience shows that total extirpation for cervical carcinoma, if performed early, offers a prognosis for radical cure as good as carcinoma in general.

Uterine Myomata.

While there has not been much that is really new developed in the treatment of myomata, there has been a very decided advance made. German authorities lean strongly to removal of the uterus, even though the tumor be not very large. Martin advises laparotomy as a better procedure than the removal through the vagina. Bigelow, of Boston, who has been with Martin in Berlin for many months, has very recently reported Martin's work; he has lost one case of the last eleven in which he removed the uterus by laparotomy. The most interesting and warm discussion to be found in current medical literature is now being carried on between Tait and Bigelow. A résumé of this discussion will not only
afford us some amusement, but also will show the status of affairs with reference to the treatment of myomas.

In a recent issue of the *American Journal of Obstetrics* Bigelow takes Tait to task in an article entitled "Hysterectomy versus Oöphorectomy in the treatment of Myo-fibromata of the Uterus." Bigelow's conclusions, previously formed, were that—

1st. A rare percentage of tumors is dangerous from hemorrhage.

2d. The bleeding may be from sources posterior to the tumor.

3d. Enucleation of ovaries and tubes will not always arrest the bleeding.

4th. The operation is serious and difficult.

5th. The sequelae may be fatal, for a mass deprived of its nutrition is left to undergo degeneration.

Bigelow goes on to show that the study of the circulation of the normal pelvis and dead house experiments show that it is impossible to arrest the entire circulation of these tumors, and when the tumor is at the fundus, Tait's operation will not strangulate the total circulation; and that cases on record show that after the menopause severe hemorrhage had come from myomas. He adds that oöphorectomy is more difficult than hysterectomy, is not radical but palliative, is dangerous and merely tentative, while hysterectomy is, though dangerous, yet radical, and closes by saying, "Do the statistics of mortality favor one above the other?"

Tait replies at once in the next issue, opening with this choice morceau: "Bigelow shows completely that he has an aptitude for misrepresenting the views of others, and no very great power of expressing his own. I can supply the facts and arguments but I cannot supply the intelligence necessary to understand them." After reading this, the average reader will be certain to want to hear the rest. Tait then says that he has never said a word about oöphorectomy in the treatment
of myofibromata. His operation, called by his name, is the removal of the uterine appendages.

He then takes up Bigelow's points seriatim, and as to the first, that "A rare percentage of tumors is dangerous from hemorrhage," Tait says cases are constantly coming to us by reason of suffering chiefly from hemorrhage.

Second, As to the bleeding from sources posterior to the tumor, Tait says he has studied the pelvis very carefully and knows something about its anatomy, but Bigelow's sentence is wholly unintelligible, unless it means the accidental hemorrhage of piles.

Then as to enucleation of tubes and ovaries not arresting the bleeding, Tait says that he has reported one series of fifty cases, and in every one was the hemorrhage completely arrested. And as to the last point, that the sequelae may be fatal from the mass left behind to undergo degeneration, Tait says this is nonsense, because no vessel supplying the uterus is at all interfered with. His operation imitates nature's process at the menopause by arresting menstruation and the sequelae have never been fatal. Tait says it is not necessary to cut off the supply from the uterus to cure these tumors, and that he never attempts to strangulate any blood vessels; the removal of the ovaries and tubes, chiefly, however, the tubes, arrests menstruation, puts the contents of the pelvis at rest, and the tumor diminishes or disappears.

In answer to Bigelow's statement that Tait's operation was more difficult than hysterectomy, Tait states that he has operated about 116 times for the enucleation of the ovaries and tubes for myoma, with one death, and the operations were so relatively simple that he completed every one.

Tait says hysterectomy is the most ghastly, serious, and difficult operation in the whole realm of abdominal surgery; that Bigelow has never dared to meet his challenge to let surgeons know the real mortality of hysterectomy in Berlin, but that he is informed by trustworthy German and American
visitors that it runs between forty and sixty per cent. Tait says that if these figures are correct, the proceeding ought to be stopped by legal interference. Until the real facts and statistics are given, nothing but condemnation can be meted out to the German surgeons. Tait closes by saying that his mortality for his operation is less than two percent, while Keith’s mortality, the best known for hysterectomy, is twelve percent, and there is no choice between the operations, and he thinks that if the uterine appendages were removed early, before the myomas grew to such a size as to render their removal a necessity, there would be no need for hysterectomy at all.

DISEASES OF THE FALLOPIAN TUBES.

It is but a very few years ago that very little was known of Fallopian diseases, but thanks to the labors of Battey, Hegar, Sims, Tait, and others, we are now quite well informed in regard to them.

Within the past year or two very much progress has been made in the knowledge of these diseases, and improved methods of treatment brought to notice. I shall give a résumé of recent writings, chiefly of that done by one of the best American investigators, W. Gill Wylie, of New York. He takes the ground that a careful study of the diseases of the tubes will not only clear up most of the numerous and once incurable cases of local peritonitis, improperly called cellulitis, but also most of the cases of retroversion, retroflexion, and lateral flexions with adhesions, and show the uselessness and danger of pessaries in such cases.

Neoggerath advanced the view in 1876 that a man never recovered from gonorrhea, and that in after years his wife would eventually show tubal disease, the result of his old gonorrhea. The best authorities now agree that gonorrhea is the cause of a large percentage of tubal diseases. Saenger, of Leipzig, boldly says that gonorrhea furnishes a much higher
per cent of grave chronic diseases of abdominal organs than either puerperal fever or syphilis. He thinks that gonorrheal affections form one-ninth of all gynecological cases.

The gonorrheal diseases of the uterine adnexa are salpingitis, pyosalpingitis, perisalpingitis, oöphoritis, perioöphoritis, and abscess of the ovary. Saenger attributes many cases of sterility to gonorrheal salpingitis, and Wylie teaches that salpingitis causes the incurable sterility so universal among prostitutes even though they may return to the paths of virtue.

I have held for several years that salpingitis, usually gonorrheal, was to be found in nearly every prostitute of two years' experience, and was the reason of their failure to become pregnant, although in many cases their menstrual periods were fairly regular. Wylie's article and the discussion resulting from it made quite clear the following points:

Symptoms and Diagnosis. A peculiar burning pain over the tubes is quite characteristic. Dysmenorrhea is a common symptom, and menorrhagia and metrorrhagia are often associated. These last conditions are sometimes curable by the use of the curette, though its use is dangerous, as it may cause peritonitis. Sterility is the rule, and if both tubes are affected it is incurable. Frequent attacks of peritonitis furnish the most positive symptom of salpingitis.

Examination shows swelling, tenderness, and thickening of one or both broad ligaments.

Pathology. Inflammation of a Fallopian tube causes swelling and prolapse of the tube, obstruction of its lumen and imperfect drainage of the tube, or none at all. The discharge formed in the tube is quite likely to flow backward out upon the peritoneum, which becomes inflamed and exudes lymph, which glues the organs together. The lymph contracts, bands of adhesion form, draw, and distort the organs, and the folded, twisted, and adherent broad ligaments hold the uterus in its backward displacement. Soon the fimbriated extremity becomes closed or nearly so, the discharge accumulates, is again
forced out to again set up a peritonitis with new adhesions, and the tissues harden and fix the uterus in its retroflexed or retroverted position. These are the cases where retroversion is easily discovered, but the pessary inserted causes intolerable pain.

_Treatment._ Leucorrhea and dysmenorrhea in young girls should be treated early before it reaches the tubes. The serious consequences of septic endometritis, not gonorrheal, in causing salpingitis, makes more forcible the importance of cleanliness and antisepsis after labor. Subinvolution sooner or later causes endometritis, and every lying-in woman should be kept under observation until the uterus is normal in size and position. Tampons of glycerine and alum used during the third, fourth, fifth, and sixth week after labor will prevent subinvolution, retroversion, and endometritis, and a salpingitis in a delicate woman that otherwise would be easily affected. Labor is normal, but abortions are abnormal, and after abortions especial care is necessary to secure free drainage and perfect involution, and prevent septic infection. In the treatment of acute salpingitis rest and anodynes are essential. As this stage subsides, the use of tampons, first wet with pure glycerine, afterward with a mixture of one part of boro-glyceride, one of alum, and fourteen of glycerine, is very useful. These soften the uterus and render it movable, improve the circulation, and give relief. Close attention should be paid to the general health, digestion, and especially the bowels, for impacted fecal matter adds very materially to the pain by pressure on the left broad ligament. If the uterine canal is contracted it should be dilated so as to secure good drainage. If there is excessive hemorrhage, tr. of cannabis indica should be given in twenty minim doses twice daily; if this does not relieve it would be safe to curette the uterus for granulations. Such treatment is advisable preparatory to operation, except in those cases in which rupture of a cyst was threatened or had taken place. When diseased tubes are
plainly made out and the patient is bedridden, such treatment will help but not cure, and complete removal of both tubes and ovaries is advisable. Of the operation for removal of the tubes and ovaries I shall say nothing, for the time at my command is too limited to allow me to do justice to the description of the operation as now made by Tait, Thomas, Wylie, and other authorities.

THE WORK OF LAWSON TAIT.

The labors of Tait, the great English laparotomist, have probably been of greater value than those of any living surgeon. Standing as he does, the exponent of cleanliness, absolute, positive cleanliness, in this day of Listerism and antiseptic methods, his work is subjected to most vigorous examination and criticism. In common with all leaders in great movements, Tait is a marked and remarkable man; he is clear, strong, and forcible; impulsive, quick to express himself whether it be to praise or condemn, and honest, in that he does not hesitate, as many smaller men do, to admit his errors or to apologize for incorrect or unjust statements. In illustration of this he recently used the expression that English women would not submit to the "brutality" of being examined in the dorsal lithotomy position. A storm of protests from his American brethren came to him for his remarks, when he at once wrote the New York Medical Record, saying that he deeply regretted having used the word "brutality," a word certainly much stronger than he need have used, and asked permission to formally withdraw the word. Through his friend, Dr. Vanderveer, of Albany, N. Y., he recently presented a most excellent article on "Methods of Diagnosis," before the New York State Medical Society.

Tait is pre-eminently a specialist; he restricts his work entirely to surgery of the abdomen and pelvis. He found that as his experience became larger he was able almost without the use of the speculum or sound to correctly estimate the
condition of affairs within the pelvis. Unless to make some operation or special investigation he never uses the speculum, and never uses the sound to discover the position and relations of the uterus. He has cured 300 cases of vesico and recto-vaginal fistulae, never failed in one case, never refused a case, and never used what American surgeons claim is essential to these operations, the Sims speculum. He diagnosticates vaginitis by the finger, and endometritis by the feeling of the everted mucous membrane of the cervix. The finger alone tells him whether a pelvic tumor be a retroverted fundus or adherent tube or ovary, or a hematocele, and he judges by the peculiar resistance alone whether it be a myoma. Early in his history he used the sound and committed errors, and he tells one on himself. He was invited to examine a case, found a fixed pelvic tumor, said that it was a collection of matter, and used the sound to define its location; after using it he decided that the uterus was normal in length, empty, and that the patient had a parametric abscess; within twenty-four hours the patient miscarried of a four months' pregnancy, and the parametric abscess disappeared.

Tait says that inspection of the abdomen will not reveal, as Sir Spencer Wells claims, the presence or absence of adhesions. A uniformly distended abdomen may mean peritonitis, intestinal obstruction, ascitic effusion, parovarian tumor, ovarian tumor, myoma, or pregnancy. Peritonitis may be known by the presence of short, rapid, pectoral breathing. Ascitic effusion by the absence of pectoral breathing, by greater flattening of the distention and the pyriform shape, the thickening of the walls, and the presence of white lines in the flanks. These things absent, uniform distention may be due to parovarian cyst or hydramnios. Hydramnios, however, always occurs with twin pregnancy and usually in unmarried women. In pregnancy and myoma the distention is always greatest at the middle or upper part of the tumor. The large uterine myoma is defined by
its firm resistance and its uniformly dull and pseudo fluctuation, by the diameter being smaller at the base than at the middle or upper part. Pregnancy, he claims, ought always to be detected by the fluctuation of the liquor amnii, which shows a cyst within, and then by the Braxton Hicks symptom of rhythmical contraction of the uterus, now hard, now soft. He says that the fetal heart sounds and the placental souffle are so easily imitated by other sounds not connected with pregnancy that they are unreliable, and that the rhythmical contraction of the uterus so absolutely diagnostic of pregnancy, can always be secured in pregnancy and in no other condition.

Tait has unbounded confidence in abdominal section for the purpose of complete accuracy of diagnosis and adds that he does this only on the ground that with the completion of the diagnosis there is at the same time opened out the only road for successful after-treatment. He claims that the abdomen is a region of darkness, and the man who is most sure of his diagnosis is the one most frequently wrong, and that a complete and satisfactory diagnosis can never be made, except in the simplest cases, without an exploratory incision. With this, he insists that, previous to exploratory incision, every possible method of diagnosis and treatment should be exhausted before incision. Normal pregnancy and that condition which he calls the most mysterious and troublesome of all diseases for diagnostic purposes, hydramnios, furnish cause for the greatest number of errors, and reckless surgeons, failing to exhaust all methods of diagnosis before exploratory incision, often open the abdomen to find a pregnant uterus.

Early in 1885, Tait reported 1,000 cases of abdominal section. The mortality of the series was 9.3 per cent, which he thinks quite high and expects to lessen. He holds the clamp responsible for a good part of the heavy mortality of his early ovariotomies. In sixty-two cases he used the clamp, and had a mortality of nearly twenty-six per cent; in 343 cases
he treated the pedicle intraperitoneally, with a mortality of 4.58 per cent. His first fifty cases had a mortality of 38 per cent, the 405 cases that were the ovariotomies in the 1,000 reported, a mortality of 8.1 per cent, while the last 313 cases showed only 4.76 per cent. His record is now still better, for his latest results are 113 cases without a death. Tait does not hesitate to say that the horrible death-rate of 38 per cent, as opposed to 4½ per cent of his later work, was due largely to the terrible influence of want of experience, and I hope the discussion following this report will take up the question of whether the general practitioner or the average surgeon ought ever to undertake ovariotomy.

The astonishing results attained by a few operators has led to what the New York Medical Record calls a laparotomy epidemic, and says: "Every young gynecologist is ambitious to remove the tubes or uterus, or at least an ovarian cyst, while the older ones are equally anxious to remove a hundred."

"The small percentage of mortality attained by Keith, Tait, and Schede is the result in part of an extraordinary manual dexterity which few possess naturally, and fewer still ever can have the opportunity of acquiring. There are few men who really understand even the technique by which the operation is made so free from danger. The mortality from the laparotomies of most American and English surgeons is comparatively high, and serious harm has been done by wide heralding of the extraordinary success of a few adepts."

By Dr. Mansfelde: I heard but a few words, Mr. President, of the address, but it was no doubt a good one; I am an admirer of Tait, but not so far as to make Tait the criterion of the ability necessary to be a gynecologist. The operator who operates for uterine diseases without the use of the speculum is an anomaly in medicine. The average gynecologist needs all the mechanical means and all his senses to do his duty to his patient; I do not think that anomaly in gynecology should
be put as the criterion of the necessary ability wanted in an every-day gynecologist.

By Dr. Stone: Allow me one word; Tait does not do away with these instruments because he says they are not necessary, but he claims that by the less use of them and the more frequent use of the finger, it leads to a much better education of the finger and to much better methods by reason of the use of the finger.

By Dr. Mansfelde: I have Tait in my library, and I know whereof I speak when I say that he says it shouldn’t be used; he says that a man who cannot operate a vesico vaginal fistula without the use of the speculum had better let it alone.

By Dr. Graddy: I think the paper just read is one of the best papers ever read before the medical society. I believe there is one thing especially with reference to Tait’s teaching that should receive much attention and much commendation, that is, in making a diagnosis without the use of instruments which would commonly be used, which under a great many circumstances would produce injury. One thing which I wish to speak of was not referred to in the paper, and that is the use of uterine sound. He maintains that ordinarily by the finger an ordinary displacement of the womb and tumors of the womb can be ascertained without resorting to the sound. I think I have come to the conclusion from my own practice that resorting to the sound is always attended by danger. I have seen cellulitis result from the use of the sound, in my own hands, when I used it where I supposed it was necessary.

By Dr. Knapp: I wish to speak in regard to the use of these instruments by the ordinary gynecologist. It is true in our own experience, and perhaps we are all willing to admit that the greater our experience the greater our facility or ability to make examinations without instruments; especially is this true in regard to the use of uterine sound in detecting abnormal positions and abnormal growths in the vicinity of the uterus. All who have an extended experience in gynecology
will admit what our friend, the doctor from Omaha, has just
said, that we have seen cases of endometritis, and perhaps of
pelvic cellulitis, induced, perhaps, by the ordinary passage of
the uterine sound. After the mischief has been done the
physician recognizes that it has been done by his hand;
while we may accidentally cause an injury, I do not think that
we should be contented with a doubtful diagnosis for lack of
using this instrument. It is only by our constant use of this
instrument and the finger examination that we obtain a true
diagnosis; the instrument which has been capable of educating
the finger of a Tait is certainly capable of educating any other
finger that is guided by a mind. It is only by the use of the
instruments and by constant practice that we obtain this skill
which enables us to make the diagnosis. It is within the
experience of all that the more extended our experience the
less do we use the uterine sound and the vaginal speculum.
We have become accustomed to the sense of touch. While
we admire the skill that will give the man the degree that
Tait has attained, yet why shouldn't ordinary abdominal sur-
gery be done by the educated physician or a physician in
general practice. There must be a time in the history of all,
when there is a beginning of laparotomy as well as other sur-
gical operations; if there be no beginning with the general
practitioner he certainly will never become a laparotomist,
much less a successful one. We certainly should not accord
with that part of the paper which condemns the doing of
laparotomy by the general practitioner, if he is thoroughly
prepared for it.

By Dr. Leisenring: Mr. President, I, in the main agree
with the sentiments of the paper; I think it was an American,
who said that every gynecologist should have an eye on the
end of his fingers. I think it is very good advice; I think
there is a time when we should use instruments, and there is
a time when we should not use them, and that will depend
very materially upon the judgment of the practitioner; if there
is anything I condemn roundly, it is the injudicious use of
these instruments, as well as anything else. I think we ought
to know when to use instruments and how to use them; if we
don't, we ought to let them alone, because injury is sure to
follow. I think it is egotistical for anyone, author or no author,
to say that we shan't or that we shall use instruments. I
think the practitioner, if he possess any sense, is able to judge
when and when not to use them; if not, I think he had better
not undertake any operations.

By Dr. Stone: I wish to call attention to one point; the
paper did not say anything in regard to the performance of
ovariotomy by the general practitioner or general surgeon. I
ask that that point be raised in the discussion; I do believe that
it ought not to be done by the general practitioner. We are
limited, very much limited, in our knowledge; it can but be so.
If we are limited in our work to one single department we
can never fathom the whole of the depth of that one depart­
ment. Now I try to be an honest practitioner, and if I have
a case of eye disease I turn it over to my friend, the oculist;
I am not competent to do it and I know that I am not; my
patient would find it out if I did not. According to the idea
of our worthy president, one might operate on cataract because
there must be a beginning, and if we never operate one time
we never operate the fifteenth time. I don't agree with the
doctor at all; laparotomies should be made by those who are
constantly making them. There are men who are constantly
making them, and young men are growing up around them
that see their work all the time; they learn their work, and
do it finally under the eyes of the master; they are the only
worthy successors of the present men of to-day who are doing
the great work. I think that when one of us here in this
western country undertakes an operation of that character,
he does a great injustice to his patient; he makes the patient
take risks which he has no right to do at all. I have no refer­
ence to cases of emergency, I am talking about the operation
of laparotomy for an ovarian tumor.
By Dr. Mansfelde: This is a matter of some importance and I should like to be allowed to respond.

By the President: The chair is of the opinion that the discussion should close.

By Dr. Mansfelde: That statement is an injustice to Nebraska surgeons.

By the President: I guess the Nebraska surgeons all understand that.
I am before you to-day not unmindful of the honor conferred in being your chairman. We are glad as women to thus meet you in your endeavors to rob maternity of its terrible risks, and to lessen the number of stranded wrecks in our pathway. I trust from the free and untrammeled interchange of thought on her behalf your liberality will be repaid in the greater benefit which shall accrue to woman.

There have been made in this department no startling discoveries; those measures which in the past have received favorable recognition have had additional proof, or have been modified. Thus the old Cæsarian section has many times been improved; the last bears the name of Saenger. This improvement commends itself as embracing all the principles of sound surgery.

It can truthfully be said of it, "In comparison with which, Porro's operation ranks second and laparo elytrotomy, which a year ago stood the peer in all operations, is now outstripped by the number of times it has been performed and the proportion of cures obtained." Though the right to this distinction is disputed, it concerns us not so much as the success with which it is attended. Saenger, himself, claims 73.3 per cent of recoveries, while in the clinics of Leipzig and Dresden they amount to 94.7 per cent.

Leopold has operated nine times, saving eight women. Hofmeier three times, saving all the women. In America we can boast of no such glowing success. "During the last decade and seven months, ending August, 1886, there was a loss of 84 per cent, and this, notwithstanding the established
fact that a set of early operations will save 75 per cent."—

Dr. Harris thinks we must not expect very happy results until accoucheurs become alive to the fact that delay in operating will make any method fatal in a large proportion of cases. In regard to the improved Caesarian section, he says, "When it is resorted to early it can be performed with greater safety and with better results than any of its alternatives."

Dr. Tabor Johnson's paper upon its substitution for craniotomy, has elicited much discussion, the author of which is inclined to make it the operation of election, craniotomy the operation of necessity.

Garrigues voices true sentiment when he says, he could not, under some circumstances, submit the most perfect abdominal section to his patients. The profession, however, have been lead to consider it an almost fatal procedure, and not having been perfectly instructed in pelvimetry, there is often delay and injudicious resort to other methods of delivery.

It is now conceded that with a conjugate diameter of or below two inches, craniotomy is more fatal than Caesarian section, and such a deformity decides in favor of the later operation. But the idea based upon statistics, that the operation saving the greatest number of lives should be performed, is not right. The value of the lives destroyed by Caesarian section should receive a juster share of consideration, when the operation of saving the greatest number is used as an argument. When, by Caesarian section as many mothers are saved as by craniotomy, it should be preferred. Each case must be judged individually, and we should be governed in some degree by the wishes of the patient.

EXTRA-UTERINE PREGNANCY.

Since in 1869, Dr. J. G. Allen, the first in the United States to destroy the fetus by electro magnetism, there are believed to have occurred no fatal cases. This fact has tended to estab-
lish this feticidal method as a valuable means of saving women. Thomas is in favor of the measure. Tait thinks the fetus, having passed through the stage of tubal rupture and remained alive, may go on to term and be delivered, while the woman will have a chance for recovery far better than with faradization destroying the child.

Dr. Harris says: "The operation of faradization, though the extreme limit is placed by Thomas as four and one-half months, is much safer immediately and remotely if done in the second and third months."

Whether an ectopic fetus is destroyed by electricity or not, it would seem the part of wisdom when it occasions suffering and loss of health, the dangers of delay and the advantages to be gained by an operation would indicate such, and exsec­tion be called for.

"Such a procedure would have the sanction of Tait and Olshausen, who counsel early interference in all pelvic tumors where the probabilities of success are good."—Kelley.

LAPAROTOMY AS A DIAGNOSTIC RESOURCE.

The exploratory incision is coming into merited favor. Thomas has never regretted opening the abdominal cavity, and thinks it will become the rule, where other means of diagnosis do not satisfy. In the words of our esteemed secretary, Dr. Mansfelde: "When the old-time notion of the danger of wounds of the abdominal cavity has once been removed and placed in the limbo of things forgotten, the proceeding will be the saving of many lives."—Mansfelde.

PUERPERAL ECLAMPSIA

There have during the year appeared several interesting papers upon this subject, the latest of which is one by Dr. King, of Washington, who holds as a reasonable theory as the cause of eclampsia, in brief, to be the absence of the normal lateral obliquity of the uterus. The disturbance,
he says, of the renal functions are produced chiefly by pressure of the gravidal uterus upon the abdominal aorta or upon the vena cava, or both together, with their branches, in consequence of the child and uterus not maintaining during pregnancy their normal lateral position above the pelvic brim.

The paper is entitled to our consideration, but we can not yet accept its theory as correct.

Osthoff attempts to establish a prime cause for the various symptoms attending this pathological state. His conclusion is to the effect that all renal affections during pregnancy arise from a common cause. This he defines to be an unusually strong innervation of the splanchnic nerves, the uterine alterations acting as the immediate agent of this heightened nerve irritation, as a result of which occur especial vaso-constriction of the kidney circulation, cortical anemia, and degenerative processes. During labor we get the effects of this irritation directly on the central organs, and vaso motor of the medulla oblongata, no renal alteration existing. He bases his views in part on those of Traube and Rosenstein, and the experiments of Kausmal and Tenner.

The author rejects all mechanical and chemical theories of intoxication of the blood by renal excreta as a cause of eclampsia. In his treatment he does not differ materially from others, except that he avoids diuretics and drastics.

I cannot refrain from calling the attention of the society to the paper by Bedford Brown, published in the Journal of American Medical Association, Nov. 13, 1886, in which he gives his experience of thirty-five years. The paper shows a degree of observation which is commendable, and which must ever prove a source of valuable information. One thing unique in his treatment is in giving the infusion of ergot, per rectum, in large doses to complete labor. He has observed favorable results follow its action on the nerve centers as a sedative on the reflex powers and as an agent to lessen hyperæmia.
"By the use of the daily warm bath, the milk diet and laxatives, with the nightly administration of bromides, we may hope to tide the case over, but should the symptoms not diminish we would be justified in bringing on labor."—Thomas.

"Any treatment looking to the diminution of irritation and the hyperæmia of the brain lacks in so far the elements of safety that it does not provide for the danger of fatal cerebral anæmia."—Mansfelde.

PUERPERAL FEVER.

Dr. Mathews Duncan is reported to have said, the subject of antiseptics in midwifery is the most important of all in the whole obstetrical department, that the subject is greater than the prevention of epidemics which come occasionally while puerperal deaths were constantly occurring.

Though many, with Thomas, believe if antiseptics of chemical character are valueless, they at least, in all probability, do no harm, and while the question is still sub judice, give the patient the benefit of the doubt.

Dr. Gustave Zinke strikes the key-note when he says antiseptics in normal labor need and ought to mean nothing except cleanliness throughout and in every respect. Perfect cleanliness can not be replaced by antiseptics, antiseptics are not intended to take the place of cleanliness.

The subjects of antiseptics and bacteriology bear an intimate relation. From Lusk’s elegant monograph on this subject, we quote as follows: There are invariably associated with puerperal fever pathogenic bacteria. The bacterium termo and bacterium commune, to which fetidity of matter undergoing putrefaction is due, are in themselves harmless. Fetid discharges are not therefore necessarily harmful but rather serve a useful purpose, as it gives warning of the existence of conditions which favor the development of life-destroying organisms. The bacteria of putrefaction, Pasteur says, by their power of absorbing oxygen, pave the way for the active
development of pernicious germs. The different forms of bacteria possess this in common, that they are alike generated in putrefying media. Doleris found the prevailing pathogenic bacteria in puerperal fever to be bacilli or rods and micrococci or round bacteria, which rarely act singly as an agent in infectious diseases, the predominant form determining generally the character of the symptoms.

To secure effective prophylaxis is to insure the prevention of infectious germs entering the system by any media whatsoever. An effective germicide should ever be at our command. A box of hydrarge corrosive chloride powders and nail brush are essential to a complete obstetrical case.

As soon as there is marked rise of temperature, all decomposing matter should be removed from the uterus with a curette, which is afterwards washed out with some antiseptic fluid. This should be repeated once or twice. To raise and maintain the power of resistance and enable the system to throw off the poison absorbed, alcohol in large doses is now extensively used.

Carl Braun employs, in connection with it, the tepid bath, which promotes sleep and gives the patient the disposition to take plenty of nourishment. Quinia still holds a high place, but other antipyretics are not of benefit.

I can close this subject in no more fitting words than in those of Braxton Hicks:

"The value of the study of the clinical surroundings before, during, and after delivery must be obvious to all."

"The subject is a complicated one, and cannot be settled by a resume of all the information of the present hour."

"Before we can settle the much vexed question of the nature of so-called puerperal fever, we must patiently work, accumulating information from all sources, with constant inquiry into the environments of our patients."

"The attempt to deliver a final opinion on the subject has hindered, and will continue to do so, our advance both clinically and pathologically."
Nothing more decidedly retards the progress of gynecology, lowers it as a special study in the eyes of the sister departments, and fans the dying flame of a prejudice with which it has been able so successfully to contend only during the past half century, than the unsettled state of uterine pathology. In general medicine, in surgery, and in all other special departments, the study of pathology is made the key-stone of the arch which supports them; and observers seem willing to agree as to fixed principles concerning it. In gynecology this whole subject presents the melancholy aspect of uncertainty and dissention. Many of its votaries, instead of taking broad and strong views, become the partisans of some special dogma or theory, which is warmly attacked by others who hold some view equally narrow, incomprehensive, and exclusive. As a result of this state of pathological confusion among leading minds devoted to the department, every newly fledged specialist feels warranted in elaborating and maintaining a theory of his own; or in attaching himself to one of the many which present themselves for his choice. All must admit that to this department to-day as many able, zealous, and industrious laborers are devoted, as to any other in medicine. Why should such a body weaken its influence by adherence to dissentient and partisan views? Why impelled to entertain the view that inflammation of the parenchyma plays the important part or moving cause in uterine disorders, another that displacements of the uterus does so; another that the chief trouble consists in an irritation or hyperæsthesia in the uterine nerves, and so on. With all this confusion
as to pathology, the sequel with respect to treatment is no less affected. Perhaps at no time in the history of gynecology has the subject of the treatment of local uterine disease appeared more unsettled. The question of the propriety of intra-uterine medication is eliciting valuable opinions from both sides, which we hope may lead to correct treatment in future. Dr. T. Addis Emmet declares that for seven years he has not made an application to the endometrium except where there evidently existed granulations. On looking over his records he found that his patients required seven weeks less treatment than formerly, when he had been in the habit of making intra-uterine applications. Applications to the vagina were as efficient, and far safer. Dr. Paul Mundé evidently does not share his views, since he has written an article entitled “A Plea for Intra-Uterine Medication,” which will be found in the New York Medical Journal of February 5th, 1887. Thus do great minds differ. Extremes probably meet in no treatment at all, and in a recently advocated method of intra-uterine irrigation by means of a double canula and syringe. And still another faction see no panacea for the ills of woman save in surgical interference.

This may very truly be called the abdominal epoch of the surgical age in gynecology. We have seen abdominal section so developed and perfected that the brilliant achievements of skillful operators have far exceeded the most sanguine expectations. This is not only true of all fields of abdominal section, but especially so of ovariotomy, the pioneer operation in this realm. It would seem that nothing further is to be desired in ovariotomy when we hear of the astonishing report of one hundred and thirty-nine successive operations without a death. The statistics of American operators are constantly improving, in some instances reaching a high standard, although they have not yet reached the high mark attained abroad. The exact reasons for this discrepancy await demonstration.
It is probable that the explanation will be found largely in climatic influences and constitutional conditions. Again, it is unquestionably true that in our own country the operation is essayed by a relatively larger number of operatives than abroad. The surgical results relating to cystic diseases of the ovary which emperil life have been fully demonstrated to be perfectly satisfactory and justifiable procedures, but the habit of removing the ovaries for supposed disease demands a more conservative sentiment.

There is perhaps no other organ of the human body which is at present receiving as much attention from gynecologists and surgeons as the ovary. It is marvelous to relate the manifold symptoms which may be traced, says the specialist, to disease of the ovary as the cause. It is not surprising, therefore, that the ovary's near neighbor and ally, the Fallopian tube, should merit a share of the pathologist's attention. In an elaborate paper, written some time ago, and which is probably the best of the kind on record, Dr. Saenger distinguished in salpingitis the following varieties: septic, tuberculous, syphilitic, actino mycotic, gonorrhoeal, and a mixed form. The varieties most frequently met with being the septic and gonorrhoeal forms. The diagnosis in this class of diseases is either made or it is not made, consequently many unnecessary, and therefore improper, operations are being performed. Doubtless many cases of salpingitis, under much patient surveillance and judicious handling, will go on to such improvement as to render life enjoyable and operations unnecessary. That there is a dangerous amount of enthusiasm extant in gynecology is apparent, leading to gross abuse of operative methods, and to generalizations as dangerous as they are unfounded.

It is true that frequently women will feel better after an operation, even though its performance was not indicated. That this return to health is but of a transitory nature, however, and rather the result of rest in bed, good nourishment,
etc., than of the operation, is sufficiently proved when the patient, returning to her original occupation and methods of life, finds her old symptoms also returning. With some patients, the hysterical, the operation, because it is something new and unaccustomed, has a psychic effect and brings about betterment; and so on through a category of reasons till the strongest is reached, the impossibility of tracing each patient out of a large number, and thus being assured that the cure is really permanent. It is clearly apparent; hence how difficult it is to judge of the real worth of most operations. It is incumbent on every one to acquire the habit of thinking for himself, and not believing everything is gold, which has the glitter of authority. He, who begins by painting every cervix with the nitrate of silver, scarcely rises to a higher level, when he ends by cutting every cervix off.

That audacious piece of patchwork known as the Alexander’s operation, shortening the round ligaments for the cure of retroversion and prolapsus uteri, has been performed in all countries combined less than one hundred and fifty times, having, even in the hands of expert operators, in quite a number of instances, signally failed.

Hysterectomy has recently received a most wonderful impetus in the remarkable results obtained by Keith and others, particularly in Scotland and England. Keith reports a series of cases with a mortality of only eight per cent. The late Prof. Schroeder, whose statistics are probably the most favorable offered by any large operator in Continental Europe, has had a mortality of about twenty-nine per cent. The late Dr. Thomas Wood, of Cincinnati, made the operation seven times with two deaths, a mortality of thirty per cent. It is probable that in all fibrocystic tumors of the uterus, as well as in all suppurating ones, hysterectomy offers the only hope.

The use of electricity as a therapeutic agent in gynecology is at last well established. Its use in extra-uterine pregnancy is getting the attention it merits. Medicinal treatment for
extensive fibroid disease of the uterus has been tried faithfully and abundantly, and in the main unsatisfactorily. Electricity has probably a more general value than any therapeutic treatment yet applied to this condition, and its employment is becoming more and more popular. Dr. Ephraim Cutter, of Boston, publishes a full text of fifty cases treated by this method with highly satisfactory results.

Diagnosis has made almost no progress since the beginning of the present surgical era. The scarcity of literature and investigation upon this subject is greatly to be deprecated. We should expect from this source a powerful adjuvant in combating the surgical tendency of the times. Perhaps the most valuable contributions to the pathology of uterine disease, and the most plausible theory of menstruation yet advanced, will be found in the recent scientific and exhaustive studies in endometritis, by Dr. Mary Putnam Jacobi, of New York. The assertion frequently made, that woman has contributed nothing to advance the science of medicine, is untrue. Women have not yet, as a rule, formed the habit of reporting their successes to the medical journals. The innate modesty and characteristic diffidence of the sex prevent their quarreling over the number of laparotomies performed by them, consequently they are not credited with having accomplished anything worthy of mention.

A peculiar feature in the growth (if it really be growth) of abdominal surgery is, that it owes its impetus to the surgeons rather than to pathologists, and in the surgeon’s enthusiasm many fail to realize what a vast, unexplored field of conservative gynecology is awaiting investigation. A domain in which many a woman may wander peacefully with all her organs intact, and in which she shall not see upon every corner a mile-stone pointing toward laparotomy. We read of a vast amount of magnificent surgery, but I feel that we need more conservatism and less of the knife. The best gynecologist is not he who writes or operates most, but he who best helps and cures without endangering the life of his patient.
UTERINE FIBROIDS—THEIR NATURE AND TREATMENT.

BY ELEANOR STALLARD DAILEY, M.D., OMAHA.

Until the time of Dr. Wm. Hunter, who wrote towards the close of the 18th century, the true nature of uterine fibroids was not appreciated. They were confounded with malignant growths, of which they were regarded as a variety.

He described them under the name of fleshy tubercle, and contributed greatly to the knowledge of their pathology, but it was not until the writings of Chambon, Bailey, Bayle, and others, that the subject was fairly elucidated.

Sir Charles Clark, in 1814, wrote an excellent chapter upon them, which would almost answer the requirements of our day, and yet our knowledge of them is extremely elementary.

Until within the last decade our literature was meager, un-instructive, and uninteresting. While uterine fibroids were recognized by the early writers, they did not attempt to explain their origin or growth. Thomas devotes a short chapter to the subject; other authors are equally unsatisfactory in their study of this important branch of gynecology. To Emmett belongs the credit of a luminous and exhaustive study accompanied with statistical tables covering in detail the entire subject. This excellent and masterly treatise demonstrates the importance of carefully prepared notes and data of cases coming under observation of the practitioner.

We, perhaps, cannot all become authors, but we can become careful students in some particular branch of medicine, and the careful student of the present may find in the future his stored treasure valuable and instructive to his fellows.

In the larger cities of our country, and of Europe, organ-
ized effort in the form of gynecological societies have arisen, furnishing reports of recent discoveries, methods, and the ripe experience of specialists. Without the wish to appear presumptuous as a stranger and new member of this society, may we not be permitted to express the hope that at no distant day a gynecological society may be organized in progressive Nebraska. In presenting this subject we will candidly acknowledge our inability to present anything original as to description, etiology, pathology, or diagnosis of uterine fibroids. In a practice of some eight years' duration, it has been my fortune, or misfortune rather, to meet with a number of unusual cases, both in hospital and private practice. Doubtless many before me have met with equally interesting cases. It is to be regretted that reports of cases are not more frequent in our medical journals. The youth of the profession are eager for the riper experience and knowledge of older workers.

We shall not attempt an elaborate discussion of the theories advanced concerning the etiology and pathology of these tumors; time will not admit of an exhaustive study in any direction.

I quote at some length from Emmett's late edition of Principles and Practice of Gynecology. A fibrous growth has its origin within the muscular tissue, and is generally of a dense structure, but not always, and it may or may not undergo cystic degeneration. According to microscopic investigations, the chief mass of the tumor consists of smooth, muscular fibres which considerably exceed in size those of the unimpregnated uterus. Fibrous growths of themselves are innoxious, but as a rule they cause great mechanical disturbance from bulk and weight. Therefore hemorrhage with menstrual derangement from obstructed circulation will be one of the earliest symptoms, with displacements due chiefly to retroversion and prolapse, both bladder and rectum become encroached upon with consequent impairment of their healthy action. The contin-
ued pressure on nerves and blood vessels leads to great suffering and serious consequences from obstructed circulation. Anaemia is early caused by the continued loss of blood. The statistical history and the data which the general study of menstruation presents furnish no evidence that fibrous growths ever exist at puberty; they rarely make their appearance before the age of twenty-five in the unmarried, and at a later age in the sterile, and at a much more advanced age with fruitful women.

The age of greatest liability to fibrous growths, says Emmett, for all women, is shown to be between thirty and thirty-five years. The development of these growths is shown to be retarded by child-bearing, and even by marriage, for the sterile woman is less liable than the old maid, but in turn she is more so than the woman who has borne children.

According to the last named author there are enumerated the following varieties: sub-mucous (probably the most frequently met with), sub-peritoneal, interstitial or intramural, multiple fibroids, fibrous polypus, and fibro-cystic growths.

Without entering into a lengthy description of the varieties named, we will pass to the recital of some cases coming under our own observation, similar to those enumerated by the authors.

Case I. A married woman, about thirty years of age, suffering from frequent and excessive uterine hemorrhage, was admitted to the Woman's Hospital, Chicago. Her history was not unusual; menstruation commenced at the age of fourteen years, was normal in every particular, until two years previous to her admission to the hospital; at that time symptoms of a peculiar order set in, her general health depreciated, she gradually became more and more profuse in her monthly flow, then irregular, and a sufferer from dismenorrhcea, nervous symptoms developed, until unable to longer endure the burden of life, she applied for relief. After a thorough examination no unusual condition could be found. The uterus
apparently normal in every particular. Not satisfied with the ordinary examination, our surgeon-in-chief, Dr. A. Reeves Jackson, decided to introduce a tent, dilate the uterus thoroughly, and carefully explore the cavity, the introduction of the tent and the subsequent dilatation, caused the hemorrhage to cease, and with the patient thoroughly under the influence of ether, the cavity was explored by the finger, with the result of finding a small submucous fibroid situated directly in the fundus. Dr. J. then and there made a crucial incision directly over the locality, thinking to incise its capsule, and probably enucleate the tumor. All went well until the evening of the day following the operation, when violent symptoms of peritonitis set in.

By prompt interference the patient was saved, and remained in the hospital through two subsequent menstrual periods, which came on with regularity and with greatly diminished flow. General treatment consisting of tonics and Squib's fl. ext. ergot in 20 drop doses was given.

Her subsequent history was obtained six months later, and was exceedingly gratifying, the menstrual periods becoming normal with health greatly improved. Whether the improvement was due to the incision, destroying and interfering with the growth, causing subsequent degeneration and absorption, or to the beneficial effect of the dilatation by the laminaria tent, we are unable to say. Emmett is led to question the existence of a fibrous growth, invested with a covering or capsule, and thinks such an arrangement could only be conceived of after a tumor had ceased to grow. When a fibroid has ceased to grow, and has been long subjected to compression by uterine contractions, it cannot be shelled out of its bed with the greatest facility, and with a smooth surface as from a capsule. But the tumor has not in reality acquired a distinct membraneous investment, the enucleation being determined simply by a difference in the degree of density of tissue between the hard fibroid and the uterine structure.
Case II. Miss F., aged thirty-six, seamstress, consulted me with reference to an abdominal enlargement she had first noticed three years previous. She gave me the following history: menstruated at the age of fifteen years, normal as to frequency and quantity, painless; general health good. At the age of thirty years she commenced to grow more fleshy, while she noticed the menstrual flow grew more and more scanty. This state of affairs lasted for several years, until at length menstruation almost ceased. About this time she first noticed a lump, as large as a hen's egg, situated to the left of the median line, low in the abdomen. This tumor gradually increased in size until the abdomen assumed the appearance of a six months' pregnancy. When the case first came under my notice the general health was good, the entire cessation of the menses had not apparently caused any disturbance of any kind. She sought relief from the increasing weight and bulk of the tumor. On digital examination I found an almost normal cervix; the only variation noticeable was a slight elongation; examination with the uterine sound gave a depth of seven inches; by bimanual examination we diagnosed subserous fibroid of the anterior wall, also a subperitoneal growth the size of an orange above and anterior to the first. We advised ergot by the mouth, in doses of one grain three times a day, with the express charge that should she have any symptoms of contractions to report. In correspondence with her during the past year she reports no appreciable effect whatever, but cannot discover that the growth has increased the least. Her general health is good. The nearness to the menopause may account for the cessation in growth, and is certainly a favorable indication. This is a typical case of the innoxious fibroid; during its development and growth we have no record of the slightest pain, hemorrhage, or irritation of surrounding organs; no reflex nervous symptoms, no depreciation of the general health. And as far as can be ascertained, no tendency to further increase in growth or
malignant change. The treatment is still continued, ergot taken at intervals only, as the patient feared its continued use was causing some irritation of the stomach. In all probability the long continued dose of ergot has gradually lessened the calibre of the uterine blood vessels, cutting off the tumor's nourishment, and situated as it is in the outer wall, the circulation is naturally deficient.

**Case III.** While engaged in practice in the city of B., I was called in great haste to a lady, and found she had suffered a sudden and profuse loss of blood, coming on without warning or provocation while in a stooping posture. She greeted me with the cheering information that she was at her old pastime again, having had frequent attacks before. I found her in the recumbent position, head lowered, and hips elevated, and to my surprise not a particle of hemorrhage. On inquiry the following history was obtained:

Puberty was established as early as the thirteenth year, and from the first menstruation was profuse, causing exhaustion from which she scarcely recovered until the next period would bring the same loss, and consequent weakness. This condition of health lasted throughout her girlhood. She married and remained sterile several years, and after a change of climate and a degree of restoration to health, became pregnant and gave birth, in a normal labor, to a healthy male child, which died from inanition at the age of six months. When menstruation was re-established she was conscious of a still greater loss of blood, with some degree of irregularity. Some time after this she suffered a supposed early abortion, in which she was attended by a midwife, who persisted in her endeavors to remove the contents of the uterus, introducing a finger and pulling with all her force upon something, she knew not what; the patient's screams brought the attendants, who forced the woman to desist. She recovered, with no unfavorable results, from this treatment, and enjoyed quite an interval of freedom from excessive hemorrhage. In two
years from that date she gave birth to a healthy child, but was unable to nourish it. I attended her in this labor, without a knowledge of her previous history, however; the labor was perfectly normal in every particular. This brings her history to the time of my attendance upon her for profuse hemorrhage, some three years later. Having placed herself in my professional care I suspected the cause of her difficulty and urged upon her the necessity of an investigation of the trouble. She was one of those peculiar patients found in the experience of almost every practitioner, she would not admit even the possibility of any uterine difficulty, was bitterly opposed to the idea of taking medicine, thought she knew more of the nature of the case than her physician, and positively refused an examination, stoutly maintaining the idea that she was of a hemorrhagic diathesis and that nothing but death would relieve her; that in her younger days she had been dosed and dosed, without relief. She suffered several severe losses of blood within the space of one year, and then became pregnant the second time, giving birth to another healthy child in a perfectly normal labor. Again she was unable to nourish the child and resorted to artificial means.

There was freedom from hemorrhage for one year, when, on returning from an evening reception, she suddenly, without the least pain or warning of any kind, passed an alarming quantity of blood, which apparently came with a gush and as suddenly ceased entirely, no physician being called. She suffered some prostration, but regained strength rapidly and was apparently as well as usual. Several months later, after the fatigue of sight-seeing at the New Orleans exposition, she was again suddenly prostrated by the most alarming hemorrhage she had ever experienced. I was called, and flatly refused to attend her without a thorough examination of her case, and being permitted to treat her according to my own judgment. The hemorrhage continuing, she was frightened into acquiescence in my wishes. On examination with
the finger in the dilated and patulous os, I readily discovered
the cause of all her hemorrhage: situated in the anterior lip
was a fibrous polypus of very peculiar shape; the pedicle,
the width and thickness of my finger, about half an inch in
length, protruded into the cavity, and then, strange to relate,
curved upward toward the internal os, which was not dilated,
but apparently normal in size.

The examination caused frightful hemorrhage, which was
controlled by prompt and thorough tamponing of the entire
vagina; a portion of an old linen table cloth torn into strips
an inch wide, and well greased with fresh lard, was packed
firmly into the vagina causing the desired counter-pressure
and an entire cessation of the hemorrhage. This was allowed
to remain three days and then carefully removed.

The patient rallied, and promised to faithfully obey instruc­
tions in the future. Squib's fluid extract of ergot in fifteen
drop doses, with tonic remedies, soon restored her to her
usual health. Almost a year has elapsed without return of
unfavorable symptoms. In case there is a return of the dif­
ficulty the chain eraser will be used and the growth
removed. The patient's exhausted condition prohibited
the operation at the time, and the condition was easily
accounted for after the discovery of the growth, the absence
of pain readily understood, situated as the polypus was
within the cervix. In all probability the midwife endeav­
ored to tear this growth from the uterus, thinking she was
dealing with the presenting ovum and its membranes. This
worthy, or unworthy individual, met me a few days subse­
quent to the examination and inquired after her former
patron, and when I rendered my explanation of the discovery
of the growth, she was incredulous, and asked if I was sure
it was not an abortion I had been dealing with. In all prob­
ability the growth had been retarded by pregnancy, and kept
in check from year to year by that condition, and in the un­
employed intervals she suffered from excessive hemorrhage.
Case IV. Some eight years ago a case of uterine fibroid of an unusual character, first came under observation, the history of which we have carefully kept, and the progress of the growth carefully watched. The patient being a member of my own family, the case has created an unusual degree of interest. Miss S., aged thirty-three years, first noticed an abdominal enlargement about eight years ago, and while I was serving as intern at the Woman's Hospital, 1879, she consulted me with reference to it.

I had not seen the lady for two years, the growth having become perceptible during that time. When she visited the hospital she had the appearance of a woman six months pregnant.

There were not the slightest symptoms of any apparent uterine trouble. Menstruation had been normal in every particular from early womanhood. Her occupation was that of a teacher, and her general health good. Dr. A. Reeves Jackson was consulted, and the patient etherized and an examination made. His diagnosis was intramural uterine fibroid, involving the entire body of the organ; depth of the uterus as indicated by measurement with the sound was seven inches. At this time the patient was menstruating regularly and without pain. Dr. J. was decided in his advice; he simply said, let well enough alone; if she lives through the menopause the growth may cease, or finally degenerate and disappear, but do not meddle with it; the tumor has the advantage of us in its size and situation.

For four years the growth steadily but slowly increased, and the menstrual periods remained normal. Her appearance became that of pregnancy at term; her general health depreciated; there was noticeable loss of flesh, some distress from constipation, and slight irritability of the bladder; the appetite was good and she still pursued her avocation. Two years ago Dr. William H. Byford was consulted, and on examination also pronounced the tumor of the intramural
variety with cystic degeneration going on; by palpation he could distinctly feel fluctuation. The tumor at this period was immense, and fortunately instead of encroaching upon stomach and adjacent organs, its great weight caused it to fall forward; the pendulous abdomen seems as if it could not bear further stretching without rupture; the umbilicus is almost obliterated by the fearful tension. Dr. B. accounted for the sudden and wonderful increase in size within a short period by adhesions formed with the omentum, and fed by its large blood vessels. He had seen but one case of a similar nature, in a rich experience of many years.

He advised ergot in fifteen drop doses, also blue mass pills of one-half grain each every night. This treatment had the effect of overcoming the constipation, contributing greatly to the patient's comfort. The ergot could not be taken any length of time, because of its irritating effect upon the stomach. Strange to say she could not take medicine of any kind without causing her distress.

The only reflex nervous symptoms ever manifested in the history of the case occurred evidently when the growth first originated, prior to any outward perceptible enlargement of the organ; at that time, the reflex nervous symptoms took the form of hysteria, irritability of temper, and morbid depression, which lasted several years and then gradually ceased. She is now of a cheerful disposition, having seemingly become a changed woman in that respect. About the time these morbid tendencies set in she was unusually worried and distressed because of financial reverses in her family, and other sources of trouble of a character to harass and annoy her.

The theory has been suggested by some one, I cannot recall whom, of the possibility of a condition of great mental depression, acting through reflex influence upon the uterus, causing these growths. Something after the order of strong mental impressions being transmitted to the child in utero. Other than weight and great inconvenience, the patient has
at present no source of discomfort from this monstrous growth. Her general health is fair, appetite good, she sleeps well, does the labor of a well woman, and has declared she does not know what pain is. During the past two years she has menstruated but once, that merely a show. She is now forty-two years of age, and cannot notice any perceptible increase in size in the past year. Some three years ago, before the tumor attained its present dimensions, the method of treating by electrolysis was used without success; an abscess formed, causing such distress the treatment was abandoned. The application of the electrical current caused a feeling of great weight and bearing down, almost disabling her. One needle was inserted into the tumor, the other pole on the abdomen, only five cells being employed.

I am of the opinion had this method of treatment been adopted when the growth was first discovered, the history of the case would have been different. In the report of the section on obstetrics and gynecology at the American Medical Association held at St. Louis recently, some interesting reports were made of the methods of treatment by electrolysis in cases of uterine fibroid. Time will demonstrate the value of this method. One cardinal rule is to be observed in the treatment of these fibrous growths; we must do nothing to destroy the vitality of the tumor while it is in situ, since we then burden the case with the extra risk of blood poisoning, but if treatment by electrolysis or medicinal means be employed early enough such danger may be avoided. There is a wide field of research before the gynecologist in this particular direction. The many improved methods advocated by eminent specialists meet the requirements of almost all incipient growths.

Much harm has resulted from the injudicious use of ergot in large quantities, but it has not always been recognized that the harm was due to the ergot. As a rule, great benefit is obtained from it when given in small and continued doses,
with a view of acting on the coats of the vessels, and of exciting only a moderate contraction of the uterine tissue. Ergot has been administered by the stomach, by the rectum, by the vagina, and even injected directly into the tumor. But its introduction by subcutaneous injection is likely to be the method to come into general use.

The gynecologist of to-day in recognizing the important advances in his department, signalized by the discovery of ovariotomy, the cure of vesico-vaginal fistula, and reparative operations upon the perineum, the uterus, and vaginal walls, often forgets how much has been done in reference to the extirpation of uterine fibroids of all three varieties. Prior to the present century, and even during the first half of it, the operation of laparotomy for sub-peritoneal tumors of this class was unknown; interstitial tumors were uninterfered with; and he who studies the methods of those who attacked submucous growths by the constricting ligature, will at once appreciate how hazardous, difficult, and uncertain were the means at the disposal of the surgeon of the olden time for dealing with them.

The key-note to the modern advance in this subject was struck by the late Dr. W. L. Atlee, of Philadelphia, when in the year 1853 he presented to the American Medical Association an essay entitled "The Surgical Treatment of certain Fibrous Tumors of the Uterus heretofore considered beyond the Resources of Art." This essay received the prize of the association, and to-day stands as the pioneer article in the surgical literature of these grave and otherwise irremediable cases.

Both in this country and in Europe the lead of this bold surgeon has been followed, and the methods which he advocated a quarter of a century ago, and which slowly battled with a pretty decided opposition, have come to be recognized as legitimate surgical resources.

One of the great questions of the future in gynecology is to be, not the propriety but the proper limitation of the oper-
ation of laparotomy for the removal of uterine fibroids, involving, as it very commonly does, the ablation of a part or the whole of the uterus. To remove the uterus when enormously enlarged from a fibrous growth is unquestionably one of the most formidable operations a surgeon can be called upon to undertake. The degree of success which has so far attended the operation offers but little encouragement for the future.

It has long been known that a large number of women, who may have suffered years before from fibrous tumors, recover their health perfectly after the change of life has taken place, and with many the tumor gradually disappears. A knowledge of these facts led to the removal of the ovaries, first with the object of arresting the loss of blood, and at a later date, as it was held, to put a stop to ovulation, but with a purpose in common to check the growth of the tumor.

Dr. Trenholm, of Montreal, was supposed to have been the first to operate, and in 1876, by abdominal section, for this purpose; Nussbaum, of Munich, in one case, and lastly Dr. Goodell, of Philadelphia, in one case. All of these five cases were successful, the symptoms for which the operations were undertaken being wholly relieved, and the fibroids themselves shrunk away, as they sometimes naturally do after the menopause. The future of this department of gynecology promises much encouragement, from a surgical standpoint. The period of experimental treatment is rapidly passing to that of certainty, as demonstrated by successful results obtained in the past.

By Dr. Mansfelde: It was part of my object in staying to this meeting to-day, that I should hear this paper. I have met with cases of fibroids, and I did not know what to do with them; it is my nature to feel very badly when I cannot have my own way, and a physician of that description when he cannot do any good to his patient, feels likewise badly. I want to thank the author of the paper for a thought that she has given me, which I shall certainly try to demonstrate the correctness of, as soon as the opportunity affords itself. When
she spoke of my very good friend, Dr. Jackson, of cutting into the fibroid, in the first case she reported, and the good effect of it, the idea came to me that there was a relationship of the effect in such operations, to the ablation of the tonsils, which, as is well known, atrophy after such interference.

It is certainly true, as the writer of the paper states, that fibroid tumors of the sub-serous kind, are the let-me-alone cases. If I had one of those cases, I would be tempted to institute this kind of procedure: I would make a wedge-shaped cut down into the tumor, then take the wedge out of the tumor, and sew up the tumor again, provided I couldn't remove the tumor; the point I make is this, this piece removed, the tumor being composed of involuntary muscle fibers—all physicians know that they are put together in dovetailed fashion [indicating with his fingers]—you do away with the continuity of the tissue, and you do away with the power the tissue possesses for indefinite growth. I don't believe in strangling the growth, what I want to do is to interfere with the nutrition of the part to such an extent that it shall not grow any further, but still that there should be life left in it so that it shall retrograde or stay where it is.

By Dr. Lanphear: If there are no other remarks by the members of the society, and you will bear with me for a moment, I would like to explain a little in regard to the treatment by electrolysis. At a recent meeting of the American Medical Association, Dr. Englemann, of St. Louis, showed us a number of cases of uterine fibroids which he was treating by this method of electrolysis. He related his experience in continental hospitals; one case I remember distinctly, in which the original fibroid tumor extended some three or four inches above the umbilicus. By four, or at most, five, applications of the electrode, it was reduced more than one-half in size. The results obtained from electrolysis are certainly surprising; they are more than that, they are strange; and if not well authenticated, would be incredible. The mode is to take a
stylette, something the shape and size of an ordinary lead pencil; in large fibroids this is introduced at the cervix, and thrust four or five inches into the mass of the fibroid; the result is, that a large hole is left in which one would think there would be considerable suppuration, but as the galvanic battery is used there is no suppuration whatever. The ordinary Leclaux cell battery is the one employed; while it produces a certain amount of electrolytic effect, there is no suppuration resulting from it. The patient at the first operation is put in bed for twenty-four hours, with the idea that there may be a certain amount of inflammation; in the cases operated upon there has never been any inflammation. After the first operation the patient comes to the clinic, is operated upon, gets off the table, returns home, and goes about her duties; the operation is repeated once or twice a week, ordinarily once a week. The result is, that in a very short time the uterine fibroid begins to diminish in size; the immediate result is, when the stylette is withdrawn, that you have a large hole left, which gradually diminishes, until at the end of three or four days it will barely admit the passage of the uterine sound. This shrinks and shrinks, until at the end of a few weeks of treatment, there is almost nothing remaining of the uterine fibroid tumor. It is impossible to use a battery of this kind for the treatment of uterine fibroid without the galvanometer. A certain number of milliamperes must be used; you must measure the electricity the same as you measure quinine. A very strong current is employed, and the length of time is ordinarily five minutes. As I was saying, the other electrode is placed upon the abdomen; a large piece of metal is employed, covered with moist earth; by so doing there is no ill result from the large amount of heat; if the current is too strong it is divided, and one is thrown around the abdomen, and one to the thigh. The result of the treatment universally has been good; there has been no case of uterine fibroid so treated which has not yielded to the electrolysis.
THE PREVENTION OF PERINEAL LACERATION IN PARTURITION.

BY DR. MARY R. BUTIN, DORCHESTER.

Fellow Laborers—It has been truly said that he, who preserves from rupture a perineum which is in peril, shows more skill, than he, who successfully repairs one which has been ruptured.

After the able and convincing paper at our last annual meeting, and which proved an incentive to this, it seems our duty to operate in cases of laceration if impossible to prevent it. While so much attention is being directed to prophylactic measures in other departments of medicine, it is as truly needed here as elsewhere.

That this is an important subject none can doubt; one of obstetrical interest, yet reaching into the domain of gynecology. Authorities favoring measures for preventing laceration are many, among whom may be mentioned Lusk, Playfair, Barnes, Goodell, Barker. It requires no microscope to reveal to the enlightened physician, as he reflects by the bedside of a patient who has sustained a laceration, the raiding micrococci and consequent puerperal sepsis.

With some degree of truthfulness it has been stated that could the experience of the accoucheur and gynecologist be known to the general public, but few would face the consequences of married life.

Hart and Savage have especially elucidated the subject of perineal anatomy. Ambrose L. Reamey, in American Journal of Obstetrics, '83, in a series of articles on the "Topographical Relation of the Female Pelvic Organs," in which he reviews the perineum.
The shape of the perineal body is variously defined. The general impression is that it is triangular; this, however, can be considered as yet in doubt. Hart and Barbour, in their Manual of Gynecology, define it as being an irregular edged segment of a hollow sphere, an angular inter-space situated between the lower one-third portion of the posterior vaginal and anterior rectal wall. Entering into its composition, and forming the pelvic diaphragm, are muscles, fascia, nerves, blood-vessels, and lymphatics. As the first-named are important to us in this connection, we will briefly review them.

The levator ani, or, as called by some, the pubo-coccygeus, arises from the pubes, from the pelvic fascia, and spines of the ischium, and is attached in the median line to the vagina, rectum, and fellow of the opposite side. "The function of this muscle, as the name would indicate, is that it tends to raise and support the rectum and vagina during expulsive acts; it is the physiological antagonist of the diaphragm in its action on the pelvic viscera, as it rises and falls in unison with it during forcible expiration, and when the action of the abdominal muscles is excessive, it yields and enables the pelvis to bear a greater force than a more resistant structure, and on remission of such action it restores the perineum to its form."

The transversus perinei and sphincter ani are of less importance. The former, arising from the rami of the ischium, passes to be inserted at an acute angle in the central tendinous reflex of the perineum. It is obvious that in central laceration this muscle is torn through at its point of attachment, and that it will produce gaping of the longitudinal fibers of the pubo-coccygeus. "The perineal fascia is a dense, membranous lamina, and closes in the front part of the outlet of the pelvis." "The pelvic fascia, forming the sulci along the sides of the vagina, is reflected over the muscles around the line of junction of the vagina, so that with the subpubic ligament above the connection, with the coccyx behind, and the
tuber ischii on each side, a firm support is given the outlet.”

Thus it would seem the uterus and vagina are not supported by the muscles alone, but by the fascia and connective tissue filling the pelvis, and forming the roof.

FUNCTION OF PERINEUM.

The function of the perineum is differently estimated, the terms are vague and the literature conflicting.

One endeavoring to arrive at a correct conclusion in the matter occupies much the same position the geologist in Azoic time would have done.

The atmosphere of uncertainty so enshrouds the face of truth as to obscure it, while facts and recently formed strata of opinion from beneath, are thrown by the fires of thought and investigation into disorder and confusion.

Hart and Barbour state that “the functions of the perineum are important, but have been both exaggerated and underrated.” It gives a fixed point for many muscles, prevents pouching of the rectum forward, and strengthens that part of the pelvic floor which has no posterior bony support.

If the pubic segment of the pelvic floor, as described by these authors, is prolonged backward to the sacrum by means of the uterus and uteri-sacral ligaments, and is one great factor in supporting the pelvic organs and the weight of the super-incumbent viscera, the perineal body of necessity will be deprived of much of its supposed physiological interest.

Barker says: “When we consider the deplorable condition of women with extensive lacerations of the perineum, the cystocele, the rectocele, the prolapse, with all their annoying symptoms and complications, we cannot doubt the importance of the perineum as a supporting body to the vagina and uterus, or the sad consequences of its destruction.”

Emmet says: “The perineum includes all the muscular structure in front of the curve of the rectum, and unless the
sphincter ani is included in the rupture, it is not productive after healing of subsequent trouble."

None can doubt that whatever trouble the gynecologist may attribute to laceration, a wound to the extent which will admit of septic absorption, is of importance to the obstetrician.

The perineum is the structural end of the parturient canal, and as such forms a barrier to the presenting part, which meets the perineum at nearly right angles as it descends in the axis of the inferior strait and is directed by it in the axis of the outlet. The elasticity of the structure allows of the escape of the head, which it also keeps in close opposition to the pubes.

**ETIOLOGY.**

Some of the most common causes producing laceration may be enumerated as being: First, large foetal head. Second, passage of shoulders. Third, careless use of forceps. Fourth, rigidity of soft parts. Fifth, rachitic pelvis.

It will be seen by the factors producing laceration that the accident can not always be averted, but that in some instances it may, with judicious care, be preserved, can not be doubted.

The agencies acting to expel the foetus are uterine contractions and the accessory muscles of respiration. Those engaged in relaxing the tissues of the canal are: First, the membranous pouch. Second, the presenting part. Third, artificial means.

**THE MEMBRANOUS POUCH.**

The amniotic sac, when it can be preserved intact, was no doubt intended as the natural dilator of the uterus and vagina and perineum. Some of our best authorities, however, advise us that after the dilatation of the cervix the office of the membranes have been fulfilled, and that to leave them unruptured retards labor. In current literature, though, we find many advocates of its preservation.

Dr. Moses, in *Courier of Medicine*, Sept., '85, says: "I
have closely observed the process in cases in which the sac has been preserved and the lacerations have been of trifling moment."

Dr. Byford, in a paper read before the Chicago Medical Society, recommends keeping the membranous pouch intact, to secure sufficient dilatation of the vulvar and vaginal rings, and to make the occiput ride over instead of hooking under them.

Dr. E. E. Montgomery (Weekly Med. Review, Jan. 20th, '86) says: "When the membranes are preserved unruptured until the vulva is dilated, and the head about to emerge, the probability of perineal laceration is extremely slight. The causes for rupturing the membranes are the hastening of labor, and saving suffering of a longer duration to the patient."

If the case be a normal one slowness is the part of safety for the patient, and time to the physician should not be taken into account, and the acceleration of labor should be only undertaken by skillful hands, and for some threatened danger.

ARTIFICIAL MEANS.

Artificial means of dilating the perineum are various, and consist of measures which from theory and experience are known to be relaxants, and those means which are based upon a knowledge of the composition of the structure and its function.

"The aim of prophylaxis," Lusk says, "should be to develop elasticity of the soft parts to the fullest extent, and to cause the head to pass by its smallest diameter."

Hart and Barbour state that, "by gentle pressure we can keep the head flexed, retard its progress, and elongate the perineum towards the pubic arch."

Playfair says: "The term, supporting the perineum, conveys an erroneous idea and it is certain that no one can prevent a laceration by mechanical support."
If the term, *relaxation* of the perineum, were employed we should have a far more accurate idea of what is to be aimed at, and if this be borne in mind it cannot be questioned that nature may be most usefully assisted.

The use of warm water applied to the perineum with a sponge is recommended in some instances. Chloroform and sweet oil are also applied for their relaxing effects.

Chloroform administered by inhalation is thought serviceable, and will control the impulse to bring to bear the thoracic and abdominal muscles. Dilation by means of the fingers hooked over the perineum has a great many advocates, and no doubt is of service.

The forceps have been an efficient means in saving the perineum.

Hart and Barbour speak of the case with which the axis traction forceps bring the head over a rigid perineum.

Episiotomy is held only as a dernier resort in cases when the perineum is in extreme peril.

The manner of securing relaxation and controlling the head, recommended by Goodell and Olshausen, finds an advocate in Mundé. It consists of rectal expression. Towards the close of the second stage two fingers are passed into the rectum and under the chin of the child, and by pressing the face upward and forward the normal rotation can be effected and delivery can be made to occur at the will of the operator.

Lusk, in a similar manner, in cases of great rigidity, alternately draws the chin downward until the head distends the perineum and then allows it to recede.

In the *American Journal of Obstetrics*, June, ’84, Dr. McGaughey details a method which consists in support to the the foetal head by the left hand while the right supports the perineum. He places the patient upon her left side, passes the left hand over the abdomen, between the thighs, over the vulvar orifice, where it lifts the head towards the os pubes and away from the perineum. The left hand in this position
retards the progress of the head, if necessary, by resisting uterine action. The right hand applied to the perineum notes elasticity and extension. In this position the practitioner may apply any means deemed advisable to relax the structure. The right hand is in a position to prevent rupture by the passage of the shoulders, which often do more damage than the head.

Dr. Reamey, in the *Journal of Obstetrics* for October, '85, thinks the anatomical arrangements bear him out in applying support by means of a towel or bandage passed over the perineum and placed in the hands of two assistants in such a way that traction during pains can be directed in such amount as the accoucheur may direct.

Emmett has aptly compared the perineum to two muscular curtains stretched from the pubes to the coccyx. The force of the head in parturition tends to separate them, and would doubtless do so in every case were it not for the obstacle offered by the underlying fascia and overlying integument.

From what we have already learned of the structure, function, and causes operating to produce laceration, it is consistent with intelligent action to apply measures—First, to secure relaxation of the perineum. Second, to retard the progress of the too rapidly descending head. Third, to support and keep flexed the head on the sternum.

The method or methods I have used, and with which I have been as successful as I think anyone can expect to be, consists chiefly in that method described by Playfair, and the aim of which has been as stated by Hart and Barbour, by gentle pressure to keep the head flexed, to retard its progress, and to elongate the perineum toward the pubic arch.

The position in which the patient can be most and best assisted is undoubtedly upon her left side.

When the physician acquires, as he very soon can, the *tactus eruditus*, there need be no exposure of the patient, as the finer sense of physician and patient will indicate.
Should rupture be suspected, or to satisfy the practitioner whether it exists or not, but a small amount of exposure is necessary and could be objected to by none.

I would begin the support early, soon after the head bulges the perineum. Here common sense will dictate the time at which it will be of most service. The object being to direct the head forward in the axis of the outlet, instead of it being driven too much downward and backward. Judicious pressure will not allow the perineum to be bruised, while the fingers and thumb pull the fibers toward the central portion. As the head descends in the axis of the inferior strait and the occiput is rotated forward to the pubes, it is evident subsequent uterine contraction will drive it against that point and firmly hold it.

The pubic bone forms a pivotal point around which the head must revolve as it describes the arc of a circle. Now, in order to do this the head presents by the sub-occipito bregmatic, sub-occipito frontal and sub-occipito mental diameter successively. The longest diameter which distends the perineum being the sub-occipito frontal.

If the force directed down the spinal column and extends, the long arm of the lever be counteracted by judicious pressure, the long diameter of the head may be made to coincide with the axis of the outlet and the force from behind exerted to expel the ovoid by its smallest diameter.

This is somewhat theoretical, yet I do not know why its practicability is not possible, and that by gentle pressure we can and do keep the head flexed. In the endeavor to retard the progress of a too rapidly descending head, so as to allow time for relaxation and prevent too forcible and sudden distension, the methods recommended would seem to fulfill the indication, and rectal expression seems especially commendable. I think it can be doubted, though, if the expulsive action can be successively combated by the *vis a fronte* recommended by Dr. McGaughey.
Uterine force will be found seldom, I think, so great of itself as to greatly endanger the perineum. It is only when the accessory muscles of the thorax and abdomen are called into action that the expulsive power becomes so great that too forcible distension need be feared.

Playfair says, "It is certain the patient can by voluntary exertion materially increase the action of the accessory muscles of parturition. And when the head is distending the perineum, we may even find it advisable to urge the patient to cease all voluntary effort and cry out, for the express purpose of lessening the tension to which the perineum is subjected."

I am convinced that in this measure lies one of the secrets of success in preventing laceration. Giving chloroform to aid in controlling the impulse to bear down is laudable and sometimes necessary.

I have endeavored, though imperfectly, to review the current views of the perineum, and the means and methods for its preservation. I can offer no panacea, nothing new. Yet, if the advocacy of the views which have been advanced be productive of good, this turning over and harrowing in of olden ideas will be justified, and the successfully terminated cases of labor which will pass from your hands be a harvest which enriches humanity.

Discussion on the paper opened by Dr. Lanphear: I arise to compliment the author upon the successful presentation of this subject, but there are one or two points to which I must object; no doubt there will be numerous practitioners of ten or fifteen years' experience, who have attended hundreds, nay thousands, of cases of obstetrics who will state here that they have never had a case of perineal laceration. I have heard this statement made repeatedly by physicians, whom I know have had thousands of cases; not long ago in the Kansas City Medical Society one of our most prominent and active members made the statement, that in twenty years of obstetric practice he had never had a case of perineal laceration, but,
gentlemen, I have at the present time in preparation for operation a case of rupture of the perineal body back of the sphincter, which occurred some years ago, in the practice of that same practitioner. Why did he make that statement? Simply because he did not recognize the fact that he had perineal laceration; there are many who do not know when they have perineal laceration. The importance of the subject is becoming more apparent, and I think the Doctor is more to be complimented for having presented the subject in such a forcible manner. But of the directions for the prevention of laceration I think some of them are ill-timed and ill-advised. You are all familiar with the experiment with the Floritine flask, in which a single touch explodes the bottle, or of the boy who takes the bladder and fills it full of wind, and then in order to make it explode, strikes it with his hand. The same is true of the perineum, when the perineum is on a strain; in its most tense condition then, is the application of a towel or the hand going to prevent laceration? No, it is going to assist in laceration of that perineum; for that reason I object to the application of the so-called support for the perineum by the application of the hand or the towel. I believe that many cases of rupture of the perineum are assisted by the application of the hand to the already over-stretched perineum. The only two agents which have been found to be of benefit to the prevention of laceration of the perineum have been the internal administration of chloroform and the introduction of the fingers into the rectum. Of the administration of chloroform in labor, I cannot speak too highly.

At the present time, any active accoucheur who would attend a lady in confinement in our city without the administration of chloroform would soon lose his practice; it is a most rare exception that a case of labor is attended without the use of chloroform; since the introduction of this practice cases of laceration of the perineum have become of exceeding rarity. In my opinion the best advice which can be given to practitioners is to let the perineum severely alone.
By Dr. Knapp: I wish to add to the remarks that have just been made, holding of the foetal head to prevent the too rapid descent of the foetal head, and the use of forceps not to cause laceration, but to prevent one.

By Dr. Lanphear: Correct.

By Dr. Knapp: The forceps have been alluded to in the paper as being a very fruitful cause of laceration of the perineum, I think they are a fruitful cause, in that their use has been delayed too long. You can deliver that head slowly enough to prevent laceration with the forceps, if it be done before the inflammatory changes or a hypersemic condition, or condition of congestion has been engendered, by too long delay. A few weeks ago I was called in a case of consultation to use the obstetric forceps. I saw on the first examination that the use of the forceps was absolutely necessary, and that a perinael laceration would be unavoidable, because of the delay in the use of the instruments through a period of some ten or twelve hours after they should have been used. I would recommend the holding of the foetal head, to prevent its too rapid descent. The use of the obstetrical forceps at the proper time will induce a sufficiently rapid descent. I would certainly endorse the words of the gentleman who has just spoken, to let the perineum severely alone. I believe that the same principle would apply to the method which he advocates, or one of the methods he advocates, that of the use of the fingers in the rectum, and the pulling of the head down by the use of the fingers in the rectum.

By Dr. Carter, of Lincoln: I find it to be a good practice to support the head to some extent, and avoid laceration. Now the condition mentioned in the paper, that of the patient being put on the left side, I can't see as it would make any difference which side the patient was put on, to prevent laceration. I think the Doctor deserves a great deal of credit for the manner in which she has presented the subject.

By Dr. Mansfelde: I think the gentlemen who have
spoken have somewhat misunderstood the aim of the paper that has been read, nor do I think the speaker said anything about the forceps being the cause of perineal laceration. She simply mentioned it as one of the causes. The support of the perineum is not mentioned by the author of the paper at all as a means of prevention; the method is this: the two furrows on the posterior plane of the vagina, by the introduction of the finger and the holding of the head when it descends, so that it should be pressed toward the sternum, are converted into a plane, the head gliding easily over it. This is the latest method described, I am satisfied that it is the best one.

By Dr. Lanphear: You said to introduce the finger into the vagina?

By Dr. Mansfelde: Yes, on the posterior surface of the vagina by pressing inward and downward on the parts, and at the same time put the front part of your fingers against the head and change the head towards the sternum; that is the method that has been described by the writer of the paper.

By Dr. Knapp: Which is the smaller, the fingers or the head?

By Dr. Mansfelde: I don't think it is the size of the head at all that does the mischief, it is the force behind that does it. There is another thing that I want to speak about as being the means of preventing the perineal laceration, beside the method described by the writer of the paper; that is, the use of chloroform in the last stage of labor. The involuntary muscles of the uterus have none of their power abolished by the chloroform; it continues, while the voluntary muscles have all their powers abolished; this is the degree of the success of the administration of chloroform. I wish I never had to confine a woman, except under the influence of chloroform. I want to state in connection with this, that I am glad to know that the first paper that was read before this society by a woman was in choice English, and one to be compared favorably with those that come from the classic (?) East.
By Dr. Lanphear: I would like to ask Dr. Mansfelde what is gained by the introduction of the fingers into the vagina instead of into the rectum?

By Dr. Mansfelde: My own observation teaches me that by the introduction of the fingers and preventing the head from descending down on the weakest part of the perineum you will prevent injury to these parts.

By Dr. Knapp: Did you ever see a laceration of the perineum without tearing of the skin?

By Dr. Mansfelde: That is an entirely different thing; it is based upon an entirely different principle; I am talking of perineal rupture that has to be operated on afterward.

By Dr. Knapp: I ask the question did you ever see complete laceration of the perineum without laceration of the skin, of the perineal body, as the writer of the paper described.

By Dr. Mansfelde: No, I have never seen it, and I am glad I haven't. I prefer to give the woman the least trouble I can give her, and I think that the introduction of the finger into the rectum is not the least trouble.

By Dr. Lanphear: I have never found one that knew that the finger was introduced.
A somewhat unusual experience in the frequency of face presentation in my own practice led me to the selection of this subject for your consideration and discussion. In my first fifty-one cases of confinement, during a period of twenty-seven months, I met with this uncommon presentation three times. By some authorities it is considered preternatural, by others, natural; preternatural, because of its infrequency, and of the greater risk to both mother and child; natural, on account of spontaneous delivery in the vast majority of cases. Its frequency can only be determined by an examination of the statistics of a large number of cases. In 260,817 cases of confinement, collected from British, French, and German sources, there were 1,167 face cases, or 1 in 223\(\frac{1}{2}\). In 16,654 births in the Dublin Lying-in Hospital, under Dr. Collins, 33 presented by the face, or 1 in 504\(\frac{1}{3}\). Out of 81,711 cases at the Maternite in Paris, 320 were of the face, or 1 in about 250. We thus see that the variation in frequency is great, but that the most gives a ratio of 1 to 223\(\frac{1}{2}\). The causes given in the books for this peculiar presentation are purely theoretical, and consist of all of those conditions pertaining to the child or the position of the uterus, which would permit of an extension of the head in the ordinary vertex position. Chief among the causes cited is an obliquity of the uterus, which, after labor has commenced, has a tendency to permit of a hitching of the occiput on the brim of the pelvis, and as labor advances, what was supposed to be originally a vertex, becomes converted into a face presentation by a simple extension of the head. It has seemed to me, in a study of this
subject, that so far as I know, no consideration has been given to a want of sufficient flexion of the head before labor has commenced as a primary etiological factor. This condition, either owing to a peculiarly shaped head or a prominent neck and chest, might determine a face presentation by the uterine forces being directed through the spinal column to what should be the longer arm of the cranial lever, but which in reality is the shorter, independent of any abnormal condition of the uterine axis or the pelvis. The comparative infrequency of this presentation and the common obliquity of the uterine axis leads me to consider this the most reasonable hypothesis.

The diagnosis of a face case is very simple, if but one point be kept in mind, and that is the mouth. This orifice, with the alveolar processes, can not be mistaken for any other part. When the first examination is made, if the labor has been in progress for some time, and the face well advanced, the parts become so much distorted, failing a requisite search for an orifice, one might be readily deceived into a belief that the breech presented. An experience with an old midwife on one occasion makes this point quite prominent. After labor had been in progress some time, she sent for and met me with the statement that the child was doubled, and there was no change. She had attended twenty cases to my one, and respecting her experience, I was surprised to meet with a face presentation. At my diagnosis she laughed and sneered, and because I would not consent to her view, she endeavored to have me discharged from the case. Her chagrin at its termination was only equaled by her previous self-confidence. In the very early stage, a hasty examination might confound the forehead with the occiput, and this is to be guarded against most thoroughly, as we shall see in the management that it is at this early stage only when a rectification of the presenting part can be accomplished. If in doubt, a more extended search should be made, either for the orbits in a face case, or the convergence of the sutures in a vertex case.
It is hardly necessary to any more than refer to the diagnosis by abdominal palpation. As an accessory means it is well enough, but no obstetrician would be satisfied with it alone, and it can not reveal what the vaginal examination will as regards the dilatation of the os and the progress of the case.

The mechanism of delivery in face cases is the same as in that of the vertex, the positions being analogous. If we bear in mind the same positions of the body, with the head simply extended, we can easily remember the four positions of the face. In the first, the forehead is to the left anteriorly, while the chin is to the right posteriorly. In the second the forehead is anteriorly to the right, and the chin posteriorly to the left. These two positions occur as the rule, while the third and fourth are rarely met with. The third is the reverse of the first, and the fourth of the second. In the descent of the face, the chin constituting the shorter arm of the cranial lever, advances more than the forehead, when, on reaching the floor of the pelvis, the most important part of the mechanism, and by far the most essential to spontaneous delivery, occurs, viz.: rotation of the head. If now the head be sufficiently extended so that the chin has reached a lower plane than the forehead, it will be guided by the structures at the floor of the pelvis, the uterine force continuing to act on the shorter lever, forward beneath the ischial spine to the pubis, while the forehead passes backwards to the hollow of the sacrum. The chin now becoming arrested under the pubis, the force through the vertebral column is transferred to the longer cranial lever, and with the action of the pelvic floor structures, flexion of the head occurs, the face, forehead, and occiput respectively passing from the vulva. Should the child have a long neck, it is possible that extension of the head will be so great as not to permit of spontaneous delivery, from the fact that the pelvic floor would offer nearly as great a resistance to the forehead as the pubis does to the chin.
One of my cases seemed to present this difficulty. I was called nine hours after the commencement of labor to a multipara who had borne five or six children. The nurse informed me that the head had been at the inferior strait two hours, the pains meantime continuing severe. The chin was found well under the pubic bone, while the forehead was quite high. At each uterine pain, which was severe, the chin advanced as far as possible, while no effort whatever was made at flexion. I waited some little time for progress, but failing which, after sufficiently severe pains, the forceps were applied and flexion, with consequent delivery of the head, was readily induced. I firmly believe in this case that spontaneous delivery was highly improbable.

Should an insufficient extension of the head in its descent not permit of the forward rotation of the chin in the first or second positions, it will be directed to the hollow of the sacrum, and the forehead to the pubis, a condition which, under the ordinary relations of the diameters of the head to the pelvis, will not permit of spontaneous delivery. Where this is possible, owing to a roomy pelvis and a small head, the cranial vault becomes arrested at the pubis, the chin escapes over the perineum; it then becomes arrested and subsequent flexion results in the passage of the occiput under the pubic arch.

The prognosis in face presentation is much more unfavorable than in the common vertex, both as regards the mother and child; for the former, on account of the greater duration of the labor, and for the latter, because of the serious injuries which may result from the extreme extension of the head. Statistics give a mortality of about one in ten or eleven for the child, and of one in twenty for the mother. In my own three cases there was no unfavorable result, only one being a primipara, and in this one the child was with difficulty saved. Labor had been in progress twenty-four hours. The face was very much deformed, and the surface of the
skin excoriated on all its prominent parts. Artificial aid was required for at least a half hour before voluntary efforts at respiration were made, and then only four respiratory movements in the minute occurred. Constant watching and occasional assistance in the respiratory act were successful in saving the child. When it is remembered that the mortality is about the same as in breech presentation when nature is allowed full sway, it is somewhat surprising that there were advocates of podalic version even when the face was well advanced in the pelvic cavity, the operation itself necessarily adding to the risks in the case. If the chin does not rotate to the pubis but passes to the hollow of the sacrum, unless the head is very small or the pelvis unusually roomy, the death of the child is inevitable, and delivery is accomplished only after craniotomy.

Most of the older writers held very erroneous views in regard to the mechanism and management of face cases, believing that spontaneous delivery was impossible, and consequently that it was necessary to perform podalic version in all cases. Smellie is said to have been the first to recognize the possibility of spontaneous delivery, but it was not until long after him, following Mme. La Chapelle's article on the subject, that it became generally conceded that spontaneous delivery was the rule, and non-interference should be the practice.

It is to be borne in mind that a face case is a tedious one, and so long as the condition of the mother will warrant, and progress is continuous though slow, we should trust to the unaided efforts of nature. The membranes should be preserved intact as long as possible, as they are of much more consequence in these than in vertex cases, hence it is necessary to be careful in the efforts to make a diagnosis by vaginal examination lest they be ruptured, and to this end the examination should be confined to the intervals between pains.

Rotation of the head is by far the most important move-
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ment to be observed, and oftentimes when this seems quite unlikely to occur, valuable assistance can be rendered; yet it is to be remembered that it is sometimes very tardy and occasionally occurs when the natural efforts were supposed to be incompetent. The essentials for a proper rotation are a sufficient extension of the head, and the descent of the face to the floor of the pelvis. If it be found that extension is insufficient, and the chin is not on a lower plane than the forehead, then more favorable conditions can be brought about by pressing upwards on the forehead during the pains, and if rotation be retarded at the proper time, then, in addition to the above, it is recommended to insert the finger in the mouth, and make traction downwards and forwards on the jaw. Penrose believes that non-rotation is generally caused by the want of a point d'appui below, and that if this be supplied rotation will take place. In such cases he applies the hand or the blade of the forceps, so as to press on the posterior cheek. Finally, the application of the forceps to produce rotation is recommended, but it is questionable if, all other means having failed, rotation can be accomplished without such force as will involve serious dangers to both mother and child. Should the chin be found ultimately to pass to the hollow of the sacrum, there remains only the possibility of performing podalic version for the safety of the child, unless the relations of the head to the pelvis would permit of forceps delivery in the mento-posterior position. Generally the head is so wedged low in the pelvic cavity that version is impossible, when the chances of sacrificing the child have to be taken.

Where the forward rotation occurs with the chin under the pubis, it becomes sometimes necessary to apply the forceps, as in my own case before alluded to, for the purpose of assisting nature's efforts at a flexion of the head, and in all cases of mento-anterior deliveries great care must be given the perineum to guard against rupture. If there is any delay in an effort to breathe on the part of the child, it should
receive assistance in the way of artificial respiration, to be continued as long as there is any hope. In the case before referred to I certainly would have had a dead child had a persistent effort not been made. It has been stated before in this paper that writers of the present day differed in their consideration of the nature of face presentation, some believing it preternatural, others natural, each side presenting arguments which, looked at from their respective standpoints, are certainly logical. In the earlier days of the obstetric art it was universally regarded as unnatural, and under the belief that spontaneous delivery could not occur, podalic version was the routine practice. With a change in the sentiment of the profession, induced by a revelation of the fact that spontaneous delivery was not only the rule in all cases left to the natural efforts, but that only one child in ten or eleven was sacrificed, a mortality not greater than in breech cases, came an abandonment of the practice of podalic version, which was now rightly considered to offer no better chances to the child, and which added to the risks of the mother by the necessary operative procedure. Later came the practice of endeavoring to convert the face into a simple vertex case, which received the commendation of Baudelocque. Hodge has advised it in all cases, and still more recently Dr. E. L. Partridge, of New York City, appears as a strong advocate of the practice. In his published article in the 1884 Journal of Obstetrics, he gives the details of five cases in which the attempt was successful, labor terminating in each case as a vertex case. In two of them there was a return to the face presentation after the change had been effected, when a second attempt was successful and the forceps immediately applied and the head brought well down. He says: "The conditions especially favorable to the operation are, an os nearly "or quite dilated; a face not engaged in, or at least capable "of being readily lifted from the pelvic brim, an unruptured "bag of waters—a capacious vagina—chloroform to relax
"the structures of the parturient canal, to quiet the move-
ments of the patient, and to obviate pain which would attend
the introduction of the hand into the vagina, is of primary
importance. The manipulation requires the presence of
the fingers only in the uterus, and does not involve any
laceration of the cervix. Passing the palms of the fingers
over the occipital bone and pressing them firmly against it,
traction downward should be made. In our endeavors
flexion of the head almost immediately commenced and
quickly became complete. The other hand aided greatly
by external manipulation. In two of the three instances
in which the membranes were unruptured at the beginning
of the operation they remained unbroken at its completion,
showing how simple the operation can be." Schatz advo­
cates a method of correcting face presentation by external
manipulation only. He grasps the child through the uterine
and abdominal walls. The fetus is to be lifted upwards until
the presenting part is liberated from contact with the pelvic
brim, and the uterus straightened until its axis is in the
median line. The child’s breech is then pressed forward
with one hand, while the other, placed against the upper and
anterior part of the child’s thorax, pushes this part of the
body backwards. When semiflexion is gained by these ma­
nœuvres, downward pressure upon the child will, he claims,
completely restore the presentation to that of the vertex.
Schatz’ method, while quite plausible, theoretically, is much
inferior to that described by Partridge, and has not been
received with much favor. It is questionable whether the
average practitioner would be justified in attempting either
of these procedures. Even in the experience of Partridge,
as given, we find that two of the five attempts failed, and in
both of these it was considered necessary to apply the forceps
at the superior strait, an operation certainly not unattended
with risk and difficulty. He gives as one of the conditions
requisite for a consideration of the attempt, "an os nearly or
quite dilated,” and then another, “a face not engaged in, or at least capable of being readily lifted from the pelvic brim.” These two conditions, it seems to me, would hardly be likely to prevail in any but exceptional cases. Certain it is, that in many cases the first examination would find a face well down in the pelvic cavity, when the operation would be out of the question.

Of the operation, Playfair says: “Although it might not have been attended with evil consequences in his (Hodge’s) “experienced hands, it is certainly altogether unnecessary, “and would infallibly lead to most serious results if gene-“rally adopted.” He then says it may be allowable in certain cases in which the face remains above the brim and refuses to descend into the pelvic cavity. Lusk, in regard to the same, writes: “Though occasionally successful,” this “practice has been discontinued by most obstetric writers, “because experience has shown the results to be by no means “commensurate with the dangers incurred.”

By Dr. Knapp: This situation, a few years ago, was a very alarming one indeed, but we are not so greatly alarmed now. In one case, the only case that I have had occasion to interfere with, was where the face refused to engage, the chin refused to descend into the pelvic excavation, through a series of hours of waiting. Just why there was a failure to engage, I was unable to say, but I succeeded in passing my hand over the occiput of the child, and forced the engagement of the head. It finally terminated without any serious trouble. I pressed with one hand, as much as I could, on the sternum of the child, and I raised the child as much as I could, and I succeeded in bringing down the occiput and changing the presentation. I think this measure is one that should not be forgotten, although it might not be the better course to pursue in those cases where there is failure of the face to engage at all. I feel like complimenting the author of the paper on his very interesting paper.
By Dr. Leisenring: I am very sorry that I did not hear the entire paper, but the latter part I heard, and was very much pleased with it, particularly that part of it leaving those cases to nature. It is astonishing how we are getting back to first principles again—our forefathers taught us that meddling was a bad thing. I think we should know when to meddle, and when not to meddle. Fortunately or unfortunately, the two last cases of confinement I have had were face presentations; two right in succession—something unusual. The first case was lingering, I was a little uneasy, I succeeded in delivering her, without difficulty, of a living child. In the last case, I was compelled to resort to the use of instruments. I delivered the patient of a living child, but in less than an hour afterwards she had seven successive convulsions. She, however, is convalescent. The fact of interfering too soon is, I think, a mistake. When you come to practice it, you will find it is not so easy as you imagine it is. That has been my experience at least.
At about 11 o'clock A.M. of October 9th, 1884, I was called to see Mrs. L., aged 17 years, of normal appearance, and who was enjoying good health. I found her walking, with some difficulty, about the room, of about ten feet square. She was suffering from irregular uterine pains, which she and her family supposed to be labor pains, the full term for delivery having arrived, as they believed. After watching her closely for some time, and noting the character of the pains, I decided, without making a vaginal examination, that regular labor had not commenced. After administering an anodyne, and instructing the family when to send for me, I left. The next day at about 10 o'clock A.M., I was again sent for. On visiting my patient, I found she had passed a comparatively comfortable night, and had rested well up to the time I was sent for, when the pains returned with more regularity, and with increased force. On making a vaginal examination, I detected a head presentation, with the head already within the superior strait, but could find no os uteri. The cervix uteri also was entirely obliterated. I carefully several times passed my finger around the vagina, but could detect nothing that in the least indicated the location of the mouth of the womb. After waiting an hour or two, and carefully watching the progress of the labor, as well as learning all I could of the previous life of my patient, I concluded to await further developments, realizing that I had a case of complete occlusion of the mouth of the womb. In order to give my patient rest, as well as for its relaxing effects, I prescribed an anodyne, composed of chloral hydrate, pot. bromide, and elix. val. of ammonia, to be given every hour until it had the de-
sired effect. I left my patient, promising to return in the afternoon. At 3 o'clock p.m., I again visited her, found her comfortable, resting after taking several doses of the chloral mixture, the pains not so severe, more regular, with longer intervals. On making a vaginal examination, I found that the head had descended somewhat since my former visit, but there were no clearer indications of the location of the os uteri. I now made an examination with two different uterine speculums, but could see no point that looked like the place where the os ought to be. The entire presenting surface appeared uniform to the eye, as it had done to the touch. The motion of the child could be felt at intervals. My former diagnosis was confirmed by the use of the speculum. This being the first case of the kind I ever had, yet felt satisfied that an operation would be required to save mother and child. There were no indications requiring an immediate operation. I therefore concluded to continue, at intervals, the anodyne mixture, and await future developments, hoping that the uterine contractions might possibly dilate the os uteri sufficiently to indicate its location. Requesting to be sent for as soon as the pains became of an expulsive character, I left at about 5 o'clock p.m. At 9 o'clock the same night, I was sent for, the messenger stating that the pains had been constant, and had increased in force since my former visit. I called on Dr. Gibbs, asking him to go with me to see the case. He kindly consented to do so. On our arrival we found the patient suffering considerably from regular uterine contractions. After placing her under the influence of a combination of ether and chloroform, we made a thorough and careful examination by the finger and with the speculum, but met with no better success, so far as finding or locating the site of the os uteri was concerned than I had met with in my former examination. At the suggestion of Dr. Gibbs, we increased the dose of the anodyne mixture already prescribed and awaited its effects. After waiting about two hours and seeing no progress in the
case, but rather an abatement in the severity of the pains, we concluded if possible to defer operating until in the morning, promising to return early for that purpose. We returned to our homes at about 12 o'clock, midnight. At three o'clock a.m., a messenger called at my residence stating that my patient could not endure her sufferings any longer, requesting my immediate attendance. Dr. Gibbs could not be reached. I called on Dr. Ayres, who kindly accompanied me to render the necessary counsel and assistance that might be required.

We found our patient suffering from severe expulsive pains. On making a vaginal examination we found the head in the cavity of the pelvis, pressing against the thin uterine walls with considerable force. Dr. Ayres carefully examined the patient several times at short intervals, but could find no spot that indicated the location of the os uteri. After carefully watching our patient for about two hours, hoping that nature might force an opening at the original site of the os, but being disappointed in this and fearing that longer delay might cause injury to the mother or loss of life to the child, I concluded to make an incision into the most prominent presenting part of the uterus. In making a careful examination for this purpose by pressing the end of my index finger against the presenting head, during a pain, I imagined I could detect a small point that on pressure yielded on the inner side of the uterus and appeared somewhat softer than elsewhere. After fully satisfying my mind that my diagnosis was correct, I, with the serrated edge of my index finger nail, made a persistent sawing and rotary motion with pressure against this point of the womb, with the view of forcing an opening through it. I soon was more than pleased to find it yielding from within outward, and after some persistency succeeded in making an opening large enough to insert my finger, with which I enlarged the opening by a tearing force. I ruptured the membranes, found the head presenting in the first position. The expulsive pains soon dilated the opening large enough to in-
introduce the forceps, which I did and delivered my patient of a live, large male child, after a labor of forty-eight hours. Her recovery was rapid and without an unfavorable symptom.

The first question that naturally presents itself to one's mind is, what caused the condition of the os and cervix uteri described? The occlusion must necessarily have taken place after conception. I learned that about a year before the marriage of the patient that she had a severe attack of syphilis, was pronounced cured by her attending physician at the time of her marriage. May there not have remained some inflammatory condition of the os and cervix, caused by the syphilis, which after impregnation had taken place, owing to the congestion or hypertrophied condition of the uterus following conception, adhesive inflammation took place, causing the agglutination and occlusion of the os and cervix described. I also learned that for some months previous to conception, at each menstrual period, she had severe dysmenorrhea. I called to see my patient on the 25th of May last (1886), found that her health had been good ever since her delivery, except that about one week previous (18th of May), she had a miscarriage of about two and a half month's conception, apparently no syphilitic taint remaining in her system.

The literature on the subject of occlusion of the os uteri, both in our text books and medical journals, is quite meagre. Many of the older authors do not refer to it at all, and I have found few cases of it reported in our journals. Atresia, agglutination, and occlusion are often used synonymously and to my mind incorrectly.

Moreau, on page 18, says: "Accidental occlusion generally follows lesions of the vagina, or of the os tincae produced by antecedent pregnancies; or inflammations and ulcerations of divers kinds, which, before or after conception, may be seated in these parts."

Cazeaux and Tarnier, in their late edition, on page 696, in
speaking of agglutination of the external os, say: "This is a very rare complication, and but few examples are reported in the books. The question arises, what is the nature of this agglutination? It has probably followed an inflammation of the cervix and the upper part of the vagina, which has terminated by adhesion. In a case where a woman died during labor, the adhesion of the neck was found at the post mortem examination to be so resistant that it could neither be lacerated nor broken by any moderate force, and the membrane that blocked it up was of an aponeurotic character. The precise period at which the formation commences cannot be determined."

Dr. Robert J. Ness, of Philadelphia, in his notes in Cazeaux's latest edition, on page 697, says: "I have met with two cases of adhesion of the external orifice. In the first one, which occurred in the Hospital of the Clinic, I detected the condition of things whilst practicing the touch during pregnancy. I was therefore prepared when labor commenced. At first there was considerable resistance, but when the pains became very powerful, the adhesions yielded spontaneously and delivery was accomplished naturally. The second case was one of the first labor, to which I was called in consultation by a physician in the city. The patient had been in pain for three days without any progress made. I became satisfied, after several careful examinations, that there was no opening upon the lower segment of the womb, though I thought I could detect the place of the external orifice by the existence of a very slight depression there. When the pain came on I endeavored to destroy the adhesions by strong pressure with rapid rotation of my finger. After a few fruitless attempts I succeeded; the opening dilated rapidly, and delivery took place in a regular manner."

M. DePaul, in his work on obliteration of the neck of the womb, published in 1860, writes: "That the external orifice is the one usually obliterated, though the internal one is
sometimes affected in the same way. The diseased action producing it sometimes begins after fecundation, though it seems probable that it oftener existed before it, having already considerably contracted the opening; under these circumstances the intervention of pregnancy gave rise to conditions favorable to the completion of the closure. These complete obliterations may have their origin in violence done to the neck of the uterus in the first labor, especially when it was long, painful, and required the use of instruments. All inflammation and other alterations of the cervix may be followed by obliteration; therefore it is that primiparae are not exempted, though less exposed to it than those who have borne children."

Playfair, in his late edition, page 349, says: "Agglutination of the margins of the os uteri is occasionally met with, and must, of course, have occurred after conception. It is generally the result of some inflammatory affection of the cervix during the early months of gestation, and I have known it to recur in the same woman in two successive pregnancies. Usually it is not associated with any hardness or rigidity, but the entire cervix is stretched over the presenting part and forms a smooth covering in which the os may only exist as a small dimple, and may be very difficult to detect at all. Occlusion of the os uteri from inflammatory changes sometimes so alters the cervix that no sign of the original opening can be discovered, and in two instances the Cesarian operation has been performed in the United States, by which the women were saved. Any of these mechanical causes of rigidity may at first be treated in the same way as the more simple cases, and with patience, the use of chloral and chloroform, and of the fluid dilators, sufficient expansion to permit the passage of the head will often take place. But if these methods produce, and symptoms of constitutional irritation are beginning to develop themselves, other and more radical means of overcoming the obstruction may be required. Under
such circumstances incision of the cervix may be not only justifiable, but essential, and it frequently answers extremely well. The operation offers no difficulties. The simplest way of performing it is to guard the greater portion of the blade of a straight, blunt-pointed bistoury by wrapping lint or adhesive plaster round it, leaving about half an inch cutting edge towards its point. This is guided to the cervix on the under surface of the index finger, and three or four notches are cut in the circumference of the os if this can be found; if this cannot be ascertained, then at the most prominent part of the cervix, to about the depth of a quarter of an inch. Generally the pains will now speedily effect complete expansion, which may be advantageously aided by the hydrostatic dilators."

Leishman, in his recent work on Obstetrics, page 454, says: "When no aperture whatever can be distinguished, even when the uterine action has been in operation for some time so as to bear upon the inferior segment of the uterus, no course remains for us but to incise the uterus at the point where the os is usually found, and thus avoid the danger with which the woman is threatened. The necessity of such an operation being at once recognized, no advantage, but the contrary, will ensue from delay. Beyond a certain degree of uterine effort, all that is essential is the presence of such pains as may secure the passage of the head so soon as a channel is opened up for it. The effect of delay, indeed, in such a case would be to incur the danger of rupture of the uterus, and allow the period to pass at which the patient is best able to bear the continued strain entailed by the ordinary phenomena of propulsive labor. In so far as the operation is concerned, the incision should be made from before backwards by a blunt-pointed bistoury, or by a series of incisions radiating from the real or imagined site of the occluded os. The reason why the antero-posterior direction is preferred is, that the uterine arteries may with certainty be avoided. The incision
should be made to a limited extent only, for the breach being once effected, and the uterine efforts being present, the head will, partly by stretching, and partly by tearing, open a passage for itself as it is forced onwards."

Doctor Thomas C. Smith, of Washington City, reports in the *American Journal of Obstetrics*, 1884, two interesting cases of occlusion of the os uteri during pregnancy, one of them requiring the use of a cutting instrument, or rather a sharp-pointed probe to open the womb before the child could be delivered, which he did with the forceps, "from which the patient made an excellent recovery." Dr. Galabin, of London, in his recent work on Obstetrics, on page 391, in speaking on atresia of the cervix uteri, says: "The cervix must, of course, have been permeable for pregnancy to occur. In some cases, however, no opening has been discoverable at the onset of labor. Adhesion of inflammatory granulations may have been formed after conception, sometimes as a result of the too vigorous application of caustics in the treatment of cervical inflammation, or of attempts to procure abortion. Care must be taken to reach every part of the vagina and cervix before it is assumed that there is no opening, lest the case be really one of mal-position of the os. *Treatment.*—When labor pains have commenced, a puncture or incision must be made at the site of the os, or at the center of the lower segment of the uterus, if the site cannot be discovered. Dilatation is then to be carried on by metallic bougies, dressing forceps, fingers, hydrostatic bags, or other convenient means, until there is space for the bag of membranes to bulge into the opening and continue the dilatation."

The above is all I can find published upon the subject under consideration. From all that I can learn upon it, from books, journals, and experience, I have concluded that in cases of complete occlusion of the os and cervix uteri no definite rules of procedure can be prescribed, but that the attending accoucheur in these cases, as in many others that we daily
meet with in practice, must depend largely upon his own judgment for his rule of practice. Where an immediate operation is not demanded, I would delay operating as long as possible, so as to give nature an opportunity to force an opening, which if she succeeds in doing, no doubt would be at the site of the original os. By so doing less injury to the mother is likely to follow than by a cutting process. If an opening cannot be effected by the combined contracting powers of the uterus and the pressure of the presenting part of the child, then the persistent pressure and sawing motion of the serrated nail of the index finger, at the most dependent part of the uterus, will in all probability accomplish the object. If this should fail, and there was no pelvic deformity of obstruction, I would incise the dependent portion of the uterus from before backwards, in the manner and for the reasons already described, and if indicated, deliver with the forceps. In cases of occlusion of the os uteri, complicated with pelvic deformity or other obstructions, I would resort to the Caesarian section and operate as early in the stage of labor as possible, with the view of saving the lives of mother and child.

By Dr. Stone: Mr. President. I have been interested in the paper presented. In my experience I have never seen a parallel case; the nearest approach to it was one I saw on the table in the clinic; there was no difficulty in passing a small probe into the uterus, but there was no os whatever, but by a passing in of probe, we found it.

By Dr. Stanhope: I was very much interested in the paper, more so, on account of having had a parallel case, and not a parallel case either; my case was one brought to me from a neighboring city. I found a perfect os, or surface rather; there was a point that I could find that indicated an opening; she had gone for twenty months without menstruation; she had menstruated for two or three years regularly and correctly, and then suddenly began to diminish in menstruation,
and finally ceased entirely, and when brought to me, after twenty months, or nineteen months perhaps, the cervix was entirely glued and hard; when I was advised of the nature of the case, I told her my plan of procedure would be to open that, carefully and slowly force my way up by instruments. Of course I did not have much hope for her life, in the condition she was; though she was in fairly good condition, she was failing in flesh and strength. I found her cheeks purple, and her lower limbs were purple from having to lie down; in that condition her blood was vitiated. I attended her nearly three weeks, and I succeeded in opening up the os; when that was opened, she came to my office about eleven or twelve o'clock in the day, and the next day at twelve o'clock she was dead. I was called there, and stayed with her during the night, and when I opened the cervix, and held it open, with my dilators, I never saw such a flood of water in the world; she died unconscious; when I found her in the night she was unconscious, having symptoms a little like those in the first stage of labor; that's a very peculiar case, rather more so than the one the doctor has described, because it was a young girl; she was twenty years old.

By Dr. Lanphear: I would like to ask what the girl died of, did she die of acute peritonitis, or shock, or what?

By Dr. Stanhope: That is what I would like to ask you; I call it septicemia, and shock. The day but one that she died she told me that she was feeling well; she said, "Doctor, I am doing splendidly under your treatment." She said, "I think you are going to get me through," the third day before she begun to show signs of this septicemia.

By Dr. Lee: I would like to ask the doctor if there was much abdominal enlargement?

By Dr. Stanhope: Yes, she had the appearance of a woman seven or eight months pregnant.

By Dr. Lee: I think if the doctor had made a post mortem examination he would have found a foetus; from the
history of that case, I believe that the patient was pregnant.

By Dr. Stanhope: It could not be.

By Dr. Lee: I think that woman perhaps died of puerperal peritonitis.

By Dr. Stanhope: I know well enough that she was not pregnant, because of the water that came from her; you have no idea of what it was; the mattress was an ordinary one, on the bed, and there was a quilt folded four or five thicknesses under her, and there was matting of two thicknesses under the bed, and then the clothing that she would naturally wear upon her, and they were all saturated, and it ran through the bed and saturated a place two feet square in the matting, and the vessel below was two-thirds full.

By Dr. Lanphear: I would like to ask the doctor if he doesn’t agree with Dr. Lee’s diagnosis, which seems to me very probable, if it was impossible that the girl had ascites.
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A CASE OF OVARIOTOMY.
BY E. A. BENTON, M.D., CENTRAL CITY.

Mrs. A. H., Swede, age 46, mother of two children, youngest nine years old. Menstruation irregular for the past year, the last appearance about the first of March, or six weeks before the operation. First appearance of tumor four years ago. She was first seen by me Feb. 9th, 1886, and after making as thorough an examination as possible for me to make at the time, I gave my opinion that it was a cystic tumor of the left ovary, and advised its removal very soon, as she was very much emaciated and the vital powers were fast breaking down.

Consent for an operation was not obtained until April 7th, at which time her pulse was 115 and her temperature 101°. She was vomiting, had a local peritonitis, and was in a typhoid condition that looked desperate in the extreme. Had been confined to her bed for a month. Under preparatory treatment her condition improved somewhat, and on April 15th her pulse was 84, and her temperature 100°. At this time with the assistance of E. L. Robinson, M.D., of Clarks, W. Y. R. Gawne, M.D., of Central City, and J. E. Martin, M.D., of Chapman, I removed the tumor. Antiseptic precautions of perfect cleanliness and carbolization of all instruments, sponges, and everything connected with the operation were observed, but the spray apparatus was not used. At 11 o'clock, she was given stimulants and opium. At noon she was placed on the operating table, and the anaesthetic administered under the care of Dr. Robinson. Complete anesthesia was quickly obtained and continued for one hour and fifteen minutes, with one oz. of chloroform and one-half oz. of chloral hydrate.
The first incision was made four inches long in the median line, and on opening the peritoneal cavity, there was about two quarts of ascitic fluid escaped. The tumor was then seized with vulsellum forceps and Emmet’s large trocar plunged into it; and, to my surprise, only two oz. of fluid escaped. The abdominal incision was then enlarged to six inches, the cyst opened so as to admit the hand, and the contents of the cyst scooped out until the size of the tumor was reduced enough to be extracted through the abdominal incision. Two adhesions to the omentum and one to the intestines were separated without any trouble or hemorrhage. A Spencer Well’s clamp was applied to the pedicle and the tumor cut away. The pedicle was about one and one-half inches wide by three-fourths of an inch thick and two inches long. When the tumor was extracted the intestines were held back with, and the wound covered by, napkins wrung out of warm 2 per cent. carbolic solution, being changed often to keep them warm. The pedicle was permanently secured after Emmet’s method, by drawing a heavy silk ligature doubled through the center of the pedicle one inch below the clamp, tying it both ways so as to divide the pedicle into two parts, with the ligatures passing through each other in the center; there was no hemorrhage and the pedicle was dropped back in, the cavity sponged out, the abdominal incision closed with wire sutures, and a small rubber drainage tube left in the lower angle of the incision; all being covered with carbolized compresses, adhesive straps, and flannel bandages. The operation being completed at 1:15 P.M. The soiled clothing was hastily exchanged for warm and dry clothing, the patient removed to her bed, previously warmed, and heat applied until reaction took place. Shock was quite severe, we having to resort to hypodermic stimulation during the operation; and soon as possible after she was placed in bed a rectal injection of beef broth and quinine was given. The pulse being 108 and hardly perceptible at the wrist, and the temperature 96°.
At midnight, reaction had taken place fully, the pulse being 98 and full, with a temperature of 100°, after which both gradually sank to normal, and never have been above that point since, recovery taking place without an unfavorable symptom, so that in five weeks she was able to walk in her room, and at the present time, seven weeks since the operation, she is walking and working as she chooses, and fast gaining in flesh, with nothing to show for the operation but a scar about three inches long. Weight of tumor about 20 pounds.

The abdominal extremity of the left Fallopian tube, together with a part of normal ovarian structure and the broad ligament, were adherent to and removed with the tumor. There was no microscopic examination of the tumor, but its contents seemed to be morbid glandular neoplasms, or growth which had undergone considerable cystic degeneration, and was so soft that it could be readily torn away with the hand, and where separated from the attachment to the cyst walls, hemorrhage was quite free. The color was not all the same, some being of a dirty yellow-green and some of a brownish-red.

I think Emmet would classify it as cystoma proliferum glandulare, and Schroeder would simply call it cystomata.

By Dr. Mansfelde: I am indeed very much obliged for the report of that case, and for his remarks before reading the report, in regard to the advisability of any one, in private practice, or anywhere, performing ovariotomy. I did not intend to say anything at this meeting, of my ovariotomy cases, having done so for several years past, and it may be monotonous to this society, but I must do it. I think that Dr. Thomas and Dr. Goodell, and others, who have had hundreds of cases where I have had one, have had no better success than I have had. I have operated six times with one death, that a case of tubercular trouble of the intestines, which terminated in death. The second last case I had I would state, that from the time I commenced the operation, i.e., from the time I made the incision into the
abdomen, until the tumor was away, took just ten minutes. In regard to the advisability of operating, in private practice, I have to say, that if the private practitioner has surrounded himself with all the necessary requirements of performing that operation, and he has the skill, he is as much entitled to do it as any one that makes a business of it. I will say that I have apparatus in my room at Ashland for the operation of ovariotomy that cannot be excelled by any man east of Ashland. I will state to this society, that the operation was the most interesting one I have had. I operated on a woman for almost nothing because I did not want her to leave the state of Nebraska, which was threatened if she had to pay for it.

By Dr. Lee: Mr. President, I was very much interested in the doctor's statement. There is one thing I would like to call attention to, that is, the form of the drainage tube. The doctor spoke of the rubber drainage tube; I think the best authority given us by those men who operate the most on ovariotomy, use the glass drainage tube. I think the glass drainage tube is better, especially in the abdominal cases. Another thing that seems quite peculiar in the case, is the fact that the patient took so little chloroform, and then suffered from the shock, the shock coming on so immediately, and that he had to resort to hypodermic stimulants during the operation. It is a peculiar circumstance. Another peculiar thing about it is the rise of the temperature so soon after the operation, without any inflammatory evidences after that.

By Dr. Leisenring: I was very much interested in the paper. I am of the opinion that our country practitioners should report their cases. I believe if we would take all the cases from our unknown country practitioners they would be just as successful as operators in our city hospitals.

By Dr. Knapp: I would like to know what test he applied to the fluid.

By Dr. Benton: The test was simply coagulation; without heat it did not coagulate, with heat it did.
By Dr. Knapp: I had a case a few days ago in which I found a rather anomalous condition of the fluid present in the tumor. Some of our authors tell us that the fluid of the ovarian cyst should coagulate with heat, and that it should be soluble in twice its bulk of acetic acid and heat. I had fluid of this kind coagulate in heat, but insoluble in acetic acid, with the addition of heat. On that ground alone a diagnosis was made that the cyst was not an ovarian one, contrary to the fact which exists, I think, although that has not yet been demonstrated. It was decided to be parovarian cyst, and that was the principal grounds. I tested this fluid, as far as my facility and ability would permit, and failed to find the evidence present of its being a parovarian cyst, therefore I was forced back to my original opinion that the cyst was an ovarian one, and perhaps death or something else will demonstrate the fact.

By Dr. Stone: I do not wish to open up the question as to the country practitioner, but I would not allow myself to operate in any case whatever. I am a country practitioner myself. If there is a man who has a high respect for the country practitioner, it is I, because he is thrown upon his own resources, and does a great deal the hardest work done in the profession; but the fact of a hundred and thirteen successful operations in the country does not in anywise alter my opinion, that it is not advisable or justifiable, except in emergencies.

By Dr. M. Lane: I do not wish to continue this discussion on ovarian operation, except this: that I think all operators will admit that the operation itself, to the operator, is not a grave one. The operation to the patient is a formidable one. I think all operators will admit that the simple fact, or the simple act of making an incision down into the abdomen, can be done by any country practitioner who has the courage, but the successful operator is the one who follows details and strict cleanliness.
By the writer of the paper: I first used the glass tube, and then changed it for the rubber. The condition was this: prolapsus of the vagina, laceration of the cervix, and a troublesome cystocele. A large pessary, to prevent the complete displacement of the organs, had been worn for a long time, and it was not deemed necessary to remove it. The pessary came so close to the glass drainage tube that I feared to leave it there. I feared the pressure would produce trouble, and I changed it for the rubber tube. Now, in regard to the shock of the operation, I attributed that to the condition of the patient. The patient was in an exhausted and weakened condition. She was the most emaciated person I ever saw. She was a person who, probably, in her natural health, would weigh, without any tumor, about a hundred and twenty-five pounds. After the tumor was removed she would not have weighed over seventy-five or eighty pounds. The rise of temperature I attributed to the effects of the stimulants that were used, and to the artificial heat that was applied to bring about reaction. I was quite apprehensive of trouble six hours after the operation, at midnight, when the temperature reached the highest point. If it had gone any further, I would have used means for lowering the temperature. I stayed with the patient until the next morning at 6 o'clock. At that time it had been reduced about one degree, and the pulse was in a much more favorable condition. After that my attention was limited to one visit a day for ten days; after that, one visit every second day for three visits; after that I saw her but once, a few days previous to making this report.
HAEMATEMESIS IN A GIRL 15 YEARS OF AGE,
CAUSED BY OLIGO MENORRHŒA.

BY E. CHRISTIANSEN, M.D., GRAND ISLAND.

Miss L. J., a young girl, fifteen years of age, 5 ft. 11 in. high, of a plethoric habit, commenced to menstruate at the age of twelve years, and has been regular ever since. About one year ago she was taken with haematemesis, and a physician who was called in pronounced the case consumption.

On the 16th of April, A.D., I was called to see the patient, and found her vomiting blood quite freely. She complained of fullness about the head, and says she frequently has her vision obscured, beating in her temples, and often ringing in her ears; her bowels as a general rule constipated.

A careful auscultation pr. stethoscope in sitting posture revealed a clear vesicular murmur, the first, i.e., the murmur of inspiration, much higher in pitch than the second, or murmur of expiration. Auscultation of the heart gave a strong plethoric murmur over the base of this organ and some palpitation. Pulse, 76 pr. min., very full, not intermittent. Respiration 19 pr. min., full and easy. Percussion of the stomach revealed a slight tympanitic sound from the middle line to the left hypochondrium, extending a little below the umbilicus.

Upon inquiry I found that patient had the first attack of blood-spitting about one year ago, shortly after her menstrual period, and that the following attacks were always about this time. She menstruated quite freely and regular, the period lasting from five to six days—but as her mother thought not near as much as she was subject to when a girl.
A microscopic examination of the vomited matter showed no sarcinae ventriculi, but a number of ascaris lumbricoides. Failing so to diagnosticate any lung or stomach trouble which would account for her condition, I concluded that I had to deal with a case of hæmatemesis caused by menstruation parea. I put her under the following treatment to commence with about a week before time of menstruation:

R. Boracis 5j.
Fl. extr. Gossyp Herb, 5j.
Fl. ext. Cimicifug. Racenios, 5j.
Aqua distil., 5s.
M. S. Teaspoonful four times a day.
Warm foot bath every night, and sitz bath once a week.

She got over her attack quite readily and menstruated considerable more than she ever had before. On May 20th, she menstruated again quite freely; complaining a few days previously about fullness in the abdomen but none of the head symptoms offering themselves this time and no spitting of blood.

I consider this case of more than common interest for the reason that, notwithstanding menstruation having been well established and neither suppressed, still the non-sufficiency caused hæmatemesis.
As chairman of the section on materia medica and therapeutics, it becomes my duty to report such progress as may have been made in this branch of medical science during the past year.

A few new remedies and measures have been proposed. Some of them give fair promise of usefulness, while many of them have already been condemned as useless. There has been a tendency towards conservatism, a growing feeling against fashions in medicine, a distrust of radical and heroic medications, and an increased reverent admiration for common sense.

TONICS.

Nothing new has been added to the long list of tonic remedies. There have been growing doubts in the minds of many as to the reputed efficacy of some tonics that have become reverent from long use, which have finally culminated in a paper read by Dr. Samuel Wilks before the British Medical Association, wherein he takes occasion to say that, "I have seen hundreds, many hundreds, of persons with paralysis take strychnine, and I never remember to have seen it of any service. I should regard it as almost a useless remedy in this disease. Then, again, there is phosphorus. This was a scientific remedy, because the brain contained it, but doomed soon to become ridiculous, when the public believed their minds were being invigorated by swallowing zoedone. I
never remember seeing more than one patient the better after taking phosphorus, and therefore I am bound to look upon this as a coincidence. In my private pharmacopoeia I have attached to the word phosphorus 'humbug.'"

CARDIAC STIMULANTS.

Many clinical observations and experiments have been made with caffeine, convallaria, and adonis, with reference to their stimulant action upon the heart, and as a substitute for digitalis. Since this latter drug is often badly tolerated, does not act immediately, there is danger of cumulative effects, and is not admissible when the kidneys are diseased. There seems to be a strong demand for some drug to take its place that shall be free from like dangers.

Caffeine.—For the past year, Prof. F. Riegel has been conducting experiments at his clinics with caffeine, already recommended by Honchard and Lepine as a heart regulating agent, and comes to the conclusion that caffeine is a heart remedy which deserves to be classed with digitalis, and in some cases is even preferable to it. The fact that this drug has attracted so little attention in this connection is explained by Riegel as due to the facts that it has always been given in far too small doses, that it is very insoluble, and that its salts are readily decomposed. The last two objections can be overcome by combining it with soda salts of benzoic or salicylic acids, as follows:

R₁ — Benzoate of sodium, grs. 47; caffeine, grs. 40; distilled water, 3 1½; 16 gtt. = 4 grs. caffeine.

R₂ — Salicylate sodium, grs. 48; caffeine, grs. 41; distilled water, 3 1½. Dissolved with aid of heat, 16 gtt. = 7 grs. caffeine.

These double salts are sol. in two parts of boiling water, and remain in solution after cooling. These solutions may be given subcutaneously. Dose of caffeine, 1½ to 3 grs. in single doses, 6 to 10 grs. in 24 hrs; dose of hydrobromate, 3 to 7 grs. in single doses, 10 to 30 grs. in 24 hrs; dose of double
salts with soda, 7 to 15 grs. in single doses, hypodermatically, and are better tolerated than the pure alkaloid.

It has been given with good results in valvular heart disease when compensation is absent, myocarditis, fatty heart, nephritis, with reduction in volume of urine, and pleurisy with effusion.

The unfavorable symptoms produced by caffeine are of very rare occurrence. They may be headache, giddiness, and vomiting, more frequently insomnia, and a state of nervous excitement.

Convallarine.—The active principle of convallaria majalis (Lily of the Valley) exercises a regulating influence over the circulatory apparatus without any danger to the patient. Its action is less certain than that of digitalis, but it has no cumulative effects. It does not possess much of an action upon the nervous system in general, and it is in a sense only the more valuable on this account, since the clinical use of the drug is almost, if not wholly, in connection with the heart, and consequently the drug can be pushed in this use without fear of the complication of any effects on the nervous system. The chief objections to its use are that it appears to be extremely irregular in its action, judging from the contradictory reports we receive, and it seems to be the feeblest agent in the group.

Adonidine (From adonis vernalis).—All physicians who have employed this drug, attribute to it properties analogous to digitalis. It increases the energy of the cardiac contractions, regulates the pulse, and diminishes its frequency. It is rapidly eliminated, and increases in a marked degree the quantity of urine, and hence serves to remove dropsies and oedemas. It never occasions secondary action from accumulation, it is less irritating and less dangerous than digitalis, and Mr. Durand concludes that the indications for its employment are the same as for digitalis. He commends its use in mitral insufficiency, myocarditis, and palpitation. It is to be preferred to convallaria or caffeine.
<table>
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<th>TABLE OF CARDIAC STIMULANTS.</th>
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<td><strong>DIGITALIS.</strong></td>
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<td><strong>MODE OF ADMINISTRATION.</strong></td>
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<td>Should be given in full doses, two or three times in twenty-four hours; should not be combined with narcotics.</td>
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<td>Is often badly tolerated—cumulative; not to be given in chronic diseases of kidneys.</td>
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<td>In palpitation and irregular action, mitral disease; in dilatation of the heart, aortic disease; in short, whenever the heart is acting feebly and irregularly, avoid its use in compensatory hypertrophy of aortic disease, and in fatty degeneration.</td>
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The intense interest aroused in the minds of the profession concerning antiseptic remedies has not abated, but rather deepened during the past year. The excitement, which led men to pin their faith to the wildest vagaries in germ theories of disease and measures to counteract their deadly influences, has given way to more rational views, to more searching investigations, and to the exercise of greater care in conclusions. Fashion has led us in the past into many errors which we are fast throwing aside, as by accumulated evidence from theory and observation the truth becomes known.

*Carbolic acid*, which a few years ago rode on the topmost wave of popularity, has been relegated to a secondary position, since it was found that micro-organisms grew in a two and one-half per cent solution, while many retained their vitality in a five per cent solution, and that union by first intention was a rarity. These, together with the frequent occurrence of toxic symptoms, and its unpleasant odors, has caused many to discard its use nearly, if not quite, altogether.

*Iodoform*, on account of its well-known action upon ulcerated surfaces in preventing suppuration and stimulating granulating surfaces, was brought into prominent notice as an antiseptic, has failed to gain much popularity as a universal dressing, by reason of its vile odor and the frequency with which it causes toxaemia.

*Bichloride of Mercury.*—In a search for some antiseptic that should commend itself to popular favor by an absence of odor, bichloride of mercury was found, in very weak solutions, to be a much more active germicide than any of its favorite predecessors, and for these reasons it sprang at once into a world-wide popularity and extensive use hitherto unknown in the field of antiseptic surgery. It was used most lavishly in every condition that was supposed to embrace a disease germ as a factor. As the novelty of the new idol soon wore off, by reason of man’s restless spirit desiring something
new, calm judgment and a multiplied experience bade us halt
in our mad career to view more than one victim of the new
antiseptic, and show cause why we should not be indicted for
an over-zealous following of fashion. We have come to
know that bichloride of mercury is a dangerous remedy, that
it not infrequently produces acute toxic enteritis, salivation,
an over-saturation of the system, weakness of the heart and
muscles, symptoms of collapse, not rarely ending fatally.
Again, in many cases where it has been used in a very weak
solution, continuously for days, the convalescence has been pro­
tracted through many weeks, and even months, marked by gen­
eral debility, accompanied by affections of the nervous system,
neuralgias, paresis, and reduction of the pulse to less than
40 per minute. On account of these dangers, sublimate
should only be employed in cases where the required effects
can be secured by very moderate quantities. Where larger
quantities are necessary in the treatment of wounds, either in
the form of irrigation, or masses of dressing material, or
other extensive applications, as a spray in the throat, or in the
uterine cavity, sublimate is the last of all the antiseptics to be
used.—(Rose).

The tendency is to exercise greater care and discrimina­
tion in its employment, using much weaker solutions than
formerly, and at greater intervals. Since the safety point has
been placed at 1-5,000, 10,000, or even 20,000, there is room
to doubt its vaunted efficacy as an antiseptic agent in such an
attenuated condition, and whether such solutions are any
better than boiled water.

Acetate of Alumina.—Attention has again, after a number
of years, been directed to this reputed germicide, discovered
by Gannal in 1827 to have anti-fermentative properties.
Reintroduced by Reish (Prussia) in 1854 as a deodorant and
anti-putrefactive agent in the arts. Burow established its
efficacy in 1874. Beneke demonstrated its relations as an
antiseptic. Billroth, Paul Bruns, and Marion Sims have
highly recommended it. It is claimed that its germicidal power must be near or equal to that of a strong solution of corrosive sublimate. It is superior to most other antiseptics in this regard, and superior to all on account of being non-poisonous.

**Iodol** is a new antiseptic, which promises much as a very efficient and perfectly harmless substitute for iodoform, since its action is similar, it gives rise to no symptoms of intoxication, and no iodine appears in the urine. In the form of a powder, it is a deodorant, favors healthy granulations, and has a general salutary influence on the nutrition of the affected part. It produces local anesthesia. Its objections are its high price and insolubility in water.

Iodol is a light-brown powder, almost odorless, soluble in water 1 in 5,000 parts only, in alcohol 1 in 3 parts. It may be used in the form of a dry powder or in solution 1 part iodol, 16 parts alcohol, 34 parts glycerine, for tampons and abscesses, with gauze, vaseline, or collodion.

**Aseptol**, a new antiseptic introduced during the past year, is a failure.

**Stannon’s Chloride**, according to Prof. Abbott (Johns Hopkins University), is an efficient germicide in a 1 per cent solution, which is much in its favor as compared with chloride zinc, which is inefficient in a 2½ per cent solution. Sulphate of copper in a 20 per cent solution, sulphate zinc in a 40 per cent solution, and sulphate of iron in a saturated solution, are all inefficient.

**Antisepsis of the Alimentary Canal** is a question of paramount importance to the believers in the germ theory of disease. For this purpose it is generally conceded that the yellow oxide of mercury is best adapted, on account of its mild effects on the system, slow decomposition, and efficiency.

**Bisulphide of Carbon** has been quite extensively used by Dujardin Beaumetz, of Paris, in the form of an aqueous solution for intestinal antisepsis, made after the following formula:
R—Carbon bisulphide, 5 6½; aquae, fl. 5 16; spts. peppermint, gtt. xxx. Sig.—One (1) tablespoonful in half a tumblerful of water or milk eight to twelve times a day. Put into a flask, shake, and let settle. Replace water in flask after each dose.

During six months' constant use in the Hospital Cochin, Paris, in the treatment of the diarrhoeas of typhoid fever, etc., he never saw any untoward accident from its employment. He strongly affirms that in favorably modifying putrescent intestinal processes, carbon bisulphide has been proven to be possessed of an efficacy above all other medicaments.

ANTIPYRETICS.

A searching investigation of the merits of remedies for the reduction of abnormally high temperatures has been going on, with more particular reference to ascertaining the true merits of resorcin, kairine, thalline, antipyrine, and hydrochinon.

Resorcin.—Experience has proven that this drug, though less toxic than carbolic acid, has been found in typhoid fever and rheumatism to produce the same depression of the vital forces; the same adenemia; the same pulmonary congestion which has followed the use of the carbolic acid, hence its employment to reduce high temperatures has been abandoned. —(Dujardin Beaumetz).

Kairine has been found by experiment and experience to be an antithermic substance, but one which acts by destroying the haemoglobin, and by profoundly altering the blood—circumstances which should be especially avoided in the infectious, febrile diseases. Again, it has no action on the fermentations, hence it should be discarded from therapeutics.

Thalline is the most powerful of all the antithermics. It acts like kairine, by diminishing the respiratory power of the blood and dissolving the haemoglobin, and is very liable to
plunge the patient into a state of collapse. It is a symptomatic remedy, and is not curative of the disease.

**INCOMPATIBLE WITH SWEET SPIRITS NITRE.**

*Antipyrine* has been found to be the best and least dangerous of our antithermic drugs that are given internally, but it is not without its dangers since it has unquestionably caused death in more than one instance, when used injudiciously in collapse.

Dr. Sarah Welt found, in 122 cases, antipyrine to be an excellent symptomatic remedy, but without influence on the disease itself.

In addressing ourselves to the treatment of hyperthermia we have to deal with a very complex problem. Augmentation of the pulse and increased frequency of the respiration, delirium, changes in the blood, atoxic symptoms, among which the high temperature stands simply as an associate symptom, and not as a cause of the aggravation of the general symptoms.

To reduce the temperature is not to destroy the fever, nor even to reach the cause which has provoked it. Dujardin Beaufort says: "To depress the temperature of a man affected with pneumonia, is not to cure the pneumonia. To cause typhoid fever so to undergo evolution that the temperature shall never rise above 100°, and to maintain the heat curve on a horizontal line, which is quite possible at the present day, thanks to the antipyretics just mentioned, is not to cure the fever." And he says further this is so true that it is a fact that by the employment of the antithermic medication, we do not diminish by one hour nor one day the duration of the febrile malady. The antithermic medication, then, only influences one of the elements of the fever. As we combat only one element of the disease, we do not cause disappearance of the latter, which according to the type remains grave or benign.
Hence, if high temperature is a grave symptom in the course of febrile affections, it would be a mistake to believe that in bringing back the temperature to the normal you can cause all the untoward symptoms to disappear. Still it is our duty to keep it under control the same as the other symptoms, and so a judicious, carefully selected antithermic medication should find a place by the side of calmative and tonic modes of treatment which we employ.

I believe that those agents act best as antithermics which act to remove or counteract the cause of the high temperature. This seems to me to be borne out by the following curious facts, to-wit:

That quinine still remains the antithermic drug par excellence of morbid periodicity. The other antithermics of marked and powerful action have only an uncertain effect in intermittent fever, while for fever of a rheumatic nature, salicylate of sodium constitutes a real specific, lowering temperature, allaying pain, and curing the disease.

As for antipyrine, its elective action is seen in the fever of tuberculosis and gives most remarkable results. Given in a single dose of 8 grs. daily, or every other day, it is a real benefit. It is indicated in quinsy, and in anomalous and hyperpyrexial forms of eruptive fevers.

Tepid baths are to be preferred in typhoid fever to all these agents.

Tepid baths keep the skin clean, abate nervous symptoms, inducing repose and calm, and reduce temperature. This shows that their effects are complex.

Remember that in reducing temperature you are attacking only one of the elements of the disease. H. C. Wood says: "It is fair to admit that the water treatment of fever is at present still superior to the medicinal antipyresis."

HYPNOTICS.

Paraldehyde produces a nearer approach to natural sleep than any other drug. It is an equally sure hypnotic with
chloral, does not produce excitement before sleep, leaves no headache, has no effect on the appetite, and has no depressing action on the heart. It supplants chloral in those cases in which the heart condition will not admit of chloral or opium while it is less active than chloral. It is indicated in strychnine poisoning and in nervous insomnias.

_Urethan._—Since chloral often produces marked cardiac depression, the bromides cause acne or bromine intoxication, while paraldehyde is often refused on account of its extremely sharp, disagreeable taste, is transient and often inert, and morphine is often quite objectionable, there seems to be a demand for some efficient substitute that shall not possess these objectionable features. Urethan seems to largely fill this vacancy in our materia medica. Dr. Stickler says: "It is an excellent cerebral hypnotic. Its advantages are that it is well borne, produces absolutely no unfavorable symptoms, and causes a sleep which appears to be perfectly similar to the physiological state." Others unite in saying that it is decidedly calmative and agreeable, causing no unpleasant effects, such as nausea, flatulence, constipation, or headache. The sleep it produces is pleasant and refreshing. The dose is 15 to 60 grs.

_Hyoscine_, in the form of a hydrobromate, in insanity has been found to be very efficient and safe (H. C. Wood). It is indicated in insomnia, occurring in the course of acute delirious mania, agitated melancholia, morphine habit, alcoholism, acute mania of neurasthenia, chronic mental disorders, with habitual wakefulness, and motor activity. Dr. Wetherell, of the Penn. Hospital for Insane, says: "I have had results which justify the assertion that it is the very best means at our disposal for calming the motor excitement of acute and chronic disorders in their talkative, active, noisy, violent phases." It is also recommended in puerperal mania, and in spermatorrhea. The latter trouble returns on the withdrawal of the drug. No case of fatal poisoning has as yet been reported, but it has given evidences of paralyzing the laryn-
geal nerves with the occurrence of sudden suffocation. Hence it is contra-indicated where there exists any trouble about the throat. Dr. Schaffer, Maryland Hospital for Insane, says that it is not always well borne. Occasionally its use has been followed by nausea, vomiting, anorexia, dysuria, syncope, with small, rapid pulse.

Hypnone is regarded by Dujardin Beaumetz as a powerful, pure hypnotic, and although it has had but a limited trial, still he anticipates for it the best of success. He says it will act promptly in cases of cerebral hyperexcitation, but it is useless in insomnia due to pain or fever. On the contrary, Laborde, after careful experiment, views the drug as too dangerous to receive an unqualified commendation. It has a horrible taste, is violently irritant, and there are grave doubts of its practical value. It is inferior to chloral, and scarcely equal to paraldehyde.

Hopeine, said to be an alkaloid extracted from the lupulin of Arizona hops, sprang into quite a notoriety during the past year. It has proven to be nothing more than a preparation of morphia. It was a most infamous attempt by a London firm to perpetrate a wholesale fraud on the people.

**MISCELLANEOUS.**

Cocaine still maintains its popularity as a local anaesthetic in ophthalmic surgery, although some accidents have been reported as following its use, its uses being mostly extended to operations on the body and extremities, even of the magnitude of amputation. The extent of its usefulness in major operations has yet to be determined. Dr. V. H. Coffman, of Omaha, reports very satisfactory results with this local anaesthetic in many operations, such as hemorrhoids, removing enlarged glands from the neck, etc. He employs a solution of cocaine in ether, by means of a hand atomizer.

Permanganate of Potash, in the treatment of amenorrhoea, has received considerable attention at the hands of several
prominent professional men, Bartholow, Thomas, Ringer, Murrell, and others, all of whom express faith in the value of the drug as an emmenagogue. To be effective it must be given in selected cases in doses of two to four grains in capsules, between meals, and followed by large draughts of water, and continued for a period of not less than two weeks.

To the therapeutics of diphtheria have been added two remedial agents which promise much in this dreadful malady, paypayotin and the thermo-cautery. Paypayotin has been used by Jacobi in a large number of grave cases of diphtheria with very satisfactory results. He employs a solution composed of one part paypayotin, two parts each of water and glycerine. This solution is applied to the membrane with a brush or spray, every hour. It digests the membrane and causes its rapid disappearance, with amelioration of all the other grave symptoms. It bids fair to prove a most valuable agent in membranous laryngitis (it has no effect on healthy tissue), and merits a thorough trial. In Europe, Bloebaum and others have cauterized the diphtheritic patches with the thermo-cautery, and all who have witnessed its employment uniformly testify that the effect is most marvelous indeed; the specific inflammation is changed to a traumatic one, the membrane is destroyed, in most cases by a single cauterization, and cases of the utmost gravity rapidly improve. The objections to its use are that the patient must be anæsthetized, and it requires a degree of skill in its manipulation possessed only by a few surgeons.
The history of the care and treatment of the insane, from the colonial period down to the present time, when carefully collated, exhibits striking contrasts concerning their custody, but in its scientific psychology falls far short of the progress in civilization and development of the races. No country on the globe furnishes a parallelism with our own respecting the physical and mental multiplicity of character in the races which populate it; none presents a duplicate uniform standard of civilization, nor such an equality of citizenship. By virtue of the generous hospitality which free America guarantees to aliens from every clime, the United States has become a willing receptacle into which foreign countries dump the garbage of their civilization. As a result, our home alienist comes in contact with hybrid types of degenerative mental disease, most difficult to classify and scarcely amenable to treatment. That such inherent natural conditions must necessarily modify both the essential nature of disease and its established treatment, need not be urged upon your attention at further length.
MODERN CONCEPTION OF INSANITY.

Recent researches in physiological psychology have served to corroborate the belief that all rational treatment of insanity must be based upon the recognition of well-marked disease located in the brain. The genetic force which regulates the development of the human being, hides away in the human brain ganglia and nervous centers, in which the psychological powers are concentrated, and from which man's autonomy originates. When the psychological powers become deranged or disordered, the functional energies of these ganglia are manifestly imperfect, and morbid psychical phenomena appear, which when subjected to analytical scientific methods, demonstrate characteristic specific lesions.

Insanity is, then, disorder of the mind, arising from disorder of the brain; the term, a generic one, is applicable to the whole range of mental morbidity, all-comprehensive yet non-descriptive. To define its nature more in detail, it is disease of the ultimate ganglia and supreme nerve centers which perpetuate and govern mentality, producing derangement of thought, feeling, and action, and revealing itself in appreciable, abnormal mental phenomena, the combination unified constituting a changed personality. In its progress and case-history we shall find illusion, delusion, or hallucination as prominent psychical phenomena, and perverted self-control the most constant objective manifestation. When met with by the skilled observer, the subject of such mental derangement is manifestly incapacitated for the relations of life, and is pronounced to be insane.

The legal dogma whereby an alleged case of insanity is estimated ignores the necessity of definite disease per se, and substitutes a divided responsibility in the same individual, making the one conscious and responsible, while the counterpart is innocent and irresponsible.

The medical profession must not accept such a doctrine concerning the essential nature of mental disease. The unity of
the human personality is the only sound basis upon which scientific methods of investigation can be applied to morbid psychical processes and phenomena. There exists no vague and fashionable subterfuge, no middle ground; individual man is either sane or insane.

The progressive alienist of modern times, imbued with the spirit of original research, if he be likewise a practitioner, will weigh each symptom consecutively in a case of mental disorder, to the end that its particular pathological significance may be estimated. In a word he conducts the psychical examination of his patient with even greater thoroughness than most practitioners devote to physical explorations in obscure bodily disorders.

With this systematic method of procedure every morbid phenomenon, each discordant act, each illusion, hallucination, or delusion is given a value, and symptoms cease to be mistaken for disease in its entirety. The tendency of the work amongst modern alienists is toward isolation of each individual case for analysis and treatment, and in hospitals for the insane the solution of the question of proper classification has thus been scientifically consummated. The prison for mad men has lost its title, and nowadays friends and courts transport sick men to hospitals.

The insane multitude now in existence are by no means a new race, else than human; they, too, are a sentient and impressionable class of beings, once normally endowed with nature's most generous attributes. Feelings, human emotions, traits of character, love, hatred, passions, manhood, and womanhood may perhaps be changed and distorted, but never during life totally annihilated. The brain may be there in structural completeness, but its functional product, the mind, is writhing in convulsions. The individual's normal psychical capacity and habit of cerebration is beyond either central or self-control, thought and ideation run hap-hazard.

To summarize, our modern conception of insanity recog-
nizes material disease affecting the individual as explicitly as either typhoid or phthisis, changing his personality, and revealing itself in convulsions of the psychical forces, thought, conduct, and actions.

**PROVISION FOR THE INSANE.**

Prior to the advent of "organized charities" the provision for the custody and care of the defective classes—paupers and criminals—was scarcely equal to the promptings of ordinary animal instinct. "The survival of the fittest" seems truly to have been the unwritten law of the universe; and the member of a family who was mentally deficient, idiotic, or insane was dropped by the wayside unworthy of pity, or thrust into a dungeon scarcely fit for swine. The one great law of social science upon which modern "organized charities" are founded is recognition of duty towards our fellow-man who loses the power of self-preservation through organic or functional defects.

The history of asylum architecture for the past fifty years marks many important transitions in the associate management of the insane, and chronicles the incentives to its progressive development. Primarily the chief reason for concentrating the insane of a whole district, state, or kingdom at a central point was for safe custody, rather than medical treatment, and the architecture was that of prisons instead of hospitals. In modern times the congregation of the insane has been maintained for purposes of classification and systematic public supervision, so that we retain incidentally the inheritance of prison custody.

If the modern conception of insanity be correct, the victims of its ravages are entitled to scientific medical care and treatment as well as sequestration in the secure custody of authorized agents. Present public institutions, established, erected, and officered by the state, furnish the best types of modern asylum architecture, and on examination we find two distinct
plans, called respectively, the "segregate" and "congregate" systems. The "segregate" system consists essentially in the distribution of a number of detached blocks, cottages, or pavilions over a large area of ground, grouped, as it were, around about a central building, the seat of administration. In the "congregate" system, on the other hand, we have the various wards, sections, or blocks traversed by continuous corridors, directly connected with the main building, and receding from the front in symmetrically disposed blocks on either side. If the single question of custody and convenient supervision be considered, the "congregate" plan affords superior facilities, and accordingly the majority of our older institutions for the insane have been so constructed. The more advanced views of recent times, however, are decidedly in favor of the "segregate" system, and it is recommended that the pavilions shall be only two stories in height, with well-lighted day rooms on the ground floor, and dormitories above. From a sanitary standpoint this arrangement certainly excels the "congregate," and when we come to classification and medical treatment it offers very decided advantages. Besides comfort, security, and sanitary perfectness, every hospital for the insane should be absolutely fire-proof.

There exists in Belgium a colony of insane people, some 1,700 in number, distributed by the government amongst 1,300 families, and over an area of 26,000 acres. Ghel is essentially an agricultural district, and the native population peasantry, domiciled in single-story cottages. The government of Belgium is so well satisfied with the financial exhibit of this colony during the past year that the establishment of a similar new colony is contemplated. Dr. D. Hack Tuke, in a recent description of Ghel, says: "No notice of Ghel would be complete which omitted a reference to the Church of St. Dymphna, a large Gothic building erected in the 14th century, and dedicated to the patron saint of the colony, whose history may here be read in carvings in oak and stone, and
in pictures, one of which represents the healing of the first lunatic through her miraculous influence."

From Dr. Rutter, of Ohio, an American superintendent who visited Gheel, I obtained a description of the colony and the actual every-day life of a patient there. While the plan may answer in Belgium, and for Belgians, we can comfortably dispense with such slavery in the United States.

Although the care takers in Gheel are paid stipulated sums for their services, the patient is compelled to do the drudgery of the household as well as regular farm labor. The family cow is provided for on the ground floor in an annex to the common living room, but the luckless patient climbs a ladder and roosts in the loft. Such, then, is Gheel, the Belgian city of the simple.

Of the 92,000 insane persons in the United States, 43,000 are not in asylums. The vital question which comes home to the student of social science is, what shall be done for the control and maintenance of these 43,000 defectives, and how can their propagation, intermarriage, and degeneration be stopped? Such a colony as Gheel, in Belgium, is quite impracticable, and would prove wholly unsatisfactory. The average cottage, tight-room, jail, or poor house is but a den of vice and vermin, a scandalous blotch on modern civilization.

When stripped of the pure, white robe which charity would cast about it, it comes to the political economist in the light of a financial problem, and challenges his attention because of its vital importance to the whole state. This question can neither be avoided nor evaded, and there appears to be but one solution for it: The custody and supervision of the insane is a burden which should be assumed in its entirety, regulated and controlled by the state.

At the last annual "Conference of Charities and Corrections" Dr. Chapin, of the Pennsylvania Hospital for the Insane, said in his report of "Committee on Provision for the Insane:" "That a review of the lunacy history of recent years pre-
sents a gratifying advance of various measures for the improved care and treatment of the insane, which have received the approval and earnest support of the boards composing this conference. Plans of asylum construction have been reviewed and reconsidered in the light of added experience and additional requirements, and wide departures have been made from former structures. The asylum at Willard, N. Y., with its central hospital building and groups of detached blocks; the detached buildings in connection with the Middletown, Conn., asylum; the open wards of the government asylum at Washington; the asylum at Kankakee, Ill., made up of separate blocks and a hospital structure; the proposed asylum at Toledo, Ohio; the recommendations of a large number of superintendents of asylums in the same direction—show the tendency to adapt plans to classes and conditions of the insane."

In addition to Dr. Chapin's enumeration I take pleasure and personal pride in mentioning the open wards and daily out-door exercise of fully ninety per cent of the patients at the Ohio asylums, "Athens," and "Columbus."

**CARE AND TREATMENT.**

Having constructed, furnished, and equipped a suitable hospital for the insane, what shall their personal care and treatment be? First and foremost, let me urge the necessity of a thorough analysis of the individual as respects intellect, temperament, and special propensities. It is a fact well worthy of attention that beyond the obvious functional derangements of the organs of vegetative life, the most important change is in the centre of conscious impressions, or, as one author describes it, "in that part of the brain where peripheric excitations are translated into consciousness."

Dr. Cowles, of the McLean Asylum, Boston, in speaking of the care of the insane, says: "It is important at the outset to establish the principle which shall serve as a basis for
the moral treatment of the insane person as an individual. The underlying principle in the whole matter is that the patient should be treated as a reasoning being. In other words, from the moment he enters the hospital it should be assumed that he will understand more or less correctly all that is said and done to him. Therefore he should be treated as if he were expected to act rationally, and led to see that after his failure to do what is expected of him, he brings upon himself friendly advice, criticism, reproof, and, if need be, restriction.”

Dr. Curwen, secretary of the National Association of Asylum Superintendents, and for many years in charge of the State Hospital for Insane, Warren, Penn., has said: “No one who has spent years in the care of the insane, and in diligent study of the different phases of mental disorder, will fail to reach the conviction that that course of treatment will most surely promote the best interests of the insane which aims to elevate all to a higher plane, and make each one feel that while suffering from the severest affliction which can come upon man, those who have the immediate care of them seek to alleviate that distress and make their path in life as cheerful as possible. It has been truly said that there is a key to unlock the most obdurate heart, if we only knew the art of fitting the key to the wards of the lock; and it is that art which every one devoted to the care of the insane is in honor and duty bound to study with the most earnest care, and practice with the most assiduous attention.”

The public at large, and even many asylum people, fail to make distinctions and likewise to comprehend the fact that the human mind may become impaired without being virtually exterminated; hence in his daily interviews with the patient it is the duty of the asylum physician to endeavor to correct morbid habits of thought, and cultivate, by exercise, the now latent original powers of mind.

Occupation—In the restoration of the insane, one of the
most important means at our disposal is the selection of suitable employment which, when skillfully directed, will not only engage and divert the mind, but likewise exercise the muscles and whet the appetite. Market-gardening, the cultivation of small fruits, the lighter grades of farm work, fruit picking and the like, are found to be especially well adapted to the physical and mental capacities of the majority of insane patients. Efforts to establish a system of indoor shop-work suitable for the insane have nowhere proven practically successful, and while at our penal and reformatory institutions the results have been eminently satisfactory, with the insane the problem remains unsolved. Heretofore, many mild and harmless patients have been allowed the freedom of the grounds, but not until recently have the very violent ones been released from seclusion in their rooms, and taken outside the confines of an airing-court for the purpose of systematic daily exercise and diversion. Besides the long walks, horticulture and various forms of manual labor, which may be selected as curative measures, athletic sports, such as base ball, lawn-tennis, and croquet are decidedly beneficial. For purposes of general recreation, amusement, and social mingling of the sexes, music and dancing afford the very best indoor resource.

In resorting to tactics in moral management, and to divers forms of physical exercise, we seek to switch the train of morbid thought safely off the main line of sound reasoning.

**MECHANICAL RESTRAINT.**

In asylum parlance the term "mechanical restraint," signifies the use of special mechanical devices and appliances for the purpose of restricting muscular movements on the part of troublesome or violent patients. This interesting collection of human harness includes the "muff," the "mittens," the "crib," the "camisole," the "strapping-bench," the "fixed-chair," "wristlets," "anklets," and "hand-cuffs." Of these,
either a choice or each possible combination is resorted to, ac¬
cording to the taste, temper, or inclination of the applicator. Advo­
cates of the "restraint system" assert that the employ­
ment of restraint apparatus is absolutely indispensable in a
well-conducted institution, class it amongst therapeutical rem­
edies, and grow eloquent in their praises of the "Utica crib,"
alias "the covered bed."

In order that a clearer understanding may prevail concern­
ing this particular article of asylum furniture, I may be
privileged to give a description of it. The typical specimen
of the "Utica crib" is made from hard wood slats and corner
posts, which when bolted together form a cage six and one-
half feet in length, twenty-eight inches in breadth, and
twenty-four inches in depth; the bottom of the crib is per­
haps fifteen inches from the floor, and the cover, hinged at
one side, fastens with hasps, staples, and padlocks.

For ordinary therapeutica! purposes a mattress, pillow, and
bed-clothing are placed in the crib; but when, owing to grave
pathogenetic, functional, or organic lesions in the ultimate
nerve-cells, the condition of the patient becomes alarming, it
is found necessary to use additional mattresses sufficient to
bring the face and body of the subject snug up to the cover
and thus conserve the vital spark by preventing his turning
over in bed. In very extreme cases the hands are strapped
to the slats on either side, and a roller-towel drawn tightly
across the chest. This, then, is the unvarnished picture of
the so-called "covered bed," recommended and fondly
advocated by restraint apostles. The camisole or straight-
jacket with endless sleeves, the wristlets, the leather muff; the
fixed chair with belt and padlock, and various other devices,
are chiefly administered during the day-time with the object
of exacting quietude and due decorum in the wards.

As a matter of fact the only rational argument in favor of
mechanical restraint is that it reduces the attendants' labor
and protects the hypersensitive pride of the superintendent
from adverse criticism for apparently maintaining a noisy and disorderly house. Go with me within the confines of such an establishment, and there witness its practical workings: an air of mystery and official distrust greets you at the threshold; the inmates sit there like wax figures in a museum; if perchance in your rapid transit through the disturbed wards an irrepresible patient dares to address the monarch of the castle, laughs, or grows boisterous, he is repulsed and apologized for; mark carefully the whipped-cur demeanor of the refractory patient when the keeper approaches, remember that his shape is human, and then thank God that you are not insane. "But," the objector asks, "can the most violent and refractory patients be successfully managed, or managed at all, without mechanical restraint?" I answer, most assuredly they can; and in support of my assertion refer him to the recorded successes of the "non-restraint system" in the asylums of Great Britain, Germany, and many of the best institutions in the United States.

No feature of recent progress in the care and management of the insane exhibits such thrifty growth as the determination to eliminate barbarous methods from the curriculum of asylum treatment, and substitute therefor better and more humane plans. In the construction of sleeping apartments for violent patients, perfect security can be had by properly ceiling the interior; for those disposed to bruise and injure themselves, have the walls upholstered in leather; if the case be a suicidal one, detail a special night-watch.

Freedom from harassing restraint during the day, abundant sunshine and outdoor exercise, recreation, and manual labor, are, in the majority of cases, the very best hypnotics within the reach of asylum physicians. Make a bonfire of every crib, fixed chair, muff, and camisole about the premises, and educate attendants and nurses to the fact that even the worst cases may be better managed, more humanely treated, and more certainly restored to health without mechanical restraint.
Dr. Gundry, superintendent of the Maryland Hospital for the Insane, says: "I believe that it is possible to manage an institution without mechanical restraint, except in surgical emergencies in very exceptional cases. The absence of restraint does not do away with all the concomitants of insanity. Exacerbations of the disease occur now as formerly, but are met and treated more considerately and dispassionately. My own experience at the Maryland Hospital for the Insane, as elsewhere, enables me to indorse to the fullest extent the claims made for the non-restraint system by its most enthusiastic advocates. Non-restraint substitutes tact for force. It leads to forbearance in the adjustment of the patient and his environment instead of exacting an unthinking compliance with arbitrary regulations. It does not wound the self-respect of the patient, nor blunt the sympathies of those around him. It modifies the feelings of all concerned, and promotes a mutual feeling of trust in the better qualities of our common nature."

This, gentlemen, is the mature judgment of an alienist who has few peers in the management of asylums for the insane, and I submit to you whether the logic of his reasoning, born of ripe experience, can be shaken by skeptics who declare "It can't be done."

THERAPEUTICAL TREATMENT.

Progress in the therapy of insanity has by no means kept pace with the radical improvements in structural provision and personal care of the insane, and it is doubtless due to the fact that advanced experience has demonstrated the futility of searching for medical specifics for mental disorders. The records of the very best institutions in the land show a steady decrease in the medical dosage of the inmates, and a decided tendency to substitute a generous diet, fresh air, sunshine, and exercise for ferruginous tonics and narcotics.

Besides the ordinary bodily diseases co-existing with insan-
ity and requiring general medical attention, the one condition, insomnia, demands and is given more medical treatment than all others combined. The routine practice of exhibiting regular night doses of "bromide and chloral" as hypnotics in all cases of unrest is being discarded by scientific practitioners as altogether injudicious and unwarranted.

In argument against such routine method, it is claimed that chloral enfeebles the vaso-motor system, lowers and weakens the heart action, and produces undue anaemia of the brain in a class of cases already impoverished in nutrient resources.

Merc's elixir of hyoscyamine has proven of incalculable value in controlling the furious frenzy of acutely maniacal patients, and when properly administered will induce from six to eight hours of refreshing sleep. In Berlin, the sulphate of hyoscyamine has recently been given the preference, however, because better adapted to hypodermic administration. This alkaloid has proven to be a very successful hypnotic agent, and likewise has the advantage of exerting a decisive tranquilizing influence on excitable patients the ensuing day. The subcutaneous injection of three-tenths of a grain will be followed in some twenty minutes by well-marked physiological effects on both motor and sensory centres, producing dilatation of the pupil, uncertainty in locomotion, defective articulation, confusion of mental faculties, and general psychical quiescence.

Hydro-bromate of hyoscie, a new alkaloid of hyoscyamus, promises to become of rare value in its special fitness for the control of insomnious delirium in that class of insane patients who are denied sleep and mental relaxation by reason of perpetual tumult in the centres of cerebration. The administration of from 1-120 to 1-40 of a grain hypodermatically has been found efficient in such cases, and its future special applicability in other forms of insanity will doubtless be demonstrated.

Hyprnone, hopeine, paraldehyde, and urethan are amongst
the new additions to the list of hypnotics and cerebro-spinal sedatives, and merit more extended investigation by the profession.

With this brief reference to special drugs recently employed in certain conditions of the insane, I will proceed to note special items of progress in their care.

SPECIAL PROGRESS.

A most gratifying evidence of progress in the treatment of mental diseases is the original research in pathology under the supervision of Dr. Fisher, superintendent of the Boston Lunatic Hospital, South Boston, Mass. Special studies in the pathology of insanity are so rarely found in the annual reports from institutions for the insane, that a scientific medical section, such as that in the Boston report, affords material of unusual interest. In this section Dr. Gannett, the pathologist of the hospital, has reported the clinical diagnosis of a number of selected cases, and the results of the autopsy in each, both as regards macroscopic and microscopic appearances.

The McLean Asylum Training School for nurses, established by Dr. Edward Cowles, superintendent of the McLean Asylum, Somerville, Mass., the first school devoted exclusively to the education of nurses for the insane, has proven eminently successful. In his annual report for 1885, Dr. Cowles gives an extended history of its workings and says: "The value of such a school depends upon the thoroughness of its work, and that the main portion of the teaching, besides the practical work in the wards, should be the study of textbooks, systematic class drill, and practice in making clinical observations."

Besides the practical instruction from expert teachers in the art of nursing the insane, the system of the McLean school includes lectures in physiology, hygiene, and minor surgery from the medical staff of the asylum.

Two other progressive measures in Dr. Cowles' manage-
ment of the insane have been the introduction of female nurses in the department for males, and the employment of ward-maids to do the ordinary household work. Besides the McLean Training School, there are similar ones at the Buffalo Hospital for Insane, Buffalo, N. Y.; Norristown Asylum, at Norristown, N. J., and the Kankakee Asylum, Kanka­kee, Ill.

The Buffalo Training School graduated a class of six attend­ants during the past month, and is in flourishing condition under the supervision of Dr. Andrews, the superintendent.

During the past three months a new departure has been made at the Hudson River State Hospital for Insane, Pough­keepsie, N. Y., in the establishment of a day-school for teaching the branches of a common school education to the patients at the asylum. The project seems feasible, and the results so far have proven satisfactory.

In conclusion, may we not hope that the boldness in cranial surgery will beget precision in cerebral localization, and that the systematic exactness of physiological psychology will, ere the dawn of a new century, dispel the mysteries of psychical aberration.
SECTION
ON FORENSIC MEDICINE AND TOXICOLOGY.

A REPORT ON THE PROGRESS IN FORENSIC MEDICINE AND TOXICOLOGY—THE CHEMICAL ANALYSIS IN TWO CASES OF CRIMINAL POISONING IN NEBRASKA.

DR. MARTIN V. B. CLARK, SUTTON, 1887.

CASE I.—ARSENIOUS ACID.—June 8th, 1881, Andreas M. Anderson, widower, invited John Storm Johnson, his wife, and little daughter, all Swedes, to come over on the following morning, have a drink of whisky, and take breakfast. Mrs. Johnson and daughter did not go, her excuse being that she had to stay at home and wash. Johnson accepted the invitation, and was met on the path between their dugouts by Anderson, who accompanied the former the rest of the way home.

After taking a drink of whisky the two old men sat down to a breakfast prepared by Anderson, consisting of meat, bread, cakes, and coffee. Breakfast over, they sat down in a friendly way to smoke. In about half an hour Johnson was taken very sick at the stomach, went outside, sat down by the side of the dugout, and vomited. Anderson, just at this time, discovered that his stock was straying, and when he had returned from that Johnson had left for home, where he arrived at 9:30 A.M., having been absent about an hour and a half. He now began to be dreadful sick, calling for water, which
did not quench his thirst, choked for breath, and was very pale, incessantly vomiting a brownish-red vomit; he cramped in his bowels and feet, and purged a watery-green matter, all the time growing tired and cold, and died collapsed, at two P.M., five and one-half hours after taking the poison.

Soon after death, and while yet Mrs. Johnson was holding her husband—his last request being to hold him up—Anderson comes, pale and nervous with fear. Mrs. Johnson upbraiding him for making her husband so sick, Anderson replied, “Do you think I gave him the poison?” Anderson then sat down on the bed and prayed a strange prayer, which was afterwards explained by Mrs. Johnson to be “a prayer for the safety of the soul of the dead.”

Anderson went from here to a neighbor’s, and expressed alarm from the fact that Johnson was taken sick at his house, and might occasion a good deal of talk. On a suggestion by this neighbor that in order to clear up the matter it would be necessary to have a physician and have the case examined into, Anderson remained silent. In strong contrast, he was quick to suggest and assist in preparation for the funeral and burial, which took place next day at five P.M.

In a few days the gossips near the scene of the murder took up the theme of the sudden death, and still more sudden and hasty burial, which at length resulted in a coroner’s inquest. June 14th, five days after the burial, information came to me, on account, I suppose, of my having been coroner of Clay county. The information was reduced to writing, and was subscribed to by the informers, who took the same to Coroner Geo. Nuss, and an inquest was ordered on the 15th.

I prepared a new two-gallon earthenware jar, having a closely-fitting earthenware cover, to receive the viscera, by rinsing it thoroughly with water until it was clean. It was then filled again with clean water, and, after agitation, a pint was taken, properly sealed in a bottle, and reserved for future use if ever a question should be raised as to the cleanliness of
the jar that was to receive the organs taken from the body for chemical analysis. A sample of the water with which the jar was cleansed was then taken and tested for mercury, copper, zinc, arsenic, antimony, and other mineral poisons, and found to be free from the same. The jar was then emptied, the cover securely bound to its place and sealed by the coroner, and taken by him to the cemetery, where the exhumation, post mortem, and inquest were to be held. The post mortem was participated in by Drs. A. O. Kendall, R. B. Conn, and myself. We removed successively the stomach, with duodenum attached, ligating each at its distal extremity. The liver, lungs, heart, and left kidney were next taken, in the order named, and placed, as removed, in the jar, in the presence of the coroner. No dissections were made of the viscera, but the physical appearance of the several organs was observed to appear normal, save the liver and lungs, which were considerably congested, and for the time of the year were remarkably well preserved.

The coroner's jury was then called and sworn. By request of the coroner, I conducted the inquest, examining the witnesses separately, and had the evidence reduced to writing, for use before the grand jury. The evidence bearing on the circumstances and manner of death having been presented to the jury, it adjourned to the following day to receive the chemical evidence in the case.

The jar containing the viscera was brought to me by the coroner, and by him, in the presence of witnesses and myself, opened. I then proceeded to make a qualitative chemical analysis, by first submitting a sample of the alcohol, distilled water, zinc, sulphuric acid, and other chemicals proposed to be used in the analysis, all of which were added to a Marsh hydrogen apparatus, and were found to be pure and free from either antimony or arsenic. A little of the bloody serum present in the containing jar was added to the hydrogen generator, and on holding a cold porcelain surface over the flame
no coloration took place, which showed that if poison were present it was either inside the organs in the jar, or it had not been absorbed by the escaped blood and serum. I then caught up the cardiac extremity of the stomach with a tenaculum, and made a crucial incision, and obtained, by gentle pressure, two or three drops of a viscid, reddish-brown, semi-liquid substance. This I added to the hydrogen apparatus, and at once the color of the flame became reddened, and when a cold porcelain surface was exposed to the same there immediately sublimed upon it a metallic, blue-gray, mirror-like deposit. To these I applied the differential test, in order to determine whether I had carbon, antimony, or arsenic, either of which might be present. Applying a solution of calcium chloride, it immediately dissolved the spots, thus excluding carbon and antimony. Holding an alcohol flame against the dark spots, it immediately dissipated them, with a strong garlic odor, thus proving the presence of arsenic.

The jar containing the viscera, without any part of the same having been removed from it, and without the addition of any antiseptic, was then securely closed by tying the cover down with tape, sealing it, and then blowing it with plaster of Paris which by test was known to be free from arsenic. The jar was then turned over to the coroner and kept by him in a secure place for a complete qualitative and quantitative chemical analysis.

On the reassembling of the coroner's jury, and after hearing the results of the chemical analysis, it brought in a verdict "that Johnson came to his death by poisoning with white arsenic by Anderson, maliciously, feloniously, and with intent to kill," whereupon the coroner issued a warrant arresting Anderson, who was given a preliminary hearing before a justice of the peace, and bound over to appear at the sitting of the grand jury without bail.

At this trial Anderson's motive appeared to be a desire to get rid of Johnson so he might marry the wife of Johnson,
who, it seemed, was quite willing on her part, and owned a large property. The drug store at which Anderson got the poison was found, but before the trial of the case the druggist died, and hence this evidence could not be introduced, either in person or by the poison register, as the latter would have to be sworn to.

At the first sitting of the grand jury Anderson was indicted for murder in the first degree.

The post mortem examination resulted as follows:

_Stomach._ Weight of stomach and contents, fourteen ounces avoirdupois; weight of contents alone, six ounces avoirdupois. Externally, color brown, and in good state of preservation. Internally, it was denuded of gastric membrane, leaving its muscular coat bare. Contents of the stomach were of a dirty reddish brown, thick in consistence, like mucilage. The internal muscular structure was striped with a golden yellow and bright, light yellow stripes, due to the formation of orpiment (yellow sulphide of arsenic), the sulphur coming from the injesta.

_Liver._ Weight, twenty-six ounces avoirdupois. In good state of preservation; surface uniform, with no appearance of abscess, recent or remote, and no evidence of fatty or other degeneration. Internally: On division the internal structure was firm, with right lobe congested. The internal surface of the hepatic veins presented bright yellow stripes, having the same appearance as those found in the stomach.

_Lungs._ Weight, twenty-four and one-half ounces avoirdupois; slightly congested, and free from tubercular or calcareous deposits.

_Heart._ Weight, eight and one-half ounces avoirdupois; measured two and three-fourths inches in small diameter, and four inches in large diameter; no appearance of effusion, fatty degeneration, or hypertrophy.

_Kidney._ Weight, five and one-half ounces avoirdupois. On division it was healthy and free from fatty deposit. The
pelvis of the kidney exhibited the characteristic bright yellow striated appearance as was observed in the stomach and liver.

This constantly present striated appearance was the only remarkable post mortem condition.

Prof. Samuel Aughey kindly assisted in the chemical determinations. We entered upon the work July 2, 1881, by first testing the distilled water, alcohol, and all chemicals and re-agents that were to be used in the analysis for poisons or other impurities, and found them free from the same. We took one-fourth of the liver, cut it into small strips, and digested it in a new glazed porcelain evaporating dish, over a sand-bath, in distilled water acidulated with acid hydrochloric, two and one-half hours, and when cool filtered through a double paper filter. Took one-tenth of this solution, which would be about one-fortieth of the whole liver, and added it to a Marsh hydrogen apparatus. On holding a cold, glazed porcelain surface in the flame of the hydrogen lamp, a bluish metallic deposit at once took place. On applying a solution of calcium chloride, the spot was immediately dissolved. The flame of a gas jet on the spot dissipated it with the odor of garlic, thus excluding carbon and antimony, and proving the presence of arsenic. Heated the tube through which was passing the hydrogen arsenide from the generator containing the solution of the liver: beyond the flame a sublimate took place, having the characteristic blue-gray mirror color of the metallic element of arsenicum. This tube was then broken, and the portion containing the sublimed arsenic was crushed in a clean mortar, mixed with an equal bulk of black flux, placed in a reduction tube, and heated. Shortly after, and toward the open end of the tube, crystals appeared, which under the microscope proved to be octahedral crystals of arsenious acid. These crystals were preserved for future reference at the trial of the case, if called for.

This result proved that the arsenic had been absorbed by the system, having been carried to the liver by the portal
circulation. The remaining portion of the liver was flowed with chemically pure alcohol, sealed, and kept for reference.

THE STOMACH.

Weight of the stomach and duodenum, twenty-one and one-half ounces avoirdupois; weight of contents of the stomach, six ounces avoirdupois. Operated upon about one-half of the contents of the stomach, and about the upper one-half of the stomach and about the lower one-half of the duodenum, weighing all together 5,250 grains.

Cut up with a pair of shears the solid portions of the stomach and duodenum; macerate this in a porcelain evaporating dish over night in distilled water, acidulated with acid hydrochloric. It was then digested in a new porcelain evaporating dish with gentle heat for three hours, cooled and filtered through double paper filter. A small portion of this solution of the stomach was subjected to the Marsh hydrogen test and showed the presence of arsenic. As a matter of precaution the differential tests were made excluding carbon and antimony.

Among the theories proposed by the defense to explain away the poisoning was, that Johnson took Paris green by mistake. This poison being arsenite of copper, hence the following test: To a portion of the filtered solution of the stomach was presented a bright, steel surface; no deposit or discoloration took place, thus excluding all soluble compounds of copper. The filtered solution was then concentrated to two fluid ounces, cooled and filtered through a double filter; the evaporating dish was washed with distilled water, alcohol, and acidulated distilled water, and the same added to and passed through the filter. To the filtered solution, after all had passed through the filter, there was added to the same, one and one-half volumes of distilled water and placed in a tall, narrow beaker glass. Through this solution a stream of washed hydrogen sulphide was passed which precipitated the arsenic in the form of a ter-sulphide.
In order to prove that this precipitate was arsenic sulphide, and not sulphur, or any of the sulphates of either or all, of cadmium, selenium, tin, or antimony, we subjected a portion of the precipitate to the following distinguishing differential test. A portion of the precipitate was dried and treated in a reduction tube with a flux composed of sodium carbonate and potassium cyanide, which gave an iron gray mirror-like sublimate of arsenic or metallic arsenic. The portion of the tube containing this was broken up and placed in another reduction tube with black flux, and in contact with free oxygen, contained in atmospheric air, which resulted in the characteristic octahedral crystals of arsenious acid, proving that the precipitate was arsenic sulphide.

The precipitated arsenic sulphide was collected on a double filter, which filter had been previously dried in a drying oven at 212° Far. as long as it ceased to lose weight, in order to expel all hydroscopic moisture, after which the weight was duly recorded. After all the solution had passed through the filter, the latter containing the precipitated arsenic sulphide was again dried in the drying oven, until as before, it ceased to lose weight.

The increased weight yielding 8.64 grs. of arsenic sulphide, which by calculation contained enough arsenic to equal 6.95 grs. arsenious acid. At this rate the stomach, with contents and duodenum, would yield nearly twelve grs. of arsenious acid. The unused portion of the stomach, solution of stomach, and duodenum were sealed up with enough pure alcohol to prevent decomposition, and kept for future reference.

The case was tried before Judge A. J. Weaver, Hon. W. H. Morris, district attorney. Bagley and Bemis, attorneys for defense.

The prisoner was acquitted on the theory that Mrs. Johnson might have given the arsenic to her husband before he left home in the morning, which was simply impossible, from
the fact that Johnson, being a chronic dyspeptic, could not carry arsenic on an empty stomach an hour without vomiting. The jury, however, were satisfied that Johnson came to his death by arsenical poisoning.

Anderson, after the trial, became reticent and nervous, evidently fully condemned by his own conscience.

Widow Johnson, in the meantime, had married another man, thus adding to Anderson's misery. After a period of aimless journeyings he came back and died a pauper in the county house.

CASE II.—strychnia.—March —, 1884, Mary L. died from the effects of strychnia poisoning; her husband was charged with the crime, and among the motives for the commission of the same, the state introduced witnesses to prove that there had been a separation between him and his wife, which had been caused by a jealousy on the part of Mrs. L. from an intimacy that had sprung up between Mr. L. and an adopted daughter, who was said to have been very beautiful, and possessed of enviable personal charms. The difficulty between the estranged husband and wife had been amicably arranged for a given sum of money to be paid to the wife in installments, the first one of which had been paid. It was sworn to that the husband consulted an attorney as to the probable effect it would have in relieving him from the payments coming due should Mrs. L. chance to die. The wife's health was always better when she lived away from home and during the separation.

About a year previous to the poisoning, it was proved that she consulted a physician, who prescribed for her a medicine composed of fluid extracts and tinctures, and when one-half of the prescription was taken it would invariably vomit her excessively. The same prescription was several times repeated, with the same result, which finally resulted in a chemical analysis, and the finding of arsenic, proving the innocence of the physician and druggist.

The defence, however, claimed that this was an attempt at
suicide, which seems unreasonable, as probably Mrs. L. would not need to make so many fruitless attempts. After much persuasion on the part of the husband and his friends, and many promises on the part of the former to be a good, faithful husband, the wife consented to return and live with him, notwithstanding the unhappy life and cruel treatment that it was claimed she had received at his hands.

At about 10:30 A.M. of the day she died she was seen sitting at the window, looking out onto a porch, knitting, in the city of C——, Nebraska.

Soon after she managed to get out some way onto the porch, where she was noticed in a sitting posture. She called the boys who found her, and who noticed she could not stand up, to go quickly for her husband, and to call a doctor.

The doctor came promptly, but the husband came very leisurely.

Dr. R. saw the case at 11:15 A.M., and describes her symptoms as follows: She was in a clonic spasm when I first saw her. These continued, save with the interruption of three tonic spasms. She died in the third tonic spasm.

Skin natural color except when in tonic spasm, at which time it took on a livid appearance, due probably to interference in respiration by spasm of the diaphragm and intercostal muscles.

I tried to administer ipecac and tartrate of antimony, but do not think she succeeded in swallowing any until just before the last spasm. I got down about 5 jss. syrup ipecac. This is all the antidote I had at hand; could not have successfully administered them had I had them with me, on account of spasms of the muscles of the jaws.

She lived thirty-five minutes after I saw her, which would be about one hour and twenty minutes from the time when she was first taken.

She went from one spasm into another with but momentary intervals, calling on her friends, when it was possible for her
to speak, to "Kill me!" "Hold me!" "There, it is coming!"

Her eyes were fixed, head thrown backward, lower limbs extended and thrown apart, with feet rotated inward; her hands were held by an attendant, and in every way the case was typical. Rigor mortis came on immediately after death, and continued at time of burial. The state introduced evidence to show that the poison might have been purposely placed in a tea-pot, which always stood on the stove, from which Mrs. L. was in the habit of drinking a sip now and then between meals.

My evidence was introduced to show that the delay in the poisonous action of the strychnia from the time the husband left home in the morning could be accounted for in that it combined readily with the tannin in the tea, forming strychnia tannate, an insoluble compound.

Immediately after, and in the hurry that naturally follows a sudden death, some one found time to carefully empty and wash out the tea-pot, which for years had stood on the stove, and place it carefully in the pantry, bottom upward.

April 1st, 1884, I entered upon the chemical analysis at my laboratory at Sutton, on the authority of the district attorney, Hon. G. W. Bemis, of the Fifth Judicial District, Nebraska.

First, I subjected the distilled water and pure alcohol, acetic and sulphuric acids, ammonia, and all other chemicals, re-agents, tests, and appliances used in or connected with the analysis, to a careful qualitative analysis, looking industriously for the presence of oxalic acid, arsenic, and strychnia, and found them free entirely from the same and all other impurities.

The stomach, intestines, and liver were sealed up separately in jars, and were received by me personally from the sheriff and coroner of county, and expressed to me at Sutton, Neb., where I took charge of them and kept the same securely until the analysis was entered upon. I exam-
ined the seals on the jars, which I had seen affixed, and found them undisturbed.

STOMACH.

Weight of stomach and contents, 3,281.2 grains.

At the oesophageal extremity of the stomach was a noticeable amount of congestion.

The lesser curvature of the stomach was also considerably congested. The veins of the greater curvature were filled with dark mahogany colored and fluid blood.

*Internal surface* of the stomach was covered with a viscid reddish-brown fluid, intermingled with food in various stages of digestion.

Portions of the food and fluid contents were preserved in alcohol and in glycerine, for microscopic examination and for reference.

Weighed out 1,428.9 grains, being less than one-half of the stomach and contents, for analysis.

The unused portion, 1,852.4 grains, was flowed with chemically pure alcohol, securely sealed, and has been preserved for future reference.

Placed the contents of the portion used for analysis, together with the solid portions of the stomach, cut into small pieces, in a new porcelain evaporating dish, covered it with pure alcohol and two and one-half fluid ounces of distilled water, and acidulated it with a few drops of glacial acid acetic. Placed the evaporating dish on a water bath and digested it at a moderate heat for three-fourths of an hour. When cool, strained the whole through a fine linen strainer, pressing the insoluble parts of the stomach strongly. Repeated washing the latter and pressing several times.

The combined washings and fluid from the stomach was concentrated over a water bath at a moderate temperature, and when sufficiently cool was strained through a wet linen strainer.

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The liquid containing the suspected poison was then filtered through paper.

The filtrate was then rendered slightly alkaline with ammonium hydrate, when crystals of the alkaloid strychnia separated in needles and star-shaped forms peculiar to that poison. In order to free the strychnia from water and organic matter, I agitated the solution with rather more than its bulk of pure chloroform.

All the strychnia then combined with the chloroform, which having a greater specific gravity than water, settled and separated at the bottom, leaving the water and impurities at the top, which I drew off with a small glass syringe. Evaporated spontaneously a small portion of the alkalized chloroform solution in a small glazed porcelain capsule; added a small drop of concentrated acid sulphuric, placed on one edge of the drop a small crystal of potassium bichromate; waiting a minute for partial solution to take place, I suddenly, with a glass rod, brushed the crystal across the capsule and in contact with the evaporated chloroform residue, when appeared a bright blue color, rapidly changing to purple, then violet, bright red, then slowly faded, indicating the presence of strychnia.

To another portion of the residue I added acid sulphuric and potassium ferro-cyanide, and had the same play of colors and in the same order, confirming the foregoing test. To another portion I applied proper tests for oxalic acid and arsenic, and found none present. To another portion I added acid sulphuric, converting strychnia into a strychnia sulphate, which crystallized out on evaporation into the forms found in commerce. To these crystals I applied the color test, and found them to be a salt of strychnia. These crystals have been preserved for reference.

Applied another confirmatory test known as the physiological test, discovered by Dr. Marshall Hall, by taking a small portion of the residue and putting it into four fluid ounces of
water, and placing therein a frog weighing 432 grains. The frog died in tetanic convulsions in fifteen minutes from time of immersion, rigor mortis coming on very soon after death, and remaining permanently. Two other frogs, weighing about the same, were injected hypodermically with a few drops each of an aqueous solution of the alkaloid, and died in six minutes with all the usual symptoms of strychnia poisoning, commencing with tremors of the toes of lower extremity, twitching of the toes of the upper extremity, then spasmodic action of the muscles of the legs, and suffocation, caused by spasm of the diaphragm, resulting in death.

The liver was examined chemically, and found to give evidence of the presence of absorbed strychnia. The remaining portion was sealed up for future reference.

QUANTITATIVE ANALYSIS.

After determining its freedom from organic matter I evaporated the chloroform solution of the stomach to dryness spontaneously, and brought it with pure chloroform to fifty cubic centimeters. Measured out ten cubic centimeters of this standard solution for the analysis, being one-fifth of that portion of the stomach used. Placed a small filter in a drying oven at a low temperature, and when constant weight was reached it was recorded.

The above ten cubic centimeters were gradually poured on to the filter, and the chloroform allowed time to evaporate spontaneously, as well as the ammonia hydrate with which the solution was rendered alkaline. The filter was then again returned to the drying oven, and there maintained at a low temperature until constant weight was reached. Its increased weight was .002 (milligrams), which was the amount of strychnia found in one-fifth of that portion of the stomach used in the analysis. Multiplying the .002 of a milligram by 15.433, being the number of grains in a gram, we have .03 of a grain, the number of grains found in one-fifth of the
amount of the stomach operated upon. Multiplying this by five, we have the number of grains of strychnia in that part of the stomach used, viz.: .15 of a grain. Considering the whole weight of the stomach and contents, which was 3,281.2 grains, is to the amount used in the analysis, which was 1,428.9 grains, we have .35 of a grain, which would be the amount which the whole stomach and contents would produce. This being in the alkaloidal state it would take nearly twelve grains of water of crystallization and acid sulphuric to convert this into the form of the sulphate, in which form we have a right to estimate it, as the form in which it is found in commerce, and the form in which it was used, which gives us over .47 of a grain of crystallized strychnia sulphate in the stomach alone. This amount represents the quantity found after death—the surplusage, as it were, or unabsorbed portion left after the killing.

I then applied last of all the test by tasting, and experienced the cumulative effects of strychnia, about which some writers on toxicology have raised a question. Tasting of a concentrated solution of the alkaloid in alkalized chloroform solution, I came near being fatally poisoned, my condition being critical for nearly an hour, having experienced nearly all of the effects of a poisonous dose, but fortunately not a fatal one.

My condition was most closely observed by my clerk, Mr. H. H. Lueblen, and by myself, that I might not unnecessarily alarm my family. It was fully a minute from the tasting before that peculiar bitterness characteristic of strychnia manifested itself, which commenced at the sides of the tongue.

At first I was taken nearly blind, everything in the laboratory appearing yellow; felt weak; legs gave way; managed to stagger to the door of the laboratory, and walked with difficulty, holding on to objects as I went to my office. I was dizzy; diaphragm and intercostal muscles took on spasm, the diaphragm descending at the first onset of each paroxysm;
heart at first beat tumultuously, and then, later on, beat very slow and weak; hands closed involuntarily; took tannic acid in water, which tasted sweet; was exceedingly thirsty; took twenty grains powdered ipecac in warm water, which did not even nauseate.

Second attack.—Five minutes from the first paroxysm; was taken like the first; breathing was very difficult; light from the window still appeared yellow; was very pale and cold, countenance sallow; pulse dropped to sixty-six per minute.

Third attack.—Ten minutes from the last one; pulse, sixty-four; heart beat irregularly, and was often interrupted. As the paroxysm passed off the circulation went up to eighty per minute; temperature, ninety-seven.

Fourth attack.—Fifteen minutes from last; sharp pains at apex of heart; mouth very dry, and bitter beyond description; throat burns; was chilly; hands cold; neuralgic pains in right side of head; sneezed often; spasm of bladder and diaphragm occurring in the order named; took two drams of sweet spirits of nitre.

Fifth attack.—Thirty minutes from last; feel as badly as at first; disliked to be alone, on account of the possibility of convulsions setting in; took eight drops of tincture belladonna and a large dose of tannic acid again; intense bitterness would precede each paroxysm.

Sixth attack.—Forty minutes from last; took two drams sweet spirits nitre; only a slight paroxysm; reaction established; mouth growing moist and less bitter; an action of the kidneys gave me much relief.

My dangerous experience in this case has effectually taught me to never taste solutions of strychnia unless I am sure of their being weak ones.

I have given in detail the chemical processes followed in the recovery, and estimation for arsenic and strychnia, as examples of my other cases. They are, as nearly as each case would allow, those laid down in Prof. Wormly's "Micro-
chemistry of Poisons," whose estimable work is recognized as standard by the courts in trials for criminal poisoning in Nebraska. I might say, however, no line of chemical procedure can be absolutely followed, but each case must stand and be studied by itself, and the processes for the detection and recognition of poison must be varied accordingly.

The accused was tried for murder before Judge Neville, of Omaha. Hastings & McGinty, attorneys for the defense.

The prisoner's counsel introduced witnesses that tended to prove that the wife in her life-time threatened her own life, and also introduced as circumstantial evidence bits of sentimental poetry, of the pathetic order, like "In the Gloaming," etc.

The defense admitted in the argument of the case the poisoning, of which fact the jury were well satisfied. The prisoner was acquitted, on the theory that the deceased suicided.
ON LAW AND LUNACY, TOGETHER WITH MEDICO-LEGAL NOTES ON RECENT CRIMINAL CELEBRITIES.

BY EDWIN A. KELLEY, M.D., OMAHA, NEB., 1886.

Medical jurisprudence respecting lunacy has for ages groped in the dark realms of speculative hypothesis regarding man’s natural degree of responsibility and his capability for maintaining his position in the ranks of citizenship. As the march of civilization advances and the imprint is stamped upon the multitude who inhabit the earth, the parent stock, the type of individual, the customs, habits, and mental condition of each race of people undergo such radical transformations that recent scientific study concerning the essential nature of psychical phenomena naturally seeks the channel of evolution. The powerful under-current in recent psychological research had its origin at the fountain head of evolution, and the physiological psychology of modern times promises to lift the veil and establish a standard of man’s moral responsibility to man.

When criminal acts involving unnatural and discordant psychical manifestations shall be thoroughly analyzed according to the doctrine of physiological psychology, motives will multiply and a succession of causative forces be in many cases clearly demonstrated.

The law of evolution, as condensed by Spencer, is, “That every active force produces more than a change; every cause produces more than an effect.”

When this conception or doctrine is applied to mental facts, when psychical phenomena are frankly recognized as the true index of intellectual power and moral responsibility,
the outward acts of the individual can be justly estimated according to accurate methods of analysis.

In the whole range of medical jurisprudence there exists such a conflict between the recognized value of scientific medical evidence on the one hand and the moth-eaten traditions and judicial rulings on the other, that the actual merits of the medical witness are rarely recognized beyond his reputation for truth and veracity. Existing laws pertaining to insanity are chiefly judicial, having been founded upon the basis of a universal knowledge of right and wrong, without incorporating therein a means of determining the original mental capacity of the individual as to powers of reason, judgment, or will. Instead of analyzing a case on the basis of scientific search for disease, the rules of evidence and methods of legal procedure restrict the medical witness to hypothetical monstrosities and speculative abstractions. That such arbitrary restrictions defeat the ends of justice cannot be successfully controverted, and from a scientific medical standpoint such unfortunate results are particularly prone to occur in the medico-legal investigation of lunacy. The tendency of existing relations between Law and Medicine, together with the practice in our civil and criminal courts, contributes largely to the perpetuation of unsound doctrines concerning insanity, and cultivates charlatanism amongst medical witnesses. The supreme court of Indiana has ruled that the medical expert is entitled to liberal extra compensation, and with similar justness demands that he shall be thoroughly competent to furnish scientific expert evidence.

What is the spectacle presented in most of our courts day after day, and what the calibre of the average medical witness who is summoned to elucidate contests concerning lunacy? Let me sketch the picture and submit it to your criticism. The advocate on either side may be seen in close converse with various medical men of the town who are known to have expressed the personal opinion that the accused "is,"
or "is not insane?" that such a condition "is simply prepos­
terous;" that "she has always been more or less crazy," and so on, ad nauseam. The ensuing morning the sheriff serves the summons, and a dozen full-fledged medical experts on insanity are ushered in upon the scene. Interrogations cunningly devised elicit such awe-inspiring links of proof as these, to-wit: "Insanity is derangement of the mind; there are many kinds of insanity—mono-mania, is where a man is insane on one subject; dipsomania comes from too much drink; moral insanity is where the morals are depraved and the man gives way to irresistible impulse." When these important facts have been firmly impressed upon the minds of the jury a hypothetical question covering ten or twelve pages of legal cap, and comprising an adroitly woven personal history of a life-time of eccentricities, sins of omission, emission, and commission is put to the witness, finished with the coup d'etat, "Would you consider such a man sane or insane?" A single word in reply and the climax is reached. But to make assurance doubly sure, several medical witnesses follow in quick succession corroborating the language of the foremost, and the ends of justice are thus consummated. Alas! What a burlesque on science! With such testimony from medical witnesses, it is not to be wondered at that insanity has become the fashionable national defense for crime.

While the above process of medico-legal investigation is quite the common thing in the generality of civil and criminal cases, there are many exceptions in which scientific expert testimony has prevailed, and it is of interest to study these and analyze the principles involved and the weight of medical evidence.

The one question which lies at the very bottom of an investigation where insanity is set up as a defence for crime, is the determination of the degree of moral responsibility. In the practical medical jurisprudence of insanity, what constitutes the standard of responsibility, and what sort of mental
derangement is most commonly urged upon the notice of criminal courts? Who then is sane, and what constitutes sufficient evidence for a legal diagnosis of insanity? Echo answers, "Who, what?"

Common laws governing man as a social molecule in the community demand that he shall at a certain age be capable of and exercise sound discretion. This decree is arbitrarily enforced on all persons by punishment for disobedience, and when the age of discretion has been attained, the common practice is to assume, a priori, that the sense of moral responsibility, knowledge of right and wrong, and powers of self-control conform to a typical standard of mental capacity, the finished product of a ripe evolution.

Because of their infirmities and manifest irresponsibility, infants, idiots, and lunatics are graciously excepted from the penalties of this great common law. Theoretically, the jurisprudence of insanity takes cognizance of every factor which forms a component part of man's mental and moral nature, tests his capacity to discriminate between right and wrong, weighs his faculties of perception, cognition, and will, and keenly scrutinizes his whole affective nature. The question of responsibility in mental disease thus becomes an intricate problem of social science, and when made the subject of judicial inquiry, its accurate analysis necessitates careful medical investigation. The accurate determination of an individual's sense of comprehension, the state of his moral sensibilities, his powers of perception and discrimination, his genealogy and personal composition furnish the material for the measure of madness. Every fundamental principle of government, each feature of modern civilization, every custom practiced and edict enunciated by society recognizes separateness of individual moral responsibility.

The genesis of the moral sense antedates the birth of the individual in its origin, and draws its primary determinate factors from the parent stock through consanguinity. From
birth to maturity the progress of development of man's moral nature determines largely the evolution of his moral responsibility, which, by introspection and comparison, he discerns to be his personal criterion of right and wrong. Given such inherent natural endowment, his course of action will follow the dictates of conscience unless misdirected by ungovernable or ungoverned will-power, passion, prejudice, or impulse. Accordingly, when an individual hitherto possessed of sound mind and healthy brain, startles the community by the perpetration of an atrocious crime, the question of moral responsibility for the act solely and alone determines the penalty.

MORAL INSANITY.

Moral insanity as a defense for capital crime "is," says Elwell, "an importation from the mother country, being an innovation of the brilliant genius of Erskine in his successful defense of Hadfield, who made an attempt on the life of George the Third more than eighty years ago." Subsequently many celebrated cases were tried, and in some the acquittals on the grounds of insanity were such flagrant escheats of justice that the House of Lords addressed certain questions to the superior courts of England respecting the law of lunacy. Under the menacing influence of popular indignation, and in an age when incarceration in prison was the only recognized remedy for insanity, many unsound decrees came forth from the judiciary and went into the history of English jurisprudence as cardinal principles governing responsibility. "Moral insanity," in the popular acceptation of the term, consists of a perversion of those mental faculties known as the active powers—the feelings, emotions, propensities, and habits of self-control.

In the evolution of this hybrid product it became necessary to divorce the moral sense from the higher faculties of mind, such as reason, memory, cognition, and will, and isolate it in
utter separateness. One writer on this subject has cited the analogy of a ship's hull with air-tight compartments, either of which may be damaged without danger to the whole structure. As a matter of fact, the doctrine of "moral insanity" requires just such comparisons as the above to render it at all tenable or convenient as a legal defense for crime.

Popular fallacies concerning the essential nature of affective disorders of the human mind were cleverly exposed by Shakespeare, where Hamlet says:

"I am but mad north-northwest—
When the wind is southerly I know a hawk from a handsaw."

When moral insanity is set up as a defense for crime, the prisoner's counsel steps across the border line of essential disease and culls from his adversaries' stock the ripe fruit of total depravity. Recognizing that the burden of proof rests with the defense, he comprehends the necessity of intensifying the purport of the atrocious features of the crime, to the end that he may establish his client's irresponsibility. Although a well marked insanity implies unnatural outward manifestations, and a changed self, it differs widely from reckless ruf-fianism and vicious depravity.

Of the few medical authorities who have described and defended moral insanity as a distinct species of mental disease, Prichard and Esquirol stand foremost. It becomes a significant fact, in this connection, that the very case upon which Prichard based his description of the new disease—moral insanity—proved eventually to be a typical case of dementia paralytica.

When, then, we undertake to analyze a specimen of obscure mental disorder, characterized by strongly predominant manifestations of moral alienation, the question of legal responsibility should be determined upon the basis of essential disease instead of prevailing symptoms.

Both Prichard and Esquirol maintain that moral aliena-
tion, separate and alone, constitutes disease in its entirety, and when christened, name it "moral insanity." If the student of insanity will penetrate deeper into the essential nature of the disease which they describe, his research will be rewarded by the discovery of well-defined fundamental disorders of brain and mind, of which the moral alienation is simply the offspring, and without which a downright case of insanity cannot be established.

In the extraordinary as well as the ordinary operations of the mind, thought and cognition, including the powers of memory, reason, perception, imagination, and conception, co-exist with volitional motives, and regulate determinate actions. In estimating the degree of responsibility it is therefore manifestly unjust to recognize mere moral alienation as sufficient proof of insanity.

DIPSOMANIA.

The condition known as dipsomania is often set up as a defense for crime, and numerous medico-legal contests have been fought upon the debatable ground near to and within its jurisdiction. The common error on the part both of medical witnesses and the court is their failure to discriminate between dipsomania and chronic alcoholism. Its periodicity, history of uncontrollable paroxysms, unnatural psychical manifestations, and frequent hereditary origin, present a striking contrast to acquired chronic alcoholism.

In well-defined dipsomania the inherent mental organization impels to the periodical use of alcoholic beverages in great excess, and the mental manifestations are characterized by an utterly uncontrollable demand for the alcoholic stimulation. The disease, although close in its kinship to insanity, is distinctly different from degenerative mental disorders following chronic alcoholism, and in its clinical history the grosser physical changes are not necessary factors.

In the sphere of moral alienation the frequent absence of
vicious depravity and aggressive violence on the part of the dipsomaniac shows a marked contrast with the propensities of an habitual drunkard, and furnishes a strong point in differential diagnosis. The universal prevalence of the liquor habit developed the necessity for establishing in medical jurisprudence the department called dipsomania, and medical witnesses cannot be too conservative in testifying as to its existence in any case whatever.

In the elaboration of a case where dipsomania is alleged, it is universally claimed by counsel that the disease generates *irresistible impulse*, which in turn banishes self-control and confers the title of irresponsibility. The practical question for the medical witness to determine is, whether such impulses are in reality irresistible, or simply unresisted; whether passionate acts are uncontrollable, or only uncontrolled; in a word, whether alcoholic saturation constitutes madness.

**EPILEPTIC INSANITY.**

In the medical jurisprudence of insanity epilepsy and the epileptic insane have commanded less practical attention than their close allegiance to responsible criminals would justly warrant, and it is my firm conviction that future scientific investigation will demonstrate the existence of the epileptic neurosis in most cases of homicidal mania. The scientific problem in all homicidal insanity is to trace a connection, not between mental symptoms and the act, but between the disease and the act; and in the natural history of epilepsy and epileptic insanity we have an array of symptoms and psychical phenomena, periodical tidal waves, and consecutive case history out of which to formulate a satisfactory diagnosis of material disease.

In essential epilepsy, sensibility, motility, perceptions, the special senses and reflex functions are suddenly suspended, the victim falls, and clonic convulsions of the voluntary muscles supervene, followed by coma, deep stupor, and finally, recovery of consciousness.
Prodromal symptoms such as sullenness, hebetude, despondency, and so forth, may precede the fit for a day or two, and a similar array often succeeds it. Epileptic insanity has, in addition to such a clinical history, a profound derangement of the affective nature expressed in extreme changeableness of character and conduct, great irritability of temper, and periodical maniacal excitement, during which vicious or criminal acts are liable to be perpetrated. In this connection the most interesting medico-legal fact, however, is, that all of its distinguishing characteristics may be present periodically, save and except the falling fit and bodily convulsions. Those of the profession who have had asylum experience will willingly corroborate my assertion that insane epileptics are a most uncertain and dangerous class of inmates, and it may be declared with like assurance that the masked and undiscovered cases which exist in every community are a constant source of danger because of their persistent homicidal propensities. In masked epilepsy we have mental convulsions and passionate conduct substituted for the paroxysm of motor convulsions, in fact a well-defined central disorder which expresses itself in the form of transitory mania. In many instances, likewise, there is an alternation of mental epilepsy and the falling fits in one and the same case, so that a maniacal paroxysm takes the place of an epileptic seizure, and in the event of homicide, irresponsibility may be clearly established. Another important fact to which I would call your attention is, that many cases of epilepsy are essentially nocturnal, and may thus escape observation and lie beyond the reach of ordinary medico-legal investigation. Besides the profound derangement of the affective nature, many victims of epileptic insanity exhibit marked loss of the sense of perception, incoherence in spoken language, vivid hallucinations of the special senses, and actual delusions. When then homicide has occurred without apparent premeditation or motive, and has been executed with fiendish delight and extravagant vio-
lence, and when the perpetrator manifests stolid indifference to the consequences of his act, epileptic insanity may reasonably be suspected.

Before dismissing this branch of my subject let me urge upon you again the necessity of careful investigation of all cases of obscure mental disorder wherein transitory mania, irresistible impulse, and moral insanity are alleged as a defense for crime, in order that a sufficient exciting cause, such as the epileptic neurosis, may be satisfactorily demonstrated.

MEDICO-LEGAL NOTES.

In the more recent history of criminal court procedures there was a melancholy chapter added to the medical jurisprudence of insanity which time can never erase from the memory of the American people.

Notwithstanding the sacred reverence with which a republic of freemen recall the memory of the illustrious Garfield, the student of forensic methods finds in the history of his cowardly assassin's trial many interesting medico-legal facts. I will venture to say that no single case in any country has attracted the national and widespread attention to insanity as a defense for capital crime as did that of Guiteau. While the eminent surgeons of our country were severely criticised by the brethren across the seas for their blunders in diagnosis and treatment of Garfields wound, the legal luminaries who conducted the assassin's trial and the medical experts who took part fared no better.

Guiteau's Case.—The *London Lancet*, in commenting on the case, said: "We fancied the 'plea of insanity' had been reduced to absurdity in the ridiculous attempt to show that LeFroy was insane; but it seems that the apotheosis of stupidity is to take place in America. It is high time that the nonsense recently talked and written about 'irresponsibility' should be exposed and ended. If a man is not acting under a recognizable and formulated delirium when he com-
mits a crime he is clearly responsible, and ought to be so held, unless he is unquestionably, and on grounds other than those arising out of and associated with his crime, shown to be insane. The inheritor of an organism which predisposes to insanity is not necessarily insane. LeFroy was not insane, and Guiteau is not insane. The only insanity accruing to the latter case is that which those who support the plea import into it."

In the conduct of Guiteau's case moral insanity was fastened upon as the phase of derangement alleged to exist, and in its elaboration before the jury his counsel drew the following picture, to-wit:

"A youth born, as it were, under malign influences, the child of a diseased mother, and a father subject to religious delusions; deprived of his mother at an early age; reared in retirement, and under the influence of fanatical religious views; subsequently, with his mind filled with fanatical theories, launched upon the world, with no guidance save his own impulses; then evincing an incapacity for any continuous employment, changing from one pursuit to another—now a lawyer, now a religionist, now a politician—unsuccessful in all; full of wild, impracticable schemes, for which he had neither resources nor ability; subject to delusions about his abilities and prospects of success, and his relations with others; his mind incoherent, and incapable of reasoning connectedly on any subject; the victim of surrounding influences, with a mind so weak and a temperament so impressible that under the excitement of political controversy he became frenzied and insanely deluded, and thereby impelled to the commission of a crime, the guilt of which he could not at the moment understand."

In the management of Guiteau's defense it was undertaken to establish the fact of long-existing weakness of mental organization, habitual incoherence of thought, progressive degeneration of the moral nature, culminating finally in complete.
moral alienation, loss of self-control, and perpetration of homicide. Beyond this, his counsel endeavored to show that the accused was at the time laboring under the delusion "that the removal of the president presented itself in the form of a command or inspiration from the Deity, and that it was his mission to obey."

Respecting this point Judge Cox, in his charge to the jury, said: "Unquestionably a man may be insanely convinced that he is inspired by the Almighty to do an act, to a degree that will destroy his responsibility for the act. But on the other hand, he cannot escape responsibility by baptizing his own spontaneous conceptions and reflections and deliberate resolves with the name of inspiration."

In defining to the jury the nature of an insane delusion, Judge Cox described it as an "Unreasoning and incorrigible belief in the existence of facts or conditions which are either impossible absolutely, or at least impossible under the circumstances of the individual."

The tenor of his instructions to the jury plainly indicated that where reasoning and reflection were exercised in formulating a belief, delusion could not be made to stand.

"An insane delusion is the coinage of a diseased brain, which defies reason and ridicule, which palsies the judgment, blinds the conscience, and throws into confusion all the springs of human action."

In Guiteau's trial the most commendable efforts were made to place fairly before the jury a clean-cut, concise figure of insanity, especially in defining the marked distinction between mental and moral obliquity, between a mental incapacity to understand the distinctions between right and wrong and a moral indifference to those distinctions.

The heroism and magnanimity which characterized Judge Cox's management of this celebrated case was alone excelled by his brilliant analysis of its medico-legal merits. From a medical point of view the benefits resulting from the Guı-
teau case can scarcely be overestimated; it has marked a new era in medical jurisprudence, stimulated the profession at large to a more thorough study of forensic medicine, and given us a masterly exposition of the law governing lunacy.

CASE OF LOUIS RIEL.

Louis Riel, the British subject who led the rebellion in the Northwest territories in the spring of 1885, was tried and convicted of high treason in the following July, at Regina, and after an appeal to the Court of Queen's Bench, Manitoba, and to the Privy Council in England, was duly executed.

The plea in Riel's case was "insanity," and inasmuch as both he and Guiteau claimed to be governed by an inspiration from the Deity, and each intrusted with a mission, a comparison of the manner in which the two trials were conducted in the two courts will possibly afford points of unusual interest.

The testimony in Riel's defense shows that he had an attack of insanity in 1876–8 lasting some nineteen months, during which he was confined in the Beauport Asylum, in Quebec, under the supervision of Dr. Francois Roy. At the trial Dr. Roy was subpoenaed as a medical expert for the defense, and testified that during Riel's confinement at Beauport he was suffering from "what is known by authorities as 'magalomania.'" In describing this disease Dr. Roy testified substantially as follows: "Many symptoms of magalomania are found in the ordinary maniacs. The particular characteristic of the malady is a fixed idea, with a special ambition, incapable of change by reasoning; the prevalence of shrewd judgment, except concerning their mental disorder; their reasoning would be good if not founded on false premises; selfishness and egotism are prominent traits of character, and likewise exalted pride, as of religion or royalty. They are subject to relapses, and generally incurable."

It seems the English courts permit a medical expert to lis-
ten to the testimony of all other witnesses, and to formulate his opinion upon material facts thus obtained, together with a direct examination of the prisoner. Accordingly Dr. Roy, in closing his testimony, said: "From what I have heard here to-day, I don’t believe Riel was in a condition to be master of his acts, and I positively swear it, and I have people of the same character under my supervision."

Under the scorching cross-examination by Mr. Osler, the brilliant advocate for the crown, many points of sterling value respecting the law of lunacy were elicited from Dr. Roy. Amongst others, he stoutly maintained that an insane man acting under the influence of his delusion may barter, bargain, or negotiate a compromise in money values, and will do so consistently with the fact that such a transaction appears directly adverse to the successful issue of his conceived mission.

Dr. Daniel Clark, superintendent of the Toronto insane asylum, another expert for the defense, testified "that many of the insane understand the nature of the acts which they do; that it is all nonsense to talk about a man not knowing what he is doing simply because he is insane; that the legal metaphysical distinction between right and wrong is a dangerous one because it covers only a part of the truth, for as a matter of fact a large minority of the insane do know right from wrong. Riel did not act as a sane man would have done, for this reason, that no sane man would have imagined that he could have come into the Saskatchewan, and that he could gather around him such a force as would enable him to become monarch of this country."

Dr. James Wallace, superintendent of the asylum at Hamilton, Ontario, a witness for the crown, made a beautiful dissection of magalomania, and was altogether the most brilliant expert examined during the trial. Dr. Wallace testified, "that magalomania is not a mental disease, it is only a symptom of mental disease. The only writer in the English lan-
guage who mentions it, says it is a *condition* in which the patient has delusions, grandiose delusions, delusions of greatness, and is most commonly a complication of that form of insanity called paralytic insanity, or general paralysis of the insane."

This is Clouston's teaching on the subject and the doctrine assuredly carries with it common sense, justice, and scientific conception of disease. With the above synopsis of these two celebrated cases I submit them as samples of modern medical jurisprudence.

By Dr. Stone: I would like to offer a resolution, prefacing it by a word. The reader of the paper referred to the subject of expert testimony; it is a question of interest to us, for we are constantly called upon to testify in that direction; it is universally remarked among medical men that the method of calling expert medical testimony is a bad one. Lawyers find out what doctors are likely to be on their side, and they call those doctors, therefore, I offer this resolution: "Resolved, that it is the sense of this society that our organic law should be amended in such a manner as to provide that the courts alone should call expert witnesses to testify."

The resolution was seconded.

By Dr. Mathewson: One point in regard to the homicide tendency of the insane; as I understand this paper, the gentleman claims that the epileptic constitutes the homicide insane generally. My observation has led me to believe that epileptic may commit a crime the same as any acute insane person, the same as a maniac, but I don't think they tend to homicide, nothing near as much as the paralytic insane, or the despondent insane. So far as my observation goes, which would cover a period of at least sixteen years, I can recall to mind but one instance of murder, by an epileptic, in this state, and in that case they failed to prove the man insane; the man had had epilepsy, and it was claimed that he was insane. I can remember quite a large number that
have committed crimes and that have attempted homicide, but they are not classed with the epileptic, they are not the epileptic insane. So much for that point. Another point is in regard to the expert testimony as required now by the courts of this state; any person of course is liable to be brought up to testify as an expert where they have never seen the patient, and where their opportunities have been very limited as to examining the patient; they are expected to testify as to sanity or insanity; a hypothetical case is propounded, and I don't think as a general rule the person propounding the question knows anything of the character of the question, or what it proves. There is a defect in our law in that respect. A man might be placed in an asylum where he can be under the observation of responsible persons for a period of time, until there is a sufficient time to form an opinion; no person can be insane without being detected, and no person can simulate insanity who is sane. When a person is being tried for his life, it requires, of course, no argument to show that he is entitled to justice. A man is supposed to be sane until he is proved to be otherwise, and to prove that a man is insane is a very difficult point to establish, and one frequently impossible. There are men in prison to-day whom I know are insane, if I know anything about the subject of insanity, still there is not a question in the minds of the jury, and not a question in the minds of the people. The homicidal insane, we might say, constitute, in a measure, a peculiar class; they are the people who have the least indication of insanity in many instances, and many who are hung by a mob undoubtedly are frequently insane. In this question between right and wrong, there are very few insane people who do not understand right from wrong in a marked degree; many know everything they ever did know; when a person goes in and says, "Do you know me?" they say "Yes," and call him by name; then arises the question whether the man is insane. The question of moral insanity
is a matter not to be questioned; it is not to be discussed, but at the same time there are people leading in the profession who are raising that question again of moral insanity. The question is a very troublesome one, to say the least; when you say that a man is insane, and that his condition is the result of disease it seems to be a very plain question, but to establish the fact I know of no means of doing. Place a man under observation for a length of time, and carefully observe him, and his conduct will disclose his true condition if under observation a sufficient length of time. There are many points in this paper which are very interesting, and of course they cannot be discussed in the length of time given; in the main I favor the ideas advanced in the paper, they are well arranged and cover a good deal of ground; they indicate a good mind and are well considered points, but some of these points are not true; it is not true that the homicides are to be classed with the epileptics; I have under my observation to-day, and have had for ten years, epileptics, and they have never indicated any condition leading me to the opinion that epileptics are homicidal; while I agree in the main with what has been read in the paper, I dissent from that particular theory.

By Dr. Kelly: Mr. President: On the point of homicidal insanity which Dr. Mathewson has stated, I think he misunderstood me a little in the wording of my statement; I said that I believed that future physiological psychology would demonstrate the fact that epileptic neurosis existed in a large majority of the homicidal maniacs, not that all epileptics were naturally inclined to homicide.

By Dr. Mathewson: I must say that I disagree entirely with that theory; I disagree here, that the homicidal patients are those who have strong delusions who believe it necessary to take some person's life; it is under those delusions that they commit murder. The epileptic may commit murder, so may the maniac; it is simply the outburst of
passion when there is a convenient way for performing it immediately.

By Dr. Kelly: In answer to the point of the homicidal insane having delusions, a very great many of the epileptic insane are visited by hallucinations and delusions, and while they have epilepsy the delusion may direct their action to homicide; they can have a delusion along with the epileptic insanity, and may act under the influence of that delusion. A man might have a delusion, and might have epileptic neurosis.

By Dr. Lanphear: Mr. Chairman, it appears to me that in the discussion of not only this society, but numerous others which I have attended, too much attention is paid to theoretical medicine, and not enough to practical. The paper just read by Dr. Kelley presents some practical points. I should like to call the attention of the Association to the advancement of medical education in Nebraska, that a proper attention be directed to instruction on diseases of the nervous system, and particularly as pertains to insanity. Too little attention is paid to these matters in our colleges. The average medical student goes out from college with a smattering idea of melancholia, mania, dipsomania, and monomania; that is about all he knows of insanity; he is filled with a few technical terms, of which he knows nothing. The physician who can recognize incipient insanity is a benefactor to mankind. He recognizes it before the family does, perhaps. In this case it is doubly true that to be forewarned is to be forearmed.

By Dr. Mathewson: I do not wish to say anything about the matter of dishonest testimony. When people are under oath it is supposed they are telling the truth; but it seems to me that this resolution would cut off the defense of the accused—at least it has that appearance.

By Dr. Lanphear: If I remember correctly, in reading Dr. Stone's Practice—it is a very good work—he says no physician should be considered as expert unless he is called by the
court, and that if he is called by any other person (by the plaintiff or defendant) that he did not give expert testimony, but such ordinary evidence as would be expected from any other witness.

By Dr. Kelley: There is no such law in this state; there is nothing on the subject whatever. There is nothing governing the calling of medical experts at all; they are called at the instance of the counsel. There is not a law in the statute book regulating either the manner in which the expert testimony shall be given or the compensation an expert shall receive for giving his testimony. As an example, during the trial of Riel, in Canada, the courts allowed the experts to sit in the room and listen to all the testimony that was given, and to get any hearsay evidence that they pleased, and to put it altogether, and to formulate an opinion upon that and the examination of the patient. In the Riel case, one of the medical experts who testified had, in the year 1876-78, had charge of the prisoner in his asylum at Quebec. He went in as a medical expert for the defense. He took the previous history of the case and looked up his records, went and examined the patient at the prison, listened to the testimony, and went on the witness stand and testified as to what he believed Riel's condition was when he started out in the Northwest territory. In some of the states there are laws regulating this matter. In this state there is none regulating expert testimony.

By Dr. Carter, of Omaha: In this state a man is compelled by law to attend a court and give expert testimony, whether he will or not, whether he gets any fees or not. I know this from sad personal experience. I refused to respond to a subpoena issued by a judge of Omaha, and he sent a bench warrant after me, and ordered me to respond at once, under penalty of arrest, fine, and imprisonment, if I did not come. He gave me quite a nice fatherly talking to when I went into the court. I did not get any fee in that case, either. Now, in
this state you cannot refuse to give testimony unless you wish to pay a fine. I believe the resolution is inopportune and improper, for this reason: I believe that no enactment which could be based upon this resolution would be constitutional. I don't believe that we could pass a law framed or based upon that resolution which the supreme court would hold a constitutional amendment.

By Dr. Lanphear: For what reason?

By Dr. Carter: For the reason that you cannot legislate a law in opposition or in contradiction to the already existing constitutional enactments, which give certain rights and privileges to an accused person on trial which are as old as law itself, and are commonly recognized in all countries in the civilized world. No legislature would pass a law, or, if they did, no court would hold an enactment constitutional which would take away any rights or privileges of a person placed on trial. That is a fundamental principle in common law, and is recognized in legislative enactments the world over.

Dr. Mansfeld: My experience as an expert in the state of Nebraska was gained at the expense of my pocket-book. When a court in the state of Nebraska orders me to appear, I go, for I know I have to. When I am put on the witness stand I expect some one to ask me questions, and before I answer those questions I turn to the court and ask the court who is going to pay me for my knowledge. If the party who has summoned me gives a sufficient guarantee in money, or something equivalent to it, I answer the questions. If the parties do not pay me before I testify I turn to the court and tell the court that I must be paid for my knowledge. There is no court in the state of Nebraska that can make any man part with his knowledge of a scientific nature excepting he gets paid for it. That is a mistake that is made by the gentlemen. They think they can refuse the summons, but they cannot do that; but they can refuse to testify until they are paid as experts. Since I learned that little lesson I get my pay every time I am called as an expert.
By Dr. Stone: The resolution has nothing whatever to do with the question of pay.

By Dr. Leisenring: The resolution is certainly unconstitutional; there is no doubt about that. There is another feature that I do not like, and that is the reflection upon the medical profession. It is presumed that when a physician is sworn he is going to tell the truth. He is not going to be biased by either the plaintiff or the defendant.

The resolution was submitted to the convention. The resolution was adopted.
SECTION
ON OPHTHALMOLOGY.

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CLINICAL STUDIES OF SNOW BLINDNESS, WITH A PARTIAL REVIEW OF THE SUBJECT.
DR. L. B. GRADDY, 1886.

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REPORT OF A CASE OF TUMOR OF OPTIC NERVE.
DR. DEWITT BRYANT, 1887.

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THE MODERN VIEW OF SYMPATHETIC OPHTHALMIA.
H. GIFFORD, M.D., OMAHA, 1887.
CLINICAL STUDIES OF SNOW BLINDNESS,
WITH A PARTIAL REVIEW OF THE
LITERATURE ON THE SUBJECT.*

BY L. B. GRADDY, M.D., OMAHA, NEB.

Concerning the pathological changes produced by exposure of the eye to a glare of light reflected from a surface of snow, authorities agree on only one point, viz.: the tissues affected. It is admitted that from such exposure, continued for any considerable time, conjunctivitis, photophobia, and retinal lesion occur, resulting in a temporary suspension of the visual function, commonly called snow blindness.

Before detailing the cases which I have observed, I shall run briefly over the literature upon the subject. In Graefe's Archives für Ophthalmology, vol. XXV., No. 3, Schiess reports two cases. The first was seen two days after exposure; the cornea is described as entirely free from any lesion, and there was no pain when seen. There was considerable conjunctivitis and photophobia. Patient's first symptom on day of exposure was "severe burning in the eyes." Schiess considers the conjunctivitis partly due to the direct rays of the light, and partly to the dryness of the air in high regions. He apparently has not heard that as severe cases occur on the plains, He believes that where corneal complications occur, they are secondary to the conjunctivitis.

Reich, also in Graefe's Archives für Ophthalmology, vol. XXVI., No. 3, reports a number of cases which he saw in the Caucasus—how soon after exposure is not definitely stated. The prominent symptoms were: Moderate conjunctivitis,

* I am indebted to Dr. H. Gifford, Omaha, for reviewing the literature upon this subject.
strong photophobia, blephorospasm, and ciliary neuralgia. He noticed no corneal affection. Nyctalopia and hemeralopia were not present. He speaks of retinal anaesthesia being present in a few cases. Reich considers the conjunctivitis, etc., as purely reflex from the retina.

Michel, in his text-book, simply refers to snow blindness as a day blindness, produced by over-excitation of the retina.

Schweigger’s latest German edition (1885) speaks of snow blindness as a hyperesthesia of the retina, accompanied by marked “inertia,” blephorospasm, and hyperaemia of the conjunctiva. No mention is made of corneal lesion.

Soelberg Wells, in his text-book, says: “In snow blindness the impairment of vision is chiefly due to diminution of the sensibility of the retina,” and then proceeds to confound it with the effects of rarefied air upon the eye by saying that “perhaps it may also be owing to the rarefaction of the atmosphere on high mountains.”

Nettleship, after speaking of function night blindness, says: “Snow blindness appears to be essentially the same disease, with the superaddition of conjunctival congestion, throbbing pain, and photophobia, and sometimes of ecchymoses into the conjunctiva.” He appears to think that these changes are partly due to “the effect of the rarefied air in mountaineering cases,” but does not appear to suspect that the disease is also common on the plains.

De Wecker, in his “Ocular Therapeutics,” speaks so lightly of snow blindness that one is forced to conclude that De Wecker does not think that the disease ever reaches a serious state.

Dr. Gardner, in an article in the American Journal of the Medical Sciences for 1871, makes the following statement: “The excessive amount of light first causes an irritation of the retina, which by reflex action produces congestion of the vessels of the conjunctiva, and inflammation and chemosis, which prevents nutrition of the cornea, causing ulceration of this part.”
Leber, in Graefe-Lamisch, vol. 2, merely mentions Gardner's observations, and speaks of the disease as if it were purely an affection of the retina.

The literature upon the subject of snow blindness, although meager, is remarkable for at least three features: First, the extraordinary manner of accounting for the conjunctivitis and photophobia, both being attributed to a retinal lesion through reflex action; second, for absence of any mention of a primary corneal lesion; third, for the absence of a satisfactory explanation of the retinal lesion.

I fail to find mention made anywhere of the prime cause of the conjunctivitis, or of a primary corneal lesion, or of the probable changes produced in the retina by the chemical action of white light; therefore these are the points which I shall emphasize.

The conjunctivitis, photophobia, etc., have been unwittingly attributed to the retinal lesion, which accounting does not even approach the limits of probability, whilst an explanation of the nature of the retinal lesion itself has not been attempted, the subject having been dismissed with the conflicting terms hyperaesthesia, anæsthesia, diminution of sensibility, etc.

I take it for granted that it is only necessary to call attention to the causal relation of reflected sunlight to the conjunctivitis, etc., to show the erroneousness of the idea that it is reflected from the retina, or in any way dependent upon a lesion of that tissue.

In explaining the retinal lesion we must take into account the fact that bright, white light from any source will produce temporary scotoma. Thus we find reduced vision in sailors after long voyages, and in soldiers after long marches in hot, barren countries, but in such cases the impairment of vision is comparatively slight, and generally short in duration. It is only when the direct rays from a powerful illuminator, as the electric light, or when the rays are reflected from
a surface of snow or ice, that the affection assumes a serious aspect. The electric light has been known to cause permanent scotomata, and in some instances absolute permanent blindness. But so far as I know, appreciable changes in the retina have not been noticed, even in those cases of severest injury from exposure to the electric light. Nor have any been observed after exposure to light reflected from a surface of snow, that were not secondary, or due primarily to other causes.

CONJUNCTIVITIS.—SUPERFICIAL KERATITIS.—CILIARY NEURALGIA.—PAINFUL ACCOMMODATION.

When we are called upon to examine a person suffering from snow blindness, we are at first most forcibly struck by the intensely red or brownish color of the skin of the face and other exposed parts of the surface of the body, which we call sunburn. (It should be borne in mind that this traumatism is not due to heat, as the name would imply, but is due to the intensified light reflected from the white surface.) The epidermis and the tissue, to some depth below the surface, is acutely inflamed, and after a few days the epidermis is exfoliated. Now, that portion of the conjunctiva and cornea corresponding to the palpebral fissure is an exposed surface, and likewise becomes sunburnt; hence, a conjunctivitis—analogous to the inflammation of the skin—which is not reflected from the retina, as some have stated, but is certainly due primarily to the burn as the cýtitis. In all the cases that I have examined, the conjunctivitis was severest at a point corresponding to, and extending a short distance above and below, the horizontal meridian of the eye; soon, however, extending—but with less severity—over the whole conjunctival surface, either through continuity of structure or through infection by germs, which are nearly always present in the conjunctival sac.

The strip of cornea found in the aperture of the lids being
exposed, also suffers. In every case that I have seen of even moderate severity, careful inspection showed a horizontal strip of corneal epithelium to be slightly swollen, appearing somewhat granular—or rather, showing the fine vesicular appearance characteristic of superficial keratitis, accompanied by a delicate, though perceptible haziness, while the remaining portion of the cornea, which was protected by the lids, presented a perfectly normal appearance.

This inflammation may, like that of the conjunctiva, through continuity of structure, spread over the whole corneal surface. The contiguous structures subjacent to the burnt strip of conjunctiva and cornea participate in the soreness of the superficial parts, produced by the burn—hence the ciliary neuralgia becomes easy of explanation; so also does the severe pain attending the slightest effort to accommodate for near objects, a prominent symptom in my cases. If later abrasion of the cornea occurs infection may ensue, terminating in ulceration or abscess; the iris and ciliary body may become implicated, the eye lost through panophthalmitis or phthisis bulbi, but these complications are secondary, and are of rare occurrence indeed. (It is foreign to the subject, yet I venture to suggest that the oft-repeated inflammation of that portion of the conjunctiva corresponding to the palpebral fissure accounts for the enormously large number of pterygii found among the Indians of the Northwest.)

The primary injury to the conjunctiva and cornea, like the injury to the skin, is in direct ratio to the intensity of the light and the length of time during which the eyes are exposed. The conjunctivitis and keratitis are usually sufficiently severe to render exfoliation and proliferation of the epithelium necessary to the preservation of the integrity of parts.

The Burning Pain complained of by the snow blind is manifestly in the conjunctiva and cornea, and finds its analogue in the painful sunburnt skin wherever exposed, or in a burn of the second degree from any other source.
PHOTOPHOBIA.

In no other affection of the eyes do modern ophthalmologists seek to connect photophobia with lesions of the retina; not even with retinal hyperesthesia, in which affection we are told by the same authorities who insist that hyperesthesia of the retina is present in snow blindness, that it is chiefly characterized by the impression of the images of objects remaining for some time after the eyes have been closed or turned from the object, whereas in those cases of snow-blindness where the photophobia reaches the highest degree, the retina does not take cognizance of any object at all. In all other affections the photophobia is interpreted, and correctly, too, to indicate a lesion of the 5th nerve; particularly that portion which is distributed to the cornea. Why then, in snow blindness refer it to other tissues, a lesion of which could not possibly produce it, when we have in the primary lesion of the cornea and conjunctiva the most potent condition for its highest development, viz.: a burn of the second degree.

IMPAIRMENT OF VISION.

Impairment of vision is the most prominent of the subjective symptoms. It varies in degree from slight bluntness to total obscuration of all objects, and in duration from a few minutes to a few days or weeks, or even for a longer time in severe cases, but when uncomplicated by retinal hemorrhages (due to rarefaction of the atmosphere), or by secondary affections (corneal ulcers, etc.), recovers under proper management without permanent injury.

The primary corneal lesion is sufficient to depreciate vision somewhat, but insufficient to obscure objects. That the suspension of the visual function is due to a "diminution of sensibility" of the retina would appear upon first thought to be sufficiently explanatory. But this is begging the question, as it is too broad and indefinite. The whole retina
should not be comprehended in this approximately correct expression, but only that portion which is affected by white light. To my mind the simplest, and the only explanation of the nature of the retinal lesion is that it is the result of chemical action. This accords perfectly with the theory of chromatic perception and the known action of white light upon the chromatic perceptive principle of the retina.

Vision is effected by an image of the color and form of objects being impressed upon the retina. It follows logically, and cannot be denied, that COLOR is the prime necessity for vision. Prof. Franz Boll has shown that the chromatic perceptive principle of the retina, which he calls erythropsine, is generated in darkness and decomposed by white light. Now it is only by the different shades of color and light that we are enabled to perceive the form of any object, an absolutely black figure upon a surface with absolutely no difference in shade, would be invisible; but the eye would never become blind nor injured from looking at such a surface, since darkness favors the reproduction of that principle of the retina which renders color (hence form) perception possible. We would also be unable to see a white figure upon a white surface, but in this case impairment of vision analogous to snow blindness would ensue if the exposure were prolonged, since that principle of the retina which renders color perception possible, is decomposed by white light.

Prof. Boll's experiments, with which every one is familiar, have all been made on the dead eye, but followed to their logical conclusion, I maintain that the same will obtain in the living eye; or stated differently: that by adding to the intensity of the light, a degree far in excess of that to which the eye is adapted, and prolonging the exposure, the erythropsine will be decomposed in the living retina. Chromatic perception being abolished, the retina takes cognizance only of white light. But is this true? What is the real character of the blindness, or in what does it actually consist? The answer is, that it is
simply an inability to perceive objects. Darkness does not settle upon the individual. He sees the light as before, with this difference: he now perceives only white light. He has, in a word, by the chemical action of white light, lost his entire chromatic perception through a decomposition of the erythropsine in excess of its reproduction. It is only the principle, not the whole retina, that is traumatised. In this sense only has the retina suffered diminution of sensibility, and only in this sense is the patient blind.

In support of this theory, aside from its harmony with the theory of chromatic perception, and the known behavior of erythropsine in different degrees of light, I am able to present the cases of six hunters, all equally exposed, and in whom the first symptom, viz.: impairment of vision, was the same. As this was the first manifestation of trouble in each, and appeared in precisely the same manner, it goes far to substantiate the correctness of the explanation I have offered. They were gunning for geese on the upper Platte river, in March, when the surrounding country and ice on the river were covered by a deep snow. There was a cloudless sky, the sun shone brightly, and the glare was intense. The first of the party to complain was afterwards the first one that I saw of this group of cases. His first complaint to his companions was that he could see the geese only when they were flying; that they were very indistinct, and appeared white. This observation developed the fact that they were all affected in the same manner. Following close upon this came total obscuration of vision for all objects, the sky finally assuming as white an appearance as the snow. The blue of the sky was the last color to fade into white, for they could still see, though indistinctly, the form of the geese, which appeared white, when flying above the horizon, after they had lost all powers of perceiving objects below the horizon, even the guns which they held in their hands.

As none of the landmarks which guide men on the plains
could be seen, they made their way back to camp with great difficulty, where they remained in absolute darkness for thirty hours. Twenty-four hours later, I saw two of the party, in whom the examination showed, in addition to the symptoms as we find them given by authorities, which are: conjunctivitis, chemosis photophobia, lachrymation, burning or throbbing pain, ciliary neuralgia, and more or less impairment of vision, a delicate horizontal strip of superficial keratitis, severe acute pain upon efforts to accommodate for near objects, marked tenderness over ciliary region, and myosis. V outlines of large objects which looked like point shadows, color perception entirely abolished. The patient's own language is, that he felt as if enveloped in a perfectly white mist. The iris responded readily to atropine, and cocaine allayed the photophobia, permitting free use of the ophthalmoscope. I was able to draw a comparison between the retina at this time, and in its normal state in one case, having previously made repeated ophthalmoscopic examinations of him, and can therefore say positively that in this case the retina was perfectly normal, whilst in the others it appeared normal. The light reflected from the ophthalmoscopic mirror was in no way unpleasant, and there was no apparent image of the flame after the withdrawal of the instrument, a fact worthy of note, as showing the absence of retinal hyperesthesia in this affection.

TREATMENT—PREVENTION.

The indications for treatment do not differ in any important particular from those of a conjunctivitis induced by a burn of the second degree from any other source. Olive oil c atropine dropped into the conjunctival sac preceded by free irrigation, with a 10 per cent sol. acidi boracici, several times during the day, will fulfill the requirements for the traumatism. Absolute rest to the eyes in a darkened room should be insisted upon.
For the prevention of snow blindness civilized people resort to smearing a paste of gunpowder on the eyelids, cheeks, and brows, previous to undergoing exposure. The Indians of the Northwest are the authors of an ingenious contrivance in the form of a cone made of the untanned skin of animals, with the base fitting closely around the orbit, the apex having a small opening directed forward. This affords great protection, but necessarily restricts the field of vision to objects directly in front of the eye.

Dr. Gardner, acting upon this idea of the savage, proposed goggles made of hard rubber to fit over the eyes, with a stenopaic hole in the apex. These also have the disadvantage of limiting the field to a small area, and of being difficult to obtain.

I would suggest that a modification of the ordinary wire screen goggle by the network being extended so far forward as to leave an opening about half the diameter of the cornea, and this opening closed by a dark blue or smoked glass, would have the advantage of being both less difficult to obtain and more effective. The meshes of the wire screen should be filled with a dead black material, and for this purpose a paste of gunpowder will answer admirably. Such spectacles would limit the vision field but little, and would so modify the light as to effectually prevent injury.
REPORT OF CASE OF TUMOR OF OPTIC NERVE.

BY DEWITT BRYANT, M.D., OMAHA.

Mr. President, Ladies and Gentlemen:

On account of the extreme rarity of tumors of the optic nerve, and the very remarkable size of the one about to be described, it has seemed proper to me to report this case somewhat in detail. In looking over our journals and textbooks we find very few cases of the kind reported, and the best authorities speak of them as among the rarest of new growths. The patient, Miss A. D., of Corning, Iowa, came to me for advice about her eye on the 2d of August, 1886. She gave the following history: Was born in Glasgow, Scotland, in 1863; her parents emigrated to this country when she was five years old. Had always enjoyed good health, never having had any severe sickness or trouble of any kind, that she remembers of, until she was seventeen years old, when she first noticed that her right eye turned slightly to the nasal side, and that she saw double, one image being bright and the other rather indistinct. On closing the left eye she found the vision very poor in the right. From this on vision failed rapidly, so that in a few weeks from the discovery of trouble, the right eye was totally blind. Shortly after this the diseased eye began to be more prominent than its fellow of the opposite side, and some days she would have severe pain in that eye and temple. This pain was of a neuralgic character and of two to three hours' duration each day, and invariably came in the forenoon and completely incapacitated her for any work while it lasted. There was no regularity about its return, sometimes coming every day for a number of days, and then perhaps not returning for a week. This
continued for nearly three years in spite of all that could be done for her, when its return became less frequent. Then, for a period of two years, she was comparatively free from any of the severe attacks of pain, but a few months before she came to me they had returned with increased severity, though not with as great frequency as in the beginning of her trouble. Her family history was good. Her parents were both alive, strong, and well. Her grandparents had lived to a good old age; had two brothers, both of whom were strong and healthy. She had no knowledge of any of the present or past generation of relatives ever having been afflicted with a tumor of any description. Her condition at the time of presenting herself to me was as follows:

She was a strong, healthy-looking young woman, twenty-three years of age, of medium height, and above the average weight, inclined to be muscular rather than fleshy. The right eye protruded to such a degree that it seemed to stand clear of the socket, and produced a most hideous deformity. The hope of obtaining relief from the pain and the frightful deformity was what had driven her to seek advice and help from an oculist. On closing both eyes the lid of the right closed to within an eighth of an inch. The pushing forward of the eyeball had been so gradual that the stretching of the lids had nearly kept pace with it. There was no deviation of either eyeball from normal direction, and although motion in the right eye was limited to a great degree it was not more so in one direction than another. The eyeball itself was of normal color, not unduly vascular, and presenting no abnormal appearance whatever. The vessels of the lids and temple and neighboring localities were perfectly normal. On pressure, at the sides and behind the eyeball, a distinct enlargement could be felt. It was solid, firm, and smooth, very slightly compressible, and there was no pulsation.

There was no pain, on pressure, of the growth itself or eyeball, no history of specific trouble, either congenital or ac-
quired, and no enlargement of pre-auricular or cervical lymphatic glands; no disease of neighboring cavities, the nasal passages, or pharynx, except a slight post-nasal catarrh. The exterior of eyeball was normal. Cornea was clear, showing no trace of present or former trouble. On examination with ophthalmoscope the media were found clear and transparent. There was a high degree of hyperopia in both eyes, that of the right being seven dioptres, while that of the left was four. The optic disc was slightly oval, and presented a beautiful picture of old, chronic optic neuritis. The entire papilla was of a dirty grayish color, its margins indistinct, and extending much farther than the boundaries of the normal disc. The blood vessels were reduced in size, the arteries being extremely small, showing the stage of atrophy already well advanced. With such a history, and the appearances just described, a diagnosis other than orbital tumor could hardly have been arrived at; and the fact that the eyeball protruded straight forward in a normal direction, and that vision was entirely lost in a few weeks after the patient discovered the presence of any trouble, was almost positive proof that the growth was situated in the cone of recti muscles, and that the optic nerve was in all probability the seat of the disease. The great length of time that had elapsed since the beginning of the trouble, and the slow growth of the tumor, showed, beyond a reasonable doubt, its benign nature. This was the opinion given, and extirpation of the growth the only means of relieving her of the pain and deformity.

As, on account of the extreme size, it seemed impossible to remove the tumor without first enucleating the eye, the patient refused to submit to an operation without first consulting other physicians about the case. There was no more heard from her until the first of October following, when she wrote me, from her home, that she would be in Omaha the next week, prepared to have the operation performed.

On examination, after her return, no very great change
was found to have taken place during the two months that had elapsed since she was first seen. She was having the same amount of pain, and the exophthalmos seemed very slightly increased. She entered St. Joseph’s Hospital on the 25th of October, and on the afternoon of the same day the operation was performed. The eye was first enucleated, and then a pair of curved, blunt-pointed scissors were pushed carefully down between the walls of the orbital cavity and the tumor, separating what slight adhesions existed between them and the tumor. It was with extreme difficulty that the inner end of the growth was reached, and the optic nerve severed, at the very apex of the orbital cavity. After the nerve was divided, the tumor was seized with a pair of forceps and removed.

There was no unusual amount of hemorrhage following the operation, what little there was being easily checked by pressure in the apex of the orbital cavity. After the bleeding was controlled, the conjunctiva was brought together with two sutures, a bandage applied, and the patient put to bed. In the operation all instruments, cotton, and everything used about the wound were first soaked in a saturated solution of boric acid. The patient was given a hypodermic injection of one-fourth grain of morph. sulph. before coming from under the influence of the anaesthetic, and was ordered another dose, by mouth, at ten o’clock that evening. She passed a very comfortable night, but about six o’clock the next morning had a pronounced chill, and at the time of my visit, nine A.M., had a temperature of 103° and a pulse of 100. She was suffering from intense pain in right temple. There was great swelling of lids of right side, and in fact the swelling extended over the greater portion of that side of her face. Patient was perfectly rational, and said pain seemed the same as that which she had been having before the operation. A brisk cathartic was given immediately, and five grains quin. sulph. and ten grains sodii brom. were ordered given every
four hours, with sufficient morph. sulph. to control the pain. That evening at six o'clock the temperature had reached 104°, but pain was much less severe.

Medicine was continued through the night, and the next morning temperature had dropped to 101°, and pain had nearly ceased. There was no chill this morning, and patient was feeling much better. The same treatment was continued, and the case improved from this on, so that on the fourth day after the operation pulse and temperature were both normal, pain had ceased entirely, and swelling was fast disappearing from lids. In one week from the time she entered the hospital she was sitting up, and at the end of the second week returned home, feeling well enough to resume her duties as housekeeper. In a letter received from her a few weeks ago she states that she has had no pain or trouble of any kind since her return home. Has worn an artificial eye since the second month after operation. The tumor itself, after removal, was found to conform to the shape of the orbital cavity, and the optic nerve passed nearly through the center of it lengthwise. Its greatest length was two and one-fourth inches, and greatest width one and one-half inches; weight, nearly two ounces. Specimens examined microscopically by Dr. Hewetson, of this city, and by Prof. Parker, of Cleveland, showed the growth to be a neuroma of the fibrous variety.
THE MODERN VIEW OF SYMPATHETIC OPHTHALMIA.

BY H. GIFFORD, M.D., OMAHA.

The acquaintance of modern medicine with sympathetic ophthalmia practically begins with the publication, in 1818, of Wardrop’s Morbid Anatomy of the Eye. Here, beside giving illustrative cases, Wardrop called attention to the fact, recognized among farriers, that in horses diseases of one eye may pass over and affect the other, and suggested that the practice which they followed, of destroying the first eye to save the second, might with advantage be adopted in the case of human beings, thus establishing a debt to veterinary science which modern ophthalmology is apt to overlook. But neither Wardrop nor Lawrence, who in 1833 described cases of sympathetic disease, gave any great consideration to the theoretical side of the question, so that it remained for MacKenzie to give the first careful study of the affection, and the first attempt to explain its etiology.

MacKenzie's idea was that while the ciliary nerves and communications between the blood vessels of the two eyes might play some part, the main agents in transmitting the disease from one eye to the other were the optic nerves and the chiasma, and this not by a direct extension of the inflammation around the circuit, but by a reflection from the chiasma to the second eye of the "irritation which gives rise to inflammation." This somewhat crude hypothesis gave way twenty years later to the theory advanced by Arlt and von Graefe, that the ciliary nerves, in a purely reflex manner, conveyed an irritation from the first to the second eye capable of setting up a destructive inflammation therein, and so strong was the
weight of von Graefe's opinion that his theory, practically unchallenged during his life, continues at the present day to be the view commonly accepted by the profession.

But not long after von Graefe's death evidence began to accumulate in favor of MacKenzie's theory that the optic nerves were the channels of transmission, with the modification that the inflammation, instead of being "reflected" at the chiasma, simply spread by continuity from one eye to the other. Alt, notably, after examining a large number of eyes enucleated to prevent or cure sympathetic disease, announced that the optic nerve in such eyes invariably showed signs of inflammation, while the ciliary nerves, on the contrary, were entirely normal. But so long as the idea prevailed in general pathology that reflex irritation alone was sufficient to cause a genuine inflammation, the optic nerve theory gained but little ground. When, however, under the influence of bacteriological researches, reflex inflammation began to be regarded with more and more suspicion, the theory came to the front again with renewed vigor, and now, with the addition by Leber, that sympathetic ophthalmia was an infectious disease—was caused, in other words, by the emigration of bacteria from one eye to the other by way of the optic nerves.

Proof of this view was first advanced by Deutschmann, who, by injecting pure cultures of the yellow pus coccus into the vitreous of rabbits, was able to produce a sympathetic inflammation of the fellow eye, amounting in most cases only to a transitory neuritis, but in one case developing into a typical sympathetic iritis. The microscope showed the passage of the cocci along the optic nerves, chiasma, and their sheaths. Moreover, in several cases of sympathetic serous iritis in man, Deutschmann was able not only to demonstrate the presence of bacteria in the exciting eye, but found in the aqueous of the second eye bacteria, which, on cultivation, proved to be the white pus coccus, and which, when tested on rabbits, had the same effect as had been obtained with the
yellow variety. With the confirmation of these results, therefore, the infection theory of the disease will rest on a firm basis. An attempt by myself to bring such confirmation, while not entirely successful, showed clearly the fact that in rabbits bacteria pass from one eye to the other, indicating, however, that in these animals, at least, the path taken is not simply up one nerve and down the other, but that on the first infected side the bacteria leave the optic nerve with the central vessels, passing along the sheaths of these to the cranial cavity, whence they are carried down between the optic nerve sheaths to the perichoroidal space of the second eye.

We have now to consider how far the clinical facts correspond with the results of the laboratory. Let us first examine the main arguments in favor of the ciliary theory. It is said: (1) That the most common cause of sympathetic trouble is wounds of the ciliary region; (2) that where the first eye is tender at a particular point of the ciliary body, the second eye is likely to develop tenderness at a corresponding point; (3) that the enucleation of the first eye exercises a prompt and beneficial effect upon the inflammation of the other; (4) that the sympathetic affection makes its appearance as an iritis, not as a neuritis, as would be expected on the theory of Leber. With regard to the first point it is undoubtedly true that many cases of sympathetic inflammation occur after wounds penetrating the ciliary body, but it should be remembered that a very large proportion and probably a large majority of all wounds penetrating the globe involve the ciliary region to a greater or less extent. Moreover, there is no lack of cases in which sympathetic disease has developed after wounds not involving the ciliary body at all. The symptom of tenderness developing in the second eye at a point corresponding to that in the first, occurs so seldom that it need not be considered anything more than a coincidence. In considering the effect of enucleation upon sympathetic trouble it is important to keep in mind the sharp distinction between
sympathetic irritation and sympathetic inflammation. The former, consisting in photophobia, transitory amblyopia, and rarely or never pain, may continue for months without injuring the eye a particle, and disappear promptly on the enucleation of the exciting eye. It may occur with any painful affection of the first eye, whether slight as in foreign bodies on the cornea, or more severe as in new formation of bone in the choroid, or in advanced glaucoma. A sympathetic inflammation on the other hand often develops without any premonitory photophobia, proceeds, if neglected, to partial or total destruction of the eye, and is favorably affected by enucleation only in the very first stages. That an iritis rather than an optic neuritis seems to be the first symptom in many cases, is due in part to the fact that the media are generally so turbid when we first see them that a careful examination of the fundus is out of the question. Where the cases are seen early enough there is not infrequently found an optic neuritis before the iris is involved at all. Moreover if the same conditions hold in man as in rabbits, and anatomical research indicates that they do, it is not to be wondered at if an iritis should generally appear before a neuritis, since the bacteria from the first eye come down between the sheaths of the second nerve into the perichoroidal space which leads directly forward to the iris.

If we now review the main arguments against the ciliary theory and in favor of the bacterial origin of sympathetic ophthalmia, we have: First, that the ciliary theory is directly opposed to the modern views of the nature and cause of inflammation. Second, that the cases of sympathetic optic neuritis are simply unexplainable on the ciliary theory. Third, that the fact that, in the overwhelming majority of cases, the first eye has been opened in some way should have the same weight in determining the bacterial origin of the affection; that the difference between the results of simple and compound fractures had in determining the cause.
of wound suppuration in general. The fact that in some cases sympathetic trouble develops years after the injury of one eye, has no more weight against the bacterial than against the ciliary theory; first, because on careful criticism the majority of such cases turn out to be simply cases of sympathetic irritation, and second, because of the fact well established in general surgery, that foreign bodies may remain for years in the body perfectly quiet, and then become the centers of undoubted infectious inflammations, either through bacteria having been encapsuled with them, or through bacteria in the blood taking the tissues around such bodies at points of least resistance.

Now, granting the validity of the foregoing experimental and clinical considerations, what effect does the acceptance of the bacterial theory have upon our practice? It has the effect, first, of increasing our vigilance in cases where we are in doubt whether or not to enucleate a recently injured eye. Such cases may not be dismissed with the simple direction to return at once if the second eye become painful. Too many cases, especially in children, develop so far that enucleation is of no avail, with no warning, whatever, in the shape of pain. Such cases should be tested and examined frequently with the utmost care, and at the first sign of an implication of the second eye, our decision to enucleate must be all the more prompt because of our belief that bacteria are at the bottom of the trouble. In the case of foreign bodies in the eye, our treatment is more conservative. We attempt to extract, if the body be not fixed, but the failure of the attempt does not necessitate the removal of the eye. We watch it and enucleate only if the symptoms of infection develop. In the case of old sightless stumps also, the bacterial theory makes us more conservative. It was formerly, and still is, with some oculists, the rule to enucleate every sightless stump. It may now be laid down as a rule that no such stumps, if perfectly quiet, require enucleation, on account of danger to the other eye.
It may be removed to allow an artificial eye to be fitted, or it may later on become inflamed, and thus a source of danger, but to urge the enucleation of such stumps must at present be regarded as an anachronism.
Mr. President and Gentlemen:

As chairman of the section on history of medicine, I have no report to make, for several reasons. First, I find it very difficult to find a definition comprehensive enough to cover what is understood to be properly embraced within the terms history of medicine and state medicine, and in looking over the different sections of this society, you will find they embrace medicine in all its branches, and after material is gathered up by these different sections, you will find that there is literally nothing left for the section of history of medicine except medical legislation and its effects on the regulation of the practice of medicine in the state. But there has been nothing done in that direction during the past year, so I thought it would be well to get up an accurate history of medicine of this state from its first settlement by members of our profession, up to the present time. But I met with very little encouragement, and, as you all know, there has never been much work done in this section in the past sessions of the state society, and I have often wondered why not. But since being a member of that section for the past year I have ceased to wonder why we received no report from that section. I find it is not due altogether to the chairman and
members of the section, but partly due to the members of the profession in this state and in this society.

In order to make the work of this section, in the preparation of a brief medical history of this state, complete and reliable, it requires the co-operation of all the members of the profession in all parts of the state; and if each one would respond to the circular letters addressed to them, by giving what facts they may be able to obtain concerning the medical history of this state from the earliest settlers up to the present time, it would be an easy matter to get up a brief state medical history that would be reliable, interesting, instructive, and valuable. But you can readily see that one person, without the aid of the rest of the profession, can do but little. Several months ago I sent out about three hundred circulars, asking for facts concerning the following questions:

1st. Dates and facts concerning the early settlers of the profession.
2d. Names of societies and dates of organization.
3d. Names of colleges and dates of organization.
4th. Names of hospitals and dates of organization.
5th. Prevailing diseases in your locality.
6th. Epidemics, dates, and places of mortality of.
7th. Capital operations performed in the state since its inhabitation by the white man, and results of the operation.
8th. The effects of the state laws governing the practice of medicine in your locality.

Expecting a response from all the members of the profession, especially members of this society, giving facts and statistics which would be valuable to the society, and enable me to prepare a report such as you all should expect from this section. But I am sorry to say that from quite a number of letters and three hundred circulars I received but four communications: one from Dr. M. S. Hildreth, of Lyons; one from Dr. F. C. Coulter, of Waterloo; one from Dr. J. H. Peabody, of Omaha, and one from Dr. T. M. Hayden, of
Osceola. To these four gentlemen I wish to extend my thanks for their kind and valuable information. Now from these four letters you can hardly expect one to give you a report on the medical history of Nebraska that would do justice to this section, this society, and to the medical profession of this large, grand, and glorious state.

I hope that the committee on this section for the coming year will be more successful in obtaining dates and facts of interest, and be able to make a report instructive, entertaining, and reliable, and that the members of the profession will take more interest in this section and assist the committee in their work.
FOREIGN CORRESPONDENCE.

Plattsmouth, Neb., June 1st, 1886.

To the Officers and Members of the Nebraska State Medical Society:

Gentlemen—Your chairman on Foreign Correspondence reports for the committee that friendly relations exist between this and all other regular medical societies in the Union.

Only one "Representative" before our society has forwarded any review of the proceedings of the State Society he represents, and that one is Dr. F. D. Haldeman, of Ord, Neb., who presents a full report on the very interesting transaction of Pennsylvania for 1885, which is herewith transmitted.

Let us hope that this system of mutual representation between medical societies will not be allowed to slumber. Let us remember that Nebraska inaugurated this method of friendly interchange, and her own pride should be excited in perpetuating and spreading it. Much good to the profession and closer relations are sure to follow its general adoption.

All of which is respectfully submitted,

R. R. Livingston,
Chairman Com. on Foreign Correspondence.
To the Members of the Nebraska State Medical Society:

LADIES AND GENTLEMEN—I have the honor of submitting a review of the proceedings of the Medical Society of the state of Pennsylvania at its thirty-six annual session, held at Scranton, May 27, 28, and 29, 1885. The Society was called to order by its president, Dr. Ezra P. Allen, of Athens. An address of welcome was delivered by Dr. I. F. Everhart on behalf of the profession of Scranton.

Dr. Henry H. Smith, of Philadelphia, then announced the receipt of a telegram from Harrisburg stating the passage of the bill for the establishment of a State Board of Health. The following resolutions were then adopted:

Resolved, That this Society has learned with great satisfaction of the final passage through the legislature of this state, of the act to create a State Board of Health, and that it hereby tender its thanks to the Hon. Robt. Adams, Jr., senator from Philadelphia, and to the Hon. Henry K. Boyer, representative from Philadelphia, for their earnest, untiring, and successful efforts to secure to the people of this great commonwealth so important a safeguard as is anticipated from the organization of this board.

Medical Legislation.—Dr. H. H. Smith, of Philadelphia, offered the following:

Resolved, That any county society that shall hereafter seek general medical legislation at Harrisburg, without previously obtaining the consent thereto of the medical society of the state of Pennsylvania, shall forfeit all its privileges and connection with this society, until relieved from their contempt by the report of the action of the judicial council.
A general discussion followed. The motion, which was to be a standing resolution, not a by-law, was adopted.

Dr. Edward Jackson, of Philadelphia, read a paper on the Diagnosis of Incipient Cataract, in which he tells us that cataract is one of the most dreaded diseases of the eye, and the most amenable to treatment. Cataract has acquired its terrible significance in the popular vocabulary because it is blamed for the effects of more serious lesions. This is caused by careless or incomplete diagnosis. It should always be borne in mind that the uncomplicated advance of cataract is as painless as the whitening of the hair. The results of examination of the pupil by oblique illumination are often inconclusive or unreliable. The best way to detect partial opacity of the crystalline lens is to throw into the eye the light from an ophthalmoscope mirror, and then to look at the general red glare obtained from the back part of the eye. In doing this, the surgeon looks through the suspected lens, and all opaque portions become noticeable as black spots, lines, or patches in the red circle of the pupil.

For such an examination no costly ophthalmoscope is needed. Any perforated reflector, such as those used for examining the throat or ear, or even better, a piece of common looking-glass with a hole scratched in the silvering for the observer to look through, will answer the purpose. When it has been certainly determined that lens opacity exists, the diagnosis of cataract must not be regarded as complete. Indeed it is yet scarcely far enough advanced to have any practical value. The question is, Does the lens opacity cause the symptoms complained of? Incipient cataract may be present and cause no inconvenience whatever. On the other hand, when cataract exists other lesions of the eye—nerve atrophy, choroiditis, or ametropia—are very apt to be present.

A paper on the non-contagiousness of Cholera Asiatica, was read by Dr. Henry H. Smith, of Philadelphia, in which he gave a summary of some of the facts and opinions in reference to the non-contagiousness of cholera.
Dr. William F. Waugh, of Philadelphia, read a paper on A New Method in the Treatment of the Alcohol Habit. His results in the treatment with large doses of capsicum were very satisfactory and deserve the attention of the profession. Acute alcoholism, he said, is generally successfully treated, but except in a very few cases the patient relapses into inebriety, and finally dies a drunkard.

The disease is not, however, essentially incurable, for cases do sometimes recover permanently. The causes of relapse are:

1. Previously existing disease, which led to drink.
2. Overwork, especially when combined with illness.
3. Gastric catarrh, due to alcohol.
4. Catarrh of the mouth, due to the same cause. This is the form which is popularly cured by using liquor as a gargle instead of drinking it.
5. The depression which results from discontinuing the customary use of stimulants.

In the first and second classes, the recognition of the cause affords the indication for treatment. In the third class, the remedies recommended are, hot water with soda before meals, oxide of silver, oxide of zinc or bismuth following, and minute doses of ipecacuanha to restore the secretion of the digestive glands. In the fourth and fifth classes, the use of coca is recommended, in the form of a masticatory, to obtain the local effect on the mouth as well as the constitutional effects in relieving the depression. The object is to substitute for the alcohol habit the harmless habit of chewing coca. The food should be carefully regulated, and should at first consist of raw oysters or beef, with capsicum and vinegar, pickled tripe or pig's feet.

Dr. Ezra P. Allen, president of the society, read an able address, in which he discussed some of the important improvements and advances which have occurred in medicine and surgery during the past forty years. In closing, he expressed
regret at the neglect of congress to appropriate money for supporting the National Board of Health, and thus leaving that institution crippled from the want of funds necessary for its existence and operation. This address was followed by one from Joseph G. Richardson, M.D., on Hygiene, in which he pictured an ultimate triumph over disease in general by hygienic measures, which would do away with any occasion for physicians, and thus sanitarily reform us out of existence.

The address in otology was delivered by Dr. C. S. Turnbull, of Philadelphia. The paper was brief and of great practical value in aural therapeutics. In prescribing for the ear, he thinks entirely too much guess-work is indulged in, and too much precious time is lost before characteristic symptoms are recognized. The majority of cases of otorrhea in children under two years of age would recover, and the hearing would not be damaged, if they were simply let alone. Ordinary cleanliness is all that is necessary for the proper management of such cases. In the use of medicated solutions to be dropped into the ear of children, the anatomical topography of the parts must be borne in mind. The auditory canal is short, and the Eustachian tubes are patulous, and the solutions syringed into the ears of children run directly into the throat. For this reason he deprecated syringing and the use of water in any way, in connection with cleansing of the external auditory meatus. Impacted cerumen must be first soaked by the instillation of a warm alkaline solution, and then, as in the case of inspissated cerumen, can always be safely removed by syringing with warm water, which procedure is the only one in which he considers the use of water permissible; even here, however, had water not been injudiciously used in the first place, the wax would never have become packed. In case it becomes necessary for superfluous cerumen or the lodgment of dust to wipe out the meatus, it should be done with a dry, soft cloth, or a damp towel. He regards discharges from the ears, unless they be sour or fetid,
as harmless, in so far as the hearing is concerned. Serum, mucus, or muco-pus he wipes out with absorbent cotton. If the discharge has become fetid, boracic acid in solution, suspension, or as an insufflated powder must be used.

The most essential point in the cleansing of discharging ears, is the thorough freeing of the middle ear from secretion. This must be done by teaching adults to make forcible expirations while holding the nose and keeping the mouth shut. In children he recommends his own method, which is as follows: one nozzle of an ordinary auscultation tube, protected by a perforated "lead pencil rubber cap," slipped upside down over it, or a piece of gum tubing is sufficient to cover the nozzle. This is called the nose-piece, and is held firmly, as it plugs one nostril and acts as a point of support upon which to close the other. As the child cries lustily or else blows out (as if to blow out a light) the surgeon, having the nozzle at the other end of the tube in his mouth, blows a quick, short blast which invariably inflates both ears. Once assured that the procedure does not cause them pain, children enter into the spirit of it and blow with a will.

The great secret in the treatment of all discharges from the ears is dependent upon the fact that fermentation and putrefaction soon occur in the moist auditory meatus. So long as a discharge is not allowed to ferment it will not become fetid; seldom ever purulent. He treats mild cases of eczema of the auricle and external auditory meatus with weak mercurial ointment, while chronic cases require repeated applications of a saturated solution of nitrate of silver. In tinnetus aurium he recommends erythoxylon coca, Squibb's hydrobromic acid, and bromide of sodium.

Especially attention was called to a disease (not unlike boiler-maker's deafness) which he styles "mill operative's deafness." This is a disease of the auditory nerve, caused by a prolonged succession of concussions and irritation from the rattle and din of machinery, the first grave and characteristic
symptom of which is the power of being able to hear distinctly only when in a noise.

In conclusion he says: “For collections of wax in the ears, soak and syringe. For pain in the ears, use dry heat and anodynes in full doses. For children’s earaches, never forget the hot foot-bath and aconite. Tincture of iodine behind the ears is less annoying and does just as well as a blister for counter-irritation. Wipe out running ears with absorbent cotton, and do not meddle too much with acute cases. Submaxillary tickling on either side, with sudden impairment of hearing, means reflex tubal irritation, and calls for faucial treatment. Chronic cases of otorrhoea call for powdered boric acid, and get well. Never plug discharging ears with cotton. Never pick the ears with anything smaller than the finger.”

The “Address in Medicine” was then read by Edward T. Bruen M.D., of Philadelphia, who gave a resumé of the present status of thought upon the important subjects which have excited general interest in the past year, and at the same time some personal observations were submitted. In tubercular disease, he said it has been established that a micro-organism, the bacillus of tuberculosis, is constantly present. The inoculability of the tubercular material from pure cultures is also proven, and its causal importance is claimed by an increasing number of clinicians and pathologists. It is, however, a fact that healthy tissue can resist the inroads of the microbe, and constitutional predisposition or acquired ill-health is a constant source of menace if the new etiology should prevail. But there also exist cases of abdominal tuberculosis without pulmonary lesion, and even cases of cheesy degeneration in the lungs, in which the bacillus is not present, however careful the search. These cases radiate foci of infection through the lymphatic channels, and in this manner differ from a case of tubercular matter in which a bacillus exists, for in the latter case the entire system may be
involved. There also exist the forms of interstitial phthisis, known as pneumonokoniosis or artisan's phthisis, in which the appearances are often very similar to the admittedly tubercular forms, but which are minus the bacillus.

Diphtheria was then spoken of. This disease, which is always a practical subject, may now be assumed to have a causative relation with a microscopic fungus, known as bacteria, in the form of microcci, or with a morbific element so closely associated with the fungus as to be inseparable from it by physical means. There is also considerable evidence tending to show that some of the phenomena of the disease are due to a development, during the progress of the disease, of poisons in the body of the patient. The poison may enter the system by various channels, such as air or fluid media; but the upper air passages are most exposed to the influence of the poison, and hence they most frequently exhibit its features. The fructification of the microcci results in inflammation and fibrinous exudation by which the parchment-like membrane characteristic of the disease is produced; then the blood and the whole system is affected. In the kidney, spleen, and other internal viscera, the bacteria develop in such prodigious numbers as, in severe cases, to block up the capillaries, and thus obstruct the circulation, and by the interference with essential vital processes occasion death. While this is going on, the patient may be throwing off by the breath, expectoration, urinary, and fecal excretions, great quantities of bacteria which might communicate the disease to others. The ordinary bacterial forms which abound wherever decomposition is taking place, and which exist in a drop of saliva or in the fur on the tongue, are capable of producing this mischief.

Dr. E. A. Wood, of Pittsburgh, then read the Address on Surgery. He pointed out the errors connected with surgical training, and also where and how improvements may be made. He thought in the training of a surgeon, there were a few branches now connected with medical education which should
be left out. Chemistry should only be considered as preliminary. Whatever takes up his time or distracts his attention from his real work ought to be eliminated. Geometry and trigonometry should not only be held as essential preliminaries, but should be studied and practiced all through the course. Geometry is of far more value to the operative surgeon than chemistry; trigonometry more important than a dead language. He briefly calls attention to the subcutaneous method of operating for aneurism by using the wire loop, to more fully and clearly demonstrate the importance of geometry and trigonometry in surgery. He thinks every surgeon should be prepared to make his own dressings and appliances. A carpenter shop should be an adjunct to a medical college, just as the chemical laboratory now is.

Spencer M. Free, A.M., M.D., of Dagus Mines, Pa., read a paper on Morphia in Cholera Infantum. The particular advantage of this treatment, he tells us, is that perfect rest is secured from vomiting, diarrhoea, and other bad symptoms, and nature is afforded an opportunity to recover her balance, and is then ready to properly receive and apply our assistance. The principal of treatment seems correct and reasonable, and the results obtained encourage further trial.

A paper on Dermatitis Medicamentosa or eruptions due to the ingestion of drugs, was read by Arthur Van Harlingen, M.D., of Philadelphia. He grouped the clinical characters of drug eruptions in such a way as to aid in their identification in practice. The following drugs were spoken of as producing some form of eruption on the skin: Antipyrene, arsenic, belladonna, bromine, borax, cannabis Indica, chloral, copaiba, cubebs, digitalis, duboisia, hyoscyamus, iodine, iodine, iodoform, mercury, opium, pilocarpin, phosphoric acid, quinine, salicylic acid, santonine, tar and its congeners, carbolic acid, creasote, turpentine, rosin, and petroleum. Among these, bromine, iodine, and quinine are by far the most frequently described as producing eruptions of the skin. Idiosyncrasy is the
theory he uses to explain the cause of eruptions due to the ingestion of drugs which act through the nervous system. Beyond this our knowledge does not at present extend.

Dr. W. D. Kearns, of Pittsburgh, read a paper on Retroflexed Splints for Fractures of the Forearm, which, it was claimed, gave greater ease to the patient and efficiency in causing the parts to knit and heal in proper shape. In his experience he has found that in many, if not most, cases of fracture of the forearm or wrist, the splint should be applied so that the metacarpal phalanges of the hand may be bent upward from the plane of the arm at an angle of about 122°, and that it should be left as free to move as possible. This is about the natural inclination of the human hand, or that in which the posterior muscular tendons are most completely relaxed, and the continued maintenance of this relaxation of the several tendons, fasciae, and ligaments is of paramount importance in the class of fractures above noted.

Registration of Diplomas.—Dr. R. D. Keyser, of Philadelphia, offered the following:

Resolved, That it is the sense of this Society that all diplomas from medical schools in any other state or country than this, on being registered in this state should be endorsed only by a school of the same system of study and practice as the school granting the diploma.

Resolved, That a copy of this resolution be sent to the prothonotary of every county and to all the medical schools in the state.

The resolutions were unanimously adopted.

Dr. H. R. Wharton, of Philadelphia, read a paper on Osteotomy for Correction of Deformities in Lower Extremities. He recognizes two methods of osteotomy—the linear, which is performed through a small wound with a saw or osteotome, and is a subcutaneous operation, and the cuneiform, in which a wedge-shaped piece of bone is removed by means of a chisel; this latter necessitates an open wound. The results of the former
operation, or linear osteotomy, are so much better than those of the latter, or the cuneiform operation, that it is now generally made use of. The case in which osteotomy may be required for the correction of deformities are those arising from rachitis, from coxalgia, from badly united fractures, or from unreduced dislocation; and of all these the vast majority of cases requiring operation are probably due to the first named cause. For the correction of angular deformities of the hip joint, resulting from coxalgia, Gant’s modification of Adam’s operation is preferred; that is, a section of the femur just below the lesser trochanter. This operation is preferred because a section of the bone at this point secures its division at a locality where its structure is comparatively healthy, whereas its division through the diseased structure of the neck, if it still exists, is capable of renewing an active inflammation in tissues which are most susceptible to inflammatory accidents following traumatism. Also from the fact that the shaft of the femur can no longer be influenced by the action of the psoas magnus and iliacus muscles, the chances to recorrect deformity are less when the section is made at this situation. The fact that no case has resulted fatally in a large number of cases in the author’s experience, speaks well for the general safety of the operation. The results obtained as regards the correction of the deformity are most satisfactory. The use of plaster of Paris dressing to fix the parts after the operation is strongly recommended.

Dr. Benj. Lee, of Philadelphia, read a paper on *Nil Desperandum* in Spinal Caries. There are two points that can never be too strongly insisted on in reference to the treatment of spinal caries, or Pott’s disease of the spine. First, that it is never too early to begin the employment of mechanical support of the most decided character; and, second, that it is *never too late*.

The wearing of an artificial support, properly contrived, for a few months can do the patient no harm if the spine is
not diseased, but neglect on the part of the physician to advise a resort to this means of treatment when such disease is present will lead to irreparable injury to the patient, and a loss of prestige to the physician himself. It is perfectly easy to recognize the disease long before any deformity shows itself. The principal signs are: Sudden attacks of cramping pain in the abdomen or sides, great stiffness on waking in the morning, and inability to stoop forward and touch the floor. There is not generally pain or tenderness in the back, and it is a great mistake to pronounce that there is nothing the matter with the spine because that symptom is absent. If the patient is able to walk, he will turn in one or both toes, and hold his shoulders back and up rigidly. If an infant, it will scream on being moved and lifted. The disease often follows an attack of whooping cough, and can frequently be traced to a fall or other injury. It is *never too late* to begin with the use of mechanical supports. It is the greatest possible error to suppose that strength is needed on the part of the patient in order to bear the application of a surgical appliance. When the vital energies are slowly wasting away in consequence of a local source of irritation, the mechanical support is the plug which stops the leak. Without this, internal medication is as vain as the labors of the fifty daughters of King Darius, condemned to expiate the awful crime of murdering their husbands on their nuptial night, by filling eternally with water a vessel full of holes.

The society adopted the usual resolutions of thanks, and adjourned to meet at Williamsport on the first Wednesday in June, 1886. The session seems to have been a harmonious and in other respects a pleasant one. While no papers of great importance were read, at least two matters of business were resolved upon, which cannot be regarded as unimportant. The first of these was the passage of a series of resolutions declaring in favor of a state board of examiners and licensers, independent of the medical colleges of the state, and
the appointment of a committee to draft a bill embodying this principal, to be reported at the next annual meeting of the society. If approved, the passage of the bill is to be secured, if possible, at the next biennial session of the legislature, that is, in 1887. The evident majority by which these resolutions were carried shows that the profession of the state are ready for such a bill, which seems now to be required more particularly to protect them against the large number of poorly educated men who are being graduated by the extra state schools adjacent to their boundaries. At the same time it seems no more than fair that the graduates from the schools within the state should be subjected to the same examination. The second resolution, also passed by a decided majority, inhibits county societies from attempting to secure legislation on matters affecting the conduct or interests of the profession of the entire state. It is evident that the initiation of such legislation should be, not with a county society, but with that of the state, in order that the profession throughout it may have a voice, and all interests be fairly represented.
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