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THE WISCONSIN MEDICAL JOURNAL

JUNE, 1910

ORIGINAL ARTICLES.

THE IMPORTANCE OF A STUDY OF PARASITOLOGY.

BY BENNET M. ALLEN, PH. D.,

UNIVERSITY OF WISCONSIN.

MADISON, WIS.

This subject, while not a new one, has been enriched by much important work during recent years. It has been but a short time since the cause of the very serious anemia so prevalent in Porto Rico has been traced to the hook-worm, *Necator Americanus*; and more recently still that attention has been called to its great prevalence in our southern states. The ravages of this parasite are very wide-spread in all tropical and sub-tropical countries. While it does not directly concern the medical profession of our state except in so far as it may be brought here by patients returning from southern regions, it might some day gain a foothold in our mines as the European hook-worm (*Ankylostoma duodenale*) has done in Switzerland, England, etc. As a matter of fact, a closely allied form is very common in our cats and dogs.

The importance of knowledge of the malarial parasite and its transmission through the agency of the *Anopheles* mosquitoes has been justly emphasized during the last few years. The control of this disease is absolutely vital to the health and commercial development of the tropics. The successful combating of malaria and of that other mosquito-borne disease—yellow fever, can only be carried on with a thorough knowledge of the life cycle and habits of the different mosquitoes that carry the disease.

While of these diseases malaria alone may occur in Wisconsin, and that very rarely, these diseases have a great importance, affecting us all in a direct or indirect economic sense. The conquest of these diseases

will make certain parts of our southern states and of the tropics a white man's country. For instance, the very rich delta of the Mississippi is destined in the not distant future to be as productive as the famous delta of the Nile. The mosquito and the malarial organism alone prevent its development.

While these problems interest us in a scientific and economic sense, the physicians of our state are more directly concerned with our local problems. We have to deal with tape-worms, seat worms, eel worms (*Ascaris*), itch (fortunately not so common as formerly), and a number of other parasitic forms quite as common. Our commonest parasite, the minute follicular mite (*Demodex folliculorum*) is given but slight attention, and yet it probably deserves more, since its attacks are one factor in the production of "black heads" and quite probably of other and more severe forms of acne. Observations upon the occurrence of this parasite in facial eruptions should be recorded. In my class in Medical Zoology I devote a couple of hours to the study of this parasite. Our material for study is furnished by the students themselves, who examine sebum squeezed from their own faces. This last year 50 per cent. of the class were thus successful in "patronizing home industry". In dogs a form quite similar, practically indistinguishable from the human parasite, causes a fatal form of mange. It is extremely difficult to reach in ordinary treatment, owing to the fact that it lies deep in the skin and is protected by a thick plug of sebum. Dispersal is probably in large part due to the agency of the barber and to promiscuous use of towels. Facial massage, no doubt, may remove a few of them, although by no means a considerable number. These few may be deposited upon the face of the next patron of the massage. It should certainly seem desirable to place this parasite among those organisms against which the barber should be made to exercise more care.

The intestinal parasites are of more importance than we have been accustomed to think. In a recent paper by Schloss, it was shown that of two hundred and eighty New York children from the poorer classes examined, eighty, (28.57%) were infested with intestinal worms. Of these 11.0% harbored the whip-worm (*Trichinurus trichinurus*) 8.21% the seat-worm (*Oxyurus vermicularis*); 7.14%, the dwarf tape-worm (*Hymenolepis nana*); 2.14%, the eel-worm (*Ascaris lumbricoides*) and 1.78% the beef tape-worm (*Tenia saginata*). These were not picked cases but were taken at random.

In many of these cases the presence of the parasites was not suspected owing to the absence of severe symptoms. A small number of whip-worms or dwarf tape-worms would cause but little disturb-

ance. When present in considerable quantities, however, they may cause very serious disturbances, especially is this true of the dwarf tape-worm. Since this parasite is less than one inch in length, the small chains of proglottids that are passed in the feces wholly escape detection in ordinary examinations. Whip-worms may exist in large numbers without giving any direct evidence of their presence. The symptomatology of the intestinal worms is by no means simple. A general tendency to anemia, with eosinophilia may be noted in some cases, while alimentary and nervous disorders may give a clue to the general character of the trouble. Actually the only scientific means of forming a diagnosis that would reveal the species of the parasite is by a microscopical examination of the feces for eggs. The physician should most assuredly be equipped with a knowledge of the differences that characterize the eggs of the various types of intestinal worms, since different types may be best expelled by means which vary widely from one another. The prognosis can be intelligently given only when the species of parasite is known. In order to correctly determine the course and results of treatment it is quite necessary that the habits of the parasites be understood and that the stools be examined to note the presence or absence of ova.

Medical men certainly can do a great service to their communities by disseminating information regarding the means of preventing the introduction of these parasites. It has been shown that the eggs of the eel-worms can be transported by flies and it is quite probable that those of other parasitic worms may be carried in the same manner. The method of transmission of the dwarf tape-worm has not been clearly demonstrated, but the fact of its presence in the rat should cause us to add one more to the many grievances that we have against that pest. Whether it is transmitted directly from the rat to man or through an intermediate host, there is little doubt but that the rat disseminates the parasite.

This leads us naturally to the consideration of trichina since the rat most certainly is the agency through which that parasite is fostered and spread. The parasite is quite prevalent in rats, owing to their peculiar susceptibility and to the fact that they eat one another. Hogs, on the other hand, not infrequently eat rats, and hence the parasite is finally conveyed to man.

While trichinosis is not very common in this country owing to our usual custom of thoroughly cooking meat, yet it is probably much more common than our records would seem to indicate, because sporadic cases are often not suspected and are frequently given an

incorrect diagnosis, although the symptoms taken together give a reasonably clear indication.

Wisconsin with her large German and Scandinavian population must certainly show a relatively large percentage of cases of trichinosis. There is most assuredly a considerable amount of raw or poorly cooked pork consumed in the state. While this is true, the meat inspection practiced by our government does not involve examination for trichina in pork to be used for domestic consumption. Such examination is carried on to a certain extent by at least one private firm in the state, but this would involve inspection of a very small percentage of the pork consumed. I am told by the inspector that about three hogs per thousand subjected to this inspection are found to be infected with trichina. This may be taken as a fair index of the occurrence of trichina in the hogs brought into Milwaukee. Some authorities have given a much higher percentage for the United States. One instance was recorded in which samples taken from three hogs in succession revealed the presence of trichina.

While it is no doubt true that the large sum of money that would have to be spent in carrying on a thorough microscopical inspection for trichina might better be used toward the eradication of tuberculosis or in other public health work, the need for publicity regarding the real danger that lurks in raw or poorly cooked pork should certainly be emphasized. Experiments have shown that trichina parasites remain alive in well smoked ham and that boiling for two or three hours does not suffice to raise the temperature in the interior of a large ham to a point fatal to the worms.

In conclusion, it may be said that the subject of parasitology is one of great importance to medicine even in a region so far north as Wisconsin, and that a scientific knowledge of the structure, life history, and habits of the parasites is of much value to the practitioner. We consider this subject of such importance that we are now giving at the University of Wisconsin, a course in Medical Zoology which deals primarily with the structure, reproduction and life history of parasites infesting man. It also deals with disease carriers. Such as mosquitoes, flies and rats, and finally with venomous insects and reptiles. We hope by a course of this kind to impart facts which are not ordinarily included in our medical training; but which are really quite essential to a thorough preparation for medicine.

THE PRACTICE OF SURGERY.*

BY RALPH ELMERGREEN, M. D.,

MILWAUKEE.

The practice of surgery was perhaps co-existent with the origin of species and co-extensive with the evolution of man. Every effort made, whether sensitized or instinctive, crude, primitive, successful or unsuccessful, to favor the restoration of function, quicken resolution, or restore the continuity of living cells we must catalogue under the art of surgery. Yet, though the art be long—dating back to unnumbered eons—the science of surgery is comparatively modern, scarcely more than a hundred years old.

It is more than passing strange to the contemplative that centuries should have lapsed, ages folded up, and yet, despite the wonderful progress made in the other human activities,—in economics, in the fine arts, in poetry, music and song, in architecture, agriculture and the various crafts,—yet no beam of light, no stray tangent ray should have been deflected from the fount of ancient and medieval wisdom to fall upon the shrine of surgery.

Were it within the province of this paper to explain why the intellect that could conceive the construction of the pyramids, convey to canvas the wonderful colorings of nature, put in cold marble the soft lines of the human anatomy, transcribe the repertoire of the feathered throngs, and put in song all the suffering and the passion of the human heart—why this civilization with all its physical power and intellectual potentialities should fall short of allaying the pains and anguish it could so graphically depict, my answer to you would be Superstition.

Man, mediocre or genius, is but the product of his age. The mediocre, the modicum; the genius the composite of the best. Galen could not rise above his era, though he distanced by leagues his contemporaries. Hippocrates remained fettered to much of the darkness of the pre-Christian centuries, though he had successfully cast off many of the traditions and teachings of his fathers. The mind of a Galen or a Hippocrates in a twentieth century setting would have hastened the advent of a proper conception of the principles of surgery. The dark superstitions that prevailed before the coming of Christ were handed down as late as the year 1800, and even show their endemic out-croppings to-day in the cerebrations of our faith-curists and the rabid demonstrations of our anti-vivisectionists.

*Read before the Milwaukee Medical Society, May 24, 1910.

The art of surgery made but little progress from the reign of the first Ptolemy to the year 460 B. C. when Hippocrates was born; and no marked advance of moment from the latter's birth to the beginning of the nineteenth century.

We have authentic records both in cuneiform and hieroglyphics that surgery was practiced as an art during the dark dynasties of our progenitors. The crude splint to keep the broken limb in place, the application of healing balsams to the gaping wound, and similar surgical feats were common practices during the reigns of the early Ptolemies. That these crude practices were handed down by primitive man we may safely conjecture, since naturalists tell us that even the lower animals instinctively fortify and give long periods of rest to a broken limb or wing.

Now came Hippocrates—the father of medicine and the expounder of the elementary principles of surgery. It is always difficult to accept and use knowledge beyond our culture, and it is impossible to throw off the thought tendencies of the age we live in. Though regarded by his contemporaries and followers as little less than a god, yet Hippocrates left little knowledge of surgery behind him, and it is significant that what he left to us was for centuries lost in darkness. It was Hippocrates' era that dwarfed him. Just as Luther remained essentially a Catholic after his apostasy, so did Hippocrates remain essentially a Greek philosopher after his repudiation of the speculative system of thought.

It is impossible for the human mind entirely to disassociate itself from the thought currents of its genesis and respective periods of growth and decay. All knowledge is primarily empirical knowledge—founded on our experience. Hippocrates' mind, though a composite of the best intellects, yet was necessarily circumscribed by his era, and this explains many of his faulty deductions and crude superstitions.

Galen came after Hippocrates. He introduced the experimental methods of research, and deliberately cut certain nerves in the lower animals to demonstrate the resultant paralyses, and thus laid the foundation of nerve physiology. For more than 1400 years the Galen influence dominated the practice of surgery in the treatment of fractures, dislocations, abscesses, gangrene, wounds, and even hernia.

After Galen came the Arabians. Surgical progress was now no longer possible in the Christian countries. Religion and dogma were at their zenith, and fanaticism flourished. The human body dead, was sacred, and animal experimentations prohibited by law. The church was dominant and her influence held men in awe. The Bible

was construed literally, and dogma based on biblical revelations supplanted the innate human quest for knowledge. All free exercise of the mind ceased; man vegetated or moved in a circle. The Arabians alone made progress during this age, and in the literature of extra-uterine pregnancy, hernia, amputations and wounds, they are even to-day extensively quoted. Thus passed the middle ages without leaving any mileposts behind.

The Renaissance, so brilliant in other channels of human activities, added little or nothing to Galen's contributions on anatomy and surgery.

The discovery of America, the art of printing, the reformation and the advent of Bacon, all combined to make man free and enlarge his mental horizon. Paracelsus loudly preached reform in the treatment of wounds, but strange enough, no lasting progress was made. In surgery we had not yet emerged out of the shadows of the middle ages. Selective surgery was deferred and wounds were permitted to suppurate worse than ever. Yet there was one great step forward—man began to observe more and speculate less. The foundation for twentieth century surgery was laid! After Bacon came Harvey, Hunter, Bright and Sydenham; all Englishmen—England being free from war at this period. And with these great English investigators came the laboratory, the clinic, and scientific methods of research.

It was now that the contraband work of Vesalius, Fallopius and Eustachius began to bear fruit. Not unlike his great contemporary Luther, Vesalius dissected the human body even as Luther had dissected the Church—both at the risk of their reputations. The research spirit was in the air. Observations led to experiments, and experiments to conclusions. The move of speculation had receded. Research was dominant, and the quest for Truth paramount.

In 1628 Harvey gave to the world his conclusions on the circulation of the blood. It is true that regional circulation of blood was suspected by the Greeks centuries before Harvey was born, and the careful student will even notice that the literature of the Periclean age contains many allusions to the functions of the heart. The Shakespearian student will also recall that Shakespeare's knowledge of surgery was most remarkable. In a late issue of the *Journal of the American Medical Association* (May 1, 1910) appears an interesting and instructive editorial on Shakespeare's medical information. The article shows how Shakespeare must have anticipated Harvey. Brutus refers to "the ruddy drops that visit my sad heart." Julius Caesar was written before Harvey published his "*De Motu Cordis et Sanguinis*".

Whether or not we should give Harvey credit for a knowledge of the capillary system I am not prepared to say, as I was unable to gain access to certain old volumes, but it is admitted that Malpighi in 1661 was the first to explain clearly how the blood was returned to the heart by means of the capillary system.

Nearly half a century before Harvey published his little treatise of 70 or 80 pages on the circulation of the blood, *Cisalpinus* had published his views on the venous and arterial circulations. I am unable to explain why so little credit is attached to the discoveries of this great investigator, but it is not within the province of this paper to speculate on these matters.

A few years later in 1688, *Leeuwenhoek* actually demonstrated the capillary circulation in tadpoles. Whether *Servetus* had a general idea of the capillary circulation when he taught the arterio-venous circulation in the lungs, we are unable to say, because old *Calvin* had seized and burned him for heresy before he (*Servetus*) could go on record.

It is only fair that we give due credit to this great discovery of *Malpighi*, for it was really the capillary system that had baffled all our early investigators. *Hippocrates*, *Galen*, *Aristotle* all knew about the two kinds of blood vessels, and that the heart pumped blood. It is known that *Galen* even suspected some kind of a connection between these two kinds of vessels, but he was unable to demonstrate this, nor did he consider this capillary connection necessary to complete his views on circulation, as he still clung to the apocryphal opening in the ventricular septum.

I offer no apology for having tarried here so long even at the risk of outwearing your patience, because it was the discovery of the circulation of the blood that laid the foundation of modern surgery.

But if the discovery of the circulation of the blood was the first milestone of modern surgery, the control of hemorrhage was none the less the second milestone.

An even century, almost to a day, after *Harvey* published his epochal work on the circulation of the blood, *John Hunter*, also an Englishman, was born. *Hunter* was the first man that clearly demonstrated collateral anastomosis and the healing of wounds following the ligation of an artery. Nothing was dreaded more than hemorrhage by the ancient and medieval surgeons. The proper control of hemorrhage and the recognition of collateral anastomosis marked the second milepost in modern surgery. Boiling oil, the cautery, pressure, and bandaging now gradually gave way to the tourniquet and the ligature.

My paper might have been entitled the Progress of Surgery rather than the Practice of Surgery but for the fact that prior to the year 1800 there was no continuous progress in the art of surgery. There were short periods of marked activity in the practice of surgery uniformly followed by longer periods of somnolence, priestcraft, and superstition. It is significant, however, that the periods of progress in the healing art were generally coeval with the periods of action and growth in the other departments of human activities. Thus Oliver Wendell Holmes points out that Hippocrates lived during the Periclean age, a contemporary of Socrates, Plato and Phidias. Then came Servetus and Vesalius—both contemporaries of Luther. With Bacon came Harvey, and Bichat studied human anatomy while Napoleon led his armies across the Alps. We could even profitably continue Holmes' observations by pointing out that Virchow laid the foundation of surgical pathology while Bismark contemplated the unification of Germany. That McDowell was born when Washington wintered at Valley Forge, and that Dr. John Jones, the father of American Surgery, published the first American medical book—*Plain Concise, Practical Remarks on the Treatment of Wounds and Fractures*—the year of our Independence.

We have now arrived at the birth of the science of surgery—the year 1800—when the Parliament of England officially recognized surgery and issued a charter to a Company of Surgeons. England again was first here. France was still hesitating, and Germany was not ready to yield to the despised art of surgery a place in her university curriculum. Italy who still boasts of the first medical department in the world, connected with the University of Salerno—also the oldest university in the world—looked askance at surgery even as an art, and refused to follow the example of England. Lord Thurlow who fought the recognition of surgery when the charter was granted by Parliament proclaimed in the House of Lords, according to Dennis, that, “there is no more science in surgery than in butchering.” To illustrate what a late sister surgery really is of medicine, the latter always a dignified and stately science, we have only to cite that when Von Wuthwehr of Freiburg, in 1774, insisted on the recognition of surgery as a science and its union with medicine, the students actually threatened to mob him.

Fully to understand the contempt in which surgery was held prior to its recognition as a science we should remember that surgery was mostly practiced by barbers, quacks, and charlatans for many centuries, while medicine was always a substantial, dignified, and gentleman's calling. While medicine was fostered and supported by

kings and governments, surgery was despised, neglected, and in not a few instances, even prohibited. We can very readily account for this universal antagonism toward surgery when we consider the agonizing pain and the uncontrollable hemorrhage that trailed the scalpel for so many centuries. And when we add to this the terrors of blood poisoning, generally ending in deformity or death, it is after all small wonder that even hardy men of stout hearts dreaded this heroic work and found it altogether un congenial to their refined and cultured tastes and surroundings. Nor, if my observations have not betrayed me, have we fully outgrown this latent feeling of antagonism for surgery to-day. If, for instance, those who may be interested, would turn to page 1453 of a current issue (May 1, 1910) of the Journal of the American Medical Association, they could read there: "A physician ranks somewhat higher than a surgeon as his calling is associated with a university education and greater scholarship, while a surgeon is essentially a craftsman, descended from the old barber-surgeon." The observing critic will perhaps also have noticed that in a gathering of physicians and surgeons the former do in no wise suffer in comparison with the latter in general culture, and professional learning. It is a constant reproach to surgery that the terms operator and surgeon are considered interchangeable. A man may be a skillful craftsman and yet be a poor surgeon if he lacks surgical judgment and fails to cultivate studious habits. But of this more later.

We have seen how surgery was held in contempt while the speculative philosophy was in its ascendancy, and how later when speculation yielded to research and when Harvey climaxed the great work of Servetus, Copernicus, and Galileo, how with the discovery of the general circulation and the knowledge that men bled to death, contempt was turned into fear, and the beautiful dissections of Servetus and careful anatomie surgery of Andreas Vesalius were turned to but little practical advantage. But now a new era had dawned.

Dr. Robert J. Morris classifies surgery under four epochs: (1) Heroic surgery, as practiced in the Periclean age. (2) Anatomic surgery introduced by Servetus and Vesalius. (3) Pathologic surgery, based on the work of Virchow, Pasteur and Lister. (4) Physiologic surgery.

In our own humble essay we have now arrived at the third age, namely, Pathologic surgery. I shall recognize no separate class in the Physiologic surgery of Morris but shall treat Physiologic and Pathologic surgery together, considering the former simply the scientific complement of the latter.

No theme in the whole sphere of human attainments can possibly afford the essayist a greater joy and a greater pride than a contemplation of the practice of surgery during the last century. So wonderful was the progress, and so alluring the practice of surgery during this century that there is nothing to equal it in the annals of human undertakings. The pages of the development of surgery since its recognition as a science read like a novel. The practice of surgery became more daring and yet withal more humane with every decade, so that by sheer force of intellect and craftsmanship it rose to the dizzy heights of scientific medicine and became the peer of all sciences. More genuine progress was now crowded into a few decades than had accumulated in all the preceding hoary years since the beginning of history.

Heretofore the laurels were won by England, Spain, Greece and Italy. Now came the red letter day of God's own country. In 1809 McDowell of Danville, Kentucky, successfully removed an ovarian cyst from his patient, and three years later he removed a stone from the bladder of James K. Polk, later president of the United States. When the news of McDowell's success reached England, the *México-Chirurgical Review* of London made this brief comment: "A back settlement of America—Kentucky—has beaten the mother country, nay, Europe itself, with its boasted surgeons thereof, in the fearful and formidable operation of gastrotomy, with the extraction of the ovaries." This was meant as sarcasm, but it remained the truth.

Yet this was but the dawn of American surgery. In 1836 J. Marion Sims, the great Southerner and pioneer gynecologist, demonstrated his operation for the cure of vesico-vaginal fistula. A few years later he gave to the world the speculum that still bears his name. From now on the development in the practice of surgery reads like a fairy book.

In 1846 America gave ether anesthesia to the world—the greatest blessing ever given to suffering mankind. William Morton had climaxed the work of Wells, Jackson, and Long, and administered ether to a patient operated upon by Dr. Warren.

Here is what Dr. Oviatt says in speaking of this boon given to suffering humanity: "Every young physician should avail himself of the opportunity when in Boston, to visit the Massachusetts General Hospital and ask to be conducted to the little amphitheatre at the top of the old building where the first operation was performed under ether administered by Morton. This room has been left practically unchanged, and there may be seen the original apparatus used in its administration. To me this seems a sacred place." The third mile-

stone in the practice of surgery! A year later Simpson demonstrated the value of chloroform as an anesthetic.

Pain now had been conquered, but alas, the foe of surgery was still rampant. The horrors of the sickening, suppurating wounds still stayed the advance of the scalpel, and only the most urgent cases as yet received the benefit that anesthesia conferred upon surgery. But now came Pasteur,—and with him Lister, and to the everlasting glory of surgery the fourth milestone, marking the introduction of aseptic surgery, was erected.

We thus see that the first milestone in the practice of surgery relates to physiology, the second to anatomy, the third to medicine, and the fourth to pathology. It therefore devolves upon the aspiring surgeon to master these branches before he attempts to limit his work by specialization. The practice of surgery, to-day, demands wide schooling, thorough training, honest effort and a willingness to work in the glorious cause of humanity.

The discovery of the Roentgen rays, Finsen light, radium, and the introduction of serum and vaccine therapy; of local and spinal anesthesia; the modification of the older operations and the use of the newer operations; the discovery of better diagnostic methods, and improved methods of blood-examination and blood-transfusion; the improvement of the microscope; the installation of perfectly equipped laboratories, and improved methods of bacteriological investigations; the coming of the gentle, faithful nurse—her training school and her home; the endowment of our medical libraries and laboratories, and the great moral and intellectual elevation of our medical schools—all this places the young surgeon in the *front* and gives him a glorious opportunity to become worthy of his vast heritage.

Now, if we for a moment close our eyes and permit the foregoing resume of the development and practice of surgery to construct itself into a panorama, what do we see? Here is your relief; Priest—philosopher—scientist—general practitioner—surgeon. And here are your stages: Primitive, formative, practical and scientific. Around these stages cluster our barnacles—the impediments to every advance: Sooth sayers, religious fanatics, charlatans and our erring cults. Yet withal what a glorious past we revel in; what a precious heritage is ours!

At every age, regardless of opposition, regardless of barriers, unmindful of loss to reputation, aye, even at the risk of life itself, the stoutest hearts and clearest minds pitched their tents on advanced grounds, and practiced the art of surgery to relieve the suffering of their fellow men.

But every advance made in our art has entailed days of study and preparation. Every opportunity given us means just so much more responsibility. A knowledge of the circulation of the blood made a moral demand on every surgeon to acquire a knowledge of the vessels that carry this blood—their distribution, anatomic structure and pathology. Yes, physiologic surgery even demands of the surgeon to-day that he be a hematologist, familiar with all the changes in the blood in disease and health. A knowledge of anesthesia makes it incumbent on the surgeon to be ever on the alert for the timely recognition of every danger signal. And a knowledge of antisepsis entails not only habits of surgical cleanliness but also the building up of a healthy, clean, surgical conscience.

The surgeon of today has recourse to marvelous aids and methods in arriving at a correct diagnosis and in carrying out his final decision. He should therefore be careful not to under-estimate the technical skill and mental acumen of those who preceded him and who did good work with little or no equipment. He should ever remember that the methods of his early teachers, and the heroic chances they took, while perhaps praiseworthy at that time, would be culpable at his period. All estimates are arrived at through comparison, and the surgeon of to-day should not neglect to broaden his mind by reading the classics of his early masters.

The great men in surgery were all general practitioners—and remained so in thought if not in practice, during their surgical careers. Limitation is not specialization, and while it may be wise, often necessary, to limit your work, yet I see rocks ahead in that myopic tendency toward specialization in the practice of surgery before mature experience and years of study, and general clinical training would warrant such limitation. Only too often ill-health, inherent laziness, mistaken impressions as to the relative glamour of a specialty, or even the hope of a greater financial reward influence us in the selection of surgery as a specialty before our surgical judgment has matured and our technic caught up with our ambitions. This we should sedulously guard against to save the practice of surgery from just reproach.

I believe that the greatest asset of surgery is the erudite internist, accustomed to weigh and judge, familiar with all the marvelous aids and latest discoveries to further a correct diagnosis, and possessed of that love for investigation and research work that differentiates the surgeon from the craftsman.

It has always been a great mystery to me how some surgeons came to choose their specialty, but it has been a far greater enigma to me why other internists shunned surgery! I honestly believe that in

many instances the loss to surgery occasioned by the staying out of those ideally fitted and academically and scientifically qualified for the practice of surgery is due to an atavistic outcropping of the ancient contempt in which surgery was held, and the fanciful disinclination to ruffle the repose and dignity of a professional gentleman. It has been said, and I believe with a great deal of truth, that if the internist were let loose in the operating room, and the surgeons put in charge of the medical wards, the non-surgical cases alone would suffer.

I disclaim every intention on my part to say who shall and who shall not practice surgery, and I am not quite so absurd as some surgeons appear who, after having climbed high by kissing the feet above them and kicking the heads below them, loudly demand a reformation in the practice of surgery. The people need no protection against a man that is a regular graduate from a regular school, and is duly licensed to practice surgery. They need protection against quacks, charlatans, and the psychical cults only. I do believe, however, that there is some poor work done in the name of surgery, but I do also know that there is far more poor work done in the name of medicine. There is as much criminality in the careless routine administration of drugs for supposed illnesses never satisfactorily diagnosed on account of lack of time or ability, as there is in the mishandling of a case of placenta previa, or in a faulty technic in the amputation of an appendix. It is not for you or me to say who shall or shall not practice surgery. If poor work is done, we must raise the standards for matriculation and graduation, and equalize the measure of reward for surgical and medical services rendered. Just so long as the internist with all his experience, training, and culture; with all his knowledge of anatomy, physiology, and pathology; with all his senses trained to confirm by sight, hearing, and touch the nature and course of disease,—just so long as he will charge five dollars for diagnosing a disease only to send his patient across the corridor to be operated upon by a mere craftsman for a stipulated fee of five hundred dollars,—just so long will our surgical wards be overfilled with surgical internes and our medical wards go begging! And just so long, too, will surgeons specialize before maturity, and become mere craftsmen cherishing an arrogant contempt for internal medicine!

However, I have no fears for the practice of surgery. I do not share the misgivings of our alarmists. I recognize in the education of the public a proper adjustment of all evil tendencies obtaining

today. Aye, I do not even view fee-splitting, or a proper compensation of the family physician with the knowledge of the patient, with any alarm whatever. I do not believe that surgeons will undertake operations beyond their ability oftener than medical men will administer drugs of whose action they have no knowledge. I do not believe in telling a young man who makes honest efforts to stay out of surgery. The poorest technic I have seen in abdominal work was done in our large medical centers by surgeons of international reputation, and the best work I have ever seen was done in our own city—and there are few medical centers I have not visited.

It perhaps has not escaped some of you that as the surgeon grows older in practice, his technic often becomes less perfect, his operations more radical, and he himself more conservative. All this may sound paradoxical, but is it not true? You have only to visit the surgical clinics of your Alma Mater and notice the disappointing indifference to details in your former brilliant instructors. For this reason we need younger men to take the place of their former teachers. If the second point I raise needed proving I could point to the radical Wertheim operation for cancer of the uterus or to the modified Schuchart operation as practiced by Schauta—both so radical in conception and daring in execution that the younger man would wisely hesitate before attempting such operations—to the great benefit of his patients. I will cite Billroth in defense of my last observation with reference to the growing conservatism of our older surgeons. The great Pirogoff suffered from cancer and Billroth refused to operate. In reference to this case he later wrote to a friend. "I am not the bold operator whom you knew years ago in Zurich. Years and experience bring in their train a certain degree of hesitancy."

James E. Moore of Minneapolis says, "Conservatism has no place in modern surgery." Conservatism in surgery means opposition to improvement, and thus retards progress. I urge this as another reason why every opportunity should be given the young man, and why all the portals of advancement should be thrown open to him.

The future of the practice of surgery belongs to the young man by virtue of his merit, and the past belongs to him by heritage. We need therefore entertain no fears that any permanent evil tendencies can possibly befall the practice of surgery.

When the layman begins to comprehend the beautiful story of the thousands of lives saved by the microscope and culture tube, hears of the noble sacrifices of our Carrolls, Reeds, Lazears and Ricketts, and learns of the patient efforts of our brilliant Flexners, then the

pendulum will swing back, the glamour of the operating room will fade, preventive medicine will come into her own, and the practice of surgery resume her legitimate position—the complement of medicine.

THE NEED OF PHYSICAL EXERCISE IN THE TREATMENT OF TUBERCULOSIS.

BY WILLIAM FLETCHER, M. D.,

SALEM, WIS.

Nearly every medical journal contains in each issue one or more articles on tuberculosis. When so much has been said there may seem to be nothing more to add, yet I believe one important thing has been neglected.

To sum up the present treatment it would be about like this: first, live in the open air and sunshine, eat all you can, breathe all the air you can. True these are the best things in the world yet they are just the things the tubercular patients cannot do. We will take for example the instructions to the patients to breathe all the air they can and we find they are unable to breathe even the normal amount of air. We find our explanation of this condition when we consider the pathological condition of the lungs when they are affected. In pulmonary tuberculosis we find the lungs to contain tubercles which not only destroy air spaces but also involve the surrounding lung tissue which finally becomes fibrous and is not available for breathing purposes. In this way the actual space containing air in the lungs is rapidly decreased. These patients when told to breathe find that they are continually short of breath and especially upon the slightest exertion. They find that it is difficult to breathe deeply and they do not try to do so. When they are out for exercise they get tired easily and do not take enough exercise. For want of exercise the patient also lacks an appetite, making food undesirable.

The most serious thing resulting from the contraction of the lung tissue is the failure of the patient to breathe enough air to properly oxygenate the blood. The blood is unable to throw off the carbon dioxide and it is also unable to take up enough oxygen. When the blood is not properly oxygenated the system becomes charged with toxins, the digestive system becomes sluggish, and the patient loses his appetite. It is easy to see that if the patient follows the directions to eat large quantities of food he will have indigestion and instead

of furnishing nourishment for the body we have toxins absorbed from the digestive system. The absorption of these toxins poisons the patient and thus defeats the purpose of forced feeding and hastens the death of the patient. In order that the patient may be able to take the proper nourishment, the necessary exercise, and breathe the required amount of air we must try to remove the cause which prevents the patient from carrying out the instructions to eat, exercise, and breathe. Since the cause is found in the decrease of the lung tissue we must proceed to have the patient develop the required lung tissue.

As far as I know our only hope to do this is through physical exercise. The patient must have daily lessons in the exercises which will develop the lungs. The following simple exercises are sufficient for this purpose: *first exercise*, the patient is to stand erect, raise both arms at right angles to the body, the palms of the hand being perpendicular, the patient is then to bring the arms forward until the palms meet, then the arms are thrown outward and as far back as possible; this is to be done from ten to twenty times for each lesson. *Second Exercise*.—Patient stands erect, the arms at rest at the side, palms facing backward. The patient now lifts both hands upward as high above the head as possible inhaling at the same time; the arms are kept extended as they are brought downward again to the patient's side. The patient exhales as the arms are being brought down. The value of this exercise is greatly increased if the patient will hold a dumb bell in each hand. There are various exercises which would accomplish the same results which are fully explained with illustrations in almost any book on physical culture. It will aid the digestive system very much if the patient takes some of the exercises which develop the muscles of the back and abdomen.

By the exercises just described it is possible for patients to increase the breathing space of the lungs to almost normal. As the breathing space of the lungs is increased the oxidation of the blood is increased which supplies the cells with oxygen so that they can better carry on the metabolism of the body. The elimination of the waste products is also increased and as the body is free from poisons the ability of the digestive system to properly digest the food is increased. As the patient increases in his ability to digest the food taken so as to make pure blood the body cells will work naturally and be properly nourished. Now that the patient can breathe large quantities of fresh air as directed he can also take the exercise needed to create an appetite and a demand for food. The patient is now ready to take and

digest large quantities of food without making toxins which will defeat our efforts to have the patient regain his health.

The sanatorium treatment of tuberculosis patients has proven somewhat disappointing, to-day at least. From my own experience and observation I believe I can say that if the proper physical exercises were given to these patients the percentage of cures would be very materially increased.

THE MEDICAL EXPERIENCES OF BENVENUTO CELLINI.

BY A. W. MYERS, M. D.,

MILWAUKEE.

"All men, whatever be their condition, who have done anything of merit, if so be they are men of truth and good repute, should write the tale of their life with their own hand. Yet it were best they should not set out on so fine an enterprise till they have passed their fortieth year. And now this very thing occurs to me, when I am fifty-eight years old and more, here in Florence, where I was born. Many are the adversities I can look back on such as fall to the lot of man; yet am I freer from the same than I have ever been till now. In truth it seems to me I have greater content of mind and health of body than at any time in the past. Some pleasant happenings I recall, and, again, some unspeakable misfortunes, which, when I remember, strike terror into me and wonder that I have, indeed, come to this age of fifty-eight, from which, by God's grace, I am now going on my way rejoicing."

Benvenuto Cellini who thus presents to us his views in regard to autobiography was a goldsmith and sculptor, born as he tells us in Florence "on the night of All Saint's Day of the year 1500 at half-past four exactly", and at first sight may appear inappropriate for the consideration of a gathering of medical men, but he came in contact with many members of the medical fraternity of his day and the light thrown upon the methods of practice of our professional ancestors in his pages may be, perhaps, entertaining and instructive. It is certainly entertaining as he tells it, for no man ever wrote of himself with greater zest and self-approbation or with more entire absence of reserve, and the dullness of my narrative will be due only to my own defects in bringing together the portions having special interest for us.

We are wont to think of the age in which Cellini lived as one in which the medical profession was beginning to throw off the benumbing influences of tradition and think its own thoughts, but because only the names of the great ones have come down to us we must not imagine that the physicians of that time were everywhere few in numbers and consulted only in cases of great severity, or by the rich exclusively. Italy in Cellini's day presented the highest civilization of the western world and there apparently, doctors were abundant, although at this same time in some of the towns of Germany, the only medical advice obtainable was that dispensed by the midwife, the apothecary, or even the public executioner!

But in Italy and France medical advice was allowed to influence the daily life of the people to an extent we have hardly realized. In France this was carried to what seems almost a ridiculous extreme, as when we learn from a contemporary account that Charles the Bold, Duke of Burgundy, only a few years before this time, started on a campaign "with four surgeons for his own person and for those immediately about him, and six physicians, and these when he is at table, sit behind the bench and counsel him with their advice what viands are most profitable for him."

Cellini had a cousin in the medical profession, Maestro Annibale the surgeon: we meet him but once and then in the ungracious position of refusing to stand security to obtain the release from prison of the high-spirited Benvenuto who is in jail for knocking down a rival goldsmith and threatening death to his friends, but perhaps this relationship helps to explain the interest in medical details which is everywhere apparent. This relationship need hardly be called in to explain his tendency to abuse the profession when things go wrong, a tendency shown in the first pages of his narrative when he tells about his mother who was childless for 18 years after marriage and then "miscarried of two male children by reason of the doctor's blundering." As his mother was attended by a midwife in her subsequent pregnancies we must imagine that this first twin pregnancy terminated in a difficult labor in which medical aid was sought but proved unavailing as far as the children were concerned.

Having left his country for his country's good we find Benvenuto in Rome in 1523, 23 years of age, busily engaged in his work as goldsmith, his time almost completely occupied by his work for the Pope and some of the richest cardinals. At this time so terrible a pestilence broke out in Rome that "every day many thousands died of it." (It may be well to say in passing that statistics interested Benvenuto very little and his figures are not to be accepted without a grain of

salt.) He showed his common sense by spending his spare time in pigeon shooting in the suburbs and keeping away from the crowded streets to avoid contagion. In his description he shows himself a good deal of a sportsman as well.

“At this time, when I was a young man of twenty-three or thereabouts, so terrible a pestilence broke out that in Rome every day many thousands died of it. Being somewhat afraid, I began to take recreation of a kind to my liking, drawn thereto for a reason which I shall relate. I was in the habit of going on fete days to the ancient monuments, and there making copies, now modelling in wax, and now drawing. As these old places are all in ruins, a great number of pigeons have taken to breed there, and I took it into my head I should like to have a shot at them. So thus, to avoid contact with other people, for I was afraid of the plague, I put my gun on the shoulders of my Paolino, and he and I by ourselves set off for the ruins; and, as it came about, many a time I returned laden with fine fat pigeons. I never liked loading my gun with more than one ball, so that it was by real marksman’s skill I brought down so many. My gun I had made myself, and inside and outside it shone like a mirror. With my own hand, too, I made the finest powder, discovering wonderful secrets, which to this day are unknown to any one else. I will not enlarge on this matter, but just give one hint to astonish skilled sportsmen. It is this—that with a charge a fifth of the weight of my ball, it carried two hundred paces point blank. I am naturally of a melancholy temper, but while I was amusing myself in this way I grew light-hearted, and so I worked the better and with more skill than when I had no distraction from my studies and the exercise of my art. Thus in the end my gun was more of a gain than a loss to me.”

This pestilence was one of the recrudescences of the bubonic plague, the Black Death, which, entering Europe in 1348 after having stalked across Asia, in successive waves during the following years swept away the fourth part of mankind then existing. From the time of its appearance it remained domesticated in the soil of Europe for more than three hundred years, breaking out with frightful violence in limited areas from time to time; and at longer intervals sweeping over whole districts or countries.

During one of these epidemics in the 14th century the medical faculty of Paris, at that time one of the most celebrated in the world, were commissioned to deliver their opinion on the cause of the Black Plague and to furnish some appropriate regulations with regard to living, during its prevalence. After prescribing temperance in eating and drinking and pronouncing bathing to be injurious they go on to

say: "Men must preserve chastity as they value their lives." This idea we shall see repeated by the Roman physician over a hundred years later.

Benvenuto thought he had an attack of the plague but his own diagnosis and that of his physician was probably an error. "Still the plague raged on for many months, but I had kept it at a distance. Many of my comrades had died, yet I remained safe and free from infection. Now it happened one night that one of my intimate acquaintances brought a Bolognese prostitute called Faustina home to supper. She was a very beautiful woman, though she was about thirty years old, and she had with her a little maid of thirteen or fourteen. Now as Faustina was my friend's property, I would not have had any dealings with her for all the gold in the world, and although she said she was much in love with me, I never swerved from my loyalty to my friend. But after they were in bed, I ran off with the little maid, who was as fresh as fresh; and it would have been a bad job for her if her mistress had known. So I spent a much pleasanter night than if I had had the mistress Faustina. Next day when dinner time came near, I was tired and hungry as after a walk of many miles. Then I was seized with a violent headache; swellings rose in my left arm, and I discovered a carbuncle just by my left wrist-bone. Every one in the house was terrified; my friend, the big cow, and the little calf all fled away, and I was left alone with my poor little shop-boy, who refused to leave me. I felt suffocated, and I looked on myself as a dead man. Just then the father of my apprentice passed by, who was Cardinal Jacobacci's household physician. The boy ran out to meet him, crying, "Come, father, and see Benvenuto, who is in bed, and not very well." Not thinking what my illness might be he came in at once, felt my pulse, and then too clearly saw what he would fain have been blind to. Turning quickly on his son, he cried, "O you faithless boy, you have ruined me; How can I ever again go into the Cardinal's presence?" To which the boy replied, "My master, father, is worth more than all the cardinals in Rome." Then turning to me, the doctor said, "Now that I am here I will treat you. Only of one thing I warn you, that if you have been with a woman, there is no help for you." To this I answered, "I was with one last night." "With what sort of creature?" asked the doctor, "and how long?" "The whole night," I replied, "and with a very young girl." Then seeing he had spoken rashly, he made haste to add, "Since the sores are still fresh and not putrid, and since there has been no delay about the remedy, do not be over-anxious, for I certainly hope to cure you."

"So we went on by the help of God; and, thanks to the marvellous remedies which were applied, a great improvement set in, and I came happily out of that terrible illness. While still the wound was open, but stuffed with lint and bandaged, I used to ride about on a little wild horse I had." And soon after he writes: "By this time the plague had almost passed away, and all who survived lived a merry life and made much of each other."

The rebound after the release from the horror of the pestilence can readily be imagined. Although it is evident from the description that Benvenuto had only a boil or carbuncle on his wrist with involvement of the axillary lymphatics and some constitutional symptoms, his terror and his physician's, and his joy at recovery, were as great as though it had really been the bubonic plague which they both considered it to be.

At about this time "there came to Rome a very great surgeon called Maestro Giacomo da Carpi. This clever man, in the course of his other professional duties, took certain desperate cases of the French evil. Now in Rome priests are particularly liable to this disease, especially the richest of them. Well, when this distinguished man became known, he declared he would cure the malady in the most marvellous fashion by means of fumigations. But before beginning a cure he first bargained for his fees, and it was by hundreds and not by tens of crowns that these were reckoned. Now this clever man had a great understanding of the art of design. One day, passing my shop by chance, he saw a collection of drawings I had lying about, among which were some fantastic little vases I had designed for my own pleasure, entirely different from any that had ever been seen before. Maestro Giacomo wished me to make some for him in silver, and this I did with all the good will in the world, for it fell in with my fancy. Although the distinguished man paid me very well for them, the honor it brought me was a hundred times more; for the best men in the goldsmith's trade said they had never seen anything more beautiful or better executed. No sooner had I finished than he showed them to the Pope; and next day he took his departure. He was very learned, and could speak admirably on the subject of medicine. The Pope wished him to remain in his service; but Carpi said he would not be in the service of any one in the world, and whoever wanted him might come and seek him. A very shrewd person he was, too, and he did wisely in leaving Rome; for not many months after, all those whom he had treated were a hundred times worse than before; and he would have been killed had he stopped."

It is interesting to observe the influence of moods on the artistic temperament. Compare his words here with another account of the same affair given later in his memoirs, at a time when he considers that his artistic ability has been insufficiently recognized. "This is copied from a silver jug of such and such a weight, which I made at such and such a time for that quack Jacopo, the Carpi surgeon. He came to Rome, and stayed there six months, daubing with his unguents scores and scores of lords and unlucky gentlemen, whom he fleeced of many thousand ducats. At that time I made this vase for him, and another different one: and he paid me wretchedly for my pains. And now all those poor wretches in Rome, whom he daubed, are crippled to-day, and in very bad case."

This Giacomo da Carpi or Giacomo Berengario of Carpi was a surgeon of great eminence in his day who treated gunshot wounds after removal of the ball, with soft oiled dressings, avoiding too frequent changes of dressings, extirpated the prolapsed uterus, and as we have seen treated syphilis with such success that he could not show himself more than once in any one place without risking his life. It may also be mentioned that Berengario considered the rotation of the face of the child toward the anus during parturition as having a direct reference to the sinfulness of our natures as descendants of Adam, and as being a punishment designed to start us on our journey through life in a proper state of humility.

Berengario was an anatomist of distinction and dissected first swine and then numerous human bodies. He was accused of vivisectioning condemned criminals but this was probably an exaggeration by the ancestors of the present day anti-vivisectionists, based upon the authorized dissection of the bodies of executed criminals. In fact the authorities in Padua at this period were so obliging as to allow the anatomists to do the executing themselves so as not to injure the subject. As Fallopius relates: "For the prince ordered a man to be given to us, whom we killed in our fashion, and dissected. I gave him two drams of opium. He, having a quartan ague, had a paroxysm which prevented the opium taking effect. The man, in great exultation, begged of us to try once more, and if he did not die, to ask the prince to spare his life. We gave him other two drachms of opium and he died."

Berengario also wrote in defense of pederasty upon convicts, but in extenuation we must recall the frightful immorality of this period and also the fact that this custom was recommended by Solon and authorized by the state in Sparta and Thebes in order to prevent over-population. Some of his theories roused such a violent opposi-

tion that he was banished from Bologna where he had held a professorship, and retiring to Ferrara he lived there for many years and dying, left his fortune to its Duke.

During the siege of Rome in 1527 Benvenuto turned from his work-bench and became a valiant soldier, if his own word is to be taken, aiding greatly in the defense of the Castle of St. Angelo by the Pope. He was struck in the chest by a mass of stone loosened by a cannon shot and lay on the ground as one dead. He was brought back to life by one of his companions, a fifer, possessed of "greater talents for medicine than for music" who heated a tile red hot, sprinkled on it a good handful of wormwood, and then poured some Greek wine over it. "When the wormwood was well soaked, he put it at once on my chest, where the mark of the blow was plainly to be seen, and such was the virtue of the thing that my wandering senses came back to me at once," and he went on fighting.

After the surrender of the Castle Benvenuto returned to Florence and found as he says that "there the plague was raging furiously". During the summer of 1527, 40,000 people lost their lives in Florence as a result of this epidemic of either bubonic plague or typhus fever, or perhaps both, and in this number many of his family were included. He himself went on to Mantua where he worked for several months, disturbed only by a severe attack of malaria which did cause him some trouble for in his delirium he loudly cursed the Duke by whom he was employed and thereby lost his favor. On his return to Florence after an absence of only four months he found his father's house occupied by strangers who told him that the whole household had died of the plague. The state of mind produced by these devastating epidemics is so well shown in his narrative that I shall read part of the paragraph which follows: "Then I left to go to the inn, but on the way there I met a dear friend of mine, Giovanni Rigogli, and got down at his house. Afterwards we went off to the piazza, where I heard that my brother was alive. Off I set to seek him at the house of a friend of his called Bertino Aldobrandi. There I found him, and our greetings and caresses were endless; and reason was there for some extravagance of joy, seeing he had heard news of my death and I of his. Then, breaking out into a long fit of laughter, he took me by the hand saying, "Come, brother, I shall take you to a place you never would think of. For I must tell you I have given our sister Liperata again in marriage, and for a certainty she thinks you dead." On our way to her home we entertained each other with all the great things that had happened to us. When we arrived at her house, she was so overpowered by the unlooked-for event that

she fell into my arms as if dead; and if my brother had not been there her excitement and her dumbness must have made her husband think I was some one other than her brother, as at first he was inclined to. But Cecchino told him all, and helped to revive her from her swoon. Then with some tears for the father, sister, husband, and little son she had lost, she began to prepare supper; and for the rest of that festive evening nothing more was said of the dead—we spoke of weddings rather. And thus merrily and most pleasantly our supper went by.”

The surgical instruments of this period seem rough and clumsy when viewed by our eyes in the pictures that have come down to us and that they were not only terrifying but unsatisfactory is shown in the following passage in which Cellini turns instrument maker: “Now this poor child had a disease in her right hand, which had eaten into the bones of her little finger and the next one. Through the heedlessness of her father, she was attended by an ignorant quack, who said her whole right arm would be maimed, even if nothing worse came to pass. When I saw her poor father appalled at the prospect, I told him I did not believe all the ignorant doctor said. He replied that he had no acquaintance with any doctors or surgeons; and begged me, if I knew of one, to call him in. Without delay I sent for a certain Maestro Giacomo of Perugia, a most distinguished surgeon. The poor young girl was in despair, having guessed the verdict of the quack; but when the man of skill had seen her, he said, on the contrary, that no harm would come of the thing, and that she would be perfectly able to use her right hand; and that though the two last fingers might be a little weaker than the others, this would not matter in the least. So he began his treatment; and when, after a few days, he was about to cut out the diseased portions of the bones, the father called me and asked me to look on while this was being done. For his operation Maestro Giacomo used some rough steel instruments. Seeing that with these he made little way, and hurt the girl terribly, I told him to stop and to wait a few minutes for me. So I ran to the shop, and made a little tool of finest steel, curved, thin as a hair, and sharp as a razor. Then I ran back with it to the Maestro, who began to operate so gently that she felt no pain; and in a short time the thing was finished.”

Shortly after this Benvenuto's brother was injured in a street fight and lost his life as the result of a gun-shot wound of the knee joint. “The doctors consulted together and treated him, but they could not make up their minds to cut off his leg, else they might perchance have saved him.” They treated it expectantly, using a frac-

ture box, but he died in a few days. One point in connection with Benvenuto's revenge on his brother's slayer is interesting as showing the Italian point of view, although it is not medical. "The man lived near a place called Torre Sanguigna, next door to a house where lodged one of the most favorite courtesans of Rome, called Signora Antea. The clock had just struck twenty-four. The arque-busier stood in the doorway after supper, sword in hand. I crept up stealthily, and with a Pistojan dagger dealt him a back stroke, thinking to cut his head right off. But he wheeled round suddenly, and the blow fell on the top of his left shoulder, cleaving the bone. Up he sprang, and dazed by the sore pain, he threw aside his sword, and began to run. I followed after, and came up with him in a step or two. Then raising my dagger above his bent head, I struck him on the nape of the neck and the weapon went in so deep I could not for all my efforts draw it out. For just then out of Antea's house came four soldiers clutching their swords, so that I was forced to handle mine to defend myself from them. Leaving my dagger sticking there, I made off, for fear of being recognized, to Duke Alessandro's house, between the Piazza Novona and the Rotunda. As soon as I got there I told the Duke, who gave me to understand that, if I was alone, I had only to keep quiet and all should be well. I was to go on with the Pope's work, since he was so anxious to have it; and for eight days I had better work within doors. The soldiers who had stopped me, had now arrived, and were relating the whole affair; they had the dagger in their hands, and told the great trouble they had had to pull it out of the neck-bone and head of the dead man, whose name they did not know. At this up came Giovan Bandini and said to them, 'The dagger is mine, and I lent it to Benvenuto, who wanted to revenge his brother.' Then the soldiers could not say enough of their regret at having interrupted me, though, indeed, I had got my fill of revenge."

Not long after this Cellini gives us his personal experiences with syphilis. "It was true I had been ill; but I think I had caught the malady from that pretty young servant girl whom I had in my house at the time I was robbed. The French evil was latent in me for four whole months; then all at once it covered my body. It did not show itself in the usual form, for I was covered with red boils of the size of farthings. The doctors were never willing to call it by the name of the French evil; and yet I told them why I thought it was so. I continued to treat myself in their fashion, and got no better. Then at last I made up my mind to take *lignum vitæ*, against the wishes of the first doctors in Rome. I took it with the greatest

system and abstinence you can imagine, and in a few days I felt very much better, so that at the end of fifty days I was cured, and as sound as a fish in the sea. Then as a restorative after my great exhaustion, as soon as winter came on, I amused myself with shooting. This forced me through the wind and the water, and to stand about in the marshes, so that in a few days I was a hundred times worse than before. Once more I put myself into the hands of the doctors, and they went on treating me; but I grew worse. When the fever attacked me again, I made up my mind to take the guaiac. The doctors would not hear of it, and told me that did I have recourse to it while I still had fever, I should be dead in a week. However, I made up my mind to disobey them, and I kept to the same system as before. When I had drunk the guaiac water for four days, the fever left me quite, and I began to feel wonderfully restored. While I was treating myself thus, I was all the time getting on with the models; and during this period of abstinence I made the finest things and the rarest designs I ever did in my life. At the end of fifty days I was altogether cured, and with the utmost care set myself to fortify my health. After this long fast I was cleansed from my malady as if I had been born again. But though I took pleasure in the restoration of my health, I did not work the less, now at the Pope's chalice and now at the Mint; each of these tasks had their due share of my energies."

We have heard something of this disease in the reference to Giacomo Berengario and his use of mercury by inunction and fumigation. Now we hear *lignum vitæ* or guaiac praised as a specific. This had been introduced into medicine only about ten years before the time of Cellini's attack and its reputation was very great. It continued to be highly esteemed in the treatment of syphilis until the time of our grandfathers but it is probable that the regular life and strict abstinence which accompanied its administration were more effective in producing the good results attributed to its use than the drug itself.

It is easy to see from the beginning of the paragraph just quoted that the venereal nature of syphilis was clearly recognized and it is also clear that the disease had assumed a much milder type than when it burst forth in malignant and almost epidemic form soon after the siege of Naples by Charles VIII of France, in 1494, having been spread rapidly through Europe by the returning soldiers from the infected French, Spanish and Italian armies.

While it is probable that syphilis has existed from remote antiquity (and according to Klein who relies upon the annals of Malabar

it is more than nine centuries since the first mention of the cure of the disease by mercury,) it must have been so rare in Europe as to escape general consideration and it was practically a new disease when it confronted the medical profession in the closing years of the 15th century. One source of much confusion to later generations of surgeons was not yet present. Gonorrhoea had been known almost from the beginning of medical history, it is described with great care in the medical works attributed to Cleopatra, and its treatment by urethral injections was recommended by Oribasius of Pergamus in the 4th century. Only after the two diseases had existed side by side for nearly fifty years did they become blended into one in the minds of the medical profession.

But while infection with "the French Evil" was looked upon as something of a distinction, so that Erasmus considered that a man who had not had the disease might be regarded as boorish and no gentleman, gonorrhoeal infections were looked upon as too humiliating and intimate to be mentioned even to a physician. The only passage in Cellini's memoirs that could be construed as a reference to gonorrhoea occurs at a much later period and is a brief statement that at "about this time I suffered somewhat from an affection of the loins, and could not work."

(To be continued.)

CLINICAL DEPARTMENT.

SOME SUGGESTIONS AS TO THE TREATMENT OF WOUNDS OF THE HANDS, FACE AND SCALP.*

BY T. L. HARRINGTON, M. D.,

MILWAUKEE.

I am led to make some suggestions on the treatment of wounds of the hands, face and scalp, from the belief that many of the results obtained in these cases are not ideal. The experience of the past few years has led me to believe that most surgeons are too active in treating these cases, and in an effort to destroy infection, which is likely to enter lacerated and incised wounds at the time of the accident, it often happens that more infection is introduced, and that the involved tissues are so injured by the antiseptics used that

*Read before the Milwaukee Medical Society, May 24, 1910.

the cell resistance is materially lowered, and an ideal field is prepared for bacterial growth and invasion. In addition the part is usually so encased in dressings as to partially or completely exclude the air and retain the secretions and body warmth, so that an artificial oven is constructed for the growth and multiplication of septic micro-organisms.

What is the result? The first and most noticeable result is that the time of disability of many laboring men is considerably lengthened, working a hardship both to the injured and the employer. Second, a wound that if properly handled, or sometimes if let alone altogether, would heal without suppuration, is converted into a suppurating wound by the misdirected efforts of the surgeon. Scar tissue, prolonged disability, and possibly partial or total loss of function are the results.

To avoid these results in the future I would suggest that we discontinue scrubbing wounds of the hands, face and scalp with soap-solutions and antiseptics. If it is necessary to cleanse the tissue around the wound, the wound itself should be first covered with antiseptic gauze, so that neither the infection from the skin nor the solution used may find access to the wound.

In scalp wounds it is my custom to moisten the hair on either side of the wound with the soap solution, and if possible, shave the scalp without allowing the solution to enter the wound. Whether the injury is on the hand, face or scalp I gently swab the wounded area and the adjacent skin with tincture of iodine. If large areas of skin have been destroyed this is very painful, and may in some cases have to be omitted. After inserting horse-hair sutures and tying them I again paint the wound and adjacent skin with tincture of iodine. Some one may ask, if I object to antiseptics, why use tincture of iodine? My only answer is that it seems to be the one antiseptic that is of value as a disinfectant, and at the same time does a minimum of damage to the wounded tissues. I use it freely, yet in no case has it seemed to hinder primary union. One thing is certain, and that is that when painted on it never carries infection from the surrounding skin into the wound. It seems rather to fix the micro-organisms much as the flame fixes the smear on the cover-glass.

We know how difficult it is to disinfect a skin surface and yet a number of abdominal surgeons have abandoned the scrubbing of the abdomen, and instead swab the skin surface with tincture of iodine two or three times before doing a laparotomy.

Let us now give our attention briefly to the question of dressings. It took most of us a considerable time to learn that, as a rule, burns

heal more kindly and in a much shorter time, when exposed to the air than when covered with antiseptic gauze and yards of bandage. I believe the same rule holds good in the treatment of wounds of the face and scalp. Until three or four years ago it was my custom to dress most of these wounds with a collodion dressing, and it was a common thing to find the wound bathed in pus at the end of forty-eight hours. I have not used collodion more than two or three times in the past three years and expect to use it less often in the future. If we pause and think how rapidly nature seals a wound of the face or scalp when once the bleeding is controlled, we will soon appreciate that the main effect of our gauze, cotton and bandage, or the collodion dressing, has not been to keep out infection, but rather to establish a favorable breeding place for pathogenic micro-organisms.

If you let a patient go away from your office with a wound on the face or scalp two or three inches long, and no dressing over it, you will probably feel as I have felt, that you were false to tradition, and possibly criminally negligent in the eyes of the laity and many of your fellow practitioners. But when this patient returns in two or three days with no trace of pus, and when at the end of a week you remove the stitches and you see the merest line of a scar, you will feel repaid for the mental compunction you have undergone.

In the case of the hand I regret that the question is more difficult to solve. The hand is a prehensile organ. It is not that infection would get into a wound of the hand if left exposed to the air, but rather that the hand would get into infection. For this reason I find it necessary to dress most wounds of the hand. I have tried the screen shield, so applied as to keep the dressing from contact with the wounded surface, but this is cumbersome and not satisfactory. I now use the lightest dressings possible, and coat the surface that comes in contact with the wound with a thin layer of sterile vaseline, or what is better with balsam of Peru. These prevent the dressings from adhering to the wound, preserve the granulation tissue, form a poor culture medium for micro-organisms, and make the removal of the dressings an easy matter. I rarely use moist dressings. If moist dressings are used, I should advise against the use of bichloride in any strength, and would use instead a solution of boric acid in 50 per cent. alcohol.

Occasionally wounds of the hands and face have coal cinders ground into them. In all such cases the tissues must be scrubbed with gauze sponges or a brush until all cinders are removed. This scrubbing often requires local or general anesthesia, but it must be thorough, otherwise a disfiguring blue mark remains after healing.

Of course, the vitality of the wounded tissue is jeopardized, but of two evils choose the least in this case.

Thus far I have spoken only of the treatment of incised and lacerated wounds. We have a large class of contused wounds of the hands, face and scalp where there is no solution of continuity of the skin. For these, and for the lacerated and incised wounds where sepsis occurs, I know of no treatment comparable to artificial hyperemia, combined with complete rest. The hyperemia may be produced by the Bier Method, or by hot water. If either of these methods are used intelligently and persistently, the disability of most cases is materially shortened and suppuration is often averted.

I have thrown out a few suggestions that have come to me in recent years in handling a rather large number of traumatic surgical cases. I trust that these suggestions will bring forth a considerable discussion on this much neglected field of surgical work.

A Text-Book of Practical Therapeutics by HOBART AMORY HARE, M. D., Professor of Therapeutics in the Jefferson Medical College of Philadelphia. Thirteenth edition, thoroughly revised. Octavo, 951 pages, with 122 engravings, and 4 full-page colored plates. Cloth, \$4.00, net; leather, \$5.00, net; half morocco, \$5.50, net. Lea & Febiger, Philadelphia and New York, 1909.

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While this volume cannot replace the text-book of medicine, it nevertheless contains so much that is valuable and suggestive in condensed form, that we heartily subscribe to the verdict given by the medical public in its demand for this the 13th edition, and we recommend it as a most useful and reliable ready reference book and guide in the therapy of internal medicine.

A. J. P.

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No. 1

EDITORIAL COMMENT.

MILWAUKEE MEETING.

The Head Booster writes his June sermon on a postal card as follows:

June 10, 1910.

I have been so busy with my "Heathen" and the coming meeting that I never realized my time was up until now. We'll have to let the sermon go—but maybe the work did more good. Until the 21st

Faithfully yours,

SLEYSER.

It seems to the writer that this furnishes each of us with a text on which to preach himself a sermon. Let us all follow the example

of our Head Booster and do something instead of talking about it. He has shown us what one man can do; let us now come together, one and all, and show him and show ourselves what a united profession can do for the State and for its own members.

FOURTH OF JULY INJURIES.

The perennial campaign for the sane observance of the Fourth of July already has been heralded by a few preliminary skirmishes. Nothing that ever has been written or ever can be written will prevent injuries upon that or any other day. Many of these injuries are so slight as to be deemed worthy of home remedies or those to be supplied (at cost?) by the truly great drug store clinicians. Unfortunately, many that are taken to practicing physicians receive similar therapeutics. After all that has been written about the distribution of the tetanus bacillus none may justly seek any excuse if any case under treatment develops lock-jaw. Prevention by the prompt injection of antitoxin is so certain, so easily to be obtained, that if any doctor has to write a death certificate for tetanus, be it not forgotten that the words "criminal negligence" can not be effaced from the list of contributory causes.

TUBERCULIN THERAPY.

Twenty years ago R. Koch gave his old tuberculin to the scientific world and with it introduced an agent into medicine which was to be a truly etiologic remedy for tuberculosis. This brought forward an entirely new principle of treatment, for tuberculin is not a neutralizing or a protecting agent but one destined to stimulate the cells of the organism so that they might produce bodies which in turn would render inefficient both bacilli and their toxins. It is not astonishing that medical men carried away by the supposed recommendations of Koch went beyond their depth in using tuberculin, and, not knowing what they were doing, soon found themselves in deep water. Hence the "tuberculin delirium" lasted just about eight weeks and received its death-knell through the statement of Virchow that he had found softening and fresh extension of tubercular processes in cases treated with tuberculin. Subsequently he as well as v. Baumgarten acknowledged that they found similar changes in the lungs of deceased patients who had not been injected with tuberculin. But for the time being tuberculin treatment was abandoned and its use was generally regarded with suspicion and distrust. Notwithstanding there

remained a number of investigators who continued their experiments with tuberculin. Such were Fraenkel, Petruschky, Turban, Möller, Bandelier and in our own country, Trudeau, v. Ruck, Pottenger. Aside from theoretical deductions their practical experience had shown them too often that with tuberculin they had been able to cure patients who had steadily gone from bad to worse, in spite of the most careful adherence to hygiene and dietetics. This experience told them that they were pursuing a right road in using tuberculin but that their method of application was probably faulty. They were cognizant of the fact which recent investigation has proven, that tuberculosis is by no means a uniform or fairly typical disease, but that it is most complex. There are e. g. probably a number of kinds of tubercle bacilli concerned; in tuberculosis the individual factor is of the greatest moment, etc. Fortunately, sanatoria have arisen everywhere, in which patients were able to remain for a comparatively long time, and thus became of moment in proving or disproving the value of a remedy.

Recent publications show very encouraging results. Bandelier (*Beitrag z. Klinik d. Tuberkulose* XV, 1.) reports the histories of 500 cases, all of which, with the exception of 18 were benefited by the use of tuberculin. These 18 were in the third stage; but 32.8 per cent. of those in the third stage regained a complete earning capacity. Similarly, v. Leube (*Med. Klinik* Jan. 30, 1910) reports decided clinical improvement in 30—50 per cent. of 150 patients in the second and third stage of the disease.

At the Adirondack Cottage Sanatorium of incipient cases 64 per cent. lost the bacilli without tuberculin, while 67 per cent. lost the bacilli with tuberculin. Of moderately advanced cases 24 per cent. lost the bacilli without tuberculin, while 44 per cent. lost the bacilli with tuberculin. Equally good results have been published by Moritz, Lenhartz, Pottenger. Of the sanatoria in Europe 60 per cent. are now using the so-called combined treatment.

As the body gains strength from the sanatorium treatment, it becomes better able to respond to the stimuli from the tuberculin. The general hygienic-dietetic method, most valuable as it is, can only improve the general conditions and thereby increase the general resistance, but our studies in immunity have shown us that it is an extremely slow factor when attempting to bring about a specific resistance. We must find something more efficacious, and that appears to be a tuberculin. To a great extent the good results obtained during the last years are due to our studies in immunity and also to the

greater amount of skill and judgment with which tuberculin is now administered.

The man behind the syringe is certainly the most important factor.—G. R. E.

A GOOD EXAMPLE.

The South Side of Milwaukee is sharply divided from the remaining portions by definite geographical limits and in a way it might be said almost to constitute a city in itself. It contains many factories and its population of 115,000 contains a very large proportion of wage-earners. Hard-working respectable and self-respecting citizens, but not rich.

The medical atmosphere of this portion of Milwaukee has been in the past somewhat troubled. Lodge practice and contract practice have been very general and the competition for work of this character has been so keen that rival physicians in attempting to underbid each other have reduced their charges to absurdly small figures, sometimes as low as thirty or forty cents a year for each member. The general level of fees for all classes of medical services has been kept unreasonably low by the feelings of distrust and mutual antagonism which were generally prevalent. Distrust and dislike among the members of the profession have created a similar spirit among the patients in many cases, and the collection of bills has been rendered difficult by the frequency with which families would shift their allegiance from one physician to another.

Not many months ago the Milwaukee Physicians Association was organized in this section of the city for the purpose of advancing the business interests of its members and promoting social intercourse among them. Of the seventy-eight physicians practicing in this district seventy-three have joined the Association. Weekly meetings are held. A business meeting occupies the first Thursday in each month and on the other Thursdays the meeting is of a purely social character. Conversation, bowling, billiards, cards, refreshments occupy the evening and no scientific program is presented.

In addition a composite list of delinquent debtors is made up by the secretary and sent to the members for their guidance in extending credit. This list does not include the names of the worthy poor but only of those who ought to pay and do not.

The results of this organization have been extremely practical. In place of jealousy and dislike, affection and mutual respect have appeared. The members have found each other such good fellows that

it is almost impossible to get the meetings to break-up at a reasonable hour. Contract practice goes begging and many lodges are considering a rearrangement of the matter of fees on a basis of reasonable payment for services rendered.

Obviously this organization supplies a need. It ministers to a very real part of the life of the practicing physician. It is not the only part of his life, however; the scientific side must not be neglected any more than the business or the social side. But would not the County Societies do well to cultivate these features more extensively in the future than they have in the past?

PROGRAM
SIXTY-FOURTH ANNUAL MEETING
OF THE
STATE MEDICAL SOCIETY OF WISCONSIN
AT MILWAUKEE, JUNE 22, 23, 24.

COMMITTEES.

Program Committee: O. H. Foerster, Milwaukee, Edward N. Reed, La Crosse, Charles S. Sheldon, Madison.

Committee on Arrangements: P. F. Rogers, Chairman.

Committee on Public Policy and Legislation: A. W. Gray, Milwaukee, J. P. McMahon, Milwaukee, F. F. Bowman, Madison.

Delegates to the American Medical Association: Carl W. Doege, Marshfield, C. A. Richards, Rhinelander, L. F. Bennett, Beloit.

Alternates: F. S. Wade, New Richmond, F. S. Wiley, Fond du Lac, C. S. Sheldon, Madison.

1. Papers are limited to twenty minutes, leaders of discussion ten minutes, and members taking part in general discussion, five minutes each. No member shall speak more than once in each discussion except by permission of the Society.

2. Papers must be typewritten and handed to the Secretary, after reading, for publication in the *JOURNAL*.

3. Alterations made in papers after they are in type, as well as all drawings and illustrations, will be made at the expense of the author.

4. Upon his arrival at the meeting each member will register at the Office of Registration and Credentials, and receive a badge and Certificate of Membership.

5. The House of Delegates will hold its meeting on the evening before the General Session at the rooms of the Milwaukee Medical Society 325 Goldsmith Building.

6. The first meeting of the Council will be announced in the program to be distributed at the meeting.

REPORT OF COMMITTEE ON ARRANGEMENTS.

"Recital Hall," first floor of Auditorium Building, Fifth and State Streets, has been secured as the place of meeting.

The Registration Bureau, Bureau of Information, Pathologic Exhibit, Commercial Exhibit, Post Office, Stenographer, etc., will occupy "Kilbourn Hall," Auditorium Building, immediately adjoining the place of meeting.

The House of Delegates and the Council will hold their meetings in the rooms of the Milwaukee Medical Society, 325 Goldsmith Building.

On Wednesday evening, June 22nd, at 8 o'clock the members of the State Medical Society are invited to attend a Smoker, given by the Milwaukee Medical Society, at its rooms, 325 Goldsmith Building.

At the same hour an "Anti-Smoker" for visiting ladies and the feminine members of the State Medical Society will be given in the offices of Drs. Seaman and Hitz, 3rd floor, Goldsmith Building.

Thursday evening, June 23rd, Banquet at 8 o'clock in Red Room, Hotel Pfister, price per plate \$2.00. Dr. A. T. Holbrook will preside as Toastmaster.

Friday, June 24th, 1:30 P. M. Excursion to Whitefish Bay by boat or trolley, buffet luncheon. (No charges). No return tickets will be validated by the Head Booster before this time!

We are promised something out of the ordinary in the way of pathologic exhibit, including some stereopticon and moving picture shows.

The commercial exhibitors include:

E. H. Karrer Instrument and Supply Company; Sharp and Smith, Chicago; Mellins' Food Company; John McIntosh, Chicago; O. F. Schmid Chemical Co., Grand Rapids, Mich.; H. M. Alexander Co., Marietta, Pa.; Squibb & Co., New York; Roemer Drug Co., Milwaukee; Horlick's Malted Milk Co.; Northern Chemical Association, St. Paul; International Banana Food Co., G. D. Searle & Co., Chicago; Keasby & Mattison Co.; Eskay's Food Co.; Kremers & Urban Co., Milwaukee; W. D. Allison Co., Physician's Furniture; Fairchild Brothers and Foster, New York; Kress & Owen Co., New York; Buick Motor Car Co.

P. F. ROGERS, *Chairman.*

THE FIRST ANNUAL MEETING OF THE ASSOCIATION OF COUNTY SECRETARIES AND STATE OFFICERS OF THE STATE MEDICAL SOCIETY OF WISCONSIN.

MILWAUKEE, JUNE 21, 1910.

Rooms of the Milwaukee Medical Society, Goldsmith Building.

11 A. M.

Business Meeting and Organization.

1:30 P. M.

- Aims and Designs of this Association..Charles S. Sheldon, Madison
- Some Things this Association can Accomplish, Rock Sleyster, Waupun
- The County Society.....George H. Simmons, Chicago
- The Year's Program. How can we Promote greater Scientific Interest?.....H. W. Abraham, Appleton
- Membership and Attendance.....H. A. Jegi, Galesville
- Business Side of the Secretary's Work.....M. V. Dewire, Sharon
- Social Features of the County Society.....J. H. Cleary, Kenosha
- The Relation of the Councilor to the County Society.....G. Windesheim, Kenosha

5:30 P. M.

- Ginger Tea at a Nearby Inn.....Gilbert E. Seaman, Toastmaster
- How can County Meetings be made more Interesting and Successful?
Edward Evans, La Crosse; G. V. Mears, Fond du Lac; J. M. Dodd, Ashland; M. B. Glasier, Bloomington; W. F. Zierath, Sheboygan, S. S. Hall, Ripon.
- What the County Secretary can do for the Journal.....A. W. Myers, Milwaukee
- What the Journal can do for the County Secretary.....A. J. Patek, Milwaukee

PROGRAM.

WEDNESDAY, JUNE 22.

MORNING SESSION, 11:00 O'CLOCK.

- Call to order by the President, Edward Evans.
- Invocation, Rev. C. H. Beale.
- Address of Welcome, Mayor Emil Seidel.
- Response by the President of the Society, Edward Evans.
- Report of Committee on Arrangements, Philip F. Rogers.
- Report of Program Committee, O. H. Foerster.

AFTERNOON SESSION, 2.00 O'CLOCK.

1. Annual Address of the President. Edward Evans, La Crosse.
2. Possibilities of Prophylactic Measures in the Development of Insanity, Arthur W. Rogers, Oconomowoc.
 Nature of present medical era and its opportunities. Medicine becoming more and more a prophylactic agent. Increase of nervous and mental diseases. Causes and means of their prevention. Influence of heredity, alcoholism and syphilis.
 Discussion opened by W. F. Becker, Milwaukee.
3. Human Pancreatic Juice, H. C. Bradley, Madison.
 Results of an investigation of human pancreatic juice obtained by temporary fistula. The physical and chemical characteristics of the juice were determined from day to day—specific gravity, volume, alkalinity and its causes, and content of digestive enzymes. Especial emphasis was laid upon the enzymes trypsin and lipase, with reactions of the latter under a great variety of conditions. Some of the laws of enzyme action are especially well demonstrated by the lipase reactions.
 Discussion opened by R. H. Jackson, Madison.
4. Results of Heredity and Their Bearing on Poverty, Crime and Disease, A. W. Wilmarth, Chippewa Falls.
 The awakening of public interest in the increase of the dependent classes. The number of mentally and morally incompetent is computed in hundreds of thousands. Their cost to the competent members of society is reckoned in millions of dollars. Their harmful influence is beyond computation. The laws of nature indicate, and actual observation confirms the fact that the physical conditions on which such incompetency is based, are, in the majority of cases, transmitted and consequently largely preventable. Varieties of mental and moral incompetency with their physical causes, briefly considered, with feasible methods of curtailment.
 Discussion opened by W. H. Washburn, Milwaukee.
5. Co-relation between Splanchnoptosis and Pulmonary Tuberculosis, Wilhelm Becker, Milwaukee.
6. Practical Medicinal Therapeutics as it appears from the Prescription File, Julius Noer, Stoughton.
 Basic question is one of professional and commercial honesty. The diagnosis made, the treatment if wholly or in part by drugs, necessitates physiologic and pharmacologic knowledge, without which there can be no practical therapeutics. Recent studies in body metabolism place some of the more obscure physiologic conditions in a light that is radiant with therapeutic possibilities. Laudations of new drugs or compounds by commercial promoters cannot be made to serve as therapeutic indications. A suggestion regarding the establishment of a pharmacological laboratory.

ANNUAL SMOKER AT THE ROOMS OF THE MILWAUKEE
MEDICAL SOCIETY, GOLDSMITH BUILDING, AT 8 P. M.

THURSDAY, JUNE 23.

MORNING SESSION, 9 O'CLOCK.

7. The Present Status of Spinal Anesthesia, A. J. Puls, Milwaukee.
8. The Plaster Spica in High Fractures of the Femur, Chas. H. Lemon, Milwaukee.
A discussion of the writer's practice in treating these fractures by the plaster spica dressing applied under extension, with an exhibition of skiagrams illustrating results obtained.
9. Oral Deformities and Associated Defects, G. V. I. Brown, Milwaukee.
10. Tincture of Iodine as a Skin Antiseptic, M. W. Dvorak, La Crosse, and W. H. Brown, Madison.
A brief comparison of older antiseptic methods with those in use to-day. Local uses of iodine historically considered. Technic followed in its application. Results of our work. Advantages.
11. Reconstruction of the Bile Ducts, A. S. Sullivan, Madison.
Dearth of literature upon the subject. Construction of an intra-abdominal sinus for biliary drainage. Technic. Results of experimental studies. Report of case.

11:30 O'CLOCK.

12. Annual Address in Surgery—The Medical and Surgical Aspects of Tumors, including Inflammatory and Neoplastic Formation, Joseph C. Bloodgood, Baltimore.

AFTERNOON SESSION, 2:00 P. M.

13. Ludwig's Angina, W. E. Ground, Superior.
14. Early History of Medicine in Wisconsin, W. S. Miller, Madison.
15. On Enlargements of the Liver, L. A. Warfield, Wauwatosa.
16. Value of Blood Cultures in Puerperal Fevers, Jos. S. Evans, Madison.
17. Annual Address in Medicine—The Wassermann Reaction in the Pathology, Diagnosis and Treatment of Syphilis, Richard M. Pearce, New York.
18. The Serum Treatment of Hemophilia—Preliminary Report of a Case, Arthur J. Patek, Milwaukee.
Discussion opened by J. L. Yates, Milwaukee.

19. The Early Diagnosis of Cancer, F. Gregory Connell, Oshkosh.
A brief review of some of the newer attempts of early diagnosis of cancer, with a preliminary report of observations with the anaphylactic reaction in guinea pigs.

ANNUAL BANQUET AT 8.00 O'CLOCK, HOTEL PFISTER.

FRIDAY, JUNE 24.

MORNING SESSION, 9:00 A. M.

20. Aneurism of the Thoracic Aorta, Jos. F. Smith, Wausau.
Report of case of aneurism of descending portion of thoracic aorta with fatal termination by rupture into the esophagus. Chief clinical feature of case was persistent boring pain referred to right lumbar region just beneath twelfth rib and in front just beneath the right costal arch. Difficulties in diagnosis in these cases. Value of X-rays as an aid in diagnosis. Importance of pain as a feature of these cases. Literature.
Discussion opened by J. L. Yates, Milwaukee.
21. Traumatic Hernia, T. W. Nuzum and J. F. Pember, Janesville.
Report of three cases of injury. Causes that produce hernia. Two varieties (a) accidental traumatic, (b) true traumatic, where hernial contents are forced through abdominal wall. Immediate and remote symptoms. Favorite locations or most frequent points of exit. Treatment should be prompt and efficient. Detail of experiments conducted on cats. Comparative anatomy of inguinal canal; difference in old and young cats; what we hoped to determine; (a) varieties and severity of force required; (b) points of escape from abdominal cavity; (c) condition of peritonetum; (d) effect on abdominal viscera.
22. The Nursing Mother from the Baby's Standpoint, A. W. Myers, Milwaukee.
The changes in the intestinal tract immediately after birth. Influence of human milk on these changes. Importance of human milk during first few weeks. Regulation and modification of supply of breast milk. Illustrative cases.
23. Chronic Diphtheria, George C. Ruhland, Milwaukee.
Chronic diphtheria is at present little or not at all recognized by the profession at large; is a condition that, however, frequently is associated with definite symptoms of disease, the recognition of which is of greatest importance in the history of disease epidemics; the necessity for treating the condition.
24. Some Observations on the Smith Operation, or Extraction of Cataract in the Capsule, G. I. Hogue, Milwaukee.

THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORGANIZED 1841.

Officers 1909-1910.

EDWARD EVANS, La Crosse, President.
 Joho Walbridge, Berlin, 1st Vice-President. G. V. Mears, Fond du Lac
 2d Vice-President.
 T. E. Loope, Eureka, 3rd Vice-President.
 CHAS. S. SHELDON, Madison, Secretary. S. S. HALL, Ripon, Treasurer.
 A. T. HOLBROOK, Milwaukee, Assistant Secretary.
 O. H. FOERSTER, Milwaukee, Chairmao Program Committee.
 P. F. ROGERS, Milwaukee, Chairman Arrangement Committee.
 A. J. PATEK, Milwaukee, Chairmao Medical Defense Committee.

Councilors.

TERM EXPIRES 1911.		TERM EXPIRES 1914.	
1st Dist., H. B. Sears, - - Beaver Dam	7th Dist., Edward Evans, - - La Crosse	2nd Dist., G. Windesheim, - - Kenosha	8th Dist., T. J. Redelings, - - Mariocette
TERM EXPIRES 1912.		TERM EXPIRES 1915.	
3rd Dist., F. T. Nye, - - Beloit	9th Dist., O. T. Hougen, - - Grand Rapids	4th Dist., W. Cunoingham, - - Platteville	10th Dist., R. U. Cairns, - - River Falls
TERM EXPIRES 1913.		TERM EXPIRES 1910.	
5th Dist., J. V. Mears, - - Fond du Lac	11th Dist., J. M. Dodd, - - Aahlaod	6th Dist., H. W. Abrsham, - - App'eton	12th Dist., A. T. Holbrook, - - Milwaukee

NEXT ANNUAL SESSION, MILWAUKEE, JUNE 22, 23, 24, 1910.

The Wisconsin Medical Journal, Official Publication.

SOCIETY PROCEEDINGS.

CALUMET COUNTY MEDICAL SOCIETY.

The regular meeting of Calumet County Medical Society was held at Kiel, Wisconsin, June 1, 1910. The meeting was called to order in the parlor of the hotel by the president, Dr. F. P. Knauf, all the members, with the exception of four, being present, one being detained on account of sickness and one other being away such a distance from place of meeting as to be unable to attend.

A paper on *Diarrhea of Children*, was read by Dr. J. A. Schmidt. A general discussion followed. An adjournment for supper was then taken, after which the annual outing, which is a feature of Calumet Medical Society, was discussed. It was moved and carried that we make an automobile run around Lake Winnebago, July 19, 1910, the starting-point to be Hilbert Junction on the morning of above date at 9 o'clock sharp. The schedule is Oshkosh for dinner and Calumet Harbor for supper. This is to be called the "First Annual Automobile Run" of Calumet County Medical Society, the banner society of the state of Wisconsin. And considering the interest taken in this run by all members present, it will undoubtedly become an annual affair with Calumet Society. Drs. F. P. and J. A. Schmidt were appointed a committee of arrangements.

There being no further business, meeting closed in due form.

J. A. SCHMIDT, M. D., Secretary.

GRANT COUNTY MEDICAL SOCIETY.

The regular meeting of the Grant County Medical Society was held at Lancaster, Thursday, May 12th, the president, Dr. E. D. Orr, presiding. By courtesy of Judge E. B. Goodsell the meeting was held in the Probate Court room of the new court house.

The following subjects were ably presented by members of the society: *Some Suggestions for Conducting a County Medical Society*, by Dr. Jos. Godfrey; *Tubercular Peritonitis*, by Dr. J. M. Lewis; *Adenoids; Symptoms, Treatment and Results*, by Dr. J. A. Gault; *Dispensing; How Do You Do It?* by Dr. C. A. Armstrong. Dr. J. C. Hancock of Dubuque, Iowa, read a very interesting paper on *Local Cocaine and Adrenalin Anesthesia*. These papers were fully discussed by the physicians present.

It was decided by unanimous vote that members of this society require a fee of \$5.00 for examinations made for Old Line Life Insurance Companies.

On motion a unanimous vote of thanks was extended to Judge E. B. Goodsell for the use of his court room for the meeting, and to Dr. J. C. Hancock for his interesting and instructive paper and his efforts to meet with the society.

Dr. J. H. MacLaughlin, of Glen Haven, Dr. Francis E. Bock, of Lancaster, and Dr. Emil F. O. Hanneman, of Boseobel, were elected members of the society.

This was the largest meeting in the history of the society, there being twenty-two present. The next meeting will be held at Cassville, in September.

M. B. GLASIER, M. D., *Secretary*.

GREEN LAKE-WAUSHARA-ADAMS COUNTY MEDICAL SOCIETY.

A regular meeting of the Green Lake-Waushara-Adams County Medical Society was held at Green Lake on May 24th at Hotel Lake View. A lively interest was shown in the matters taken up at the business meeting, in the talk given by Dr. Silverthorn, and the discussion following, and while we ate supper, opportunity was taken to get better acquainted.

At the business session the applications for membership of eight new men were examined by the board of censors, approved by them and by vote of the society these men were accepted as members. Dr. Scott of Berlin, called the attention of the new members to the resolution previously passed by the society condemning *Contract Practice* as fostered by certain Fraternal Organizations. It was decided to hold a meeting of the society every two months, arrangements to be in the hands of the program committee already appointed. Motion was made and carried that the secretary be instructed to make draft through the local bank upon those who failed to pay their annual dues before June 1st, each year.

Dr. Silverthorn of Berlin then gave a very able and practical talk on *Infant Feeding*, emphasizing the fact that plain cow's milk, properly modified, is the practical food for bottle-fed babies. In his experience in the city with the care of a series of 400 babies brought to the hospital in a condition of greater or less marasmus, modified plain cow's milk was used with very satisfactory results. The amount to be fed to each child was estimated by the

caloric method. They have found that there are approximately 20 calories of heat in one ounce of milk, 50 calories in one ounce of cream, and 120 calories in one ounce of sugar. Up to 3 or 4 weeks of age each pound of baby requires an ounce of milk in 24 hours. Thus from the weight of the baby in pounds is easily found the amount of milk required for 24 hours' feeding. An interesting discussion followed.

It was decided to hold the next meeting at Green Lake in July.

R. H. BUCKLAND, M. D., *Secretary.*

SIXTH COUNCILOR DISTRICT.

A letter to the members of the Winnebago, Outagamie, Brown-Kewaunee, and Door County Medical Societies:

No matter what vacation you have planned for the summer, do not let it interfere with the State Meeting. You still have ample time to arrange your work for a few days vacation in which you can renew many old acquaintances and make new ones. It will put new life into your work, and the smoker and banquet will add ten years to your allotted three score and ten. Let us all help make this a record meeting.

Yours fraternally,

H. W. ABRAHAM, M. D.,

Councilor Sixth District.

SEVENTH COUNCILOR DISTRICT.

On May 5th a dinner was given by Dr. E. Evans, Councilor for this district, to the La Crosse County Medical Society and the secretaries of the counties under his supervision. The dinner was held at the Hotel Stoddard; and in intention was a meeting to stir enthusiasm for the coming state meeting to be held at Milwaukee. The dinner was a delightful affair and delicious.

After dinner Dr. Jegi of Galesville told us all about the trials and tribulations of the county secretaries and all their difficulties. Dr. C. Marquardt told us very much of interest concerning the Early Practitioners of La Crosse, Their Various Accomplishments and Methods.

Dr. T. H. Miller responded to the toast "The Future of Medical Practice." Dr. Sarles of Sparta then told us about the Organization of the National Association.

The formal program being complete, the host called on several of the brothers present. The dinner having had the desired effect, all were able at the very least to tell a good story. Dr. Anderson, our ex-mayor, easily winning the palm. The guests of honor were Dr. Jos. Evans of Madison, Dr. Sarles of Sparta, Dr. Anderson and Dr. Laflin of La Crosse. The hour being late and all feeling very happy, the meeting adjourned, the chairman first appointing a committee to act in union with the committee of the Board of Trade, to suggest means and ways regarding a Tuberculosis Sanatorium for La Crosse.

M. W. DVORAK, M. D., *Secretary.*

NINTH COUNCILOR DISTRICT.

To the Physicians of the Ninth Councilor District.

I wish to congratulate the members of the various County Societies comprising the Ninth District upon their zeal for the organization and upon the quality of work that has been accomplished in nearly all the societies. This is, no doubt, due to an awakened interest in, and love for the work in which we are all engaged. To end the year in a fitting manner, I respectfully urge each one to attend the Milwaukee meeting of the State Society.

This meeting will undoubtedly be a record-breaker in attendance as well as in its scientific and social features. You owe yourselves a vacation, and this kind of vacation will pay for itself in many ways. Come early and stay to hear "Auld Lang Syne" at the close of the banquet.

Yours sincerely,

O. T. HOUGEN, M. D.,

Councilor Ninth District.

NEWS ITEMS AND PERSONALS.

Dr. A. N. Baer, Milwaukee, is ill with pneumonia.

Dr. S. W. Doolittle, Brodhead, will leave July 1st for a trip abroad.

Dr. M. Bossard, Spring Green, will spend the summer in Europe.

Dr. G. F. Andrew, Birchwood, is seriously ill at his home with pneumonia.

Nearly all the physicians of Calumet County are now automobile enthusiasts.

Dr. E. L. Bolton, Chilton, who has been ill with rheumatism, has recovered.

The Hilbert Hospital, at Hilbert, Calumet County, was opened to the public on May 21st.

Dr. P. J. Calvey, Fond du Lac, was injured, though not seriously, in a runaway accident, May 24th.

Dr. C. M. Ray, Oshkosh, underwent an operation for appendicitis, on May 28th. He is convalescent.

Dr. W. H. Halsey, has resigned as interne at the Emergency Hospital, Milwaukee, and is now located at Blackfoot, Idaho, where he will enter private practice.

Dr. B. N. Webster, Rice Lake, has been elected Health Commissioner of that city. The item in last month's issue stating that Dr. J. M. Helgeson had been appointed Health Commissioner, is an error.

The 7th Street Hospital, Milwaukee, one of the city's hospitals for contagious diseases, was inspected by Health Commissioner Rucker and was found to be unfit for the purposes for which it is used.

Dr. W. A. Sherman, for twelve years assistant superintendent of the Northern Hospital for the Insane at Winnebago, was elected superintendent of that institution by the State Board of Control, to fill the vacancy caused by the death of Dr. W. A. Gordon.

Marriages. Dr. E. A. Miller and Mrs. Myra Topp, both of Clintonville, May 26th.

Dr. J. D. Fuller, Eland and Miss Luella Clinton, Milwaukee, at Grand Haven, Michigan, May 31st.

Removals. Dr. Robert Leith, Appleton to Manhattan, Kansas.

Dr. E. J. H. Garl, Lake Geneva to Spokane, Wash.

Dr. McMillan, Platteville to Canada.

Dr. C. G. Dwight, Janesville, to California.

Dr. Albert E. Voss, Watertown to California.

Deaths. Dr. Theodore George Ernest Kopff, Beaver Dam, died at his home on May 24th, after a three weeks' illness.

Dr. Kopff was born at Lindingeroda, Hartz Utts, Germany, in 1829. In 1831 he moved with his parents to Nordhausen. He commenced the study of languages at 8 years of age and at the age of 16 was graduated from the high school, and four years later was graduated with high honors as a linguist from the Academy at Eisleben. A few years later he entered the University of Halle, where he studied medicine. After spending a year at Halle, he entered the University of Giessen, finishing his course at the University of Leipzig.

Dr. Kopff has held many prominent positions as physician and surgeon. He served as surgeon in the 34th Wisconsin Regiment one year, and in the 3rd Wisconsin Regiment one year.

Baden Baden, Germany. Dr. Robert Koeh, the world famous bacteriologist, died suddenly on May 27th, of heart disease.

At a recent meeting of the **Anti-Tuberculosis Society at Ashland**, Dr. C. O. Hertzman, secretary of the Ashland-Bayfield-Iron County Medical Society, administered a severe arraignment to druggists and patent medicine houses who advertise and sell so-called sure cures for consumption, thus delaying proper diagnosis until too late to institute effective treatment. The doctor agrees with all advanced medical thought that tuberculosis is curable, but apt to be neglected and that our greatest hope in stamping out the disease is to educate the public.

BOOK REVIEWS.

Organic and Functional Nervous Diseases, a Text-book of Neurology, by M. ALLEN STARR, M. D., Ph. D., L. L. D., Sc. D., Professor of Neurology, College of Physicians and Surgeons, New York; ex-President of the New York Neurological Society. Third edition, thoroughly revised. Octavo, 904 pages, with 300 engravings and 29 plates in colors or monochrome. Cloth, \$6.00, net; leather, \$7.00, net. Lea & Febiger, Philadelphia and New York, 1909.

As stated in the preface this third edition of a justly valued book has been arranged with the idea of making it as valuable to the student and practitioner as possible. In the first part we find a very satisfactory discus-

sion of the methods of diagnosis and a good review of the necessary anatomy and physiology. Very helpful features of the book are the figures, plates, and diagrams which are of especial value in the presentation of such a subject.

The fact that more and more attention is being paid to functional neuroses is fully recognized by doubling the space allowed to this subject. Hysteria always interesting, often puzzling is well discussed and the newer conceptions in regard to the condition adequately presented. It is to be regretted that the article on anterior-poliomyelitis still retains the older ideas in regard to its etiology, maintaining that the lesions are probably due to a toxin rather than to a micro-organism. The observations which have given us more definite knowledge in regard to etiology, pathology, symptomatology, and some hope for the future in regard to treatment, are comparatively recent and probably this accounts for their omission.

The treatment advocated in apoplexy does not seem entirely satisfactory. Methods to reduce blood pressure with the idea of thus preventing further hemorrhage are still advised, and there is not sufficient recognition of the fact that the increased blood pressure is probably an effort on the part of the system to overcome the increased intra-cranial pressure and thus maintain the necessary cerebral circulation.

Of late years the treatment of many nervous diseases has received new impetus from the work of certain surgeons, and the surgical successes are undoubtedly among the most brilliant of the recent achievements in neurology. These surgical measures are indicated and described in a satisfactory manner. On the whole the work is a very valuable one, beyond doubt the result of extensive and ripe experience.

J. D.M.

Self Propelled Vehicles. By JAMES E. HOMANS, A. M., published by Auld and Co., 63 Fifth Avenue, New York. Price, \$2.00.

This volume of six hundred pages is so full of valuable information that few car owners can afford to be without it. The history of self propelled vehicles, in the opening chapters, reads like a novel, depicting, as it were, all the early struggles of our pioneer inventors in overcoming apparent mechanical impossibilities.

The chapters on compensating devices and the drive gear, two subjects so little understood by the average motorist, are very instructive, explaining with suitable drawings what words would have failed to convey.

More than thirty pages are devoted to tires. No substitute for the rubber pneumatic tire has as yet been found, according to the author's conclusions, and I am inclined to believe that he is materially right.

The principles of air and water cooling are lengthily discussed, and formulae of anti-freezing mixtures are recommended.

The many pages devoted to carburetters and carbureting are perhaps a trifle too technical for the average motorist, and could have been profitably condensed to meet the needs of the car owner or mechanic.

The chapters on ignition are complete and of invaluable profit to every automobilist.

The principles of the various types of transmission are instructively

illustrated and every moment spent on this valuable technical material will be to the car driver's advantage.

In the operation of the engine, many useful cautions are given. Causes of misfiring are fully explained and proper remedies indicated. The cut showing the proper manner of starting the engine deserves special mention. The author counsels the placing of the thumb always on the same side with the fingers to avoid the danger of a broken wrist in the event of back-firing. This is a good point to remember and a better point still to practice.

The latter part of this very instructive volume is devoted to the electric machine. The electric vehicle evidently has come to stay, and I know of no better work than the above volume to get a fair idea of the principles of the electric car, and the construction and proper care of the batteries.

On the whole the book is well written, copiously illustrated and carefully edited. It is a volume all car owners and chauffeurs should have.

R. E.

A Text-Book on the Principles and Practice of Surgery. By GEORGE EMERSON BREWER, M. D., Professor of Clinical Surgery in the College of Physicians and Surgeons, New York. Octavo, 908 pages, 415 engravings and 14 full-page plates. Cloth, \$5.00, net; leather, \$6.00, net. Lea & Febiger, Philadelphia and New York, 1909.

The author of this textbook presents in very condensed form the essentials of present-day knowledge covering the entire field of general and special surgery.

Chapters I and II give a clear and concise exposition of the subjects of infection, immunity, inflammation and suppuration. Then follow chapters on various infectious surgical diseases, shock, tumors, anesthesia, diseases and injuries of the several organs and regions, fractures and dislocations, amputations, orthopedic surgery.

The author's style throughout is characterized by directness and clearness of statement. The work is nowhere burdened by description of obsolete theories or methods. On the other hand, it is lacking in much of important details and in helpful illustrations, both essential in a text book for students as well as in a work to which the practitioner may go for help and guidance.

H. R.

A Text-Book of Surgical Diagnosis. For Students and Practitioners. By EDWARD MARTIN, M. D., Professor of Clinical Surgery, University of Pennsylvania, Philadelphia. Octavo, 764 pages, with 445 engravings, largely original, and 18 full-page plates. Cloth, \$5.50, net; Lea & Febiger, Philadelphia and New York.

The title of this book would naturally lead one to expect to find within it an authoritative, discriminating and up-to-date presentation of the methods of examination and interpretation now available in the differential diagnosis of diseases of distinctively surgical character and importance. The author's avowed purpose in the preparation of this volume has been to make it serve

"the interest of early diagnosis in its relation to helpful and curative surgery . . . and to lay stress mainly upon symptoms of major and deciding moment." It is disappointing, therefore, that on perusal of its contents one finds it to consist largely of an enumeration of a vast number of conditions, many of them distinctly non-surgical, with, in the majority of instances, a rather meager recital of their symptomatology. With few exceptions the early and differential diagnosis of important surgical lesions is given less discussion than is found in the average text-book. Why a work on surgical diagnosis should be cumbered with a chapter on ordinary skin diseases, with full page illustrations (practically all reproductions from Hartzell) of acne, syphilides, itch and other parasitic diseases, is by no means clear.

Similarly the discussion of common, non-surgical diseases of the eye and of most of the other organs and regions of the body seems worse than wasted in a work of this nature. On the one hand these discussions are too brief and incomplete to furnish any real aid in diagnosis, and on the other they crowd out adequate presentation of diagnostic technique and its application in clinical diagnosis which one would justly demand from an up-to-date work on surgical diagnosis.

Chapter I, on Laboratory Diagnosis, is by Dr. W. T. Longcope. It is entirely interpretative and offers no suggestions or critical discussion in reference to the technique of laboratory methods.

The same is true of Chapter II, on the use of the X-ray in surgical diagnosis, by Dr. H. K. Pancoast. It is stated, e. g., that in the examination for foreign bodies in the head "special methods should always be employed if accuracy is desirable," but the reader will have to search elsewhere if he wishes to know what these "special methods" are.

The chapter on nervous diseases by Dr. T. H. Weisenburg may be said to constitute an exception to the criticism which applies to the volume in general. This chapter is replete with valuable and clearly-stated information, and it is to be regretted that the author could not have given himself unlimited scope for the discussion of his subject and for the introduction of more numerous illustrations.

Many of the outline drawings from X-ray plates illustrating various fractures are interesting and instructive, but would more appropriately find a place in a work devoted specially to fractures. With the exception of these outline drawings and skiagraphs, the illustrations are mostly reproductions from older publications and hardly calculated to be of assistance in the early diagnosis of those surgical conditions which call for prompt diagnosis and prompt surgical relief.

Had the author limited the scope of his work and gathered into one volume a complete, critical and concise summing up of modern laboratory and clinical methods of surgical diagnosis, with appropriate illustrations, he would have rendered the profession a real service.

H. R.

Preparatory and After Treatment in Operative Cases. HERMAN A. HAUBOLD, M. D., Clinical Professor in Surgery and Demonstrator of Operative Surgery, New York University and Bellevue Hospital Medical College. Cloth, \$6.00. D. Appleton & Co., New York, 1910.

This is one of the few books of its kind on the market to-day which

merits the careful attention of every surgeon and every practitioner who comes in contact with surgical cases. Surgical text-books of the present day, singularly enough, avoid mention in detail of the before and after treatment of surgical cases, and after all, it is just this care which is so essential for the rapid and uneventful recovery of every surgical case. It appeared to be the author's original intention to write the book for the use of the general practitioner only, and to advise him in the preparation and the after treatment of all operative cases. This to our mind is questionable. There are many procedures and technics described in the volume which it would be well for the general practitioner to wisely let alone, for it requires a good deal of surgical experience and judgment to perform them. This leads the reviewer to ask whether or not it is a wise plan to allow a general practitioner to take care of the after treatment of surgical cases. The after treatment of operative cases is often a more difficult and trying matter than the operation itself and none but the experienced operator himself is able to cope with the many unforeseen complications that follow operation.

The general make-up of the book is excellent. The text is clear and the subjects follow each other in excellent sequence. Chapter I is devoted to cases in which operation is not urgent and treats of such cases as are handicapped by diseases such as cardiac, renal, and diabetic disorders, which may be greatly improved by judicious treatment and preparation before operation. It offers sound advice to the practitioner who has the case in hand. Several chapters follow which treat in detail of the preparation of operating rooms, dressings, operators, assistants, etc. Chapter XI gives an excellent description of the treatment of shock. The method of direct blood transfusion is a delicate operation to be done only by competent and experienced surgeons. Chapter XII should be read by every surgeon. Acute dilatation of the stomach is a more common condition than one supposes. It is gratifying to note that physostigmine is used often in intestinal paresis. This drug is receiving more attention lately from our own investigators. Its effects are remarkable when used in time on cases of intestinal paresis. The author makes this chapter more interesting by citing clinical cases. Cranio-cerebral topography is discussed fully and well. Under operations on the thorax flushing of the pleura should be condemned as a hazardous procedure. Operations upon the abdomen are discussed in great detail. An instructive description of the special preparation of the gastro-intestinal canal is well worth reading. The use of medicines injected to prevent post-operative peritonitis is still in the experimental stage. Peritonitis is treated by the Murphy method and with the remarkable results that many are reporting from its use it might be emphasized more fully and described in detail. Special operations on the stomach and intestines deal mainly of course with the diet and question of handling the complications. Throughout the entire volume the author explains many simple procedures and the treatment of usual conditions that every practitioner has to contend with daily, but a description of which one rarely finds in text-books. On the whole the book is carefully written, well indexed and arranged. It should be read by every one who is interested in surgery and the after care of surgical cases. Surgeons especially will find it valuable as a guide and review to the first principles of surgery.

(H. G.)

THE WISCONSIN MEDICAL JOURNAL

JULY, 1910.

ORIGINAL ARTICLES.

THE ANNUAL ADDRESS OF THE PRESIDENT OF THE
STATE MEDICAL SOCIETY OF WISCONSIN.

BY EDWARD EVANS, M. D.

LA CROSSE.

THE UNIVERSITY OF WISCONSIN AND MEDICAL EDUCATION.

My first pleasant duty is to express to you, ladies and gentlemen of the State Medical Society of Wisconsin, my deep appreciation of the honor you have done me in making me your president. No light task is it, if one would prove a worthy successor to a long line of earnest, thoughtful men who have preceded me in this chair, and who have labored for the honor and advancement of our beloved profession; not as leaders only but as privates in the ranks, working shoulder to shoulder with many others of you who sought as your only reward the gratifying sense of duty well done.

For no worth of mine, I take it, was this honor given me; but only because of my official connection with the University of Wisconsin as one of its Board of Regents. It was intended as a recognition of and an honor to the greatest of State Universities. And with this significance it is a yet greater honor to be your presiding officer. While keenly realizing my unfitness for the task, I wish to try to indicate to you today what this great University of Wisconsin is doing and aims to do for the citizens of Wisconsin, for you and for me; for our children and our children's children.

This I shall endeavor to do under three heads: 1. The place of the University in the State at large. 2. The University's influence on State or Public Medicine; and 3. The Moulding Power of the University on Higher Medical Education.

A discussion of those three points will naturally lead us to a consideration—necessarily brief and only suggestive—of the problems confronting us today as an organized and specially trained body of citizens.

1. THE PLACE OF THE UNIVERSITY IN THE STATE AT LARGE.

In a consideration of the first point,—The Place of the University in the State, we must not forget that we are not doctors only, but citizens also, and as such vitally concerned in everything that pertains to the uplift of our people, not only in medicine, but in culture, in pure science, in agriculture, in law, in domestic and in political science, and in all those things that influence the social improvement and the physical betterment of the citizens.

It is proper therefore and pertinent for us to inquire how the University is serving those interests. The more our science approaches a pure science the more do we realize its close relation to and dependence on the other sciences—physics, chemistry, physiology and anatomy, biology (the science of life and living things in the widest sense). Not only this but as we study more the scope and possibilities of medical science, the more clearly do we see its close relation to the humanities—to philosophy, to the social sciences, and, be we sceptic or Christian, we must weave into the very warp and woof of our professional being a recognition of those relationships if we would be educated, competent, successful medical practitioners.

Our University then must not only educate the students within her walls, her professor not merely give instruction to his classes and do research work in his laboratory. Our University must be a servant of the state, bringing within her beneficent influence every citizen in the most obscure corner of our state, not alone increasing his material wealth, but interesting him “in all those subjects that have to do with the higher intellectual development of humanity.” Her professors must serve the State in other capacities than those of student instruction and private investigation. Our University is doing this to a remarkable degree. Its president is a very material factor in the great conservation movement of our national resources, including “Just Folks”, and is the acknowledged authority on some phases of it. More than forty men in the faculty are serving the state outside of the University in some official capacity or other.

More than this. The University recognizing the vast advancement of knowledge during the past century, recognized also that the

people, because of their isolation or lack of opportunity, inevitably lagged behind in the assimilation of knowledge developed. And so the University of Wisconsin established the University Extension division and is offering to our people courses in all grades, including some in public health.

So we see how all-prevading, how inclusive of all branches of secular knowledge is the University's teaching. The medical profession must avail itself of this great means to educate the public to know the great value and the possibilities of modern medicine. "Public opinion will then demand the creation of efficient boards of health, the adoption of effective public health laws and the thorough training of medical practitioners in the science of Medicine." As trained medical men, we recognize that "The development of scientific medicine means the physical, intellectual and moral betterment of the race."

The influence of disease in sapping the manhood of a people and leading to its political, moral and intellectual decadence is well illustrated by W. H. S. Jones' little book, "Malaria and Greek History." He shows that malaria fell as a blight upon many fertile districts of Greece (as it did upon Athens in the fifth century B. C. and as it did on the Roman Campagna later) and undoubtedly played a large part in the decadence of the race. Not only do malarial regions lose many by death, but also by emigration; and these latter are naturally the richer and more intelligent; so that soon in such afflicted areas, there remain only the poor, the stupid and the unenterprising. The young of such are foredoomed to failure. Such a people inevitably sink into national decadence. Today we know that Africa is the "Dark Continent" because of the baleful power of Malaria and Ankylostomiasis. It may be that the political map of continents will be changed because our conquest of yellow fever and malaria has made the Panama Canal possible; while in our own household "Hook Worm Disease" offers a new and scientific explanation of the supineness and backwardness of the South—one not quite so flattering to inherent superiority in the North.

Abbot Gasquet, perhaps the greatest living English historian, in "The Black Death of 1348 and 1349" depicts vividly the far reaching effects of epidemics on Social Evolution. Dr. Gasquet treats this epidemic as the most important event of the Middle Ages and a prime factor in the making of Modern England. It swept away one-half the population; desolation, terror and disorganization stalked throughout the land. But following it came a social revolution. The laborer

found his labor in demand. The abolition of serfdom followed; and privileges never before dreamed of were wrested from king and nobles. Yet other results followed. While progress in Art, Education and Commerce was checked for years, Religion received a crushing blow. The very fervor of the clergy made them the easier victims. So few priests survived the plague that mere boys and persons entirely unfitted were ordained. The bad example set by many of these gave rise to scandal and abuse, and demoralized the people. The Black Death paved the way for the Reformation as well as for a new order of things in the body politic.

In light like this the history of the world is being re-read and we are learning that civilization advances or recedes with the improved or diminished health of the people. "The progress of medicine both in its public form and in private practice, depends not only on the education of private practitioners, and public health officers, but also on an education of the public which will enable people to appreciate the difference between the true and the false in medicine, between the application of scientific knowledge to the prevention or alleviation of human suffering and the various forms of quackery and superficially glazed ignorance." (Bardcen.) Therefore we should recognize the large place the University must occupy in the state's healthy, normal advancement--medical as well as material and cultural.

2. THE UNIVERSITY'S INFLUENCE ON STATE OR PUBLIC MEDICINE.

All the various intellectual and scientific activities of a University must and do make for better health conditions directly or indirectly. Of these the most potent in the past have been the Agricultural School and the Premedical Department. The Agricultural School in the past has done splendid work in state preventive medicine, directly for the hogs and cattle and horses, and indirectly only for the people, for we cannot isolate one department of progress from another. The farmer cannot learn how to conserve the health of his stock and even the soil without making some application of those principles to the welfare of himself and his family.

Within a few years the Premedical Course has developed into the school of Medicine. As one who has taken part in the formation of the school of Medicine, I may be over-enthusiastic about it. But it is already having a powerful moulding influence on the development of University life along lines of sane care of the body while pursuing

an education. It must be confessed that in the past the physical department of the University was from the side of the proper physical education of the student, not all it should be. The class room ventilation was necessarily bad because of old and poorly designed buildings; physical culture was an end not a means—quickly to be gotten rid of—not educational. The Gymnasium was not utilized as it should be—as a laboratory for physical culture and education. Boarding houses were not inspected. Infectious diseases were uncontrolled, except in a haphazard way.

All this is being changed under the influence of the Hygienic Committee composed of members of the Medical Faculty. Class rooms are being inspected and altered. The gymnasium is being properly cleaned and supervised. Boarding places are properly inspected. A close watch is being kept to guard against the spread of infectious diseases. And most important from the educational standpoint the student body get systematic instruction by lecture and demonstration on personal and community hygiene. One of the recommendations of the Hygienic Committee acted upon by the authorities deserves special mention—the appointment on the medical faculty with professorial rank of a Student Adviser. Securing for this position a man trained in laboratory and hospital methods of scientific medicine, his influence on the student body and indirectly on the health and well being of the state at large must have a profound bearing for good.

The State Hygienic Laboratory, under the direction of Prof. Ravenel, is capable of doing vastly increased work for state medicine. I am sure, gentlemen, we do not avail ourselves nearly enough of the opportunities here offered for our own improvement, and the verification of our clinical observations and for the benefit of the communities in which we practice. In connection with the Hygienic Laboratory, is now a Pasteur Institute which is already proving the wisdom of its establishment.

With slight additions to the Department of Medicine, it will be possible to establish a thorough course at the University for Medical Health Officers. This step I think should very soon be taken.

The problems of the future are problems in State Medicine. They are, however, not problems of medicine alone; but inextricably involved with social and industrial conditions. Our Universities are the places where these complex problems must be solved.

The Department of Health in our state should be a department in the University. It should be presided over and directed by a member of the faculty, a professor in the school of medicine,—call

him what you will, Supervisor of Public Health, Director of State Medicine, or Secretary of State Board of Health. What a great force for good this would mean. Such a man would have the resources of the whole Medical Department to aid him. He would have the cooperation of the Department of Political Economy and of Law and of Agriculture and of Engineering, and he would have the University Extension Department as a ready and efficient means for the dissemination of useful and necessary information.

It is surely an anomalous and indefensible position that while we spend through our Agricultural Department some \$150,000 for our stock and crops, this great State of Wisconsin pays its Secretary of Health \$3500 to care for and conserve the health of its three million inhabitants. He gives only a part of his time to what should be, what is the most important office in the State of Wisconsin. Only some \$15,000 is appropriated annually for the Department of Health.—one-half cent for each inhabitant.

3. THE MOULDING POWER OF THE UNIVERSITY ON HIGHER MEDICAL EDUCATION.

Nearly three years ago, Prof. Welch of Johns Hopkins pointed out in an address on "Medicine and the University" at the University of Chicago that "The historical and the proper home of the Medical school is the University of which it should be an integral part co-ordinate with the other faculties."

The University can do much for medical education where the medical school is an integral part, in three ways. (a) by maintaining high and well defined standards of entrance. (b) By the inspiration of productive scholarship in education and in science. (c) By the financial support of the medical department as liberally as other departments.

The University and especially a State University *should* do much for medical education; for what other science is so closely interwoven with the well being of the individual and of human society as is medicine; and what "higher or nobler function of a University can there be than the teaching of the nature of disease, and how it may be cured or prevented; and the advancement of the knowledge on which the conquest of disease depends." (Welch.)

In recent times the practice of medicine has come almost to be the application of certain fundamental sciences:—chemistry, physiology, physiologic chemistry, anatomy, bacteriology, and pathology.

This means that today the practitioner must be a scientifically trained man. Such training can be (as a matter of fact *is*), obtained only in the University School. The trained investigator is bred in educational institutions; and just as true is it that the properly trained, well equipped, competent medical practitioner (and who wishes to entrust himself or his family to any other) is trained in the same University atmosphere. The work done in the Medical School at our University the first two years is of the very highest order. It has won words of highest commendation from President Pritchett of the Carnegie Foundation. (See page 37, Fourth Annual Report, 1909.) For the future progress of Medicine in Wisconsin, it should do much. Here the student secures real University work in the basic sciences; real training in science for its own sake, away from the distraction of the Medical and Surgical clinic before he is prepared to avail himself properly of such teaching. Here may be the possibility of "finding" the research student for the future advancement of medicine. Here may we hope to see in the future a great post-graduate school where we may refurbish our knowledge, not so much in clinical branches as in the important advances made in physiologic chemistry, pathology, serum therapy, state preventive medicine—just as we have now the best post-graduate farmer's school in the world. Here may we hope to see established, in connection with the historical library, a great loan Medical library, the nucleus for which Dr. Byron Robinson has bequeathed his Alma Mater.

The Medical Department of our University is destined to become a great school, worthy alike with the school of Letters and Science, the school of Engineering, the school of Agriculture, of our greatest trust, our deepest reverence, our most sanguine expectations, our most liberal support.

I have tried thus briefly to bring to your attention the place the University occupies; to indicate its three-fold power for good on our profession. The future calls almost impatiently to us for *work* yet undone—work for the good of the community rather than for the good of the individual. In the plan of nature that the individual must die is of small moment; but when and how he dies is of incalculable importance economically and hygienically to the community. In this light the physician whose life is made up of "visits to relieve constipation, set broken bones, remove an offending appendix, or act in emergencies, might almost as well be a successful plumber or merchandise vendor. When, however, he takes advantage of those opportunities that his study and intimate knowledge of the needs of

humanity give him, and uses whatever power he may possess to fight causes instead of consequences. then indeed, does he become great." (Dearholt.) In this light the humblest health officer who does his duty is greater, nobler, more essential in the plan of nature than is the most brilliant operating surgeon. In this light the University assumes a new importance and a new power as a great educational and educating center. We are fearfully behind our knowledge, in our application of this knowledge in practice.

Medical inspection of schools should be compulsory. What right has the State to compel me to send my children to school and then take no thought for their health. It is unfair, reckless and barbarous. Why should the idea of school be necessarily connected with ugly walls, poor light and worse ventilation. Cannot education be acquired in open places—classes conducted in play grounds and parks? It seems to work well for those whose health we have ruined, might it not work well for the well. "Once upon a time the citizens of a certain city in Greece were greatly interested in the nurture and training of children. When the question arose as to whether they should build a great public school or open a playground it was decided to open a playground. Now in the course of years it came to pass that the citizens of that city advanced so far beyond the rest of the human race, that in all the centuries since, even to this day, the nations that have gone on building public schools and neglecting to open playgrounds have not been able to catch up with them."

There should be medical inspection by the State of industrial callings. We must have stricter, better, more scientific supervision of our water supplies and our milk and other food supplies. The infective diseases and especially the so-called social diseases must be brought under greater subjection—why should we not say eradicated.

We must not neglect to combat the fierce and untruthful campaign being waged by reactionaries against vivisection. Just the same battle was fought and won to secure material for anatomical study in the time of Lord Macaulay. As a body we should emulate a small group of our profession, who have been doing such splendid work in this state in the anti-tuberculosis campaign; and work with the enthusiasm of our "Head Booster" who has shown us what even one earnest worker can do.

I believe the time has come for us to do away with our sectarian board of Medical Examiners. The situation is so grossly unfair, unjust and improper that it demands no discussion. If this means going into politics—"Now is the acceptable time."

You know that splendid essay of Osler's on Chauvinism. There is I assure you a Chauvinism of *time* as well as place. I am glad that we have on the program this year a paper on the history of medicine in our state. Next year let it be of wider scope. Let us study the history of our noble profession—its great names—the beacon lights in its history, and we shall have a broader outlook, a more catholic spirit. Let us engrave on the tablets of our memory the noble Hippocratic Oath and in our profession will cease the barter for gain, the giving and taking of commissions; and the betrayal of innocent life for "30 pieces of silver."

I hope you have all read that other essay of Osler's called THE MASTER WORD. *Work* is what is needed. What is of value is service—the service of the *man*. Individual worth after all is what counts, for the value of the unit determines the strength of the organization.

In the possible changes that loom up in the future of our profession, whether of triumphs or vicissitudes, one figure stands fixed and prominent. It is that of the family doctor. Whatever of specialization and change the practice of medicine may undergo, his place is assured. So long as the family remains the unit in the State, so long will there be the family medical adviser. As education becomes universal and rational, physical and moral as well as mental, so the necessity for the scientifically trained, fully equipped family doctor will be more readily recognized. He is destined to be in his full development and in the fruition of medical science, the flower of the profession,—in culture, in scholarship, in scientific attainments and in abiding service.

THE HIPPOCRATIC OATH.

I swear by Apollo the physician, and Aesculapius, and Health, and All-heal, and all the gods and goddesses, that, according to my ability and judgment, I will keep this Oath, and this stipulation—to reckon him who taught me this Art equally dear to me as my parents, to share my substance with him, and relieve his necessities if required; to look upon his offspring in the same footing as my own brothers, and to teach them this art, if they shall wish to learn it, without fee or stipulation; and that by precept, lecture, and every other mode of instruction, I will impart a knowledge of the Art to my own sons, and those of my teachers, and to disciples bound by a stipulation and oath according to the law of medicine, but to none others. I will

follow that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to any one if asked, nor suggest any such counsel; and in like manner I will not give to a woman a pessary to produce abortion. With purity and with holiness I will pass my life and practice my Art. I will not cut persons laboring under the stone, but will leave this to be done by men who are practitioners of this work. Into whatever houses I enter, I will go into them for the benefit of the sick, and will abstain from every voluntary act of mischief and corruption; and, further, from the seduction of females or males, of free men and slaves. Whatever, in connection with my professional practice or not in connection with it, I see or hear, in the life of men, which ought not to be spoken of abroad, I will not divulge as reckoning that all such should be kept secret. While I continue to keep this Oath unviolated, may it be granted to me to enjoy life and the practice of the art, respected by all men, in all times. But shall I trespass and violate this Oath, may the reverse be my lot.

THE MEDICAL EXPERIENCES OF BENVENUTO CELLINI.

BY A. W. MYERS, M. D.,

MILWAUKEE.

(Continued from page 28.)

From time to time throughout the narrative there are references to attacks of malarial fever but the most severe of these occurred when he was 35 or 36 years of age. He was so ill that his death was reported and obituary sonnets were composed in his honor. His description of his delirium is too long to read in full. "Four days after I was seized with a very high fever and with a shaking fit. I went to bed, and thought I was about to die. The first physicians in Rome were called in, among whom was one Maestro Francesco da Norcia, the oldest doctor in the city, and the one of most reputation. I explained to the doctors what I believed to be the cause of my grave illness; that I had wished to be bled, but was advised against it; and I begged them, if it were not too late, to bleed me now. Maestro Francesco answered that to draw blood now would do me no good, but if it had been done at the right time, I should not have been ill at all. Now he must cure me in some other way. So they enlisted all their zeal and skill for my cure, and every day I got

violently worse. At the end of eight days the malady had increased so much that the doctors, despairing of the case ordered that I should be indulged and given anything I asked for. Maestro Francesco said, 'While he still breathes call on me at any hour, for one never knows what nature will do for a young man of this sort; but if he should become unconscious, give him these five remedies, one on top of the other, and send for me. I will come at any hour of the night. For I should be better pleased to save him than any Cardinal in Rome.'

* * *

"More than three hours passed ere I came to myself; and having applied all the physician's remedies, and seeing that I still did not revive, my beloved Felice set off running to Maestro Francesco of Norcia's house. He knocked so loud that he awoke him and make him rise. Weeping, he begged him to come to my house, for he thought I was dead. Whereupon Maestro Francesco, who was a very hot tempered man, called down, 'My son, what do you think I should do if I came? If he is dead I am sorrier than you. Do you think that by coming with my medicine I could blow life into his body?' But seeing that the poor lad went off crying, he called him back, and gave him a certain oil wherewith to anoint my pulses and my heart, and told him to squeeze my little toes and little fingers very hard; adding that if I came to, he was to be sent for at once. Felice left Maestro Francesco and did his bidding. When it was almost daylight and hope was given up by the watchers, orders were given to make my shroud and to wash my body. All of a sudden I came to myself, and called out to Felice to drive off the old man who was plaguing me." * * * "But Maestro Francesco came at last, and he said he was determined to save me in spite of everything, and that he had never seen greater force in any young man than in me. Then, sitting down to write, he ordered perfumes, lotions, unguents, plasters, and all sorts of wonderful things. In the meanwhile, having had more than twenty leeches applied to my posteriors, I came to, but I felt as if I had been pierced, bound, and pulverised." "So my illness lingered on, and I got little better. The most excellent Maestro Francesco came four or five times a day, but Messer Giovanni Gaddi, who had been shamed, never came to see me any more."

* * *

"My malady had been so terrible that it seemed as if it could never end; and that good man Francesco da Norcia gave himself more trouble than ever, and every day he kept bringing me new remedies, striving to repair that poor disordered instrument, my body. Yet

with all these extraordinary efforts, it seemed impossible to weaken the malady's persistent hold on me; so that the doctors were almost in despair, and did not know what further they could do. I had an insatiable thirst, yet I had refrained from drinking for many days, in obedience to orders."

* * *

"I called Beatrice, the servant, a girl from Pistoja, and begged her to fill a great crystal wine-cooler, that stood near, with clear fresh water, and to bring it to me. The girl ran at once and brought it to me full. I asked her to hold it to my mouth, and promised, if she would let me drink as long a draught as I wished, I'd give her a gown. Now this servant had stolen a few little things of some importance, and in her terror lest the theft should be found out, she would have been glad for me to die. Therefore she let me drink twice of the water, and as much as I could each time, so that in truth I drank more than a flask. Then I lay down under the bedclothes, began to perspire, and fell asleep. Felice came back after I had slept about an hour, and asked the lad how I was. 'I don't know,' said the boy; 'Beatrice brought him that wine-cooler full of water, and he has nearly drunk it all. I don't know now if he is dead or alive.' They say the poor young fellow almost fell down in a swoon from the vexation he felt. Then taking a thick stick he beat the servant furiously, crying, 'Alas, traitress; you have killed him.' " "This woke me up, and I said, 'Let her alone, for perhaps in meaning me harm, she has done me more good than you ever have been able to, with all your devotion. But come now and help me, for I am all of a sweat. Quick—' Felice took heart again, dried me, and made me comfortable; and feeling greatly better, I became assured of my recovery.

"When Maestro Francesco came, he saw the great improvement in me, also the servant weeping, the prentice running hither and thither, and Felice laughing. This confusion made the doctor think something had happened, which had worked this change in me for the better. Meanwhile, the other doctor, Maestro Bernardino, had come in, the one who, in the beginning, had not wished me to be bled. Maestro Francesco, that splendid fellow, cried out, 'Oh, power of Nature! she knows her own needs. We doctors know nothing.' Whereupon that fool of a Maestro Bernardino answered, 'If only he had drunk another flask, he would have been cured at once.' But Maestro Francesco, a venerable man, and of great authority, replied, 'Please God that such a misfortune fall on your own head!' Then turning to me, he asked me if I could have drunk more. 'No', I answered, 'for I had quenched my thirst.' Then to Maestro Bernar-

dino he said, "See you, Nature had just satisfied her needs, neither more nor less. So was she craving for what she needed when the poor young man requested to be bled. If you knew that the saving of him depended on his drinking two flasks of water, why did you not say so before? Then you would have got the credit!" At these words the quack went off in a surly temper, and he never turned up any more.

"Then Maestro Francesco said I must be taken out of the room where I lay; and he had me carried up to one of the hills of Rome. Cardinal Cornaro, hearing of my recovery, had me brought to a place of his on Monte Cavallo. That very night I was carried with the utmost care in a chair, well covered, and not jostled. As soon as I arrived, I began to vomit, and in the vomit which I brought up was a hairy worm, a quarter of a cubit in length. The hairs were long, and the worm was most hideous, and covered with different colored spots, green, black, and red. They kept it for the doctor, who declared he had never seen such a thing. Then he said to Felice, 'Now take good care of your Benvenuto, for he is cured. Don't allow him any excesses. For though he has escaped this time, yet another disorder would kill him. You see his sickness has been so serious, that had we been bringing him the holy oil, we might have come too late. Now I am sure that with a little patience and time he will still do fine work.' Then turning to me, he said, 'Benvenuto, my friend, be wise, and lead a regular life; and when you are cured, I want you to make me a Madonna with your own hand, and I will say my prayers to her always for love of you.' Afterwards I asked him whether I might prudently move to Florence. He told me that I should get a little stronger first, and wait to see what Nature did for me."

These passages illustrate many of the characteristics of the practice of the day; the blind following of authority, as represented by the withholding of water in fever. Asclepiades of Prusa in the 2nd century denied both food and drink in the beginning of fevers "so that he did not allow the mouth to be rinsed even once"; therefore water must be withheld. The discussion about bleeding at the onset of the illness brings up for consideration one of the greatest battles of that period, the struggle over the time, place, and method of venesection. The later Greeks and Arabians and their followers held that at the onset of inflammation blood should be taken at a distance, and on the opposite side from the seat of disease, in small quantity, and slowly, drop by drop; while the Hippocratic method provided for free venesection in the vicinity of the diseased organ and upon the same side. The battle between the adherents of these opposite theories be-

came so fierce that in France an appeal was made to the King to prohibit by law the Hippocratic method. However a relative of some court favorite had been relieved by this method of treatment and the King refused to interfere.

And in Dr. Francesco's apostrophe to the powers of nature we can see the dawn of that saving open-mindedness so strenuously preached by Philippus Aureolus Theophrastus Bombast von Hohenheim, commonly known as Paracelsus, that Roosevelt of the early 16th century, who sent his pupils out to observe and to think for themselves. "Reading never made a doctor, but practice is what forms the physician. For all reading is a foot-stool to practice, and a mere feather broom." It is sometimes thought that Paracelsus despised all authority and tradition in medicine, but he seems to have had a high opinion of Hippocrates because he based his practice on clinical observation. The commentators and theorizers were the ones at whom his invectives were aimed.

This illness of Cellini's was probably a malarial infection although its prolonged course may mean typhoid. At any rate his convalescence was slow and to hasten it he decided to return to Florence. In connection with this journey he refers to the painter Vasari, the author of the celebrated Vasari's Lives of the Painters, Sculptors, and Architects, in a curious anecdote.

"Now this ill turn I owed to the painter Giorgetto Vassellario of Arezzo, perhaps in return for many good turns I had done him. For I had given him hospitality in Rome and paid his expenses, though he had been a most troublesome guest; for he suffered from a dry skin disease, and his hands were all wasted from continual scratching. Now he had slept with a good young fellow in my employment, called Manno; and when he thought he was scratching himself, he had taken the skin off one of Manno's legs with his dirty hands, the nails of which he never cut. Manno left me, and, indeed, was determined to have his life; but I reconciled them."

After his restoration to health Benvenuto decided to visit France and the journey is made by way of Venice and Padua. Thence, he says, "I took the road through the Grisons, for none of the others were safe on account of the war." This visit to Paris was short and uneventful but the war he speaks of is of great interest to us for it was in this very campaign that Ambrose Paré just risen from barber-surgeon to army-surgeon, had his baptism of fire, and, by good luck, discovered that boiling oil is not the best treatment for gunshot wounds. His account of it follows:

"It happened at Suse, a little place near Mont Cenis, in 1537:

The enemy within the castle, seeing our men come on them with great fury, did all they could to defend themselves, and killed and wounded many of our soldiers with pikes, arquebuses and stones; whereby the surgeons had all their work cut out for them. Now I was at this time a fresh-water soldier; I had not yet seen gunshot wounds at the first dressing. I had read in John de Vigo, book one, Of Wounds in General, chapter eight, that wounds made by fire arms partake of venosity, by reason of the gunpowder; and for their cure he bids you canterize them with oil of elders, scalding hot, mixed with a little treacle. And to make no mistake, before I would use the said oil, knowing that it was to bring great pain to the patient, I asked first, before I applied it, what the other surgeons used for a first dressing; which was, to put the said oil, boiling well, into the wounds, with tents and setons; wherefore I took courage to do as they did. At last, my oil ran short; and I was compelled, instead of it, to apply a digestive made of yolks of eggs, oil of roses, and turpentine. In the night, I could not sleep in quiet, fearing some default in the not cauterizing, lest I should find those, to whom I had not applied the said oil, dead from the poison of their wounds; which made me rise very early to visit them; where, beyond my expectation, I found that they to whom I had applied my digestive had suffered but little pain, and their wounds without inflammation or swelling, having rested fairly well that night. The others, to whom the boiling oil was applied, I found feverish, with great pain, and swelling round the edges of their wounds. Then I resolved nevermore to burn thus cruelly poor men with gunshot wounds.

“When I was at Turin, I found a surgeon famed above all the rest for his treatment of gunshot wounds; into whose favor I found a way to insinuate myself, that I might have the recipe of his balm, as he called it, wherewith he dressed these wounds. And he made me pay my court to him for two years, before I could possibly get the recipe out of him. In the end, thanks to my gifts and presents, he gave it to me, which was this, to boil down, in oil of lilies, young whelps just born, and earthworms prepared with Venice turpentine. Then I was joyful, and my heart made glad, that I had learned his remedy, which was like that which I had obtained by chance.

See how I learned to treat gunshot wounds; not out of books.”

“Paré’s other great discovery, the use of the ligature, instead of the red-hot irons, to stop the bleeding of an amputation, was made about 1552; ‘which it pleased God to teach me, without I had ever seen it done in any case, no, nor read of it.’”

It is evident from this description that while Paré did make this

discovery unaided and so deserves great credit for his powers of observation, the same conclusions had been previously reached by the Italian army surgeons. Paré learned all that he could in Italy or wherever he happened to be, and the extent of his therapeutic armamentarium may help us to imagine the resources of Benvenuto's physician Francesco da Norcia whom we have seen calling on him five times a day and "every day he kept bringing me new remedies, striving to repair that poor disordered instrument, my body." To illustrate; Paré was called in consultation to see a young man of twenty who had received seven months previously a gun-shot wound of the thigh, fracturing the femur. He was attended by six physicians but no nurse and the sheets on his bed had not been changed for two months. After outlining the surgical treatment Paré prescribed as follows:

"To restore the warmth and nourishment of the body, general frictions must be made with hot cloths, above, below, to right, to left, and around, to draw the blood and the vital spirits from within outward—Secondly, having regard to the great swelling and coldness of the limb, we must apply hot bricks round it, and sprinkle them with a decoction of nerval herbs in wine and vinegar, and wrap them in napkins; and to his feet an earthenware bottle filled with the decoction, corked, and wrapped in cloths. Then the thigh, and the whole leg, must be fomented with a decoction made of sage, rosemary, thyme, lavender, flowers of chamomile and melilot, red roses boiled in white wine, with a drying powder made of oak-ashes and a little vinegar and half a handful of salt. And for the strengthening of his heart we must apply over it a refrigerant of oil of water-lilies, ointment of roses, and a little saffron, dissolved in rose-vinegar and treacle, spread on a piece of red cloth. For the syncope from exhaustion of the natural forces, troubling the brain, he must have good nourishment, full of juices, as raw eggs, plums stewed in wine and sugar, broth of the meat of the great pot whercof I have already spoken; the white meat of fowls, partridges wings minced small, and other roast meats easy to digest, as veal, kid, pigeons, partridges, thrushes, and the like, with sauce of orange, verjuice, sorrel, sharp pomegranates; or he may have them boiled with good herbs, as lettuce, purslain, chicory, bugloss, marigold, and the like. At night he may take barley-water, with juice of sorrel and of water-lilies, of each two ounces, with 4 or 5 grains of opium, and the four cold seeds crushed, of each half an ounce, which is a good nourishing remedy and will make him sleep.

"For the great pain in his head, his hair must be cut, and his head rubbed with rose-vinegar just warm, and a double cloth steeped

in it and put there; and also a forehead cloth of oil of roses and water-lilies and poppies, and a little opium and rose vinegar, with a little camphor, and changed from time to time. Moreover, we must allow him to smell flowers of henbane and water-lilies, bruised with vinegar and rose-water with a little camphor all wrapped in a handkerchief, to be held some time at his nose. And we must make artificial rain, pouring water from some high place into a cauldron, that he may hear the sound of it, by which means sleep shall be provoked on him.

* * *

“Then when I saw him beginning to be well, I told him he must have viols and violins, and a buffoon to make him laugh; which he did. In one month, we got him into a chair, and he had himself carried about in his garden and at the door of his chateau to see everybody passing by.”

On the return journey from Paris Benvenuto had another attack of malaria at Lyons which disgusted him with France and caused him to hasten back to Italy only to fall into disfavor with the Pope by whom he was cast into prison where he remained for two years. He escaped from prison in a daring manner but unfortunately broke his right femur three inches above the knee by falling from the rope by means of which he was descending the outer wall of the castle. Crippled as he was he crawled on his hands and knees to the house of his friend Cardinal Cornaro where he was treated by “Maestro Jacomo of Perugia, a most excellent surgeon”, whom we have already met. “He set my leg very skilfully, then bandaged it, and with his own hand bled me. My veins were unusually swollen, and, besides, he wished to make a rather large incision; so the blood sputtered furiously out in his face, and bespattered him so abundantly that he had to stop his operations. This he took to be a very bad augury; and it was with great reluctance that he went on treating me. Several times, in truth, he would fain have left me, remembering that he was risking no slight penalty in doctoring me, or at least in continuing his attendance. The Cardinal had me put in a secret chamber, and went off at once to the palace to beg me from the Pope.”

As his friends were unable to obtain a pardon and he was unable to complete his escape he was soon returned to his dungeon and there passed his time writing a long and very poor poem. He firmly believed that an attempt to poison him while in prison by putting diamond dust in his food was foiled by the cupidity of one of the plotters who substituted a cheap citron-colored beryl for the diamond which was to have been reduced to a powder. The account of t'l

manner of obtaining his pardon may easily be untrue but at any rate it gives an idea of the table manners of the day."

"A few days passed, and the Cardinal of Ferrara appeared in Rome. He went to do reverence to the Pope, who kept him so long that supper time came on; for his Holiness, who was a very able man, wished to talk over French affairs at leisure with him. Now at table people say things which otherwise they would leave unsaid. So was it now. The great King Francis was always most liberal in his dealings; and the Cardinal, who knew his character well, made promises on his behalf far beyond the Pope's expectations. So his Holiness was in high spirits about this. Besides, once a week, it was his habit to indulge in a great debauch, after which he vomited. So when the Cardinal saw the Pope was in a humor to confer favors, he asked for me in the name of his master with great insistence, bringing proof that King Francis had a strong feeling in the matter. Then the Pope, knowing the moment for vomiting was at hand—and besides his deep potations were also having their effect—said to the Cardinal with a great laugh, 'You shall take him home with you this instant;' and having given express orders to this effect, he rose from the table."

Almost immediately after his release from prison Bevenuto returned to France and entered the service of the French King, Francis I. One of his closest friends in Paris was Guido Guidi, the court physician, a native of Florence and a grandson of the painter Ghirlandajo. Cellini mentions him most affectionately—'Long before this I should have told of my friendship with one of the ablest, the most affectionate and friendliest men I have ever known in all my life. This was Messer Guido Guidi, an excellent physician and doctor, and a Florentine noble. But in telling of the endless troubles with which my adverse fortune assailed me, I have neglected to speak of him earlier. The omission mattered little, I thought, since I kept him ever near my heart. But now I see that the story of my life is incomplete without him; and so I shall bring him forward here, in the midst of my greatest trials; so that as he was then my strength and aid, now I can recall the good he did to me. At the beginning of our acquaintance, when he came to Paris, I took him to my castle, and there gave him a suite of apartments for his own use; and we were the best of neighbors for several years.'

* * *

"Messer Guido and I rejoiced in our friendship all the years I remained in Paris; and often did we congratulate ourselves and each

other that we were gaining skill at the cost of the great and wonderful prince, each in his own profession."

* * *

"In my castle I had a tennis-court, which I made very profitable by hiring it out to players. There were also some small rooms in the place where lived all sorts of men, and among them a very clever printer of books. Nearly the whole of his establishment lay inside my castle; and it was he who printed Messer Guido's first fine book on medicine."

As a further evidence of his esteem he permitted Guidi to be godfather to his first child. "Wishing now to complete my Fontainebleau, which was already carried out in bronze, also to finish the two Victories, which were meant to fit into the angles of the semicircle above the door, I took as model a poor young girl of about fifteen. She was lovely in shape, and something of a brunette; and as she was a wild little thing, with hardly a word to say for herself, swift in her movements and sullen eyed, I called her Scorzone; but her own name was Jeanne. With this girl as model I finished the bronze Fontainebleau very satisfactorily, as also the two Victories for the door. The young thing was pure and virginal, and I got her with child. She bore me a daughter at the thirteenth hour of the 7th of June 1544, when I was just forty-four years old. This daughter to whom I gave the name of Costanza, was held at the font by Messer Guido Guidi, the King's physician, a great friend of mine, as I have said before. He was the only godfather; for it is the custom in France to have one godfather and two godmothers. One of these was the Signora Maddalena, wife of Luigi Alamanni, a Florentine gentleman, and an admirable poet. The other was the wife of Messer Ricciardo del Bene, one of our Florentine citizens, and a rich merchant in Paris. She was a great French lady. This was the first child I ever had, so far as I remember. I assigned to her a dowry of the amount suggested by her aunt, into whose care I gave her. After that I never had anything more to do with her."

The book of Guido Guidi's mentioned above was a translation of Hippocrates and Galen and was probably quite popular in its day for Guidi was well known as a teacher. One of his pupils was the celebrated anatomist Vesalius who had just at this time been appointed physician to the Emperor Charles V. It was Vesalius who overthrew the reverence for the authority of Galen's animal anatomy by his demonstrations of actual dissections and by his employment of wood-cuts drawn after nature in illustration of his anatomical works.

Sylvius, the discoverer of the fissure and aqueduct of Sylvius was also one of his teachers and later the chief of his opponents. In the controversy Sylvius, with the object of defending Galen, asserted that the perfectly straight thigh bones, which as every one saw were not curved in accordance with the teachings of Galen, were the result of the narrow trousers of his contemporaries, and that they must have been curved in their original condition, when Galen studied them!

The surgeons of the 16th century were resourceful, if nothing else. Here is an account of one way to remove a foreign body imbedded in the eye. "Now one morning I was sharpening some chisels before beginning my work, when the finest splinter of steel flew into my right eye, entering the pupil so far that it could not be taken out by any means. I thought for certain I should lose the sight of that eye. At the end of several days I called in Maestro Raffaello de Pilli, the surgeon. He brought with him two live pigeons. Then laying me down on my back on a table, with a knife he cut open a great vein in the bird's wings, so that the blood spurted out into my eye. This eased me at once; by two days the splinter was out, and I was at rest, with my eyesight better than before. The feast of St. Lucy coming on in three days, I made a golden eye out of a French crown; and had it offered at the saint's shrine by one of my six nieces, the daughters of my sister Liperata."

As Benvenuto progresses with his narrative and approaches more nearly the time at which he was writing he thinks less of his health and more of the quarrels and rivalries which occupied much of his time. Here and there, however, some medical detail is given such as the following method of treating suppression of urine which is worthy of Mother Eddy: "Besides, there was a balance due to me for salary, which I thought would never be paid up now; for nearly three years had passed. But the Duke fell ill of a serious malady, the natural functions of his body being suspended for forty-eight hours. Seeing that the doctors' remedies were of no avail, perhaps he turned to God, and for that reason ordered that all those in his employment should be paid what was due to them. And I, too, was paid." The result was good and the method is worthy of more extensive trial.

Just before we part from our friend Benvenuto he relates another attempt to poison him which nearly succeeded. He seems to have grown pious in his latter days and he introduces this incident with much ceremony: "It pleased God, who doeth all things for our utmost good—at least He is ever the defender of such as confess Him and believe in Him—that in those days I fell in with a rascal from Vicchio called Piermaria d' Anterigoli, commonly called Lo Sbietta,

a sheep-farmer by occupation. As he was a near relative of Messer Guido Guidi, the physician, now the provost of Pescia, I gave ear to him when he offered to sell me a farm for the term of my natural life."

The story is too long to give in full but the gist of it is that having sold Benvenuto a life interest in their property and having received their pay for it, these thrifty sheep-farmers decided to shorten the term by trying the effect of a little corrosive sublimate on his digestion. To celebrate the closing of the bargain they prepared a feast during which he was given a number of special dishes served to him alone. Fortunately he did not eat heartily although they pressed them upon him, but on the way home the trouble began. "I had not gone three miles before I felt a burning in my stomach; and I was in such pain that I thought I should never reach my farm at Trespiano. But, as it pleased God, I got there at last after great efforts. It was late, and I prepared at once to go to bed. All that night I could not sleep for the disorder in my bowels. As soon as it was daylight, I discovered from my motions what made me suspect I had eaten something poisonous; and went over and over in my mind what it could possibly have been. Then I bethought me of the plates and bowls and other dishes given me by Sbietta's wife, which were different from the others; and how that rascally priest Sbietta's brother, had been so officiously polite, and yet would not stay to sup with us. Moreover, I recalled how he had boasted of his brother's clever trick in having sold a farm to an old man for his lifetime, who would not last the year—according to the report of that honest man Giovanni Sardella. So I felt sure that they had given me a dose of sublimate in the sauce, which was very well made, and most pleasant to the taste; for sublimate produces exactly the symptoms I noticed in myself. I am not used to eating much sauce or any seasoning with my meat, except salt; and yet I had eaten two mouthfuls, because it tasted so good. Then I went on to remember how often the wife of Sbietta pressed me in all sorts of ways to take more of it; so that I was convinced that they had put a dash of sublimate in my sauce.

"Wretchedly ill as I was, I was determined to work on my huge statute in the Loggia. However, after a few days, my sore sickness was too much for me, and I stopped in bed." "So I stayed in bed in wretched case, cared for by that most excellent man, Maestro Francesco da Monte Varchi, the physician. The surgeon, Maestro Raffaello de' Pilli, co-operated with him; for the sublimate had so burnt my intestines that I suffered from continuous diarrhoea. At last Messer Francesco recognized that the poison had done all the ill it could; for there had not been enough of it to overcome the vigor

of my excellent constitution; so he said to me one day, 'Benvenuto, give thanks to God; for you have conquered; and rest assured that I am going to cure you, just to spite the scoundrels who wished you ill.' Then Maestro Raffaello said, 'This will be one of the most wonderful and hardest cures ever heard of; for you must know, Benvenuto, that you swallowed a monthful of sublimate.' But Maestro Francesco cut in with, 'Perhaps it was a poisonous caterpillar.' And I answered that I knew well what poison it was, and who had given it to me. And here we all became silent. They went on tending me for more than six months; and a year had gone by before I regained my full strength."

Cellini told the Duke of the affair but it seems to have been looked upon as an almost legitimate bit of sharp practice and apparently there was no serious thought of punishment.

"In brief, I told him the whole story in all its particulars, stating the bare truth without a stain of falsehood on it. Then when I came to the poison, I begged him, if I, his servant, had ever found favor in his sight, instead of punishing Sbietta or those who gave me the poison, rather to give them some reward. For the poison had not been enough to kill me, but just enough to cure me of a deadly viscosity, which had attacked my stomach and my intestines. So well had it done its work, and so much had it bettered my health, that, whereas in the condition in which I was, I had but three or four years to live, now I could look forward to more than twenty. And so with better will than ever I give thanks to God. And, therefore, it is true what I have often heard folks say, 'God sends us ill that good may come of it.'

"The Duke was an attentive listener for more than two miles of our road. The only thing he said was, 'Oh, the scoundrels!'"

This brings us to the close of his narrative. He lived for eleven years after this poisoning episode and finally died of pleurisy in 1571. His last years were embittered by disappointments, and sorrow over the death or misconduct of his children. These were a rather miscellaneous assortment, the offspring of numerous mothers. But at the age of sixty-five, Benvenuto growing pious and respectable married his servant and mistress who had nursed him through the long illness following his poisoning, and legitimized the children she had previously borne him. After his marriage his wife bore him two more children, a son and a daughter, and there is no telling what the extent of his family might have been had not death summoned him at the age of seventy-one.

He was typical of the age in which he lived, hot-blooded, hot-headed, affectionate, revengeful, full of enthusiasm for his art, but not always capable of the sustained efforts his dreams required for their realization. The mixture of devoutness and superstition in his nature, with an utter absence of what we consider common every-day morality, is hard for us to understand in this day, but it was not an individual fault it was a characteristic of his age.

Minor and Operative Surgery, Including Bandaging. By HENRY R. WHARTON, M. D., Professor of Clinical Surgery in the Woman's Medical College, Philadelphia. New (seventh) edition, enlarged and thoroughly revised. 12mo, 674 pages, with 555 illustrations. Cloth, \$3.00 net. Lea & Febiger, Philadelphia and New York, 1909.

In this small volume the author presents the subject of minor and operative surgery, a task beset with considerable difficulty. The student beginning the study of surgery will find much help in the sections on bandaging, minor surgery, asepsis and anti-sepsis. These occupy about one-half of the book. The chapters on fractures and dislocations deserve perhaps special mention, while those on special operations are necessarily too brief to be of assistance to the practicing surgeon.

The book is not entirely in harmony with some present day principles, and while on some points there may be differences of opinion, the following objections would probably be sustained. Carbolic acid as a disinfectant of instruments, for washing sponges and disinfecting wounds scarcely deserves mention, when more effective and less dangerous methods have found universal employment. The caution to surgeons to watch for dark colored urine, vomiting and other signs of carbolic acid poisoning reminds one of the earliest days of anti-sepsis. The directions for the "Sterilization of rectum," nasal cavities, vagina, etc., might lead one to believe that such sterilization were possible. The intravenous injection of mercurials is considered a dangerous practice. The effort as stated in the preface to exclude methods which have become obsolete, has not been carried out in retaining the description of the technic employed in the strangulation with pin and ligature of vascular growths, naevi, and moles.

F. J. G.

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Vol. IX.

JULY, 1910.

No. 2

EDITORIAL COMMENT.

THE SIXTY-FOURTH ANNUAL MEETING.

The Sixty-fourth Annual Meeting has come and gone leaving behind it nothing but pleasant memories and a record of definite achievement. The election of Dr. Caples to the presidency is one which will meet with unanimous approval. He has given unsparingly of his time and energy to the profession of the State and in whatever capacity he has been called upon to serve he has never been found wanting. To keep up the pace which Dr. Evans has established will be no easy task, but for this undertaking no one could be better fitted than Dr. Caples.

The attendance at the scientific sessions was large, considering

the extreme heat, and the program provided food for thought suited to every taste. The Annual Addresses were all of a high order of merit.

As was foreshadowed the striking feature of the meeting was the spirit of goodfellowship which pervaded it from beginning to end. The Smoker and the Banquet will long be remembered by all who were present to enjoy them.

In looking back over the meeting, the only things one would wish to suggest in the way of friendly criticism for the guidance of future committees are the importance of considering the acoustic properties as well as the other more obvious features in choosing the place of meeting; and, even more important, the necessity for arranging the program in such a way that greater opportunity for free discussion may be afforded. The discussion of a paper brings out its important points in a way nothing else can do and its omission robs the program of nearly half its value. This difficulty can be met in only two ways, either by reducing the number of papers or by dividing into two sections for a portion of the session. It would be a pity to cut down the number of papers, for as it is the number is small considering the number of men in the state who are able to produce good papers. The other alternative, that of dividing into two sections for a part of the time, as suggested by the secretary in his comments on the meeting, is well worth trying to see if it is not more satisfactory than the present extremely unsatisfactory method of cutting off the discussion and hurrying on to the next paper, in order to keep up with the schedule.

THE UNIVERSITY AND MEDICAL EDUCATION.

The address of the retiring president which appears in this issue of the Journal deserves careful study by every member of the State Medical Society. We must build the University and especially its Medical Department into the structure of our medical lives by using it to help us to solve the problems of our daily work. It is not what we have, but what we use, that counts in medicine as in everything else, and the mere fact that the facilities for increasing the skill and usefulness of the physician are in existence at the University does not increase our individual medical resources unless we make practical use of these facilities.

In connection with University Extension work Dr. Evans said in his address: "The people because of their isolation or lack of opportunity inevitably lagged behind in the assimilation of knowledge developed." Now is not this true of medical knowledge as well? Do we

not lag behind in the assimilation and practical use of much of the recent knowledge that has been developed?

It is by using the University to keep us abreast with the times that both the University and the Medical Profession of Wisconsin will fulfill in the highest degree their respective functions of usefulness to the people.

THE ASSOCIATION OF COUNTY SECRETARIES AND STATE OFFICERS.

For the purpose of bringing the officers of the State and County Societies together once each year to exchange ideas and help each other in solving the problems of organization work, the value of this organization cannot be overestimated, and the good work done at the recent meeting will show in the local society of every man who attended. Forty-four registered and the meeting was a huge success in every way. Dr. Simmons, General Secretary of the American Medical Association, pronounced it the best meeting of the kind he had ever attended. The papers read will be published during the year in the Journal so that all may have the benefit of these ideas worked out by the men who are unselfishly giving their time to meet these problems and make their local societies broader and better each year. They are good fellows—every one—alive with the true Booster Spirit, and the head noise-maker wants to take this opportunity to tell them how he appreciates their coming and the interest they showed. Now for 1911!

ROCK SLEYSER.

THE ST. LOUIS MEETING.

The sixty-first annual session of the American Medical Association at St. Louis, June 6, 1910, was an important one in every way. In size it has been exceeded only twice in the history of the Association and in general interest and convenience of local arrangements it could hardly be excelled. The amount of constructive work being accomplished by the Association through its Committees cannot be mentioned in detail but it is enormous and is of great importance to every practicing physician.

The election of Dr. John B. Murphy of Chicago as the next President is sure to be well received in all parts of the country but especially here in Wisconsin where he was born. Dr. G. H. Simmons attempted to resign as General Secretary in order to separate that

office from the Editorship of the Journal. His resignation was accepted but the advantages of the combination and his effectiveness in that position were so obvious that he was re-elected by a unanimous vote of the House of Delegates.

St. Louis may have lost some of its old-time southern atmosphere but its "southern hospitality" has suffered no diminution, as all who attended the meeting will gladly testify.

COMMISSIONS AND REBATES.

In a certain large city of Wisconsin a physician, not a member of the State Medical Society, published in the daily press a few weeks ago in the form of an article entitled "The Grafter in Medical Practice," an accusation charging the medical profession with grafting in connection with the sending of patients to surgeons and specialists. While his charges were aimed directly at the general practitioner they also affect by implication the surgeon or specialist, for the giver of a bribe is no less guilty than he who receives it. Unfortunately for the good of our souls his philippic lost all of its force by degenerating into a plain unvarnished advertisement of himself in its final paragraphs.

A medical man who resorts to publicity of this sort is not an especially desirable citizen but the really important question concerns ourselves and not him. The *accusation* is not the serious thing. But the *truth* or *falsity* of the charge is of the most tremendous seriousness. If it is true that we have in our ranks the givers and takers of rebates and commissions we must not condemn this man for publishing the fact. If it is true it ought to be published; it would serve us right; if we are guilty we ought to be exposed.

This whole question of rebates and commissions is one to which we must give earnest thought. It is not a question which can be settled by the appointment of an investigating committee by the State Medical Society, or by the adoption of resolutions by the various County Societies; it is a question which must be settled between the individual physician and his own conscience.

The fundamental principle involved in this question is that of the responsibility of the physician to his patient. The physician is, in a way, the agent of the patient and is paid by the patient to look out for his interests. These interests are just as much concerned in the choice of the surgeon or specialist who may be needed as they are in the choice of the drugs to be prescribed or the other therapeutic measures to be applied. If the physician accepts a gift or a commission

from the consultant to whom the patient is referred is he not laying himself open to the charge of disloyalty to his trust? The general practitioner may plead that he can send his patients to some very able consultants and still obtain a rebate while securing for them services of a high degree of excellence. This does not alter the vicious nature of the custom any more than it would alter the pernicious effect of selling his vote if a man pleaded that he sold it to the party he would have voted for anyway. The voter or the rebater ceases to be a free man. He makes himself unfit for his responsibilities, for, whether he recognizes the fact or not, each time he offends he inflicts an injury upon his moral nature and becomes less and less qualified to decide the questions it is his duty as a citizen or as a physician to settle for himself.

The physician who charges his patients a fee and then accepts a present from the surgeon or specialist is putting himself in a position very suspiciously like that of the attorney who accepts fees from both sides in a litigation. The latter is disbarred if detected; what should be done to the former?

LIST OF COUNTY SOCIETY OFFICERS.

On page 110 of this issue will be found a list of the County Medical Societies of Wisconsin together with the names of the president and secretary of each. It has been customary to publish this list in the number of the Journal containing the complete Transactions of the Annual Meeting, but as this does not appear until November or December, and most of the elections take place in January, it has become out-of-date almost as soon as it is in print.

CORRESPONDENCE.

NURSES AND TUBERCULOSIS.

The following resolutions were adopted by the Directors at the June meeting of the Wisconsin State Association of Graduate Nurses:

WHEREAS, The graduate nurses of Wisconsin are being criticised by the medical profession because many of them show a lack of co-operation in the care of tuberculosis patients either in their homes or in institutions, and this lack of co-operation is felt by the body of nurses to be due to the insufficient training nurses are receiving in the modern treatment of tuberculosis; therefore be it

Resolved, That the physicians and superintendents of training schools

of Wisconsin be requested to devote more attention to the instructing of pupil nurses in the care of tuberculosis patients, and when such instruction is not possible in their schools owing to the exclusion of such patients, some affiliation with tuberculosis sanatoria be secured; further be it

Resolved, That a copy of these resolutions be sent to the editors of the Wisconsin State Medical Journal, the American Journal of Nursing, and to the superintendents of all training schools for nurses in this state.

Committee, M. G. TOMPKINS,
M. C. BRADSHAW,

NEWS ITEMS AND PERSONALS.

Dr. Haggerty, of Boscobel, is said to be suffering with rheumatism of the eyes.

Dr. R. U. Cairns, of River Falls, sailed from Boston for Europe on June 11th.

Dr. J. Hansen, of Glenbeulah, has gone to Europe. He expects to return September 1st.

Dr. L. F. Jermain, Milwaukee, has gone to Vienna to take a post-graduate course.

Dr. Williams, one of the oldest physicians of Green Bay was seriously injured in a fall.

Dr. E. K. Schreiner, Hillsboro, left on June 26th for a three months sojourn in Norway.

Dr. G. J. Kaumheimer, Milwaukee, who has been ill with blood poisoning is slowly recovering.

Dr. W. Cunningham, of Platteville, fractured his right arm on June 15th while cranking his automobile.

Dr. Frank E. Darling, Milwaukee, has resigned his position as Registrar of Vital Statistics of the Health Department.

Dr. Fred C. Gillen has returned to Milwaukee after an extended trip through Panama, where he studied sanitary conditions.

Dr. Wm. R. Bell, of Marinette, returned from Europe on June 29th, after a year's absence. He spent most of his time at the hospitals in Vienna.

Dr. Kate Kelsey, Health Officer of the town of Cable, recently drove four miles through a dense forest to warn a settler and family of an approaching forest fire.

Eighty-one soldiers at Fort Banks, Winthrop, Mass., volunteered to be inoculated with anti-typhoid fever serum, for the purpose of determining the effect of the treatment.

Insurance for members afflicted with tuberculosis and the establishment of a tuberculosis sanitarium, are propositions under consideration by the Order of Beavers. This association has 15,000 members in the State.

The German Evangelical Deaconesses' Society of Wisconsin,* has purchased the former home of Dr. H. V. Wurdemann, on Grand Avenue, Milwaukee, for hospital purposes, and will be ready to receive patients in about two months.

Removals. Dr. Erwin C. Cary, Manitowoc to Bear Creek.

Dr. F. C. Binnewies, Milton to Janesville.

Dr. Olaf Urheim, Chetek to Eau Claire.

Dr. C. G. Dwight, Janesville to Long Beach, Cal.

Dr. E. P. Weber, Cedarburg to South Germantown.

Dr. G. W. Henika, of Readstown, has disposed of his practice to Dr. A. D. Galloway, of North Prairie, and will spend the summer and fall in post-graduate work in Chicago, after which he expects to locate at Oshkosh.

Marriages. Dr. G. W. Patchen and Miss Zola Bauman, both of Manitowoc, at Chicago, on June 26th.

Dr. Wesley Taggett and Miss Anna Blake, both of Mellen, on June 18th.

Dr. Charles H. Stoddard, Milwaukee, and Miss Eloise M. Jackson, Birmingham, Ala., at Chicago on June 25th.

Dr. John M. Kelly, Cato and Miss Sadie Brennan, Maple Grove, June 15th.

Dr. D. Waters and Miss Estella Asher both of Grand Rapids, June 23d.

Dr. William Young and Miss Linn Sprague, both of Elkhorn, on June 29th.

Dr. J. Carl Doolittle and Miss Pearl McDonald, both of Lancaster, June 23d.

Dr. J. G. Harris and Miss Ella J. Smythe, both of Cuba City, on June 10th.

Dr. J. W. Rockwell and Miss Ethel Parrish, both of Grand Rapids, June 7th.

The Trustees of the University of Pennsylvania have announced recently certain changes in the personnel of the teaching staff to go into effect at the beginning of the next academic session, September 1, 1910.

To fill the Chair of Theory and Practice of Medicine made vacant by the resignation of Dr. James Tyson, Dr. David L. Edsall has been transferred from the Chair of Pharmacology and Therapeutics and the vacancy in the latter will be filled by the appointment of Dr. A. N. Richards, now Professor of Pharmacology in the Medical School of the Northwestern University.

\$100,000 has been received for the endowment of a Chair of Physiological Chemistry and Dr. Alonzo Englebert Taylor of the University of California will be its first occupant.

Dr. Richard M. Pearce of the University and Bellevue Hospital Medical college of New York, has been appointed Professor of Pathology. Dr. Pearce will also direct the work of the department of Research Medicine recently established by an endowment of \$200,000.

Dr. Allen J. Smith, the present Dean of the Medical School will be the occupant of the new Chair of Comparative Pathology and be at the head of the newly instituted courses in Tropical Medicine.

Dr. Paul Lewis, who will have charge of the Laboratory of the Phipps Institute for the Study, Prevention and Treatment of Tuberculosis, now an integral part of the University, has been elected Assistant Professor of Pathology.

Deaths. Dr. Edward Johnson, of Watertown, died on May 30th of heart disease. Dr. Johnson was born in Killaloe, County Clare, Ireland, July 21, 1822. He came to America in 1836, locating in New York City. In 1843 he came to Watertown and resided there continuously, except for a few years spent at Milwaukee and in California.

Dr. Charles L. Sonnemann, Milwaukee, died on June 23. He was born in Youngstown, Ohio, in 1869. Dr. Sonnemann graduated at the Northwestern University in 1894.

Dr. Carl Bruck, Milwaukee, died on June 10th aged 54. Dr. Bruck was born at Mayence on the Rhine, Germany. He came to New York when 20 years of age. He resided in New York and Washington a few years and then came to Milwaukee. He was an instructor in gymnastics at Erie, Pa., and St. Louis, and later in the Turnverein at Milwaukee. He was graduated from the Wisconsin College of Physicians and Surgeons in 1896. For several years he was assistant physician at the Milwaukee County Hospital for the Insane. After he left that institution he established a private practice. He was a member of the State Medical Society of Wisconsin.

Dr. Robert Newton Hawley, a former resident of Milwaukee, died on June 13th, at Baltimore, Md., aged 54. After graduating from Hamilton College, Dr. Hawley took a course at the College of Physicians and Surgeons, New York, and later a post-graduate course in Rotunda Hospital, Dublin, Ireland. He enlisted from Milwaukee during the Spanish-American War, and continued in the revenue cutter service for some time after the close of the war, spending several years in the Behring Sea and Arctic Zone districts.

The Propaganda for Reform in Proprietary Medicines. Sixth Edition. Containing the various exposes of nostrums and quackery which have appeared in *The Journal of the American Medical Association*. Price, paper, 10 cents; cloth, 35 cents. Pp. 292. Illustrated.

This book presents in convenient form most of the exposures that have appeared in the Journal of the Amer. Med. Ass'n. showing fraud either in the composition of various proprietary preparations or in the claims made for such preparations. Not all of the products dealt with, however, are such as are—or have been—used by the medical profession. Many preparations of the "patent medicine" type have been subjected to analysis and the results of such examinations appear in this volume. The book will prove of great value to the physician in two ways: 1, it will enlighten him as to the value, or lack of value, of many of the so-called ethical proprietaries on the market; and 2, it will put him in a position to answer intelligently questions that his patients may ask him regarding the virtues (?) of some of the widely advertised "patent medicines" on the market. After reading the reports published in this book physicians will realize the value and efficiency of simple scientific combinations of U.S.P. and N.F. preparations as compared with many of the ready-made, unstable and inefficient proprietary articles.

BYRON M. CAPLES, M. D.,
PRESIDENT STATE MEDICAL SOCIETY OF WISCONSIN, 1910-1911.

Dr. Byron M. Caples, of Waukesha, the recently elected president of the State Medical Society of Wisconsin, was born at the Dalles, Oregon, in 1865. After acquiring his elementary education he entered Williamette University and graduated from the medical department of that institution in 1889, and from Rush Medical College in 1891. He was assistant physician at the Milwaukee Sanitarium until 1895; spent the years 1896 and 1897 in Europe, and since 1898 has been superintendent of the Waukesha Springs Sanitarium.

Because of his untiring activity in behalf of the profession, few members of the State Society are better known to the physicians of Wisconsin than is Dr. Caples. He has long served as delegate to the American Medical Association and as a member from Wisconsin of the committee on medical legislation of the American Medical Association. In his own County, Waukesha, he has been twice honored with the presidency of the County Medical Society, and in the State Society his active co-operation, when called upon, has always been readily obtained.

Dr. Caples has well earned the honor now bestowed upon him, and, fortified by his long experience, will unquestionably prove an able presiding officer.



BYRON M. CAPLES, M. D.

THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORGANIZED 1841.

Officers 1910-1911.

BYRON M. CAPLES, Waukesha, President

J. M. Dodd, Ashland, 1st Vice-President. T. J. Redelings, Marinette, 2d Vice-President.

Wilson Cunningham, Platteville 3rd Vice-President.

CHAS. S. SHELDON, Madison, Secretary. S. S. HALL, Ripon, Treasurer.

ROCK SLEYSER, Waupun, Assistant Secretary.

A. W. GRAY, Milwaukee, Chairman Program Committee.

G. E. SEAMAN, Milwaukee, Chairman Medical Defense Committee.

J. P. McMAHON, Milwaukee, Chairman, Committee on Public Policy and Legislation.

Delegates to American Medical Association.

L. F. Bennett, Beloit. C. S. Sheldon, Madison. A. H. Levings, Milwaukee.

Alternates.

F. S. Wiley, Fond du Lac. Wilson Cunningham, Platteville. R. G. Sayle, Milwaukee.

Councilors.

TERM EXPIRES 1911.		TERM EXPIRES 1914.	
1st Dist., H. B. Sears, - -	Beaver Dam	7th Dist., Edward Evans, - -	La Crosse
2nd Dist., G. Windeheim, - -	Kenosha	8th Dist., T. J. Redelings, - -	Marinette
TERM EXPIRES 1912.		TERM EXPIRES 1915.	
3rd Dist., F. T. Nye, - -	Beloit	9th Dist., O. T. Hougen, - -	Grand Rapids
4th Dist., W. Cunningham, - -	Platteville	10th Dist., R. U. Cairns, - -	River Falls
TERM EXPIRES 1913.		TERM EXPIRES 1916.	
5th Dist., J. V. Mears, - -	Fond du Lac	11th Dist., J. M. Dodd, - -	Ashland
6th Dist., H. W. Abraham, - -	Appleton	12th Dist., H. E. Dearholt, - -	Milwaukee

NEXT ANNUAL SESSION, WAUKESHA, 1911.

The Wisconsin Medical Journal, Official Publication.

SOCIETY PROCEEDINGS.

THE ANNUAL MEETING.

Another Annual Meeting of the State Medical Society has become a matter of history, and we may profitably stop for a moment to take an inventory of our possessions and ascertain, if we can, what progress the Society and the profession have made during the past year. As to the meeting itself, like most other affairs which are merely earthly, it was not entirely satisfactory. While, on the whole, it was thoroughly enjoyable and successful, there were some drawbacks to mar it's complete success. Fortunately, however, we shall be able to remedy most of these defects hereafter.

To begin at the beginning, the "First Annual Meeting of the Officers and County Secretaries" on Tuesday, in charge of Head Booster Rock Sleyser, was freely conceded by all present to be a howling success in every particular. The attendance was unexpectedly large. Those on the program were promptly on hand with thoughtful and interesting papers, and the spirit of the whole meeting was decidedly helpful and

encouraging. Everybody thought we should have such a meeting every year, and that it would be of the greatest service in maintaining and strengthening our whole organization. Dr. Simmons, the Secretary of the A. M. A. gave us a good talk on County Societies, and pronounced strongly in favor of such meetings. The meeting was followed by a banquet at the Pfister, at which there were more talks on County-Society work, and which afforded further opportunities for getting better acquainted. So much for a good beginning.

The House of Delegates which held its first and most important meeting on Tuesday evening transacted the business of the Society, as usual, smoothly and with dispatch. The reports from the officers and various committees manifested a prosperity and an activity in various directions which is most encouraging. Every one of the fifty-three County Societies had sent in its Annual Report, and all are regularly organized, with the officers for 1910 duly elected. This is the first time since our reorganization that such a state of affairs has existed. The 1910 membership at the time of the meeting was 1549, all of whom have paid the 1910 dues. This is 101 more than we had one year ago at the time of the Madison Meeting. Our membership will go beyond the 1600 mark before the next Annual Meeting. The largest attendance in the House was only twenty-seven,—the first session—the other sessions having seventeen and ten respectively. Twenty-five Counties were unrepresented during the session. This is hardly a representative body for a Society of 1600 members. The Secretary again proposed that an amendment to the By-Laws be adopted by which the County Secretaries should become ex-officio members of the House of Delegates. The amendment was rejected by a House of 11, but the Secretary is still firmly of the opinion that such a provision would introduce a very desirable element into the House of Delegates and he can see no valid objections to the plan. Moreover, as Dr. Simmons strongly urged, each County Society should send its Secretary to the Annual Meeting and pay his expenses. The amendment will be proposed again at the next Annual Meeting, and it is very desirable that the full House should pass on the question.

The scientific program this year was of an exceptionally high order and the papers were almost without exception much above the average, largely the result of an immense amount of the unselfish work done by Dr. Foerster, the Chairman of the Program Committee. The addresses in Medicine and Surgery were greatly enjoyed and it was a double pleasure to listen to one of our own Wisconsin boys, Dr. Bloodgood, who has won for himself in the East a high rank as a surgeon.

It is a just criticism of the meeting that so little time was permitted for discussions, which all agree should be the very best part of the program. To obviate this defect, it would seem necessary either to materially shorten the program to sixteen or eighteen papers (it is now twenty-four) or divide the Society into two sections—Medical and Surgical. The latter plan seems most desirable and it might be well to adopt it for the Waukesha Meeting. With 1600 members, the Society is large enough to warrant such a trial, and if it does not work out to our liking we can try the other way, but, in some way or other, the discussion of papers should be much more in evidence.

Socially the "Smoker" on Wednesday evening, and the banquet on Thursday evening were both thoroughly enjoyable, and to dispense with either would be a real misfortune. The Banquet was especially successful, and each year these occasions seem to grow better and better.

The drawbacks to which I have referred were largely due to the date of the meeting, and the intense heat which prevailed during the entire session. Added to this, was the difficulty in hearing the speakers, due to the bad acoustic properties of the Assembly room, and the noise and confusion in its immediate vicinity. The sweltering heat, however, was the most serious hindrance to a large attendance, and the opinion was freely expressed that we should hold no more meetings so late in the summer. Inasmuch as the A. M. A. meeting is usually held in the first part of June, it would make it necessary to make our date either early in May, or else put it off till the fall,—perhaps in the latter part of September. We usually have pleasant weather at that time, and there is less sickness than early in May. There would seem to be no serious objection to a Fall meeting if the Council should so determine.

The Annual Meeting is the general round up for the year, and, as such, the showing was excellent. The Committee on Medical Defense reported that no cases have been lost thus far, and that the plan is constantly growing in favor. Our own Medical Journal is fairly launched, and the voyage thus far is eminently satisfactory. Its financial outlook is bright, and its possibilities are almost without limit—not only in giving publicity to the work of the County and State Societies, but as a medium through which the united profession of the State may more successfully attack the problems which call for a solution. With this splendid instrument at our command, it remains for us to make an intelligent and effective use of it in the accomplishment of our purposes.

In general, the spirit of the profession of the State is harmonious and united. Organization is gradually rounding into permanent shape. We are beginning to feel our strength and now we should learn how best to use it. This is the legislative year, and now is the time to think about formulating and putting in shape whatever measures are to be proposed this coming winter. Probably the most important matter for our consideration is an overhauling of the laws providing for a State Board of Medical Examiners. If we are to act in this matter our Committee should very soon begin the work of revision. A non-sectarian board, appointed by the Governor, seems most in favor. The Report on Medical Education of the Carnegie Foundation has this to say on the subject. "A model State Board law must therefore guard the following points: The membership of the board must be drawn from the best elements of the profession, including—not, as now, prohibiting—those engaged in teaching, the Board must be armed with the authority and machinery to institute practical examinations, to refuse recognition to unfit schools, and to insist upon such preliminary educational standards as the state's own educational system warrants; finally, it must be provided, either by appropriation or by greatly increased fees, with funds adequate to perform efficiently the functions for which it was created."

As regards this and other legislation we are now in a position where we can, if we choose, carefully lay our plans long in advance, and bring them to a successful conclusion. If the 1600 members of the Society shall unitedly and sincerely support any measure which we are likely to propose, success is already assured.—C. S. S.

**SIXTY-FOURTH ANNUAL MEETING OF THE STATE MEDICAL
SOCIETY OF WISCONSIN, MILWAUKEE, JUNE 22,
23 AND 24, 1910.**

DIGEST OF MINUTES OF THE HOUSE OF DELEGATES.

Meeting of the House of Delegates, June 21, 1910, eight o'clock P. M., called to order by the President. Roll call by the Secretary showed a quorum present. The appointment of a Committee on Credentials was dispensed with.

The report of the delegates to the American Medical Association was read by Secretary, and upon motion was adopted as read.

The report of the Committee on Medical Defense was presented by Dr. G. E. Seaman of Milwaukee, and upon motion was adopted as read.

The report of the Committee on Public Policy and Legislation

was read by Dr. J. P. McMahon and upon motion was adopted as read.

The report of the Committee on Publication was presented by Dr. A. J. Patek of Milwaukee and motion made for its adoption and publication in the next copy of the Journal which motion was put and unanimously carried, and report adopted as read. On motion, duly seconded, a vote of thanks was tendered by the House of Delegates to the Publication Committee and Editors of the Journal for the splendid work they have done.

The report of Delegates to National Legislative Council was read by Dr. Byron M. Caples of Waukesha, and upon motion was adopted, as read.

The report of the Committee on Necrology was presented by Dr. A. J. Patek of Milwaukee, and upon motion was adopted as read.

The report of the Chairman of Council was presented by Dr. Edward Evans. Reports of Councilors from the 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th and 12th districts presented and accepted.

Dr. Boothby moved the appointment of a committee of three by the Chair to draft an outline report for county secretaries and councilors, said committee to report later to the Council, which motion was seconded and carried, and the following Committee was appointed by the Chair: Dr. J. W. Dodd, Dr. Wilson Cunningham, and Dr. C. S. Sheldon, Secretary.

The report of Treasurer was presented by Dr. S. S. Hall of Ripon, and upon motion duly seconded and carried was adopted as read.

The report of the Secretary was presented by Dr. C. S. Sheldon, and upon motion duly seconded, was adopted as read.

The secretary, Dr. C. S. Sheldon, was elected Delegate to A. M. A. Dr. Wilson Cunningham was elected alternate. Dr. A. H. Levings was elected Delegate to A. M. A. Dr. R. G. Sayle was elected alternate.

Dr. J. M. Dodd, Ashland, was elected Councilor, Eleventh District, to succeed himself.

Dr. H. E. Dearholt was elected councilor, Twelfth District, to succeed Dr. A. T. Holbrook, resigned.

On motions duly seconded and carried, the present Committees on Public Policy and Legislation, Prevention of Tuberculosis, Medical Education and Necrology were continued.

On motion, duly seconded and carried, Dr. Bardeen was elected as Committee to act with Board of Public Instruction A. M. A. to succeed Dr. W. B. Hill.

On motion, duly seconded and carried, Dr. Byron M. Caples, was elected Delegate to National Legislative Council.

On motion, duly seconded, Dr. M. P. Ravenel was elected Delegate to Council on Medical Education A. M. A. to succeed Dr. W. B. Hill.

Certain amendments to the Constitution and By-Laws were offered, under the head of miscellaneous business, to be considered by the House of Delegates, and taken up at the next meeting.

WEDNESDAY, JUNE 22ND, 9:15 A. M.

Meeting called to order by the President. Roll call by the Secretary, showing a quorum present. The minutes of the preceding meeting were read by the Secretary and approved as read.

The amendments to the constitution and by-laws presented at the preceding meeting were taken up and discussed, and the following action taken thereon.

The proposed amendment to the by-laws providing that Chapter four, Section 10, shall be effaced, was laid over until the next meeting.

The proposed amendment to Chapter 9 providing for the addition of a new section, to-wit: Section 15, was laid over until the next meeting.

The proposed amendment to Section 3, Chapter 5, of the by-laws, and Section 3, Article 9, of the constitution, providing for changing the words "last day" to the words "second day" was on motion, duly put and carried, adopted.

The proposed amendment to Section 11, Chapter 4, providing for the striking out of the following:

"When so organized, from the presidents of such district societies shall be chosen the vice-presidents of this Society, and the presidents of the county societies of the district shall be the vice-presidents of such districts societies,"

was upon motion duly seconded and carried, adopted.

The proposed amendment to Chapter IV, Section 2 of the by-laws, as follows:-

"The Secretary of each component county society shall be ex-officio a member of the House of Delegates; and each county society shall be entitled to send to the House of Delegates one additional delegate for every fifty members, and one for each major fraction thereof, but each component society which has made its annual report and paid its assessment as provided in this constitution and by-laws, shall be entitled to one delegate in addition to the secretary."

was discussed at length, and upon motion duly seconded and carried, after a division of the house and rising vote, was rejected.

Nominations were made from each district for a nominating committee of twelve for the purpose of nominating state officers. The following were named as the nominating committee: 1st District, Dr. Wilkinson; 2nd District, Dr. Jorgensen; 3rd District, Dr. Bennett; 4th District, Dr. Oettiker; 6th District, Dr. Sanborn; 7th District, Dr. Edwards; 8th District, Dr. Oswald; 9th District, Dr. Balley; 10th District, Dr. Baker; 11th District, Dr. Sperry; 12th District, Dr. Sayle.

The rules were suspended and the Secretary cast a ballot for the above nominees. The nominating committee to report at the next meeting, the second day, instead of the morning of the last day.

THURSDAY, JUNE 23RD, 9:45 A. M.

The Secretary called the roll showing that a quorum was present. The Nominating Committee reported recommending that the following be elected to offices for the ensuing year:

President, Dr. Byron M. Caples, of Waukesha.

First Vice-President, Dr. J. M. Dodd, of Ashland.

Second Vice-President, Dr. T. J. Redelings, of Marinette.

Third Vice-President, Dr. Wilson Cunningham, of Platteville.

Report unanimously adopted and nominees elected.

Section 11 of Chapter 4 of the By-Laws was amended by omitting the last paragraph thereof, reading "When so organized, from the presidents of such district societies shall be chosen the vice-presidents of this society, and the presidents of the county societies of the district shall be the vice-presidents of such district societies."

Proposed amendment to Chapter 9 as follows: Section 15 to read: "Each county society shall have the right to admit as an associate member any reputable physician who for well-founded reasons may not be able to become a member of the state society; and may grant to such associate member upon the payment of satisfactory dues, all rights and privileges of other members, with the exception of holding office, voting for officers and voting on any question relative to the state society." This was referred to Council for action.

It was determined to hold the 1911 meeting at Waukesha, Wisconsin. The date of holding the meeting to be determined hereafter by the Committee of Arrangements.

Dr. A. S. Loevenhart presented report on Pharmacopoeial Convention held at Washington, May 6th and 7th, 1910, saying that H. H. Wiley was elected president, that politics dominated the convention to a large extent, and that a motion to exclude all drugs having no therapeutic value was lost. Report unanimously adopted.

Constitution and By-Laws amended so that report of Nominating Committee shall be received on the second day of the general session.

Adjourned.

REPORT OF PUBLICATION COMMITTEE OF THE WISCONSIN MEDICAL JOURNAL.

Statement of earnings, equipment, expenses and circulation, January 1st to June 1st, 1910.

TOTAL EXPENSES.

Equipment	\$ 137.73	
Printing	962.60	
Salaries	542.50	
Commissions for securing advt. contracts	552.50	
Postage	120.00	
Current Expense	94.60	\$2,409.93

TOTAL EARNINGS.

Advertising	\$1,695.54	
Subscription	27.85	1,723.39
Deficit.....		686.54

CIRCULATION.

To members of the State Medical Society	8,295	
On Request of Booster Club.....	128	8,423

The deficit of \$686.54 minus the cost of equipment \$137.73 leaves an actual deficit of \$548.81 which represents the cost to The State Medical Society of circulating 8423 copies of The Journal, or about 6½ cents a copy.

(Cost of each copy prior to the transfer of The Journal to The State Medical Society, 10 cents.)

THE WISCONSIN MEDICAL JOURNAL.

Financial statement, January 1st to June 1st, 1910.

Received from The State Medical Society	\$ 943.80	
Collected from advertising.....	753.16	
Collected from subscription.....	1.60	1,698.56

DISBURSEMENTS.

Equipment	\$ 112.73
Printing	550.50
Salaries	328.00

Postage	120.50	
Current Expense	94.90	1,206.63
		<hr/>
Balance on hand June 1, 1910...		491.93
PRESENT CONDITION.		
ASSETS.		
Equipment	\$ 137.73	
Bills Receivable	934.29	
Cash on hand.....	491.93	1,563.95
		<hr/>
LIABILITIES.		
Bills Payable		1,177.80
		<hr/>
Surplus.....		386.15

PROCEEDINGS OF THE GENERAL SESSION.

Meeting called to order Wednesday, June 22nd, 1910, 11 o'clock A. M., by the President, Dr. Edward Evans, of La Crosse.

The address of welcome was delivered by Mayor Emil Seidel, who said: I assure the physicians present of the sympathy and support of the socialistic administration. The Socialists have endeavored to secure the best man available as health commissioner, and ask the support of the representatives of the Medical Society in Milwaukee in enabling effective work to be done in that office. Our administration promises improved city sanitary conditions in every line.

ANNUAL ADDRESS OF THE PRESIDENT, EDWARD EVANS, LA CROSSE.

(Published in this issue of the Journal.)

HUMAN PANCREATIC JUICE, DR. H. C. BRADLEY, MADISON.

Human pancreatic juice in its normal form has been rarely obtainable. In the case under consideration an opportunity offered for its examination for six successive weeks, due to a temporary fistula. The physical and chemical characteristics of the juice were determined from day to day. And contrary to general teaching the juice was found seldom to be alkaline with sodium bicarbonate. Contrary to general belief pancreatic juice is proteolytic before it reaches the intestine; and the pancreatic juice of one animal will activate the pancreatic juice of another animal that flows inactively. The enzyme trypsin was found to activate itself within perhaps 48 hours to a week.

Discussion.

DR. WILHELM BECKER, Milwaukee: I think it is pretty well determined that it is merely atmospheric air, or the carbonic acid in the intestine, which activates the enzymes.

DR. A. S. LOEVENHART, Madison: Nothing has been thus far proved as to the nature of the activation of the pancreatic juice that comes about on standing; it is, however, perhaps due to hydrolysis or some combination between the enzymes and some other unknown constituent of the juice.

POSSIBILITIES OF PROPHYLACTIC MEASURES IN THE DEVELOPMENT OF
INSANITY, DR. ARTHUR W. ROGERS, OCONOMOWOC.

Insanity is increasing to an alarming extent. The fight against tuberculosis is world wide, but who hears of the fight against the prevalence of insanity. The disease must be fought through instruction in the public schools and on the part of parents. The liquor traffic should be regulated. The rapid increase of drug habitues must be checked. The social evil must be curbed. Venereal diseases must be as far as possible eradicated. Prejudice and ignorance must be overcome, for they have caused mental diseases to be neglected in the medical colleges, and by the medical profession, giving rise to the crude schools of Christian Science and Emmanuelism. The physician has too long been only a medical man; he must also be a good citizen. A national department of health should be established. The first duty of the medical profession lies along the lines of prophylaxis. Education is the important feature. Reduce the number of medical colleges and elevate their standard, then wage a campaign through the medical and lay press, local and state boards of health, and through the schools and universities, to prevent the spread of insanity.

Discussion.

DR. W. F. BECKER, Milwaukee: Prophylaxis is a difficult problem. All the activities that make for human betterment lead to the solution of the problem of the prevention of insanity. Heredity and alcoholism are important factors of causation.

I cannot endorse the sterilization of the criminal as practiced in Indiana. Environment and not vicious predisposition frequently produces the criminal. Desperate circumstances at one time nearly made Henry George, one of the high-minded men of the world, a criminal. There are many such cases. Should sterilization be practiced in such cases? However, vasectomy and sterilization are advisable in cases of imbecility.

Societies should be established for the care of the insane after their discharge from insane hospitals, and also for the care of those who are in danger of becoming insane. This is a most important point and should be undertaken along the lines of the anti-tuberculosis crusade.

DR. ROGERS (closing): We should advocate the establishment of a law for the sterilization of the chronic criminal, the chronic insane and the degenerate, and the establishment of a hospital to properly care for the inebriate.

RESULTS OF HEREDITY AND THEIR BEARING ON POVERTY, CRIME AND DISEASE, DR. A. W. WILMARTH, CHIPPEWA FALLS.

There is a great awakening of public interest in the increase of the dependent classes. The number of mentally and morally incompetent may be measured in the hundreds of thousands. Their cost to the competent members of society is reckoned in millions of dollars. Their harmful influence is beyond computation. The laws of nature indicate and actual observation confirms the fact that the physical conditions on which such incompetency is based are in the majority of cases transmitted, and consequently largely preventable.

Among other methods of curtailment I should suggest in proper cases restriction of marriage, sequestration and surgical intervention.

Discussion.

DR. W. H. WASHBURN, Milwaukee: Disease is a great factor in natural selection, and disease has been in great measure prevented by the advance in medical science. Under the circumstances it is surprising that the human race is as decent as it is, and we have the female portion of the community to thank that this is so. Humanity and altruism impose on us the obligation of supervising the unborn. In the case of chronic criminals I advise vasectomy or resection of the Fallopian tubes. Education is the keynote. Let us take the first step. The people must be educated. Then in another generation the legislators can be reached and perhaps in a generation after that legislation secured.

DR. W. F. BECKER, Milwaukee: In selected cases I would advocate sterilization by consent. It is more easily secured often than would be thought likely. Imbeciles, defectives and delinquents may frequently be allowed to remain at large with safety, if they are sterilized.

CO-RELATION BETWEEN SPLANCHNOPTOSIS AND PULMONARY TUBERCULOSIS, DR. WILHELM BECKER, MILWAUKEE.

The phthisical habit and *asthenia universalis*, *splanchnoptosis*, are identical. Hence the phthisical habit is not a specific phthisical inheritance. Stillier's costal stigma is a constant concomitant of the same, indicating its presence, but not its degree. Stillier's costal stigma, being a congenital defect, and present in earliest infancy can therefore be considered a diagnostic feature of the *habitus phthisicus* (so-called) long before phthisis has developed. The early diagnosis of *asthenia universalis* offers great opportunities of combating congenital disposition to tuberculosis.

PRACTICAL MEDICINAL THERAPEUTICS AS IT APPEARS FROM THE PRESCRIPTION FILE, DR. JULIUS NOER, STOUGHTON.

An examination of many thousands of prescriptions from the files in drug stores shows prescriptions by physicians of an inordinate mass of pseudo-therapeutic agents. My investigation shows that talismanic therapeutics did not die with Paracelsus nor has the mother church in Boston a monopoly as a promoter of pseudo-science, and second that the excellent work of the council on pharmacy and chemistry of the American Medical Association is not without cause and justification.

How can we improve existing conditions as regards the use of proprietary and semi-secret nostrums. We should urge the continuance of this monumental work of the council. The new edition of the Pharmacopeia should contain the remedies in general use by practising physicians which have been shown to possess therapeutic properties. It would be further advisable to establish a pharmacologic laboratory.

Discussion.

DR. A. S. LOEVENHART, Madison: The situation is not encouraging. The nostrum and proprietary evil is growing. The whole drug business is in a bad state in many ways. With some striking exceptions, the vast majority of drug houses are interested purely and simply in the making of money and are unconcerned with the question of public health.

Moreover, our expectations with regard to the pharmacopeial convention have been absolutely disappointed. The convention was dominated by poor medical schools and the pharmaceutical associations in the interests of the drug trade. The convention refused to pass a resolution excluding from the pharmacopeia drugs which are known to possess no therapeutic effect. There are, however, two factors working toward improvement, (a) the new revision of the pharmacopeia and (b) the change in our methods of teaching and the tendency toward the elimination of the poor medical school.

It is impossible to use the pharmacopeia with our students when we know that of 975 titles only 150 to 250 drugs are of any therapeutic value.

DR. JULIUS NOER, Stoughton (closing): All old prescription files should be burned at the end of three months. The refilling of old prescriptions is illegitimate and is largely responsible for the production of the drug fiend.

THE TSETSE FLY, WITH LANTERN SLIDE EXHIBITION, MR. ALFRED C. BURRILL, CURATOR OF THE PUBLIC MUSEUM, MILWAUKEE.

This fly is the cause of sleeping sickness. Prevention is the proper course to pursue. Efforts at effecting cures have not resulted so favorably as was expected.

THE PRESENT STATUS OF SPINAL ANALGESIA, DR. A. J. PULS, MILWAUKEE.

The discovery of stovain was eventful in popularizing this new method of analgesia. The dangers as well as the fallacies incident to spinal analgesia would seem to be due to faulty technique, and the excessive strength of the cocain preparations used. Spinal analgesia has many advantages. It allows the surgeon great freedom and ease while operating. The lumbar method anesthetizes all of the abdominal and pelvic organs, as well as the lower extremities. For the aged and for patients affected with heart lesions, lung trouble, arteriosclerosis, chlorosis, diabetes, and cachexia, spinal analgesia should be the method of choice.

Discussion.

DR. W. E. KRAMER, Milwaukee: This is an ideal method of anesthesia, particularly in the lower extremities, the abdomen and its contents, if the technic is proper and the solution correct. It is eligible for operations where the time does not exceed 1½ hours. As to the degree of safety the final word has yet to be said, although serious complications under proper technic and solutions do not arise. The persistent nausea of general anesthesia is avoided. No after-effects have followed good technic and a proper solution.

DR. PULS (closing): Stovain analgesia has reduced the rate of mortality over 20 per cent. in debilitated patients.

DR. JOHN C. CUTLER, Mount Horeb: In the next room is exhibited a cyst of 30 pounds weight which was successfully removed by the Stovain method where general anesthesia was inadvisable. The results were perfect.

THE PLASTER SPICA, IN HIGH FRACTURES OF THE FEMUR, DR. CHARLES H. LEMON, MILWAUKEE.

With the plaster spica applied with the leg and thigh abducted, the thigh flexed on the trunk, seemingly impossible obstacles can many times be overcome. Some one has truly said that the greatest opponents of the plaster dressing are those who have had the least experience with it. The plaster spica is by no means an easy dressing to apply. Its use requires a definite apprenticeship, but when one has become sufficiently skilled in its use, so that he has confidence in his ability to accomplish definite results, there is no appliance that gives greater comfort to the patient nor greater peace of mind to the surgeon.

TINCTURE OF IODIN AS A SKIN ANTISEPTIC, DR. M. W. DVORAK,

LA CROSSE.

As a skin antiseptic iodine has not received the attention it deserves. The method commends itself for simplicity and thorough-

ness, and wherever it is necessary to render the skin field aseptic. This paper was prepared by Dr. Brown and myself in collaboration.

DR. W. H. BROWN, Madison: Tincture of iodine produces absolute asepsis of the skin in three minutes, and penetrates deeply, sterilizing the entire depth of the epithelium. The bactericidal power is due to the iodine *per se* and not to the alcohol. Skin changes are not of serious import.

Discussion.

DR. A. S. LOEVENHART, Madison: The antiseptic power of iodine is dependent on its power to precipitate proteid and on its action as an oxidizing agent.

DR. L. A. MOORE, Monroe: The use of ether to dissolve the oil of the skin before applying the iodine causes the iodine to reach the deeper layers of the skin more readily. I have used iodine in fresh wounds with good results.

DR. JOSEPH F. SMITH, Wausau: I have adopted the use of iodine exclusively in clean cases. The results have been very gratifying. I have found no deleterious action on the skin.

DR. T. L. HARRINGTON, Milwaukee: I have been using the tincture of iodine for a considerable time. It is a great advance over the ordinary skin antiseptics. Suppurating wounds are avoided.

DR. C. M. ECHOLS, Milwaukee: I should prefer a 50 per cent. solution of alcohol as a solvent to a 95 per cent.

DR. M. W. DVORAK (closing): We have used iodine in wounds of all classes, with good results.

With reference to ether preparations, before using the tincture, I would say that we have found that the iodine alone answers the purpose as well.

DR. W. H. BROWN, Madison (closing): Tincture of iodine painted on the skin surface direct, without washing or previous application of alcohol or ether, is absolutely efficient.

RECONSTRUCTION OF THE BILE DUCTS, DR. A. S. SULLIVAN, MADISON.

I present to you a simple method for the construction of an intra-abdominal sinus for biliary drainage.

ANNUAL ADDRESS IN SURGERY. THE MEDICAL AND SURGICAL ASPECTS OF TUMORS, INCLUDING INFLAMMATORY AND NEOPLASTIC FORMATIONS, DR. J. C. BLOODGOOD, BALTIMORE.

The old treatment for cancer is still the only treatment—its radical removal. Malignant tumors are curable in proportion to the earliness of surgical intervention. There must be publicity in re-

gard to early symptoms. Skill in differential diagnosis must be increased with a view to earlier recognition of malignancy. Contrary to general opinion 50 per cent. of bone lesions are curable by operation without amputation. Amputation seldom effects a cure. When in doubt it is better to treat bone lesion as relatively benign. In examining bone lesions by the X-ray, take a number of skiagraphs, because bone lesions are often multiple. A bone cyst is a benign bone lesion and can be cured by simple incision and drainage. As indicative of the evil results of incorrect diagnosis, I show you lantern slide of a boy upon whom a subperiosteal resection was performed on the mistaken diagnosis of spindle-celled sarcoma. The boy could have been cured by simple curetment. Curetment often cures where resection fails. Differential diagnosis must be studiously made between malignant sarcoma and benign bone cyst. Otherwise amputation may be done when contraindicated. Resection is often preferable to amputation, even in malignant bone tumors. But these operations should all be done as early as possible.

Giant-celled sarcoma is frequently curable, as metastasis does not usually occur. In operating for giant-celled sarcoma remember the danger of hemorrhage. There is no danger of disseminating the disease by curetting.

As to breast tumors: glands with continuous function, such as the thyroid gland, are not usually the seat of malignant disease, while in the breast which has not a continuous function carcinoma is relatively frequent (67 per cent. in 1048 cases). Although restricted operation is often proper in sarcoma it is dangerous in cancer of the breast. A lump in the breast should be regarded as an acute disease and treated accordingly. Early operation insures cure in 80 per cent. of cases, while the operation at the end of the 5th year effects cure in about 40 per cent. of cases. Differentiate between benign breast cyst and cancer. Ulcer of the nipple is suspicious. Complete excision should be the watchword. Recurrence is most frequent in cases which appeared to be favorable, and the operator was influenced by the desire to secure a cosmetic effect.

ORAL DEFORMITIES AND ASSOCIATED DEFECTS, DR. G. V. I. BROWN, MILWAUKEE.

The lantern slides introduced show how effectively these conditions can be treated if taken in time and properly handled.

THE EARLY DIAGNOSIS OF CANCER, DR. F. GREGORY CONNELL, OSHKOSH.

Cancer is the cause of death in people over 35 of one man in 11 and one woman in 8. If it is recognized early while still local, it is curable, but it is seldom recognized while still local. Early diagnosis is the most important phase of the cancer problem. We must learn to recognize the primary signs and must search for some diagnostic test. This test has been sought for in anaphylaxis, but unsuccessfully, and until some way is devised by which the something circulating in the blood of cancer patients can be isolated from the blood serum, an anaphylactic test will not be practicable.

In spite of this failure, cancer is now being attacked from so many different angles that it can be but a short time until its secrets are as plain as those of tuberculosis.

ON ENLARGEMENTS OF THE LIVER, DR. L. M. WARFIELD, WAUWATOSA.

This paper comprises reports of a series of 11 cases taken from the laboratory and wards of the Milwaukee County Hospital. These cases were due to a variety of diseases including cirrhosis, secondary carcinoma and sarcoma, parenchymatous degeneration, chronic passive congestion, syphilis and amebic abscess.

VALUE OF BLOOD CULTURES IN PUERPERAL FEVERS, DR. JOSEPH S. EVANS,
MADISON.

We cannot exaggerate the importance of an early differentiation of the causes of fever during the puerperium, not only because it should always be our endeavor to be precise in diagnosis, but because prompt therapeutics in many cases promises favorable results. To make blood cultures requires a certain amount of laboratory equipment and training. Laboratory aids to diagnosis are important and should be appreciated, and a much freer use of them should be made than is done at present.

ANNUAL ADDRESS IN MEDICINE. THE WASSERMAN REACTION IN THE
PATHOLOGY, DIAGNOSIS AND TREATMENT OF SYPHILIS, DR. R. M.
PEARCE, CARNEGIE LABORATORY, NEW YORK.

The method of employing the Wasserman reaction is not treated in this paper. The test shows a high percentage of positive reactions

in general paralysis, tabes, aneurism, aortic insufficiency, mesaortitis, chronic bone disease, arthritis deformans and congenital affections of the nervous system, most of which diseases may be classed as largely metasyphilitic.

Seldom has a new method either of diagnosis or treatment promised as much as does the Wasserman reaction, and if the future works tends to the fulfillment of this promise we have in the Wasserman reaction one of the greatest advances ever made in the history of medicine. The knowledge which it yields, coupled with that resulting from the study of the etiology and from experimental inoculation should eventually place syphilis in the group of subjugated diseases, diseases of which the etiology and pathology are known, for which there exists an absolute diagnostic method and a rational specific treatment.

THE SERUM TREATMENT OF HEMOPHILIA, DR. A. J. PATEK, MILWAUKEE.

Work in this field promises much in the relief of these cases.

The etiology of the disease is still shrouded in mystery. Human or animal blood serum applied locally, subcutaneously or intravenously may have a styptic action during hemorrhage. But owing to the danger of anaphylaxis when alien serum is used, human serum is preferable. A prophylactic injection of serum prior to operation is advisable in these cases. Subcutaneous injections are preferable in most cases. Transfusion may be employed in massive hemorrhage.

CHRONIC DIPHThERIA, DR. G. C. RUILAND, MILWAUKEE.

Chronic diphtheria is at present little or not at all recognized by the profession at large. It is a condition, however, which is frequently associated with definite symptoms of disease, the recognition of which is of greatest importance in the history of disease epidemics. It is fallacious to depend on symptoms for differentiating acute and chronic diseases. I desire to emphasize the great importance of local after treatment in all cases of diphtheria, both for the good of the patient and for epidemiological considerations.

ANEURISM OF THE THORACIC AORTA, DR. JOSEPH F. SMITH, WAUSAU.

This paper contains the report of a case of aneurism of the descending portion of the thoracic aorta, with fatal termination by

rupture into the esophagus. The chief clinical feature of the case was persistent boring pain referred to right lumbar region, just beneath the 12th rib, and in front just beneath the right costal arch. Diagnosis in these cases is often difficult, and the X-Ray is frequently a valuable aid.

Discussion.

DR. W. H. WASHBURN, Milwaukee: The main object of the treatment is to relieve pain. Jodide of potassium is efficient, although I have had better results with sulphocyanate of sodium, and would advise its trial in these cases.

TRAUMATIC HERNIA, DR. T. W. NUZUM, JANESVILLE.

This paper is the result of experiments made by Dr. J. F. Pember, of Janesville, and myself. In making these experiments in a production of hernias 12 cats were used, 6 fasting and 6 not fasting. Hernias were more often and more easily produced in those that were fed. A rolling motion will more often produce hernia than direct pressure of equal severity. 7 hernias were produced, 3 inguinal and 4 diaphragmatic. The peritoneum was torn in 3 instances and was pushed in front of the hernial contents and formed a sac for the same in 4. In every instance there was more or less severe injury done to the vessels, viscera or both.

As conclusions from these experiments it appears that hernia is not likely to be produced by a blow unless a punctured wound is produced. The rolling motion is more likely to produce hernia than mere pressure. The inguinal region and the diaphragm are points of least resistance. Hernia is more easily produced in the young than in fully developed muscular animals, and in those with a full stomach rather than fasting. In true traumatic hernia the peritoneum is often forced through the abdominal walls ahead of the hernial contents, forming a sac for the latter.

Discussion.

DR. T. L. HARRINGTON, Milwaukee: Experimental work of the character described in the paper is useful in fortifying our theories. Traumatic hernia is difficult of definition, but I believe it to be due to unusual and violent injury. Many hernias are called traumatic which are really not due to that cause.

DR. HERMAN REINEKING, Milwaukee: We must distinguish between hernias which come out through the naturally weak openings and true traumatic hernias which are frequently ventral in character. I do not think we should classify the hernia as traumatic unless we find severe local symptoms of injury.

DR. R. G. SAYLE, Milwaukee: The diagnosis of traumatic hernia has been too frequently given to hernia due to natural causes. There is always an immediate local disturbance if trauma produces a hernia.

DR. T. W. NUZUM (closing): There is no doubt that many a hernia is produced by lifting, jumping, or falling and striking on the feet. But doubtless the term traumatic hernia has been too extensively applied to similar conditions.

THE NURSING MOTHER FROM THE BABY'S STANDPOINT, DR. A. W. MYERS,
MILWAUKEE.

There are three classes of errors into which nursing mothers may fall, (1) too frequent nursing. (2) Over-feeding on the part of the mother, producing milk which is too rich. (3) Lack of care on the part of the mother in choosing food, especially the too early or too abundant use of fruit and vegetables.

Discussion.

DR. G. WINDESHEIM, Kenosha: The rule I adopt is to instruct mothers to nurse their babies at regular intervals 4 hours apart, providing the baby is awake.

SOME OBSERVATIONS ON THE SMITH OPERATION OR EXTRACTION OF
CATARACT IN THE CAPSULE, DR. G. I. HOGUE, MILWAUKEE.

It has been the dream of ophthalmic surgeons to remove the cataract in the capsule. This at last is successfully accomplished by the Smith operation, which may be termed the complete cataract operation. This operation is a delicate one and should be limited to the experienced operator. Its technique cannot be learned from books, but must be seen to be appreciated. The possibilities of this operation are large, particularly with reference to immature cataract. When we note how slowly some cataracts mature and the extent to which our patients are incapacitated by the long delay, we may proclaim this new operation as one of the greatest that has been performed since the days of David.

Discussion.

DR. N. M. BLACK, Milwaukee: Owing to its difficulty the Smith operation will be resorted to only in selected cases, where indeed it is the ideal method. It is not indicated in mature cataracts. It requires considerable operative experience, and a well-trained assistant.

Adjourned sine die.

**ABSTRACT OF MINUTES OF THE FIRST ANNUAL MEETING OF THE
ASSOCIATION OF COUNTY SECRETARIES AND STATE OFFICERS,
HELD AT THE ROOMS OF THE MILWAUKEE MEDICAL
SOCIETY, GOLDSMITH BUILDING, MILWAUKEE,
JUNE 21st, 1910.**

Meeting called to order by President Edward Evans, of the State Medical Society, at 11 A. M. Dr. Rock Sleyster of Waupun was appointed Chairman and assumed the chair. On motion Dr. W. L. Herner of Oshkosh was appointed Secretary.

Dr. C. S. Sheldon, of Madison, briefly stated the object of the organization of this body to be to enable the various County Secretaries to get together and meet with the State Secretary and with each other and talk over and plan the methods and means and most successful manner of conducting County Society work, and that the idea was to form a permanent organization of County Secretaries.

A committee consisting of Drs. Daniel Hopkinson, C. S. Sheldon and W. F. Zeirath was appointed to draft a constitution and by-laws, said Committee to report at the afternoon session.

AFTEBNOON SESSION, JUNE 21, 1910, 1:30 P. M.

The report of the committee appointed to draw up a constitution and by-laws was presented, and upon motion was adopted.

The meeting then proceeded to the election of permanent officers of the association for the ensuing year, and the following were duly elected: Dr. T. J. Redelings, Marinette, President; Dr. W. F. Zierath, Sheboygan, Vice-President; Dr. Rock Sleyster, Waupun, Secretary.

Dr. C. S. Sheldon presented a paper on the "Aims and Designs of this Association," in which he disclaimed originality as to the idea of such an Association, stating that he had received the accounts of similar organizations in other states and had been greatly impressed with their usefulness in bringing the County Secretaries into closer touch with the work of the State Society and with each other. He told of enlisting the services of Dr. Sleyster in the movement to bring about the organization of the Association and the acceptance by Dr. Sleyster of the responsibility and his scheme of the "Booster Club" and the "2000 for Milwaukee in 1910" and said that Dr. Sleyster had clearly vindicated his title of "Head Booster" and that the outcome of the present meeting would determine the measure of his success.

He reviewed the results of organization thus far accomplished in the endeavor to transform the 150,000 disorganized doctors into one compact, harmonious and proficient medical profession, that there had been too much jealousy in the profession, resulting in the lowering of

the public estimate of the whole profession; that the medical expert had become discredited, and mal-practice suits made easy by the alliance of disloyal medical men with unprincipled shysters; that the effort to secure sorely needed legislation had been ineffective; that medical men did not seem to be accorded the respect and consideration which their merits and position deserved, as evidenced by the ready acceptance of such fads as Christian Science, Osteopathy and the like; that the solution of this problem was undertaken by the American Medical Association and a committee appointed by that body, with the purpose of securing a more thorough and perfect organization of the whole profession upon a broader and more liberal basis; that the County Medical Society was made the unit of organization and membership therein made the condition of membership in the District, State or National organizations; that organization is proving effective though much is still to be accomplished; that since the movement began the standards of medical education have been advanced and the work of the colleges improved, medical legislation has gone steadily forward, and sanitation and preventive medicine have made great strides, all brought about almost entirely through agencies connected with the medical profession.

That time has vindicated the adoption in Wisconsin of the reorganization plan; that previous to its adoption in spite of the most strenuous and persistent effort not over a dozen county societies could be kept alive, and the state medical society numbered only about 600, whereas now there are fifty-four regularly organized county medical societies and a membership in the state medical society of over 1500.

That the present meeting is called for the purpose of discussing different conditions in different parts of the state, and endeavoring to increase the efficiency of the work at least 25 per cent. during the coming year; that a grave responsibility rests on the county secretary, in securing and fostering the scientific spirit in the society, collecting dues, maintaining the organization, securing the best possible programs for meetings, and bringing the members into pleasant social relations. That the object and aim of the association is to discuss ways and means to bring about these results and keep the organization alive and vigorous.

Dr. Sleyster presented a paper on "Some Things This Association Can Accomplish."

He stated what can be accomplished might be summed up in these words: "It is a chance to get together and talk things over"; to learn what your neighbor is doing and how; that new ideas and methods are brought to the notice of each member, and adopted by

him; that of even more importance is the inspiration and enthusiasm the County Secretary should take home with him from a meeting of this kind; that he will learn the ideals and results accomplished elsewhere, and obtain a fuller realization of the possibilities of his position; that what has been accomplished in National, State or County organization can be accomplished at home, and that the standing of the profession with the public is largely dependent on local organizations.

To obtain full membership, Dr. Sleyster suggested the giving of an hour's time at an early meeting in the year to discussing the non-members in a county, and the appointment of a committee to get applications from these non-members; the appointment of a special membership committee to work for new members; the inviting of eligible non-members to each meeting. He urged the holding of a "Booster Meeting" each year, and to begin the campaign early, making careful and accurate plans, and then carry them out. Emphasize the value received for the fee paid—the Journal, membership in both County and State Societies, and mal-practice insurance.

He advocated the passage of a resolution in each organization instructing the secretary to make sight draft on a specified date on each member in arrears and thus relieve the secretary of the trouble in connection with collections; also furnishing reports at meetings to the Journal; also be optimistic in writing or speaking of your society; also to drop formal dignity when meeting as doctors and friends; and last, and above all else "Be a Booster."

Dr. George H. Simmons, of Chicago, delivered a short address to the Association, in which he congratulated the Association on the good sense of the arguments, suggestions, and helpful thoughts contained in the papers which had been presented.

He reviewed the plan of improved organization adopted by the American Medical Association by which the County Society was made the unit of representation in the state societies and the American Medical Association. That the fundamental thing was the County Society; that the County Society is the door through which every member must enter to become a member of the State Society or the American Medical Association, that the County Society elects the members of the House of Delegates, which in turn elects the delegates to the American Medical Association. The County Societies should feel as much interest in what the American Medical Association is doing as the State Societies and be prepared to approve or disapprove.

Dr. Simmons recommended that every County Society devote one meeting to the discussion of national problems and instruct their

delegates to the State Society as to what kind of man to elect as delegate to the American Medical Association, and find out whether his views coincide with those of the Society itself. Formerly the State Societies did not appreciate the enormous importance of the House of Delegates of the American Medical Association, but have now begun to realize the importance of picking men as delegates to the American Medical Association, because they realize that it is important that the views of each State Society should be represented.

That every physician should be interested in the work of the American Medical Association. That at the present time there are two big things before that Association, one being the work in connection with medical education, in which every physician should take great interest, and the other the work of the Council on Pharmacy and Chemistry, in which every individual physician is interested. If this work is in accordance with the views of the individuals, it should be so expressed in the County Society, and the matters discussed.

Dr. Simmons called attention to the Councilor's bulletin published to enlighten the men in charge of things in the State Societies—the Councilors, County Secretaries and Presidents of County Societies, containing accounts of the subjects under consideration, i. e. medical education, medical legislation, and the work of the Council on Pharmacy and Chemistry, and to the importance of those subjects, and suggested bringing the bulletin to the County Society meeting and discussing the subjects, stating that the American Medical Association and the committees thereof wanted the individual views of the members as to whether the work being done was in accord with their views and opinions.

He also said: We have got the machinery, but we have not yet begun to work with the machinery; that no society was doing as well as it could; and emphasized the necessity of securing a good live secretary for the County Society.

That one of the best movements yet started in connection with this work was the organization of these associations of County Secretaries, and that provision ought to be made whereby the Secretary be required to attend these meetings and that his expenses be paid. That it would do more to help bring about better conditions than any one thing that could be done, and that bettering conditions means putting the medical profession higher in the estimation of the people.

Dr. G. Windesheim of Kenosha spoke on "The Relation of the Councilor to the County Society," and suggested that it would be a good plan for each county society to arrange a meeting once a year at which the Councilor of the District should be present

and discuss such matters as refer to State Society questions and those relating to the American Medical Association with which the Councilor is supposed to be familiar; that at these meetings the delegates to the next State Society meeting should be present and be instructed as to the questions to be brought before the House of Delegates and in that way the State Society would get an idea as to what the Counties and the profession generally wants and desires and such matters can be acted upon accordingly.

Dr. H. W. Abraham, of Appleton, presented a paper on "The Year's Program of the County Society—How Can We Promote Greater Scientific Interests" in which he stated: "The scientific program of a Medical Society is not the most important function of that body. Perfect organization, which includes the best of good fellowship is the primal object. To be successful, both scientifically and financially, it is necessary to systematize and organize after the manner of a great business enterprise. The scientific program should be the post-graduate school of the profession. Every man should have some favorite line of study each year and give the results of his studies—clinical experiences; study and review of the literature along some particular line of thought, or original investigation.

The problem of arranging a program should be the subject of considerable inquiry on the part of the committee. Hunt out a number of individuals having a special interest in some particular subject; give them plenty of time to prepare. As a general rule a paper should not take up a subject in the order of the text-book. It would stimulate interest and discussion if papers be made to emphasize the advances made, by comparison of old with new methods. Every year's program might have a paper on the newer methods of diagnosis brought out during the year; another on advances in therapeutics; another, new surgical methods, and so forth. The practical results in regard to the great progress made each year in medical chemistry and physiology should be brought before the Society, because many do not take the special periodicals in which these advances are recorded. Question of medical ethics should be brought before the members for discussion, and there should be a paper once a year on the work done by the A. M. A.

Dr. M. V. DeWitt, of Sharon, presented a paper on "Business Side of the Secretary's Work." He said: The Secretary, in the majority of instances has the management of the whole society; keeping the records; collecting dues; remitting to the state society; incurring expenses and paying bills; arranging for time and place of

meeting; working up the program; looking after social features; arranging for the clinical cases; printing and mailing of programs; soliciting new members; keeping the machinery of the society well oiled and in good running order.

It is necessary to be careful in the way to approach members when the Secretary wants anything done, so as not to give offense. As to little infractions of the "code of ethics" patience and ingenuity on the part of the Secretary are required. In nine cases out of ten by seeing the member and talking to him you can usually show him his mistake, and he will be grateful to you for calling his attention to it. Use all the tact you have, all you can borrow, and then use more tact.

Dr. J. H. Cleary, of Kenosha, presented a paper on "Social Features of the County Society". He said: Man is pre-eminently a social animal, and doctors are no exception to the rule. The mere gathering together in a society constitutes a social feature of no mean standing and proves the prime importance of the social element in all human organizations. In order to hold the continued interest of a body of men it is necessary to contribute to their mental or material welfare, or amuse them, and most frequently both. A doctor's life being a serious one, anything that takes his mind from his daily work and furnishes relaxation assumes greater importance in medical organizations than in most other societies. Under the new era of systematic organization in medicine the need for social features in basic societies becomes more apparent. Bickering and enmity cannot long endure the mellow sunshine of the social hour. We must consider the opportunities for social features. In our country we find that holding meetings at the homes of members by invitation guarantees successful meetings, with only sufficient formality to conduct the business of the society. The spirit of sociability and good fellowship prevails. Special amusements provided will depend on circumstances and available talent and varies in different communities. During the summer months one or two meetings may be held in the country, and in counties having inland lakes they should be utilized to the fullest extent. Why not make these summer diversions an old fashioned picnic and bring the ladies. Only too frequently differences are carried into the family of physicians, and the presence of the families would contribute to the desired harmony and a better acquaintance. The annual meeting should be a feature of the county society and should be made a special occasion. The business being completed in a short time, the social features can be elaborated, and may consist of a banquet and

accompanying features. Special meetings may be provided or a regular meeting may be utilized in which to collaborate with neighboring counties. We have had some experience with these joint meetings in Kenosha and they were very enjoyable affairs. The social features of the County Society should be in charge of a special committee, and not left to the over-worked county secretary.

LANGLADE COUNTY MEDICAL SOCIETY.

The Langlade County Medical Society met at City Hall, Antigo, June 7, 1910. The meeting was called to order by the president, Dr. M. J. Donohue, at 8:30 P. M. Several important clinical cases were reported and many valuable suggestions given which were interesting and profitable. The application card of Dr. T. J. Flatley for membership was read and referred to the Board of Censors, who reported favorably, and he was duly elected. A resolution was adopted that the society approve the Owen Bill providing for the establishment of a Department of Public Health, and the Secretary was instructed to send a copy of such approval to our representative in Congress.

It was suggested that we review the fee bill and also the dead beat list and that we use all means possible to protect members from giving their services to those persons who make a practice of not paying for medical services. Let the physicians stand together as a unit and the profession will have fewer unpaid bills. After the regular session the members enjoyed a smoker with light refreshments.

The Society is in a thrifty condition and every doctor in the county in good standing but one is a member.

J. C. WRIGHT, M. D., *Secretary.*

OUTAGAMIE COUNTY MEDICAL SOCIETY.

A meeting of the Ontagamie County Medical Society was held July 5th on board the Steamer Fawn on Lake Winnebago. With Capt. Lehmann in command the party left the foot of Lake Street at 2 P. M. with 37 people on board, composing the doctors and their wives and daughters. After enjoying a very pleasant boat ride, the boat was anchored and the party proceeded to fish, the necessary tackle and bait having been provided by Commodore Scott. After a very successful catch of fish had been made the fish were dressed and the party arrived at Stroebe's Island and addressed themselves to a bountiful fish fry. The only stipulation being made that no fish were to be left. After supper some of the folks discovered a self-playing piano and as the tune struck up was a two-step several took advantage of it. At the supper a motion was put to have this an annual affair and it was carried unanimously. The Doctors were the recipients of several presents from the local retail druggists in the shape of two boxes of cigars and a box of candy.

FRANK P. DOHEARTY, M. D., *Secretary.*

LIST OF EXECUTIVE OFFICERS OF COUNTY MEDICAL SOCIETIES.

Ashland-Bayfield-Iron County, President, M. S. Hosmer, Ashland; Secretary, C. O. Hertzman, Ashland.

Barron-Polk-Washburn-Sawyer-Burnett County, President, E. R. Herring, Shell Lake; Secretary, I. G. Babcock, Cumberland.

Brown-Kewaunee County, President, R. H. Sweetman, Green Bay; Secretary, T. J. Oliver, Green Bay.

Calumet County, President, F. J. Knauf, Kiel; Secretary, J. A. Schmidt, Brillion.

Chippewa County, President, A. W. Wilmarth, Chippewa Falls; Secretary, C. F. Myre, Chippewa Falls.

Clark County, President, H. H. Christofferson, Neillsville; Secretary, V. M. F. DeLane, Neillsville.

Columbia County, President, B. C. Meacher, Portage; Secretary, A. J. Batty, Portage.

Crawford County, President, F. B. Taylor, Mt. Sterling; Secretary, C. J. Willard, Prairie du Chien.

Dane County, President, H. A. Gilbert, Madison; Secretary, C. S. Sheldon, Madison.

Dodge County, President, C. F. North, Beaver Dam; Secretary, C. G. Schwallbach, Juneau.

Door County, President, H. F. Eames, Egg Harbor; Secretary, N. Z. Wagener, Sturgeon Bay.

Douglas County, President, Lewis Moody, Superior; Secretary, T. J. O'Leary, Superior.

Dunn-Pepin County, President, A. F. Heising, Menomonie; Secretary, Aulin Egdahl, Menomonie.

Eau Claire County, President, D. Ashmun, Eau Claire; Secretary, E. L. Mason, Eau Claire.

Fond du Lac County, President, J. J. Schoofe, Malone; Secretary, F. A. Read, Fond du Lac.

Grant County, President, E. D. Orr, Mt. Hope; Secretary, M. B. Glasier, Bloomington.

Green County, President, L. A. Moore, Monroe; Secretary, G. S. Darby, Broadhead.

Green Lake-Waushara-Adams County, President, G. E. Baldwin, Green Lake; Secretary, R. H. Buckland, Green Lake.

Iowa County, President, W. S. Lincoln, Dodgeville; Secretary, W. M. Gratiot, Mineral Point.

Jefferson County, President, J. V. Stevens, Jefferson; Secretary, C. R. Feld, Watertown.

Juneau County, President, Thomas Gilluly, Union Center; Secretary, A. T. Gregory, Elroy.

Kenosha County, President, J. R. Eastman, Kenosha; Secretary, J. H. Cleary, Kenosha.

La Crosse County, President, C. Christenson, La Crosse; Secretary, M. W. Dvorak, La Crosse.

La Fayette County, President, O. L. Hansen, Argyle; Secretary, C. O. Latham, Darlington.

Langlade County, President, M. J. Donohue, Antigo; Secretary, J. C. Wright, Antigo.

Lincoln County, President, C. C. Walsh, Merrill; Secretary, L. J. Friend, Merrill.

Manitowoc County, President, C. M. Gleason, Manitowoc; Secretary, A. J. Shimek, Manitowoc.

Marathon County, President, W. C. Dickens, Wausau; Secretary, Emile Roy, Wausau.

Marinette-Florence County, President, H. F. Schroeder, Marinette; Secretary, S. E. Wright, Marinette.

Milwaukee-Ozaukee County, President, L. F. Jermain, Milwaukee; Secretary, Daniel Hopkinson, Milwaukee.

Monroe County, President, F. P. Stiles, Sparta; Secretary, W. B. Ford, Norwalk.

Oconto County, President, R. J. Goggins, Oconto Falls; Secretary, R. C. Faulds, Abrams.

Oneida-Forest-Vilas County, President, J. M. Hogan, Rhineland; Secretary, C. A. Richards, Rhineland.

Outagamie County, President, M. J. Sandborn, Appleton; Secretary, F. P. Dohearty, Appleton.

Pierce County, President, E. R. Holliday, Ellsworth; Secretary, H. P. Conway, Spring Valley.

Portage County, President, E. H. Rogers, Stevens Point; Secretary, W. W. Gregory, Stevens Point.

Priec-Taylor County, President, C. E. Nystrum, Medford; Secretary, G. H. McClure, Westboro.

Racine County, President, W. P. Collins, Racine; Secretary, Susan Jones, Racine.

Richland County, President, C. F. Dougherty, Richland Center; Secretary, A. A. Dougherty, Richland Center.

Rock County, President, D. R. Connell, Beloit; Secretary, E. B. Brown, Beloit.

Rusk County, President, G. M. Carnahan, Bruce; Secretary, W. F. O'Connor, Ladysmith.

Sank County, President, F. D. Hulburt, Reedsburg; Secretary, Roger Cahoon, Baraboo.

Shawano County, President, L. Rothman, Wittenberg; Secretary, J. B. Gordon, Shawano.

Sheboygan County, President, E. Gunther, Sheboygan; Secretary, W. F. Zierath, Sheboygan.

St. Croix County, President, B. T. Williams, Hudson; Secretary, W. H. Banks, Hudson.

Trepuetleau-Jackson-Buffalo County, President, J. P. Reinhart, Fountain City; Secretary, H. A. Jegi, Galesville.

Vernon County, President, John Schee, Westby; Secretary, F. E. Morley, Viroqua.

Walworth County, President, W. E. White, Lyons; Secretary, M. V. Dewire, Sharon.

Washington County, President, Webster Lynch, West Bend; Secretary, S. J. Driessel, Barton.

Waukesha County, President, A. J. Hodgson, Waukesha; Secretary, R. E. Davies, Waukesha.

Waupaca County, President, T. E. Loope, Iola; Secretary, G. T. Dawley, New London.

Winnebago County, President, J. R. Barnett, Neenah; Secretary, W. L. Hærner, Oshkosh.

Wood County, President, W. O. Blanchor, Grand Rapids; Secretary, W. M. Ruckle, Grand Rapids.

BOOK REVIEWS.

A Practical Treatise on Ophthalmology, by L. WEBSTER FOX, M. D., LL. D., Professor of Ophthalmology in the Medico-Chirurgical College; Ophthalmic surgeon in the Medico-Chirurgical Hospital, Philadelphia, Pa., member of the army reserve medical corps, etc., with six colored plates and three hundred illustrations in text. Cloth, \$6.00 net; D. Appleton & Co., New York and London, 1910.

The author has succeeded in making this book really practical and it furnishes a ready reference for the ophthalmologist and the general practitioner. The different diseases of the eye are treated from both a medical and surgical standpoint in the same chapter and this is a great aid to the busy practitioner.

The illustrations (306 in number) are exceptionally good and the same can be said for the paper and printing in the book.

The author treats the subject of Conjunctivitis from the standpoint of bacteriology for he states, "Bacteriological researches of conjunctival secretions may ultimately permit of a systematic classification of the various conjunctival affections based on their specific etiology. Pending further investigations on these lines, we must still content ourselves with classifying them according to their clinical manifestations, although we can already accord certain varieties a definite position, where the more or less constant presence of a certain organism or organisms has been demonstrated. As ophthalmology has been keeping pace with bacteriology, the author will begin to treat of the subject of conjunctivitis from that standpoint."

The use of poultices in any affection of the eye is emphatically condemned by Fox.

In referring to the operation on the eyelids for entropion, the author states that no one or two methods are applicable to all cases of this character and he has therefore given us in his book all of the approved methods.

The author gives the following statistics "30 per cent of the blind in the United State have lost their sight as a result of Ophthalmia Neonatorum and its sequels." He also makes the wise statement to the effect that the eyes of every child should be immediately cleansed after birth and a 2 per cent. silver nitrate solution freely instilled in the eyes. "If this measure were adopted as universally as it deserves to be Ophthalmia Neonatorum could generally be prevented." "In some foreign countries the Crede prophylaxis is made compulsory by law."

The author's experiences with the various substitutes for silver nitrate

lead him to conclude that silver nitrate is still the sovereign remedy when indicated in ocular diseases and that it has not yet been excelled by other silver preparations.

In cases of metastatic Gonorrhœal Conjunctivitis the author recommends antigonocœcic serum and claims it is a valuable addition to the therapy of this disease.

The Smith operation for cataract extraction, which is now holding the center of the ophthalmologic stage, is from the experience of the author more difficult to perform than our well-known methods.

The chapter on "Disease of the Retina" deserves to rank as a classic and in the opinion of the reviewer is the most comprehensive treatise on this most important subject.

G. I. H.

Parenthood and Race Culture; an Outline of Eugenics. By CALER WILLIAMS SALEEBY, M. D., C. H. B., F. Z. R. Edin, etc. New York. Moffat, Yard and Company, 1909. pp. 389.

This book, as the author states, is a first attempt to survey and define the whole field of eugenics. Starting with the proposition that neither Adam Smith nor Cobden properly understood "wealth" which instead of being made up of property and provinces is made up of life, the author proceeds to show that race conservation and culture are the considerations of greatest import to mankind at the present and for the future. Hitherto very little attention has been paid to this important subject either by men of science or by men of affairs, but in the exigencies of existing progress in evolution, growth in population, prevalence of poverty, vice and misery, it thrusts itself upon those who look upon the future with optimistic eye. No question can be of greater import, and its solution of greater consequence, than the one as to whether the new generation shall be the offspring of the best or the worst elements in society.

It is the doctrine of the writer that society is under obligation to do everything in its power to lessen infant mortality, improve the environments of those who are born into the world that they may become useful citizens; to teach the sacredness of motherhood and the supreme importance of protecting mothers that they may fulfill their whole duty to their children; to insist upon it that fatherhood is to be regarded as a privilege and young men so instructed.

The author states that it should be the aim of the eugenicist "to replace Nature's relative death-rate by a relative birth-rate," "to ensure that the fittest (to survive) shall be the *best*," "to make an environment, conditions of law and public opinion, such that the fittest shall be the best and the best the fittest," "to create an environment such that the human characters of which the human spirit approves shall in it outweigh those which we disapprove," "to abolish the brutal elements of the struggle for existence whilst gaining its great end." And since man can not survive in virtue of quantity he is "well assured that the choice for Western civilization will ere long be the final one between eugenics and extinction."

The reviewer cannot refrain from expressing the pleasure he felt in reading the author's comments on Malthus, a writer generally misunderstood and maligned, but whose speculations have been justified by all that has trans-

pired in the hundred years that has passed since his celebrated work appeared.

A chapter is devoted to Negative Eugenies and another to Selection by Marriage, without discussing any specific methods of bringing about the desired end, but throwing out hints to serve as bases for future elaboration.

The discussion of the "racial poisons," alcohol, lead, narcotics and syphilis is specially interesting and profitable reading. The opponents of the liquor traffic can find no more valuable ammunition than that contained in the chapter devoted to the racial poison, alcohol.

The general subject of Eugenies is certain to command a prominent place in the minds of men in the immediate future and especially in the minds of medical men. This book can be read with interest and profit by anyone and cannot be too highly commended.

(W. H. W.)

To the Casuistics of Ocular Diseases in Epidemic Parotitis. HACK, ROBERT. (From the eyeclinic of Prof. C. Hess in the University of Wurzburg. parotitis were first described in 1876 by Hatry: hyperemia of the retinal vessels and disc, deterioration of vision and color sense, swelling of lids and Archiv. fur Augenheilkunde. LXLV, p. 137.) Eye complications in epidemic to stasis of the blood in the brain and eye from compression of the vessels of conjunctiva. They disappeared within from 2 to 6 weeks. H. attributed them the neck by swollen parotid. Others described more serious affections, viz.: optic neuritis and atrophy, ending in blindness, paralysis of accommodation, dacryoadenitis and iritis. H. reports a case of metastatic iritis with deposits on Descemet's membrane of right eye in bilateral epidemic parotitis, in a laborer, aged 16. The affection healed within a week, and vision rose from 6/30 to 6/6.

C. Z.

A Case of Actinomycosis of the Orbit. ZAHN, E. (From the eye-clinic of Prof. G. Schleich in the University of Tubingen. Klin. Mon. fur Aug., XLVIII, Feb. 1910, p. 161). A peasant woman, aged 33, came to the clinic on account of excessive exophthalmus of right eye. Two months previously she could not open her mouth very well owing to swelling of the cheek, temple and neck which were densely infiltrated. The exterior of the eyeball was normal, but the ophthalmoscope revealed intense circumpapillary haziness and slight venous hyperemia. V was reduced to fingers nearby. All upper and lower molars and premolars were carions. Incisions at the temple and cheek made at the time left a number of scars and fistulae from which pus oozed mixed with globular bodies, which, stained according to Gram, showed typical actinomycetes. So far only 9 cases of actinomycosis of the orbit have been published.

C. Z.

The Physician's Pocket Account Book, by J. J. TAYLOR, M. D., bound in full leather, 24 pages of practical instructions for physicians, 216 pages of accounts. Price \$1.00 per copy; published by The Medical Council, 4105 Walnut Street, Philadelphia, Pa. The book contains 216 pages for accounts, of which eight pages are devoted to alphabetic index, 146 pages are devoted to regular accounts, 32 pages to short accounts, 24 pages to cash accounts, and eight pages to birth, death, and vaccination records.

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ORIGINAL ARTICLES.

THE MEDICAL AND SURGICAL ASPECTS OF TUMORS, INCLUDING INFLAMMATORY AND NEOPLASTIC FORMATIONS.*

BY JOSEPH C. BLOODGOOD, M. D.,

BALTIMORE, MD.

MEDICAL ASPECTS.

I should like to present a medical aspect of tumors which is somewhat different from that usually considered by the profession at large. Osler, in a contribution some years ago, presented what he called the medical aspects of cancer of the breast. In this paper he considered only the late symptoms of the hopeless stage of cancer. I wish to urge that we look upon the medical aspects of tumors and, in fact, of all surgical lesions, as the consideration of those early signs and symptoms which may be interpreted as an indication for surgical aid at a period of the disease in which surgical treatment will give the best immediate and permanent results.

Some may question the right of the surgeon to thrust upon the laity and the physician the responsibility for the early recognition of tumors.

The surgical literature on tumors, or malignant disease, as well as that considering the majority of surgical lesions, records the indisputable fact based upon a world-wide accumulated experience that progress in the treatment of malignant disease as well as other surgical conditions depends today more upon an early diagnosis which allows earlier operation, than upon improvement in technic.

A German authority has divided the period of growth in malign-

*Annual Address in Surgery, delivered before the State Medical Society of Wisconsin, Milwaukee, June 23, 1910.

nant disease before it is subjected to operative treatment into three parts: first, the period of latency, during which the host is unaware of the presence of the growth; second, the time which the patient delays before seeking advice after he is aware that something is wrong; the third period is taken up by the physician first consulted before he refers the patient to a surgeon. It is quite possible that some surgeons may increase this period of delay.

Now, for the first period at the present time we can offer nothing that will tend to shorten it. If there should be discovered some test for cancer similar to the one for tuberculosis and syphilis, this period, to a certain extent could be shortened for those individuals who would submit to this routine test. It is a long way off, however, and there are many more important things to be done before we can recommend to the public to submit to such tests when in perfect health. For the second period there is no way to reduce the delay to a minimum, except through education of the public. As in tuberculosis, so in malignant disease, there must be careful and enlightening publicity.

In some surgical diseases the relation between delay and operation is so distinct that the public is quickly educated. For example, in acute appendicitis the danger of delayed operation is almost universally known and understood. Here the relation between cause and effect is not remote. In regard to tumors there is such a remoteness between the onset of the disease, the operation, and the result that it is almost impossible for the public themselves to grasp the true situation. Fortunately, today there is sufficient evidence in surgical literature to justify statements in regard to malignant disease which can and should, be given to the public as well as to the profession.

For example, everyone should know that an elevated congenital pigmented mole is a dangerous thing to carry around. Every woman should be educated to look upon a lump in the breast as an acute disease and seek advice at once. This woman should also be informed that if she follows this rule and subjects herself to treatment by a properly trained surgeon she will not lose her breast if the tumor is not a cancer, and the removal of the benign lump will produce no mutilation. If the lump proves to be a cancer there should be no compromise, and the breast, and more, must be removed. But, having sought advice at such an early period, her chances of a permanent cure are at least eighty per cent. and probably more, while if she waits until the tumor assumes the picture of malignancy her chances of a permanent cure are thirty per cent. at most, and probably less. Every

man should know that a little ulcer, or scab, or wart, or hardness on the muco-cutaneous border of the lower lip may be the beginning of an epithelioma, and that it should be investigated at once. I am confident that today surgeons are prepared to present to the public those aspects of tumors and of other surgical diseases which the public should know, in order that it may seek earlier the advice of the medical profession.

I am also quite confident that for tumors in most regions, and for other surgical diseases, the accumulated knowledge in surgical literature will allow the surgeon who has given his special attention to one or more of such lesions, to present to his medical colleagues the signs and symptoms of that earlier period of the disease during which surgical treatment gives the best immediate and permanent results.

When surgery gives to the public and the profession at large these aspects which I call medical, then the responsibility for the earlier intervention rests with the patient and his physician.

I shall attempt, therefore, in this address to present in this sense the medical aspects of tumors, including inflammatory and neoplastic formations with which I have had sufficient experience to justify my doing so.

SURGICAL ASPECTS.

The surgeon is the one called upon to subject the tumor to treatment. With few exceptions the treatment of a tumor, if neoplastic, is removal; if inflammatory, perhaps not removal. The extent of the removal varies from the simple enucleation, as for a dermoid cyst, to the most radical dissection beyond the growth, as for a cancer of the breast. Some of these extensive operations are mutilating, some may involve the removal of a jaw, or an eye, or the amputation of an extremity. For the benign tumor the operation will be less extensive than for the malignant tumor. Malignant tumors vary in the degree of their malignancy, and with this variation there is a difference in the extent of the operation.

There must, therefore, be, before or at the surgical operation, a surgical diagnosis. The surgical aspects should consider all of those signs and symptoms which can be brought out from the clinical history and examination, from the gross and microscopic pathology, and from the accumulated knowledge of the results of a definite planned operation for a definite pathological process in a definite localization.

On such surgical aspects the surgical diagnosis rests. The result of a surgical diagnosis is immediate action, and this action leads to

an operation with a definite plan and with the definite purpose of giving the patient the best assurance of an immediate and permanent cure with the least mutilation.

In a paper before the American Surgical Association at Washington, May 3, 1910, in which I presented a clinical and pathological study of bone cysts, osteitis fibrosa, giant-cell sarcoma and bone aneurism (*Annals of Surgery*, August, 1910, vol. lii), I wrote as follows: "In many surgical lesions technic is ahead of diagnosis. The development of technic is more rapid, because the results of faulty technic are immediate, while the development of diagnosis is more difficult, especially in tumors, because the results are more remote. Treatment of tumors which will insure the patient the greatest possibility of a permanent cure with the least mutilation will only be accomplished when surgeons have a better conception of the local growth of neoplasms, both benign and malignant, and are able to diagnose, with differentiation, the various lesions at the exploratory incision, with, or better without, the aid of a rapid frozen section."

I wish to emphasize here that the surgical aspects of tumors, neoplastic or inflammatory, which allow a definite surgical diagnosis, involve a broader conception of the disease which is subjected to treatment than the clinical or pathological alone. It is not sufficient for a surgeon to be able to recognize cancer, but he must know the proper operation for carcinoma in that definite localization, and he must know the results of such operative intervention. For example, if one explores a tumor in the antrum producing an expansion of this bony cavity and finds a cancer, such a diagnosis leads to an entirely different procedure than if he cuts down upon a mass in the breast and exposes a malignant epithelial tumor; for the latter the results of surgical intervention have demonstrated that there should be no compromise; the best permanent results are obtained by the most radical procedure; the operation should never be restricted. While on the other hand, for a carcinoma of the antrum of the upper jaw there have been no permanent cures after even the most radical removal, and surgical experience seems to show that these patients are more comfortable if the tumor is left alone, or curetted leaving its shell.

I shall not enter here into the discussion of whether the diagnosis in those cases in which an exploratory incision is made should be accomplished with or without a frozen section. This is a matter of no importance to the patient. If the surgeon is trained to make his diagnosis without the help of a frozen section, he will be just as accurate as the one who employs the microscopic diagnosis. It makes no

difference whether the surgeon interprets the frozen section himself, or has a pathologist connected with his clinic do it for him. The important point is that in some way or another, a correct diagnosis must be made, and if it is not made before the operation it must be made at the exploratory incision, so that the operation indicated may follow at once.

With few exceptions there should not be an interval of time between the exploration and the indicated operation. But there are exceptions to this rule. For example, as far as I can ascertain from my gynecological colleagues and from the literature, there is no danger in the delay between the microscopic examination of curettings from the uterus and the radical operation for carcinoma. Sometimes a number of days, a week or more, pass, but they seem to think that there is no danger of dissemination by this procedure, which of course is only necessary in that early stage of cancer of the cervix which cannot be diagnosed by palpation, or the more favorable carcinoma of the body which can be reached only with the curette. Personally, I would be very glad to see gynecologists make frozen sections of the curettings and act at once, if the diagnosis is possible with this technic. In a very early epithelioma of the lip, or in any lesion there in which a diagnosis cannot be made by palpation or inspection, it would be justifiable to excise the lesion with a fair margin of healthy tissue and have it examined microscopically. This is of importance, as I will discuss later, because now and then the lesion on the lip is not a carcinoma of the squamous-cell or spinal-cell type. In this form of cancer a very complete dissection of the glands of the neck should be combined with the local operation on the lip. But if the disease is a benign or very early malignant wart, or a basal-cell epithelioma or an ulcer of the inflammatory type, the local operation only is required. I will discuss this again. There may be other lesions in which it is justifiable to excise a piece for diagnosis and even allow an interval of time. But these exceptions are few. The consensus of surgical authority today takes the position that, with few exceptions, the diagnosis, if not possible clinically, can and should be made at the exploratory incision with or without the aid of a frozen section, and that after such an accurate diagnosis, the indicated operation should follow immediately.

It is rather interesting to consider the position taken by surgeons today. They are demanding of people and of the profession an opportunity to treat tumors and other surgical diseases earlier. They are attempting to educate the public and the profession to those med-

ical aspects which will lead to this earlier recognition. If their advice is followed, if the results of their attempts at education are successful, the surgeon will more and more be called upon to make the diagnosis at a period in which it is most difficult, the period in which the prognosis for the patient is best.

It seems to me that if surgery places upon itself this greater burden and larger responsibility it is justified in taking the position indicated in this paper, that the responsibility for the earlier intervention rests with the patient and his physician. I am confident that the public at large and the profession will agree with this statement of mine as they gain confidence in the ability of the surgeon to make the correct diagnosis during this earlier period. There must be no fear or uncertainty that the patient will be mutilated unnecessarily for a benign or less malignant tumor or that for a malignant tumor there will be any compromise as to the radical operation if experience has demonstrated that such a radical procedure gives the best results.

I am quite certain that an INCOMPLETE operation for cancer in this very early period will give worse results than a COMPLETE operation for the same lesion in a later stage.

It is easily seen, therefore, that with the difficulties of diagnosis the responsibility of the surgeon increases and greater experience and a different training is required of the surgeon to differentiate surgical diseases by their gross appearance or from their cellular pathology in a rapid frozen section. No operation should be undertaken unless such an accurate surgical diagnosis can be made.

It has been my observation that when tumors present themselves in this early period surgeons of the largest experience find themselves compelled to make exploratory incisions for diagnosis, and I cannot picture any remedy which will reduce the number of these exploratory incisions. The earlier the stage of the disease when the prognosis is best, the more difficult is the diagnosis without exploration. I have studied with the greatest care the ultimate results and am unable to find any evidence to indicate that malignant disease was disseminated when the exploratory incision was followed at once by eradication. Theoretically, any focus of malignant disease should be handled with care. Palpation, any form of trauma, and, therefore, exploratory incision, might disseminate the cells. But, I repeat again, exploratory incision with our present methods of diagnosis is inevitable, and, as far as I am able to judge, not dangerous if properly employed.

There is another strictly surgical aspect that concerns the surgeon only. For example, in the radical operation for carcinoma of the

breast, of the tongue, and of the lip, there may be a great difference in the actual area to be removed in the so-called radical operations. That is, there are radical operations which, as a matter of fact, are no more radical than the so-called restricted operation. If during operations for carcinoma of certain regions the surgeon has in mind anything besides the complete removal of the disease, he will find himself cutting corners, thinking of getting through rapidly, and about the closure of the wound. It is only possible to keep one's self at the tedious task of dissecting out carcinoma by a careful and constant study of the ultimate results. The two great factors in the cure of cancer today are early intervention and a conscientious, radical operation. There should be no compromise with time or technic.

INCURABLE AND INOPERABLE MALIGNANT DISEASE.

Today it is not an exaggeration to state that *fifty* per cent. of the cases of malignant disease come for surgical help too late, and the question naturally arises, what are the medical and surgical aspects of tumors in this inoperable state?

Assuming that the publicity given to the importance of earlier diagnosis and earlier intervention is taken seriously by the public and profession, there will still be for a number of years individuals and physicians who will *procrastinate*. Today we can offer to these pitiable patients very little, and I shall not discuss this phase of malignant disease. It is one, however, to which the medical world is devoting a great deal of attention. Cancer research funds are becoming available and wide-spread investigation is going on. The physician and surgeon together should use all their available means to make these patients comfortable and save them from the quack cancer-cures.

If surgical experience demonstrates that operation offers any promise of comfort, it should never be refused. On the other hand, the surgeon should be unusually careful not to allow his enthusiasm to attempt an operative cure when such an attempt would only result in discomfort. The surgical problem in many cases is very difficult to settle, and I am confident that today operation is often refused when it would give relief and often done when it should not be. It is more difficult to judge of the results of palliative operations for inoperable malignant disease than the results of the different radical operations of the disease in its operable stage.

CLASSIFICATION OF TUMORS.

In the surgical pathological laboratory of the Johns Hopkins University and Hospital, for the purposes of investigation and teach-

ing, I have divided the subjects first into the following great divisions: 1. Injuries; 2. Infections; 3. Tumors; 4. Lesions of special tissue; 5. Lesions of special glands; 6. Lesions of special regions.

In presenting the medical and surgical aspects of tumors including inflammatory and neoplastic formations, I find material for this paper in each of these six great divisions.

When we view the medical aspects of *tumors* as the consideration of those early signs and symptoms which may be interpreted as an indication for surgical aid at a period of the disease in which surgical treatment will give the best immediate and permanent result, we find on investigation that these early signs and symptoms may be of three distinct lesions: first, of the malignant tumor itself; second, of the benign tumor which may be present months or years before it becomes the seat of a malignant change, and, third, of a lesion which may be called precancerous—using the term cancer in its broadest sense. These precancerous lesions include traumatic and inflammatory diseases of the tissues, glands, or regions in which the tumor develops and which seem to have a definite etiological relation to the malignant tumor.

It will be seen at once that the removal of the benign tumor will absolutely prevent the development of a malignant tumor, at least in that focus. The medical aspects, therefore, in relation to certain benign tumors, are now well established, and this information should be given publicity.

It is more difficult to establish the definite etiological relation between certain traumatic and inflammatory diseases and carcinoma, but, nevertheless, at the present time the relation of cause and effect is sufficiently clear to justify the medical profession to urge the curative treatment of such traumatic and inflammatory disease in the non-malignant stage. Treatment here not only relieves the patients of the discomfort of the benign condition, but protects them from a malignant change which may be excited by the prolonged chronic irritation to the tissues involved by the inflammatory process.

The evidence supporting the view that a benign tumor may later take on malignant change and that certain traumatic and inflammatory diseases predispose to carcinoma and sarcoma is daily increasing; the clinical evidence which has been accumulating for years is constantly being recorded in recent literature, and those interested chiefly in the experimental study of malignant tumors are revealing facts which confirm the conclusions from clinical evidence.

The question has assumed so much importance and interest that

this year the Chairman of the Section on Surgery of the American Medical Association, Charles H. Mayo, chose for the subject of his address "Prophylaxis of Cancer." In this address he considers the various precancerous lesions, and how their treatment in this stage reduces to a very large extent the chance of cancer in the tissue, organ or region involved.

Very frequently malignant disease starts in a tissue or organ in an area the seat neither of a previous benign tumor, nor of any inflammatory or traumatic disease. In this group we must search for the earliest signs and symptoms and present them to the profession and to the people, so that they may add this knowledge to that already given as to the benign tumors and the precancerous lesions.

The medical aspects, therefore, should include this broader view of the signs and symptoms of the lesion which slowly or rapidly leads to the formation of a malignant tumor.

In the recent meeting of the American Medical Association in St. Louis I took part in two symposiums on cancer: one before the Section on Dermatology at which I presented the *Surgical Treatment of Malignant Tumors of the Skin*, and the other before the Section on Pathology and Physiology at which I presented the *Recent Progress in the Surgical Treatment of Malignant Growths*.

In both of these papers I dwelt upon the importance of the very early recognition and treatment of the precancerous lesion, the innocent tumor and the spontaneous malignant tumor. I also discussed the medical aspects and considered, with some detail, the method of surgical diagnosis on which should be based the operation for the special lesion in the definite locality under treatment.

As these two papers will be published in the *Journal of the American Medical Association*, it seems unnecessary to repeat here, except very briefly, what has been said there.

INJURIES.

In the paper before the Section on Pathology and Physiology I called attention to the relationship between trauma and sarcoma. This has a very important medical aspect. Sarcoma of soft parts and sarcoma of bone so frequently follow injury that from the beginning of the literature on these subjects the etiological relationship between the two has been the subject of comment. When any of the symptoms due to injury—swelling, pain, or loss of function—do not disappear in the usual, expected time, or reappear after their primary disappearance, there should be no delay in a careful examination, an

X-ray study, and an exploratory incision if sarcoma cannot be excluded.

Many benign lesions as well as sarcoma may follow injury: the organized hematoma or blood cyst, the rare and interesting lymph-cyst, the different forms of myositis, especially the ossifying myositis which often contains a blood cavity; the ossifying periostitis or exostosis; the benign bone cyst.

The trauma may localize an infection—a syphilitic gumma of the soft parts or a luetic periostitis with, or without, new bone formation, a gonorrhœal infection in a joint which now and then may lead to a periostitis; tuberculosis of soft parts, bones and joints often exhibit their first symptoms after a trauma. In my study of sarcoma of the soft parts and bone it is an exception not to find the history of an injury within a few weeks or months before the appearance of the tumor.

With this evidence the medical aspects of an injury become much more interesting and important. The patient must be taught to seek advice if the results of an injury do not disappear rapidly or if they reappear. The physician must bear in mind the possibility of malignant disease, and unless this can be absolutely excluded, exploratory incision for the purpose of a definite diagnosis, to be followed by the appropriate treatment, should be advised, and there should be no delay.

The exact relation between trauma and sarcoma is difficult to establish. The focus of the malignant disease may already be present, and the trauma excite its growth; or, on the other hand, the malignant tumor may develop from the new cells thrown out by the injured tissue to accomplish the healing of the defect produced by the injury.

After every wound the tissues react and produce what is called granulation tissue. This in the early stage is very vascular and cellular, and one would expect from such tissue a very malignant cellular sarcoma. As a matter of observation, it is this form of sarcoma that we observe shortly after injury.

The granulation tissue after a time becomes scar tissue, and in this tissue we frequently see a sarcoma which develops as a rule years after the healing of the wound: its cellular picture is that of a fibrospindle-cell tumor, and the prognosis for a complete cure after local removal is very good, while the prognosis of the more cellular sarcoma which develops more quickly after an injury, is extremely bad.

The relation between carcinoma and trauma is much less distinct.

INFECTIONS.

All infections give rise to inflammatory tissue, just as a trauma does, but the reaction on the part of the infected tissue is, as a rule, greater than in the injured tissue. The ordinary pyogenic infection leads rapidly to an abscess which soon ruptures or is incised, and heals. We do not often see malignant disease develop in the focus of a healed pyogenic infection. However, if it leaves an ulcer, or an area of induration, the development of a malignant tumor is quite possible, and for this reason the ulcer or the inflammatory nodule should be excised. For example, in the breast I have now observed eight cases of scirrhus carcinoma which developed in a definite indurated mass which was the residue of a pyogenic abscess during lactation. In these cases the indurated area had been quiescent from ten to thirty years; then, without any definite etiological factor, it began to grow. It is, therefore, natural to conclude that such masses should be excised. On the other hand, I have been unable to find any etiological relationship between a lactation mastitis, with or without abscess, which heals without any residual scar tissue, and later carcinoma of the breast. We have from this evidence a pretty definite indication what to do: if there is any residue after lactation mastitis cut out the scar tissue. The scar tissue of a clean cut with healing per primam, in my experience, has never been the later seat of either the connective-tissue or the epithelial tumor.

I have observed quite a large number of fibrospindle-cell tumors (perhaps they are sarcomas) to develop in dermal nodules left after the infection of a hair follicle or a skin gland. The complete excision of such nodule is a good plan, because later it may grow; as a rule the tumor produced is of this fibrospindle-cell type in which a cure is accomplished by local excision. But now and then a more malignant sarcoma has developed, and death has followed from internal metastasis in spite of local excision.

When the infection leaves an ulcer of the skin or mucous membrane every effort should be made to accomplish the rapid healing of the ulcer. If this is not successful, the ulcer should be excised, no matter where situated. The most common malignant tumor to develop in such an ulcer is carcinoma. Sarcoma is unusual.

The ulcer which develops on the tongue or lip after a fever blister, or any other ulcer in these localities, should be regarded with grave suspicion: carcinoma is so common here in individuals over thirty years of age, that delay is often fatal. The relation between chronic ulcer of the stomach and cancer is looked upon by most sur-

geous as so distinct that resection is advocated for all palpable indurated ulcers, especially if there are no adhesions to liver or pancreas, which would make the operation for ulcer unnecessarily dangerous and for cancer, if it were present in the ulcer—hopeless.

The granulation-tissue tumor, ulcer, fungus, or sinus, associated with specific infections such as tuberculosis, lues, actinomycosis, etc., when present a long time, not infrequently become the seat of carcinoma. This possibility is another indication for radical attempts at healing. In the unhealed sinuses of chronic osteomyelitis, in healed tuberculosis, and old bullet wounds, there may be a malignant growth from the epidermis producing a carcinoma at the depth of the sinus. Although this is an infrequent observation, it must be borne in mind.

Chronic inflammations of the skin and mucous membrane, after a certain length of time, often lead to malignant epithelial tumors in the focus involved. In the epidermis, the keratoses of age, sunlight, lead, arsenic, X-ray and trauma, are very frequent precancerous conditions and easily eradicated in the benign stage. Psoriasis and foci of chronic eczemas, lesions of blastomycetic dermatitis may become the seat of carcinoma of the skin. Foci of chronic inflammation of the mucous membrane often precede carcinoma. I have never observed a carcinoma of the gum, except about a decayed tooth with a long history of chronic inflammation.

The relation between chronic cholecystitis, with and without gallstones, and cancer of the gall-bladder is commented upon by many observers; also appendicitis and carcinoma of the appendix. To my mind, there is sufficient discomfort from the benign condition to justify an operation for its relief without regard to the remote possibility of a carcinoma as an additional argument for operation.

TUMORS.

Those tumors which are instructive to study together as tumors and not as lesions of special tissue, glands or regions are as follows:

1. Epithelial tumors of skin and mucous membrane.....	812 cases
2. Benign connective-tissue tumors.....	404 cases
3. Benign pigmented moles.....	76 cases
4. Malignant pigmented moles.....	65 cases
5. Sarcoma of the skin.....	45 cases
6. Sarcoma of the soft parts.....	54 cases

The medical and surgical aspects of these tumors and their differential diagnosis have been considered in detail in the two papers already mentioned which were presented before the Sections on Dermatology and on Pathology and Physiology. So it will be necessary here to call attention to only a few interesting facts.

TABLE I.

EPITHELIAL TUMORS ACCORDING TO SITE AND PATHOLOGIC VARIETY.

Site.	Pathologic variety.						Total
	Spino-cellulare.	Cubo-cellulare.	Baso-cellulare.	Mal. Pigm.	Ben. Warts.	No. Note.	
Lower Lip	100	2	4	12	1	42	161
Upper Lip	4	..	9	2	..	6	21
Face, Cheek	9	3	24	5	5	28	74
Chin .....	..	..	2	..	..	2	4
Eyelid	1	1	16	..	..	13	31
Ear	6	1	4	1	2	3	17
Nose	12	..	24	5	4	9	54
Scalp, Forehead	3	3	9	..	5	11	31
Muc. Membrane of Mouth, Gum, Hard Palate...	23	3	2	3	2	16	49
Tonsil, Pharynx	3	2	1	..	..	7	13
Tongue	37	..	7	4	6	24	78
Skin of Neck	1	..	5	1	1	2	10
Bronchial Cleft	3	9	4	..	..	7	23
Upper Extremities	16	..	4	7	3	4	34
Lower Extremities	13	3	1	2	10	6	35
Penis	13	..	4	1	7	12	35
Skin of Body	2	..	5	1	3	1	12
Totals	246	27	125	44	49	193	684

EPITHELIAL TUMORS (SOLID). (684 CASES.) TABLE I.

In studying this group of cases we are impressed with the frequency and malignancy of carcinoma of the lower lip and the tongue. In the majority of cases there is no history of a benign tumor and rarely a long history of a precancerous lesion. There is observed, first, a little ulcer covered with a scab, surrounded by an area of induration. The local growth of the lesion on the tongue is more rapid and extensive than the same lesion on the lip.

The prognosis for even the most radical operation for cancer of the tongue is so bad and the mutilation of the operation so distressing that we must attempt to get this lesion earlier. The medical and surgical aspects of lesions of the tongue require a chapter for themselves for proper presentation. All that I can hope to do here is to emphasize the importance of immediate attention to any lesion of the tongue.

As the table indicates, the majority of cancers of the lip are of the spinal-cell type, and for this variety there should always be performed the complete excision of the glands of the neck from parotid

to parotid. No matter how early the lesion, nor how small and apparently innocent it appears, the surgeon should not allow himself to be content with local excision only.

In Table I we have divided the total number of cases in each localization into six columns. The epithelial tumor of the spinal-cell (squamous), or cuboidal-cell (transitional) type is a local growth in which experience has demonstrated that the chances of involvement of the neighboring lymphatics are so great, that, today, for this tumor there should always be a larger local excision combined with dissection of the neighboring lymphatic glands and surrounding tissue in one piece. For the benign pigmented wart, the early-malignant pigmented wart and basal-cell tumor, with few exceptions, local excision is sufficient.

It will be seen from the table that carcinoma of the upper lip, face and cheek, chin, eyelid and nose, scalp and forehead, skin of neck and extremities, as a rule begins in some precancerous lesion or a previously benign tumor. The majority of acquired warts are the result of chronic irritation, and the basal-cell cancer has a definite relation to some form of irritation. A large number, therefore, of cancers of the skin in these localities can easily be recognized in the precancerous or early cancerous stage, and one may expect a permanent cure from a properly performed local excision. But in every one of these localities the more malignant cancer of the skin is possible. It must always be thought of and excluded before any treatment is undertaken. Granting that treatment other than excision can accomplish a cure of the benign and malignant wart and the basal-cell epithelioma, it is this possibility of a spinal-cell tumor that makes such treatment dangerous unless there has been an accurate diagnosis.

The surgical aspects, therefore, of epithelial tumors as tabulated are very important. One must be able to make an accurate diagnosis, and bear in mind that for each different kind of tumor in the different localities the extent of the local and glandular operation varies. With this knowledge the surgeon is better able to give the patient the best insurance of a permanent cure with the least mutilation, and the earlier these lesions come for treatment, especially the more malignant type, the better the prognosis.

EPITHELIAL CYSTS. (128 cases.)

These have been situated as follows: In the neck (atheromatous cysts), 32 cases, two malignant; Ranula, 9 cases, none malignant; Dermoids in miscellaneous localities of the skin, 87 cases, five malignant.

The remaining epithelial cysts have been included elsewhere, because of the special interest of their localization in a special gland, like the breast, or a special region—jaw or abdomen.

Experience has shown that an epithelium-lined cyst shows the same tendency to develop a carcinoma as the epidermis or the mucous membrane. In this small table six per cent of the atheromatous cysts arising from the congenital branchial cleft and six per cent of the ordinary subepidermal dermoids have been malignant. We have, therefore, evidence for urging the immediate removal of such tumors, and the surgeon must bear in mind this possible malignancy, and before proceeding with the simple enucleation requisite for the benign cyst, he should explore the cyst and definitely exclude carcinoma. I have received two tumors from the scalp diagnosed benign wens, and one from the breast looked upon as a benign dermoid, which proved to be carcinoma. If these cysts had been cut into, I feel certain that the operators in these cases would have become suspicious that they were not dealing with a benign epithelial cyst. The mistake may be made in the other direction. I have had sent to me for diagnosis a very interesting dermoid situated in the temporal fossa. The tumor which was of large size was looked upon as a sarcoma, and in removing it the upper jaw and malar bone were resected. If an exploratory incision had been made into this tumor the benign character of the cyst could readily have been interpreted and the wall removed with a less mutilating operation.

The methods of diagnosing an epithelial cyst by the character of its contents and appearance of the wall, I have considered in the *Journal of the American Medical Association* (Oct. 30, 1909, vol. liii, p. 1475) when such a cyst is situated in the breast.

TABLE II.

BENIGN CONNECTIVE-TISSUE TUMORS.

Solid Tumors		384
Angiomas		141
Hemangiomas	87	
Fibroangioma	9	
Intermuscular angioma	7	
Granuloma	6	109
Lymphangioma	10	
Elephantiasis	21	
Mixed angioma	1	32

Fibromas	100
Fibroma, pure	28
Fibroma of tendon-sheaths	19
Fibroma of abdominal wall	11
Keloid	42
<hr/>	
Fibromyxoma	33
Single tumors	17
Multiple tumors	9
In stump	7
<hr/>	
Lipoma	110
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Cysts	30
Lymph cysts of neck	15
Lymph cysts of thigh	2
Ganglion	4
Foreign-body cysts	2
Blood cysts	7
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Total	414

BENIGN CONNECTIVE-TISSUE TUMORS (SOLID). (TABLE II.)

Whether situated in the skin or palpable subcutaneously, the medical aspects are identical. With few exceptions it is better to remove these tumors. Each has its tendency to become later a sarcoma, and in this period of growth the prognosis after local excision, although good for some types of sarcoma, is hopeless for others, and we have no way, of course, to tell the type.

The tendency of the *congenital nevus* of the skin to become malignant is very much less than of the *congenital pigmented mole*. One should not perform a mutilating excision to get rid of a *hemangioma*, but it would be better, of course, to excise when it can be done without mutilation. For the hemangioma it is perfectly justifiable to try other methods of a cure. For this tumor the treatment by liquid air or carbon dioxide snow has been especially successful.

The interesting *granulation-tissue tumors* which I have classed with hemangioma I would like to emphasize here especially, although I have considered them in detail in my paper before the Dermatological Section. These little tumors which form in the wound after an injury, especially about the nail of the toe or finger, suggest sarcoma. The differentiation with the microscope is often difficult. I have known a toe and finger to be sacrificed unnecessarily because of a granulation-tissue tumor involving the bed of a nail, and on one oc-

casian a surgeon feared that he had sarcoma of the finger, because the granulation tissue which was exuberant in the wound after a simple injury recurred again and again after excision. A careful study of this case revealed the fact that he had received the injury in examining a syphilitic patient, and although the microscopic study of the granulation tissue suggested a small round-cell sarcoma, the lesion healed up under antisyphilitic treatment.

The study of the *fibroma* whether situated in the skin, tendon sheath, or abdominal wall, or as a *keloid* in a scar, is one of great practical interest. In my experience the majority of tumors of this type are cured by local excision, but now and then a very malignant sarcoma does develop in a fibroma, and, in spite of local excision, the patient dies of metastasis.

The surgical diagnosis of fibroma, fibrosarcoma and chronic inflammatory tumors is a difficult one, and if it is based upon the cellular pathology only—most difficult, because with our present technique of fixation, cutting and staining, there is very little difference in the cellular and intracellular picture of these closely allied lesions. If one, however, has in mind the recorded experience, he will know what treatment will accomplish a cure, and very frequently in spite of the cellular picture a somewhat restricted local operation is sufficient. One interested in the details will find them discussed in the papers before the Dermatological and the Pathological Sections.

The relation of the benign fibromyxoma of the nerve-sheath to the malignant tumor I have previously recorded (Transactions of the American Surgical Association, 1909, Vol. xxvii, pp. 356 and 384).

BENIGN CONNECTIVE-TISSUE CYSTS.

The tendency for a connective-tissue cyst to become malignant is distinctly less than in the epithelial cyst, just as the frequency of this tumor is less—30 cases of the former to 128 of the latter. Among 18 *lymph-cysts*, fifteen of them situated in the neck and three in the thigh, one was malignant; this was situated in the thigh and could be recognized from the benign lymph-cyst by its hemorrhagic contents and the irregularity of its wall. I have never observed any tendency to sarcoma in the *ganglion* or the foreign-body cyst; nor have I seen any such tendency noted in the literature.

Surgeons should be suspicious of *blood cysts*. Of two blood cysts of the cheek which have come under my observation, one was benign and has remained well since a restricted local excision; the other was

a blood cavity in a perithelial angiosarcoma. The benign cyst has a distinctly smooth wall; the malignant cyst a wall at least 3 mm in thickness composed of ragged friable tissue. In the tongue I have made a similar observation with a benign blood cyst and a perithelial angiosarcoma with a hematoma in the centre. Twice tumors considered, clinically, wens situated in the scalp have been excised under cocaine and sent to the laboratory for diagnosis. The cysts contained blood (which is never observed in the benign dermoid), and the narrow zone of friable, hemorrhagic tissue resembled the malignant cyst just mentioned in the cheek and tongue: both proved to be perithelial angiosarcoma. These four cases were not cured. Whether an operation instituted earlier and made more extensive after an accurate diagnosis, would have yielded a different result, I am not prepared to say.

BLOOD CYSTS.

These observations led me to investigate, how often malignant disease presented itself as a hematoma. I have mentioned my paper on cancer cysts of the breast, and here blood cysts, benign and malignant, are described. In the investigation on bone cysts, to appear in the *Annals of Surgery*, August, 1910, the significance of blood, especially clotted blood, as evidence in favor of a giant-cell sarcoma, or of the more malignant bone aneurism, and against the benign bone cyst, is clearly proved. I have previously mentioned how the malignant lymph cyst was hemorrhagic in contrast to its more frequent benign prototype. A blood cyst or an organized hematoma, no matter where it appears, should receive careful investigation, and the possibility of a malignant lesion should be absolutely excluded before the conservative operation requisite for the benign lesion is instituted.

PIGMENTED MOLES.

In no other benign tumor is the removal of the growth in its benign state more life-saving than here. In the paper before the Dermatological section I presented all the available evidence, and up to the present time, among 65 personally observed cases, and from the literature, I was unable to find any positive permanent cure. There is no doubt, therefore, that the benign pigmented mole of certain type and size should always be removed. The diagnosis of the benign mole is not difficult. To select from the many moles which will be found at the routine examination of patients those that should be excised is a more difficult matter. I would urge that all elevated pigmented tumors of any size larger than a pea be excised, and smaller ones, if

they are in a position exposed to frequent trauma. Excision should be the method of removal. Benign pigmented areas should not be tinkered with. A mole can be removed with the knife with a definite zone of uninvolved tissue, and the resultant scar will never be complained of by the patient.

When patients present themselves with evidence of malignant change which is shown by superficial ulceration and the microscopic picture in the frozen section, I would suggest that surgeons perform a more radical local operation combined with a dissection of the neighboring lymphatic glands. This has never been practiced in the past, except when the glands were enlarged, that is, in the late and practically hopeless state. Yet, after such operations, even at such a late period, patients have lived four or five years.

SARCOMA OF THE SKIN.

These tumors were also fully described in my dermatological paper. Sarcoma arising in the derma proper is relatively infrequent without a previous history of a benign tumor or a scar. In this group, therefore, the opportunity of removing the tumor in its benign state should not be lost. The 45 cases which I have studied may be classified as follows:

Sarcoma of the skin—

with history of congenital nevus.....	6 cases, cured	1
with no such history.....	8 " "	0
in scars	19 " "	16
in fibroma	7 " "	4
multiple tumors	2 " "	0
Mycosis fungoides	3 " "	0

45 cases, cured 21

Of the 14 cases, with or without the history of a congenital nevus, the one cure was accomplished by an unusually radical operation instituted, however, rather late in the malignant stage. Apparently the failure to cure in the remaining cases is associated not only with late intervention, but apparently incomplete removal. The type of the tumor in all of these cases was of the most malignant variety—small-round-cell sarcoma with perithelial arrangement.

The prognosis for sarcoma developing in scars or fibroma is relatively good. There are but six failures in 26 cases. The type of the tumor in four cases was of the more malignant variety—round-and-spindle-cell, and these patients died of metastasis, but in two cases the type corresponded to the less malignant variety—the fibrospindle-

cell tumor. The failure to cure these cases was due to wide-spread local infiltration due to the long time that the tumor had been allowed to grow before surgical aid was sought.

SARCOMA OF THE SOFT PARTS.

The 54 cases have been classified as follows:

Fibrospindle-cell sarcoma	6 cases, cured	3
Fibromyxosarcoma	7 " "	3
Giant-cell sarcoma	2 " "	2
Spindle-and-round cell sarcoma.....	16 " "	4
Round-cell sarcoma, perithelial.....	7 " "	0
Lymphosarcoma	6 " "	1
Psammoma	1 " "	1
Inoperable, operation refused, etc.....	9 " "	0

54 cases, cured 14

We note in the soft parts not only that the relative frequency of the more malignant type of sarcoma is greater than in the skin, but that the proportion of cures among the less malignant type is not as great. This is apparently due to the fact that the concealed subcutaneous tumor does not seem as urgent to the patient or the physician as the skin tumor.

In presenting the relation of trauma to sarcoma I have mentioned the importance of the immediate exploration of a subcutaneous mass. The infrequency of a permanent cure among these 54 cases of sarcoma of the soft parts must be looked upon as evidence favoring earlier intervention. In all of these cases there was an interval of months after the palpable swelling was observed before exploration was requested. In many of these cases the relation of trauma to the swelling was sufficient to urge an earlier intervention.

The surgical aspects are of unusual interest. They embrace the differential diagnosis between the inflammatory and the benign lesion, and between sarcomas of different types. For the fibrospindle-cell—the fibromyxo—and the giant-cell sarcoma, the local operation may be more restricted than for the more malignant types.

In my own observations, and in the literature, I have found that ossifying myositis—a distinctly benign lesion, has been very frequently mistaken for sarcoma, and amputation has unfortunately and unnecessarily been performed. My colleague Dr. Finney has also called attention to this in his paper on myositis before the Southern Surgical and Gynecological Association last December.

LESIONS OF SPECIAL TISSUES.

Muscle. Although it is true that primary sarcoma of muscle tissue is a very rare lesion—I have never observed a case—yet, the sarcoma of the intermuscular connective tissue is relatively frequent. For this reason, when we have a mass, circumscribed or infiltrating, we must bear in mind not only myositis, but sarcoma, and in the very early condition it is difficult, if at all possible, to differentiate. It is true that the bone shadow of the ossifying myositis in the X-ray plate would exclude sarcoma, and the Wassermann reaction would suggest gumma, while the reaction to tuberculin would indicate tuberculosis; fever and a leucocytosis a pyogenic myositis. In many cases, however, early exploratory incision should be made.

I have previously fully discussed my own experience and the literature on the medical and surgical aspects of neoplastic and inflammatory tumors of muscle. (*Progressive Medicine*, December, 1902, p. 137; 1903, p. 178; 1905, p. 245; 1907, p. 215; and 1908, p. 167.)

Skin. The neoplastic lesions of the skin have been presented. In this paper we are interested in the inflammatory lesions only in so far as they may represent precancerous diseases. The etiological relation between ulcer, the various forms of dermatitis, tuberculosis, chronic inflammatory nodules and lesions about the hair follicles and nails, to carcinoma and sarcoma have been mentioned here and in the paper before the Dermatological Section.

Joints and Bursae. Neoplastic formations in the synovial sack of a bursa or joint, although relatively infrequent as compared with the larger number of inflammatory lesions, must nevertheless be borne in mind at the exploration. It is their infrequency that acts against their early clinical recognition, and at the operation the surgeon not having the tumor in mind may conclude that he is dealing with some rare inflammatory condition. The scanty literature on both subjects I have critically reviewed (*Progressive Medicine*, December, 1899, p. 213; 1902, p. 192; 1906, p. 251; 1908, p. 192).

TABLE III.

BONE TUMORS.

Benign tumors	60
Exostoses	34
Other solid tumors: osteoma, fibroma, myxoma, chondroma	6
Bone cysts	20

Giant-cell tumors		22
Periosteal	3	
Medullary	19	
	<hr/>	
Less malignant tumors.		8
Periosteal osteosarcoma	3	
Myxochondrosarcoma	4	
Fibrosarcoma	1	
	<hr/>	
Most malignant tumors.		32
Spindle-and-round-cell sarcoma	27	
Periosteal	14	
Medullary	13	
	<hr/>	
Angiosarcoma		5
Periosteal	3	
Medullary	2	
	<hr/>	
Sarcoma, clinical diagnosis only.		18
Multiple myeloma		1
Metastatic carcinoma		13
	<hr/>	
Total.		154

Bone. Table III shows the relative frequency of the different types of bone tumors. This is a group of tumors to which I have devoted a great deal of attention. In *Progressive Medicine* since December 1899 to 1909—a period of ten years—I have endeavored to present a complete critical review of the literature. In 1903 I described my experience with curetting for medullary giant-cell sarcoma (*Johns Hopkins Hospital Bulletin*, May, 1903, vol. xiv., p. 138). In 1904 (*Jour. of Amer. Med. Assn.*, Oct. 15, 1904), I published my experience with the benign bone cysts. In 1908 (*Jour. of Amer. Med. Assn.*, Febr., 1908, p. 325) I presented before the American Orthopedic Association the evidence that favored conservative operations for certain types of bone tumors. In the symposium on cancer before the section on Pathology and Physiology this year, I used this experience with bone tumors to illustrate what constitutes real progress in the surgical treatment of malignant growth.

Bone tumors could be well employed again to illustrate the points that I am attempting to bring out in this paper on the medical and surgical aspects of tumors. Here again we meet the relation of trauma to sarcoma; here we are impressed with the unfortunate results of needless delay; here the surgeon must make his diagnosis at the exploratory incision in spite of the great help of an X-ray which is not available for soft-part tumors; here we meet the inflammatory, the

benign, and the less malignant sarcoma which can be eradicated by a relatively conservative operation, and here most frequently the very malignant sarcoma which kills by metastasis to the lung; after metastasis has taken place amputation at the highest joint would be of no avail.

In the past both, physician and surgeon, have looked upon amputation as the usual method, and, as von Mikulicz pointed out many years ago, this view of the profession frightened the laity from seeking advice until pain, pathological fracture, or crippling deformity compelled the patient to do so; or if he did come under medical attention in the early stage when the symptoms were slight, amputation was as a rule refused.

Today, I am confident, we can say to the public and profession that amputation for a lesion of the bone which is curable at all, is rarely necessary, and the more frequently operative intervention is instituted early, the less frequent will amputation become.

Among the bone tumors we encounter two of unusual interest—the bone cyst and the giant-cell sarcoma. These tumors I have discussed before the American Surgical Association (*Annals of Surgery*, August, 1910).

LESIONS OF SPECIAL GLANDS.

The Thyroid. Its medical aspects predominate, because they consider the relation of hypo- and hyperthyroidism to the thyroid hypertrophy. In the differential diagnosis today there should always be a routine examination of the thyroid gland. Its enlargement may render the search for thyreotoxic symptoms more successful.

The surgical indications for hyperthyroidism in its different forms may be considered well established. Partial thyroidectomy is the operation of choice. When instituted early the operation becomes a simple affair and has few dangers, if any. But in the late stage of exophthalmic goitre the surgeon is taxed to the limit of his art and science. Here we need not only an expert in the technique of ligation of the thyroid arteries or partial thyroidectomy, but perhaps more important, an expert anesthetist. If a patient in the advanced stages of Graves' disease were compelled to choose, I am inclined to think her chances would be best with an expert anesthetist than with a poor anesthetist and an expert surgeon.

The surgery of hypothyroidism is not so well defined in its indications. I venture to occupy space on the medical and surgical aspects of lesions of the thyroid other than tumors, because the hypertrophies

of the thyroid gland, with or without thyreotoxic symptoms of the two types, far outnumber tumors.

In 1905, in presenting a *Clinical and Pathological Study of Cysts of the Thyroid* (Surgery, Gynecology and Obstetrics, August, 1905, vol. i., p. 115) and, later, a similar study of *Adenoma of the Thyroid* (*Ibid.*, February, 1906, vol. ii., p. 121) I demonstrated from my experience the most important medical aspect of asymmetrical enlargement of tumor of the thyroid. Although carcinoma and sarcoma of the thyroid are relatively infrequent, there was not a recorded case of cure among the cases which I studied, nor in the literature, when the operation was performed at a period of the disease in which a clinical diagnosis of a malignant tumor could be made. It seemed evident, then, that to cure a malignant tumor of the thyroid one should make it a practice to remove all asymmetrical tumors of the thyroid when first observed in patients over thirty. This rule holds good today, and it is the only reason for advising operation for a small tumor of the thyroid giving no symptoms of a local or general character.

Physicians frequently forget that multiple or single tumors of the neck situated outside of the thyroid area may be of aberrant thyroid tissue. Surgeons in operating for such single tumors have usually neglected to search for the thyroid gland proper and have been surprised to find, after the removal of the single tumor, that it was thyroid tissue, and still more surprised to observe later myxedema.

The medical and surgical aspects, therefore, of tumors of the thyroid gland can be expressed in a few words. Extensive dissections for malignant disease need never be performed: they will neither accomplish a cure nor give comfort, and, in addition, in attempting to perform them, we add to the patient's dangers tetany, and to his later discomfort myxedema. The inflammatory lesions of the thyroid need not, therefore, be differentiated from the malignant, because the malignant disease in that stage would be hopeless, while the inflammatory will subside.

The relation between symmetrical and asymmetrical enlargement of the thyroid to puberty, menstruation, pregnancy and the menopause should receive greater attention from the medical profession, and the surgeon should bear this in mind and not resort to operative intervention too early, because enlargements due to, or associated with, these critical periods of a woman's life usually subside after a short time.

THE SALIVARY GLANDS.

While malignant tumors are the most common lesion of the breast, and hypertrophies the most common of the thyroid, the salivary glands are relatively free from both types of new formation. The most frequent tumor in the region of the salivary glands is the so-called mixed tumor of the parotid. Among 100 lesions of, or near, the parotid 59 have been tumors of this type; 14 inflammations, and 27 malignant tumors.

I have never observed a permanent cure after the most complete dissection of the parotid and surrounding tissue for a malignant tumor. In two of the cases which I have studied the complete operation had been performed for tuberculosis. These patients were cured, but unnecessarily mutilated by scar and facial paralysis. I now have a record of a number of such cases through personal communications.

When an infiltration of the parotid gland is observed, therefore, suggesting malignant disease, one should never resort to the complete operation until a positive diagnosis has been made, and then it is a question, in my mind, whether it is really worth while. The mixed tumors in the region of the parotid are distinctly benign. It is important to remember that they may be situated in unusual positions. Their most common site is below the angle of the jaw. They may be situated in the cheek, in the parotid gland itself, near the submaxillary or sublingual, in the region of the tonsils, in the hard palate, and, in rare instances behind the parotid gland producing a tumor palpable in both mouth and neck.

These tumors should be removed when they are first observed and small. It is true that they have very little tendency to malignant change; yet, this is possible, and furnishes one indication for early operation; in the second place, if the tumors are permitted to grow, surgical intervention becomes more difficult. When the tumor is situated in its usual position, the greater the size the greater the risk of injury to the facial nerve at the operation; when it is situated in the less frequent and more inaccessible region, the more trying the operation for the surgeon.

There is a very important surgical aspect of mixed tumor of the parotid, and I have ample evidence of its correctness. I have seen a number of recurrences after the removal of small mixed tumors. As far as I was able to ascertain, the operation had been one of enucleation. In some 12 cases since then cures have been accomplished by a little more radical local dissection, even when the operation has been a third or fourth resort. Enucleation should never be practiced,

except when the tumor is situated in the region of the tonsil, or in some of the other infrequent or inaccessible localizations. Here a wider dissection and enucleation may encounter risks greater than that of recurrence.

This tumor has such a thin capsule, and the tissue within the capsule is so cellular and friable, that during an enucleation by blunt dissection the chances of tearing the capsule and leaving a shred in the wound to grow again would seem possible in almost every case.

THE BREAST.

The medical and surgical aspects of tumors and inflammations of this gland have received so much attention in recent literature, that the attitude of the profession has been pretty carefully established. My interest in this subject has been large (Importance of the Early Recognition and Operative Treatment of Malignant Tumors, *Jour. of Amer. Med. Assn.*, November, 1906, vol. xlviii., p. 1470). Senile Parenchymatous Hypertrophy of the Female Breast and Its Relation to Cyst Formation and Carcinoma (*Surgery, Gynecology and Obstetrics*, Dec., 1906, vol. iii., p. 721). The Clinical and Pathological Diagnosis of Diseases of the Female Breast (*Amer. Jour. of Med. Sciences*, February, 1908, vol. cxxiv., p. 157). Inflammations and Tumors of the Female Breast (*Kelly-Noble Abdominal and Gynecological Surgery*, vol. ii., p. 180). Cancer Cysts of the Breast and their Relation to Non-malignant Cysts (*Jour. of Amer. Assn.*, Oct. 30, 1909, vol. liii., p. 1475).

In the introduction I have emphasized the most important medical aspect—that every mass in the breast of a woman over twenty-five years of age, should be looked upon as an acute disease and explored. The surgical aspects have also been discussed. The diagnosis must be made at the exploration, and when the disease is cancer there should be no compromise with the radical operation.

The medical profession should know that at puberty one breast may develop more rapidly than the other; this might be confused with tumor formation. In the breasts of girls at or after puberty single or multiple nodules may appear. There is no indication to operate upon these, unless one or more tumors grow and give discomfort.

There are other symptoms besides tumor or mass with which the profession should be familiar, in order to properly interpret them. Now and then retraction of the nipple, or dimpling of the skin will be observed before the tumor. This is a positive sign of cancer—do not wait for the tumor.

Unilateral ulceration of the nipple in a non-lactating breast without a history of injury or lues is probably Paget's disease. This should be treated as cancer: there is always a malignant tumor somewhere in such a breast.

Discharge of blood from the nipple without tumor formation is not of itself an indication for exploring the breast. If a tumor can be felt, it is this sign, and not the discharge of the blood from the nipple, that indicates the operation. One will always find a cyst with a papilloma, and it becomes the responsibility of the surgeon to differentiate the benign from the malignant cyst. Here it is not inappropriate to bring out some of the surgical aspects of cysts.

A blood cyst without a papilloma within its wall to explain the hemorrhage has, in my experience, always been cancer. A smooth-walled cyst with clear, or slightly cloudy fluid has always been benign. The differentiation of the malignant papillomatous cyst from the benign is more difficult. Pain, without tumor, is not an indication for operation. When the tumor in its very onset is painful and tender, this suggests a benign lesion. The experience of pain after the tumor has been present some weeks or months favors malignancy.

Although I have dwelt upon lesions of the breast during pregnancy and lactation in my paper before the Section on Pathology and Physiology, I take this second opportunity to emphasize the importance of a different attitude toward a mass in the breast of the pregnant and parturient woman. In the first place, and most fortunately, malignant disease here is rare, and it is probably for this reason that, when it does begin, it is looked upon as mastitis.

During pregnancy any lesion of the breast is very unusual. Now and then a benign tumor has been observed before pregnancy. This tumor enlarges with the breast and, if removed, shows the lactation hypertrophy corresponding to the time of removal. In a few instances the first appearance of the benign tumor has been after pregnancy had started. It is impossible to differentiate such a benign tumor from a malignant one, except at exploration. It is my decided opinion, therefore, that the appearance of a mass in the breast of a pregnant woman should immediately be explored.

After the birth of the child and up to the fourth month of nursing the most common lesion is lactation mastitis. For this reason it is quite proper to look upon the "caked" breast as an innocent inflammatory lesion. However, a mastitis should do one of two things: form an abscess or disappear. The operation for abscess need not be discussed. But if the mass does not disappear after a short time.

say three weeks, it should be explored. Chronic lactation mastitis is rare, but possible; the mass may be tubercular, or carcinoma. I have observed cancer in the lactating breast ten times: in every instance first treated for mastitis and with massage; in every one of these cases the operation was performed after the disease was clinically malignant. There has been one cure. Massage should never be practiced during lactation. It is harmful for mastitis and worse if the mass be carcinoma. After the fourth month lactation mastitis is so rare that the appearance of a mass should be looked upon with grave suspicion, and the breast explored very promptly.

LYMPHATIC GLANDS.

The problem is very much the same whether the glands are situated in the neck, axilla, or groin. In the cases of which I have careful notes, and as far as I have investigated in the literature, all of the malignant tumors arising in the lymphatic glands are practically hopeless. For this reason it is always justifiable to remove a gland for diagnosis before subjecting the patient to operation.

There is one lesion in the neck which must be differentiated from the primary malignant tumors of the lymphatic glands, and that is carcinoma of the branchial cleft. This winter I presented before the Johns Hopkins Medical Society a study of twenty-three such cases. I called attention to two in which the lesion had presented itself as a cyst or an abscess. The failure of the surgeon to think of this possibility at the operation, and to carefully inspect the wall of the abscess or the cyst led to a postponement of the correct diagnosis until the recurrence of the disease revealed its malignancy. In the remaining 21 cases the tumor was allowed to grow until it was distinctly malignant.

This malignant tumor arising from the branchial cleft is situated in the beginning behind the upper portion of the sterno-cleido-mastoid muscle below the parotid gland, and cannot, in the early stage, be told from the enlargement of a lymphatic gland. I would urge the more frequent early exploration of single nodules in the neck, so that we may have the opportunity to perform a radical operation for cancer of the branchial cleft in its early stage. My results show that this should be attempted even in the later stage: even if the patients are not cured they are more comfortable. This radical operation should consist of temporary clamping of the common carotid above the clavicle, division of the sterno-cleido-mastoid muscle, ligation of the internal jugular, and a clean dissection of the neck removing the muscle and vein with the tumor and other dissected tissue.

It is because of this tumor that I urge early exploration. There seems little hope in the treatment of Hodgkin's disease and sarcoma. With Mr. C. C. Cody of the graduating class, I have carefully investigated the clinical and pathological picture of 33 cases of Hodgkin's disease and 32 cases of sarcoma. There is only one way to make the differential diagnosis in the early, and sometimes even in the very late stage, and that is by the excision of one gland. And even after this gland is carefully sectioned and stained, the cellular pathology is often difficult to correctly interpret.

The medical and surgical aspects of lesions of the lymphatic glands in the groin, axilla, and neck form a very important chapter. As all the problems are not as well established here as in the lesions of the breast and others discussed here, I shall leave this subject for a second paper. It would be difficult in the allotted space to present the questions properly.

LESIONS OF SPECIAL REGIONS.

The Jaws. The medical and surgical aspects of the connective-tissue tumors arising from the periosteum or the medullary cavity of the jaws do not differ from those of the long pipe bones that have been considered. In fact, the relative proportion of curable tumors is greater in the jaws than in any other bone, because here we meet tumors of dental-residue origin. Among 112 of the less malignant and curable lesions of the jaws 40 were of dental origin, 19 benign dentigerous or dental-root cysts; 21 cystic or solid adamantine epithelioma. In the beginning of the disease a differential clinical diagnosis is not possible, and it is very important to explore. Both the dentigerous cyst and the adamantine epithelioma, can be recognized. Drainage is sufficient for the cyst, while for the adamantine tumor a rather restricted operation is all that is necessary. All of these 21 cases, as far as I have been able to ascertain, have remained well. The tumor does not tend to infiltrate beyond its bone- or connective-tissue capsule. I have never found metastatic areas in the neighboring lymphatic glands. I am confident that, unless surgeons are quite familiar with this tumor, they will incline to look upon it as a spinal-cell carcinoma and, in the attempt at a cure, perform unnecessary radical and mutilating operations.

When I began to investigate the cured cases of carcinoma of the mucous membrane of the upper and lower jaw I was surprised to find three permanent cures of tumors of such a size that if they had been carcinoma spinocellulare, a cure, from experience with other cases,

could not have been expected. Now, when these cases were restudied pathologically, the tumors proved to be adamantine epitheliomas, and the glands removed did not show metastasis.

The most frequent and, fortunately, also curable lesion of upper or lower jaw is the epulis (50 cases, as compared with 40 of dental origin). The other lesions of the jaw which, in my experience, have been curable are as follows: *ossifying periostitis* (4 cases) to be distinguished from *osteosarcoma* (3 cases), because in the former resection is not indicated, while in the latter it is. The relatively benign fibrosarcoma (11 cases) occurs in the antrum of the upper jaw and as a periosteal or, very rarely, central tumor of the lower jaw. I am confident that for this fibrosarcoma, whatever its situation in the upper or lower jaw, a cure can be accomplished without total resection of the upper or lower jaw. In the few cases in which I have removed the tumor without destroying the continuity of the jaw the results have been as permanently good as in those cases in which the operation had been more extensive and mutilating. The same conclusions follow in the study of *giant-cell sarcoma* in the body of the lower jaw (3 cases). In all of these cases total resection was employed. I feel justified, from the experience with giant-cell sarcoma elsewhere, to advise that curetting should be the operation of choice.

The story of 38 cases of more malignant tumors of the upper and lower jaws is a pitiable one. Here we have 26 carcinomas of the antrum and 12 spindle-and-round-cell sarcomas involving the periosteum of the lower, or the antrum cavity of the upper, jaw, and not a single permanent cure in spite of the most radical procedure. With this evidence one should never proceed with the radical removal of the upper or lower jaw unless the diagnosis of a spindle-and-round-cell sarcoma, or of a carcinoma of the antrum, is made, and surgeons must be familiar with the curable tumors and with the extent of the local operation required to accomplish this cure.

While my table shows 150 tumors of the upper and lower jaws proper, Table 1 shows 40 carcinomas of the mucous membrane of the gum or hard palate, and as these malignant epithelial ulcers so quickly involve the bone, they are for practical purposes jaw tumors. Among these 49 cases only 7 were of the less malignant type; two benign warts, three malignant warts, and two basal-cell tumors. *A priori*, therefore, an epithelioma of the mucous membrane in the region of the jaws is the most malignant type. My experience justifies an attempt at a most radical operation: excision of the ulcer with a wide zone of mucous membrane, a large piece of bone; if the ulcer involves

the upper jaw, there should be continuous dissection of the entire thickness of the cheek down to the neck, and the usual complete removal of the glands of the neck. When the ulcer involves the lower jaw with the bone and the glands of the neck the corresponding area of the floor of the mouth should be removed.

In view of such an extensive and mutilating dissection which is the only treatment for carcinoma spinocellulare, the importance of a differential diagnosis from an adamantine epithelioma or a benign ulcer or epulis, is obvious.

The surgical problems of tumors and inflammations in the region of the jaws are therefore varied in their practical significance, and I have considered them in detail in *Surgical Diseases and Wounds of the Jaws* (Bryant and Buck's American Practice of Surgery, vol. vi., p. 813).

I am confident that lesions of the jaws can be recognized earlier, and much can be done along the line of prevention. Good dentistry with the preservation of the teeth in good condition will, I am sure, reduce the number of carcinomas of the mucous membrane of the gum. The relation of jaw tumors in general to bad teeth is well brought out in the frequent occurrence of all jaw tumors in the colored race. In this region only, as compared with all the other localizations of tumors, the number of colored individuals affected equals that of the white. Bad teeth are the rule in the negro.

Swellings of the alveolar border of the body of the jaw proper and any bulging of the walls of the antrum should immediately be investigated. Nothing is gained by waiting for pain and further development, but how infrequently are surgeons given the opportunity to see the diseases in this period. The delay apparently does not affect the individual suffering with curable tumors. The chief loss by this delay is that the curable disease having involved more bone requires a more mutilating operation to accomplish its eradication. Whether by very early intervention we shall succeed in accomplishing cures in the cases of more malignant sarcoma and carcinoma of the antrum, I am not prepared to say.

Before closing the remarks in relation to the jaws, I would like to call attention to the frequency with which subacute and chronic inflammatory lesions of the upper and lower jaw secondary to caries of, or infections about, the teeth give rise to an infiltrating mass that suggests malignant disease. I would caution against treating such a suspicious mass as malignant until definite proof had been offered by microscopic study. If any doubt remains, treat the lesion as an in-

flammation, because experience has shown that a malignant tumor of this kind would be incurable, while the inflammatory tumor will subside under less radical treatment. I have notes on six such cases: all were treated as inflammations, although the clinical evidence, and in some the frozen section, suggested a sarcoma of the cellular type. All of these patients have recovered and remained well.

The question of the early symptoms and the surgical diagnosis and treatment of orbital, intranasal and nasopharyngeal tumors are so fully dealt with in my paper before the Section of Pathology and Physiology, that I will not repeat here.

STOMACH.

The medical and surgical aspects of tumors and inflammatory lesions of the stomach would require entirely too much space to justify their consideration in this paper, but in this region, in both the medical and surgical aspects, we have new problems. The lesion is concealed, and the question is, what is the minimum of symptoms that justifies exploration of the stomach. Apparently today no one questions what is to be done if the maximum of symptoms is present. Physician and patient in consultation with surgeons must decide on the minimum of symptoms. When the abdomen is opened the problem is strictly a surgical one. What is the best treatment for ulcer in the different localizations? Can callous ulcer be diagnosed from cancer? If in doubt, shall resection be performed?

Kocher in studying his twenty-five years' experience with ulcer and cancer of the stomach found that his cured cases of cancer were freely movable tumors in the region of the pylorus which had produced obstruction and therefore brought the patient earlier to operative intervention. In all of these cases there was absence of HCl and diminished acidity—not very recent growths, therefore, but yet of much shorter duration than similar lesions situated elsewhere in the stomach where they did not produce obstruction. Among his cured cases there was but one scirrhus carcinoma: the remainder were adenocarcinomas.

We know, therefore, today pretty well what cancer of the stomach can be cured by resection. For this reason any freely movable tumor in the region of the pylorus or greater curvature of the stomach should be resected: it gives the patient with cancer of the stomach the only hope, and is, as a matter of fact the best treatment for ulcer of this type. I have called attention to the general opinion that ulcer and cancer of the stomach have a close relation to each other, and that

for this reason an ulcer of the stomach should be made to heal quickly, in order to prevent the later development of cancer. Even if this close relationship between ulcer and cancer of the stomach, did not exist I think that the conclusion based on the assumption of this relationship would still hold good.

LARGE INTESTINE.

Mr. Cody has been assisting me in a careful investigation of 112 lesions of the large intestine, of which 55 were malignant tumors. This study is by no means completed, but one very important medical fact was brought out. Of the 53 cases of cancer 36 came to surgery on account of symptoms of obstruction; 29 of these cases were operable, and most of them curable. In 17 cases there were no symptoms of obstruction, but the patients sought advice on account of painful tumors: in only 8 was the condition operable, and not a single cure was accomplished. It is fortunate, therefore, for a patient with carcinoma of the colon to have a tumor which produces obstruction. But what are we to do with the smaller group? What is the minimum of symptoms that justifies the exploration of the colon in order to subject non-obstructing cancer to operation earlier?

The medical and surgical aspects of tumors inflammatory and neoplastic situated within the abdomen, therefore, present a new set of questions somewhat different from tumors of the skin, bone, breast, etc., as discussed in this paper, but the limits of this address are already exceeded.

SOME CONSIDERATIONS OF THE PURE MILK QUESTION IN COUNTRY DISTRICTS.*

BY BEN D. BAIRD, M. D.,

GALESBURG, ILL.

In a burst of public spiritedness, characteristic of the Profession, the Galesburg Medical Society in April, 1908, organized the Galesburg Medical Milk Commission. It is only fair to say that our desires were greater than our resources, and the Medical Society not having had a great deal of experience with milk commissions considered the honor of appointment to membership of this commission, due and

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sufficient reason for proceeding to get busy with the milk question, and everlastingly keeping at it without thought of remuneration or wherewithal to meet expenses. The public was indifferent to the degree of absolutely refusing even to get interested in us, and the city council thought we were grafters when we asked for a milk ordinance that would give us some authority to inspect milk. Each councilman thought *he* should have the right to appoint the inspector and name the salary, and because there were not enough inspectors needed to give each alderman one appointment, that fell through, and we were right where we started, only we *knew* a few things which we *didn't* know to start out with. We then thought the milk dealers were easy, and would like to be educated along the lines of certified milk so we called them together and talked to them, talked to them earnestly, like fathers. They listened intently and *seemed* delighted with our theory. They thought our talks were beautiful and our unselfish stand for humanity entitled us to a bronze medal, and then they woke up and said "how are we going to pay for all this when we're making only a *living now*? Your theory is beautiful, your intentions are ennobling, your certified milk is just the thing, but *we* are only poor milk dealers and have to buy milk wherever we can get it so that we can sell it for enough profit to keep our families in shoes and our groceryman satisfied. We can't build sanitary barns and put screens on them, we can't have our herds tested and we can't make the farmers do it because they have milked cows too long now in the good old, filthy, disease-producing way."

We found that Galesburg was using about ten thousand quarts of milk daily and two thousand five hundred quarts of cream. About fifteen per cent was produced by two or three dairymen, the balance was shipped in or furnished by private families. We approached the dairymen in a very cautious and respectful manner and suggested that certain improvements would allow them to furnish a better milk supply. Their reply was that "to make these necessary improvements would mean a raise in the price of milk and our customers wouldn't stand for it, and besides our barn lots are so flat the cows wade knee-deep in mud, after each rain," which is literally true, as Galesburg is right on the prairies, "so we couldn't furnish certified milk if we got twice as much for it as we now get" (the average price is about seven cents per quart). So we were up against it again. All this had taken us better than a year and what we had accomplished in the way of *certified milk* wouldn't hurt anybody. But we were the medical milk commission and *our* duty was to see that Galesburg got a

better quality of milk and we had to do it some way and without money. Moral suasion had failed, our milk ordinance was knocked out, the milk producers wouldn't listen, the milk dealers *couldn't*, and it looked as if we were going to be failures as milk commissioners.

At the critical moment when we were in deep despair, a Moses arose as of old, and told us how our Superintendent of Public Schools had a way of getting things and suggested that we have him equip the chemical department of the High School with milk testing apparatus and have the Professor of Chemistry adopt milk analysis as a part of the regular curriculum and teach the pupils how to analyze milk and teach them what *pure* milk was and what *impure* milk meant, to instruct them that it was a most valuable part of their daily life to see that the family didn't buy filthy milk and by repeatedly examining the milk from their own houses and keeping records of the same it would soon be easy to tell which of the dealers were handling the best milk and soon the whole school would be talking and comparing notes and the milk man who wasn't clean would have to brush up or he would lose his business.

This plan we adopted and the Board of Education made us a very liberal allowance for this equipment and installed it in the chemical department of the High School. Of course this does not include the bacterial count but we test for fats, solids, preservatives, and specific gravity, and use the Wisconsin curd test for purity, so it is after all a very good analysis. A record of every analysis is kept by the Professor of Chemistry and the pupils themselves make the tests under the supervision of their Professor, and very soon they become quite proficient and after a while they positively refuse to use milk that doesn't come up to the standard. The High School has nearly eight hundred pupils representing nearly as many families and these eight hundred families wield a tremendous influence for the betterment of the milk situation.

Recently in a talk with the Superintendent of Schools and the Professor of Chemistry they told me that milk examination was specially dwelt upon all through the four years course and they considered it relatively of as great importance as any other branch that was taught because it brought the question of pure milk daily into homes that previously had known nothing of it and the demand for better milk was so great that the milk today is fifty per cent. better than when it was inaugurated. Superintendent of Schools Steele says, "It emphasizes in a way that nothing else could the value of pure milk and bring it directly home to the consumers."

MEDICAL INSPECTION OF SCHOOLS OF MILWAUKEE.

BY G. P. BARTH, M. D.,
MEDICAL INSPECTOR OF SCHOOLS,
MILWAUKEE.

History.—For some time previous to the first efforts at the establishment of Medical Inspection of Schools in the city of Milwaukee, the subject was discussed repeatedly in an informal manner among members of the Milwaukee Medical Society, which discussions gradually crystallized in the introduction of a resolution at a regular meeting of the Society in September, 1907, providing for the inspection of three schools designated by the Superintendent of Schools, as representative of the school population as a whole, with a view to determine the desirability or the necessity of regular medical supervision of the schools of the city.

The president appointed Drs. A. J. Patek, A. W. Akerly and G. P. Barth as the committee which was to have this work in charge. This committee asked the following physicians to inspect the schools designated by the Superintendent of Schools, to-wit: Drs. Barth and F. A. Stratton, the 4th District, Drs. R. F. Teschan and H. G. Oakland the 10th District No. 2, Drs. Hardy and D. C. Pierpont the 1st District.

During the month of October, 1907, the results of this inspection were tabulated and found to be of such a nature that a strong plea was made for complete medical inspection of schools in a communication to the Board of School Directors, the tables prepared accompanying the communication.

The Board was unable to act favorably upon the suggestion of the Medical Society at the time, but at its meeting in April, 1909, it voted to proceed in the matter, at the same time creating the office of Medical Inspector of Schools. This officer assumed the duties of his office April 13, 1909, and proceeded at once to fully acquaint himself with the conditions and needs of the schools from a hygienic and sanitary viewpoint, and to plan an adequate and comprehensive system of supervision of the health of the school children.

At its meeting in September, 1909, the Board of Education voted to employ five Assistant Medical Inspectors of Schools who began their duties in October. Recognizing the value of the work, the staff was increased by five at the January meeting, 1910, three of whom took office in February, and one in March. The other who is to be a woman physician, still remains to be appointed.

Nurses. Even before the establishment of regular school inspection work by the Board of School Directors the Visiting Nurse Association had been doing considerable work among school children. When a chief medical examiner was appointed two nurses were assigned for school work, which was increased to three, and then a fourth added to the staff when it was found that the number of cases in the downtown schools was so large that three could not cover the territory assigned and give each case the attention it required. Great credit is due this philanthropic association for their assistance and co-operation, as without the aid of the nurses far less could have been accomplished.

The System. The city has been divided into nine geographical districts, eight of which are approximately equal in size and contain about the same number of schools; the ninth, located in the central or slum portion of the city, covers less area because the schools are closer together and the conditions met among the pupils worse than in the outlying sections of the city. Each district is under the care of one Assistant Medical Inspector. For the work of the nurses the city has been divided into four districts, the three outlying territories being about equal and the fourth in the center of the city, being considerably smaller.

Each school has been supplied with the following materials: A case for the filing of the doctor's and nurse's records. A circular for the principal explaining in brief the purposes of medical inspection, his duties in its accomplishment, and information as to causes and time of exclusions. A circular for each teacher detailing her duties and giving information as to the early symptoms of contagious diseases. Code cards for all teachers on which all diseases of importance are indicated by number. Blue Cards. Psychological examination blanks with circulars of explanation. Physical examination blanks.

The following instructions have been given for the guidance of the Inspectors:

DIRECTIONS TO ASSISTANT MEDICAL INSPECTORS.

Each inspector will be assigned to a group of schools. He will divide this group into two groups, visiting each group on alternating days during school sessions.

When an inspector makes his first visit to a school he should make arrangements with the principal for the use of a room at least 20 feet long and well lighted, in which to make his examinations. He should also arrange some signal with the principal whereby the teachers are informed of his presence in the school for the purpose of making examinations, or a monitor can be

assigned to the doctor by the principal, who shall inform the class teachers, in order, that the doctor is ready to receive pupils whom she wishes examined.

Care and discretion must be exercised so that the routine and discipline of school and class-room may be disturbed as little as possible.

He is to use every opportunity to instruct the teachers in the recognition of gross signs of sickness or disease, and is to request the teachers to report all pupils that in his or her opinion are carriers of contagion or require immediate medical aid, on the blue card left with her for that purpose, and forward it to the principal. The inspector will then call for the children when he is ready to receive them and return the stub to the teacher, so that she may know what disposition has been made of the case, the card itself being filed at the school for the guidance of the nurse.

All diseases should be indicated by the code number. Avoid as far as possible allowing other children to learn what affliction any particular child may have, by using code numbers only in speaking of the affliction.

At the first visit to the school at the beginning of each semester the inspector will make a rapid inspection of all the pupils. This examination will be conducted as follows:

The inspector will visit each room, stand with his back to a window and have all the pupils of each room file past him for inspection. The pupils in passing expose to view the palms of the hands and the wrists, with the fingers of one hand pull down the eyelid, exposing the conjunctiva, open the mouth and put out the tongue and, in the case of girls, lift up the back hair. This hurried inspection should be made without touching the pupils. Skin diseases, eye diseases and evidence of scarlet fever and measles, especially in the convalescent stage, can in this manner be detected. After this preliminary inspection the regular forenoon inspection should be made.

ROUTINE INSPECTION.

He will adopt the following routine in his medical examinations:

He will call at each school as early as possible after the school session has begun (9:00 A. M.) and examine (a) such children as the teacher may send to him for examination; (b) such children as he may have placed under the care of the nurse; (c) such children as the nurse may present for re-examination and dismissal from treatment; (d) such children as apply for re-admission after an absence of three days, or after recovery from a contagious disease.

At the last school visited, in addition to the above examination, he should make as many physical examinations as the time will allow (not under ten). The order of visiting schools should be varied so that approximately an equal number of physicals will be made in each school, each week.

PHYSICAL EXAMINATION.

The children are ordered to report in turn to the inspector for a complete medical examination. (Preferably two are invited into the room first and as one is dismissed another is sent in, thus keeping two children with the inspector all the time.) This work is conducted in a room at least 20 feet long, and well lighted. A complete record is made out, in duplicate, on the card

provided for that purpose, one copy being filed with the principal, and the other forwarded to the central office with the daily report. In each case where treatment is deemed necessary the parents are notified on the circular letter provided and the attached card is filed in the school for the guidance of the nurse.

In making throat examinations the wooden tongue blades supplied by the department must be used to the exclusion of all other tongue depressors. Each tongue blade is used only once and then burned. Aseptic methods must be employed in all examinations.

CASES TO BE EXCLUDED.

(a) Children showing signs or symptoms of Small-pox, Diphtheria, Scarlet Fever, Measles, Chicken-pox, Whooping Cough, Mumps or Acute Tonsilitis.

(b) Cases which have been flagrantly exposed to the above diseases (except Acute Tonsilitis), until the incubation period has been passed (see below).

(c) Cases of Pediculosis with live Pediculi.

(d) Children affected with contagious eye and skin diseases and dormant pediculosis, who have persistently refused to undergo treatment.

(e) Tuberculosis of any tissue when thought to be far enough advanced to be a menace to the public health, must be reported to the chief medical inspector before excluding the pupil from school.

CASES TO BE REFERRED TO THEIR OWN PHYSICIAN, A DISPENSARY, OR TO THE SCHOOL NURSE FOR TREATMENT.

(a) Acute Conjunctivitis; (b) Pediculosis; (c) Skin diseases, including Ringworm of the scalp, face, or body, Scabies, Favus, Impetigo, Molluscum Contagiosum and discharging ears.

These children are re-examined on the next visit and allowed to attend school as long as treatment is continued. Children affected with Trachoma are referred to their own physician or to a dispensary for treatment, and are allowed to attend school as long as evidence of treatment can be shown.

If a child is excluded brief but sufficient reason therefor must be written on the exclusion circular and the card attached. The former is sent home with the child in a sealed envelope, and addressed, and the latter filed at the school.

Inspectors are forbidden to make any suggestions as to the treatment or management of pupils who are sick. In all cases the medical inspector shall scrupulously respect the rights of the family physician, and shall forward to the chief medical inspector reports of his advice in connection with all cases.

Children recovering from Measles, Chicken-pox, Scarlet Fever, Diphtheria and Small-pox must not re-enter school without a permit from the Health Department.

Children returning after mumps and whooping cough may re-enter at the discretion of the medical inspector.

When a positive diagnosis of a reportable infectious disease is made in a school, report the name and address of the case to the Health Department and the Central Office *by telephone before leaving the school*, and exclude the child forthwith.

All cases of infectious disease coming under the observation of the inspector which are not properly safeguarded should command his attention. Give

proper instructions to the family and report the matter to the Department of Health. Investigate all suspected cases of infectious disease in your territory which might have an influence on one of the schools assigned to you and report your action to the Central Office.

Each inspector shall mail to the Central Office every day a record of the work done, with the name, address and cause of exclusion of each excluded child, and the physical records of children examined on that day.

Those exposed to Diphtheria should be excluded one week from date of last exposure.

Measles cases must be excluded at least two weeks and longer if there are present bronchitis, inflammation of the throat, nose or abscess of the ear. Those exposed to Measles should be excluded one week from date of last exposure, unless a clear history of a previous attack can be obtained.

Whooping cough should be excluded until after the spasmodic stage of the cough, usually about eight weeks. Those exposed to whooping cough should be excluded two weeks from date of last exposure.

Mumps—Exclude one week after the swelling has subsided. Those exposed to Mumps should be excluded ten days from date of last exposure.

Chicken-pox—Exclude until all scabs are off and skin smooth.

Roetheln, German Measles—Exclude from school ten days. Those exposed must be excluded ten days from date of last exposure.

Cases of Tonsilitis are excluded on the clinical evidence alone and should remain excluded until all throat symptoms have completely disappeared.

The blue card mentioned above constitutes the request of the teacher for an examination for one of her pupils whom she suspects is afflicted with some acute condition requiring immediate care. When the class assembles in the morning the teacher rapidly inspects her pupils and if she finds anything abnormal in the appearance of a child she makes out this card. On this card she gives the name, address, school, grade, teacher, date and reason for sending the child. When the doctor's signal is given or a monitor informs her of the doctor's presence in the school, she gives the child selected for examination its blue card and sends it to the room in which the doctor makes his examinations. The doctor examines each child presented, makes his diagnosis and on the stub attached informs the teacher of his findings, whether the child is to be excluded or not, and if excluded, for how long. The card itself is placed on file and the case followed up by nurse and doctor until cured, when the card is sent to the Central Office for tabulation. If the case is such that the doctor considers exclusion desirable a yellow card is made out, giving the cause for exclusion, the date on which the child is to report for re-examination, and the date of re-examination and re-admission. Attached to this card is a letter form which is sent home in a sealed envelope with the child, informing the parents of the exclusion and the cause.

Each child in the schools receives also a physical examination. The result of this examination is kept on a blank made out in duplicate, and so arranged as to provide for annual records for a period of nine school years. The information recorded on the blank comprises the name, birthplace, sex, age, school, grade, nationality of father and mother, history of measles, scarlet fever, diphtheria, pertussis; date of physical examination, vaccinations, height, weight, nutrition, presence or absence of hypertrophied tonsils, adenoids, defective nasal breathing, defective palate, defective teeth, myopia, hypermetropia, other eye defect, defective hearing, deformities of the spine, trunk or extremities, tubercular lymph nodes, pulmonary, cardiac or nervous disease, chorea, epilepsy or stammering. One copy is sent to the Central Office and one copy is placed on file at the school, so that the principal and teacher may know the physical condition of each child in the school. When the child is placed under another teacher either by promotion, demotion or transfer to another school, the card is presented to this teacher who is thereby informed concerning any defects which the new pupil may have, and may take steps to place this child in the room under conditions which will enable it to do its school work in comfort and to best advantage. On the back of the sheet the doctor enters his recommendations for the care of the child, if such be needed.

When the doctor finds some physical defect in a child which is interfering with his health, development, or school progress, he informs the parents of his discovery in a circular letter which reads as follows:

"Dear:—Physical examination seems to show that your (son) (daughter) attending the.....District School No..... needs medical attention relative to....., and we would suggest that you place.....under the care of a Physician (Dentist) or a dispensary so that.....will be in better condition physically to continue school work. (Signed and dated.) Take this card with you to the doctor."

The physical examination given is necessarily somewhat crude, as no clothing is removed, the boys being asked to throw back their coats and vests. Attached to this circular letter is a card giving the data necessary to follow up the case, which card is placed on file at the school until the case has received attention or the parents absolutely refuse to care for the child. When it is found that the parents are too poor to provide the necessary care, information is furnished the department on a blank provided for that purpose, giving the financial status of the family, and steps are taken to obtain treatment

free of cost. The Board of School Directors has provided a fund of \$500.00 for the purchase of glasses for these cases.

In four diseases of the skin full directions are given as to their treatment, i. e., pediculosis, impetigo contagiosa, scabies, and ring-worm.

Special Cases. One of the acknowledged most difficult problems which any educational system is called upon to solve is that of the backward or "exceptional" child. The cost of the "repeater" in money to a community is very great. But this is not all. A conscientious teacher will endeavor in every way possible to bring this laggard up to grade standard and the extra time spent to educate this pupil is a direct loss to the other children, not only in time, but also in the wear and tear on the teacher's nervous system, for these special cases are very trying and an exhausted and irritable teacher is not as capable as one who is not so harried.

Under medical inspection in Milwaukee, when a teacher reaches the conclusion that a pupil is "backward" she reports this fact to the chief medical inspector on the psychological blank. This blank calls for all the information she may have concerning the family history of the child, its school history (whether through moving the home from place to place it was retarded by repeated transfers from school to school or city to city), and its physical and mental characteristics. The case is then gone into very thoroughly both physically and psychologically by this officer and the child recommended for a special grade or for the exceptional school. Frequently it is found that a high degree of myopia, malnutrition, obstruction to respiration or other unrecognized physical disability is responsible and on correcting this the child's ability for learning is greatly increased. When the child is found mentally below par it is transferred to the "exceptional" school. Here the classes are small, there being twelve pupils to the teacher. Each child is given a special curriculum, to conform to its abilities. In these children a particular bent of mind is often manifested, and all efforts are made to develop along this line, so that the child may become a useful, self-respecting, self-supporting citizen. It is to be hoped that this school will ultimately be able to teach every trade or calling whereby a livelihood can be gained. Thereby I believe we will exercise a strong influence toward a reduction of pauperism. There is a strong tendency for individuals of low mentality to simply drift through life and too often the current bears them down into the realms of debauchery and criminality. Instil into their minds a laudable ambition to better themselves by guiding their mind

along the paths of some useful and productive calling and many will be saved and the state made a gainer instead of a loser thereby.

Another class of unfortunates are the stammerers. These are badly handicapped by their affliction. The majority can be cured and classes for stammerers have been opened in connection with the public school system, where expert teachers train the pupils in proper vocalization.

Then we have the blind. Three classes are now conducted in the public schools where the Braille system is taught. These children prepare their lessons under the guidance of a special teacher and go to the regular grades for recitations. Their progress is fully equal to that of their class mates.

Splendid work is being done for the deaf and dumb in the school located at 7th and Prairie Sts. under the able guidance of Miss Frances Wettstein.

Two classes of unfortunates still remain for whom no provision has been made as yet, i. e., the weak, anemie and the erippled. A resolution has been introduced in the Board of School Directors to establish an "Outdoor School" for the former, but owing to a lack of funds it will probably be necessary to lay this over until next year. Chicago has formed two classes for erippled children and Milwaukee will undoubtedly follow suit in the near future.

School Nurses. As before stated, the nurses engaged in school work have been furnished by the Visiting Nurse Association of Milwaukee. So much has been published in recent medical literature concerning the value of the nurse in obtaining relief for the various diseases and disabilities found among children by Medical Inspection of schools that I simply say Amen to all praise. As a means of following up cases they are invaluable. But to detail some of their activities.

The nurses have been given the following instructions to guide them:

DIRECTION TO SCHOOL NURSES.

Each nurse is assigned to a group of schools. She reports each day at each school at a specified time.

MORNING INSPECTION.

In a special room assigned for the purpose the nurse receives all children ordered to report to her for treatment. These cases include Pediculosis, Ring-worm, Scabies, Favus, Impetigo, Mollusum Contagiosum, Conjunctivitis and Otitis Media. The treatment employed for these conditions is as follows:

Pediculosis. These cases are under the care of the nurse exclusively. Children are assembled in groups of not over five and are instructed orally and by means of circulars as to the method of home treatment. These cases are not treated in the schools. Treatment advised is as follows:

Live Pediculi—Mix equal parts of kerosene and sweet oil and saturate the hair with the mixture. Then wrap the head in a large towel for six or eight hours. (Tincture of Larkspur may be used instead of the oil mixture. The directions for use are the same.) Shampoo the head thoroughly next morning, using a teaspoonful of carbonate of soda in the water. Repeat for three successive days, combing the hair thoroughly after each treatment with a fine toothed comb wet with vinegar. While under treatment keep away from the fire or light of lamp.

To remove nits use hot vinegar or actually remove them from the hair with the fingers.

Favus and Ringworm of the Scalp. Remove the scales with Green Soap and water. Dry thoroughly and apply Tincture of Iodine, one part, and alcohol two parts. Cover with flexible collodion. On the face omit the Tincture of Iodine application.

Scabies. Scrub with Tincture of Green Soap and apply the following salve:

Sulphur	7.50
Beta Naphthol	7.50
Adipis, q. s. ad.....	90.00

Impetigo. Remove the crusts with Tincture of Green Soap and apply the following salve:

Balsam peru	1.00
White precipitate	0.30
Adipis, q. s. ad.....	15.00

Molluscum Contagiosum. Express the contents and apply Tincture of Iodine with a toothpick wound with cotton.

Conjunctivitis. Irritate with saturated solution of Boric Acid.

Otitis Media. Should be treated only after diagnosis by a physician or at a dispensary.

CASES TO BE VISITED BY THE NURSE AT THE HOMES OF THE CHILDREN.

1. *Flagrant Cases of Pediculosis.* The nurse shows the mother how to treat the condition and encourages persistence.

2. Excluded cases which do not return at the appointed time.

3. *Trachoma Cases* where treatment is not sought regularly. The nurse urges the need of treatment and if necessary takes the child to a dispensary.

(Note.—The nurse is not permitted to treat cases of Trachoma. Children so affected must report to her each week and show a physician's certificate or a dispensary card, properly dated, showing evidence that the child is continuously under treatment. Persistent failure to show such evidence is cause for exclusion from school.)

Children with marked physical defects, such as those requiring glasses, or suffering from enlarged tonsils, and adenoids or nervous diseases, who have been advised to seek medical attention, will be visited by the nurse in their homes, and in case treatment has not been begun, will urge medical attention.

Where operation or treatment is indicated and the parents of the child are not able to pay for treatment, the child's father or mother should go to a free

dispensary or hospital with the child. If it is not possible for them to go, the nurse may accompany the child if the parents give a written request that she do so. (The printed form should be used for this purpose and must be signed with the name of the parent or at least with his or her mark.)

In all cases where the parents can pay for medical care, be the amount ever so small, it should be insisted upon that the case be sent to a regular practicing physician. Under no circumstances should one physician be given preference over any other. If the services of a specialist seem indicated and the nurse is asked to recommend such specialist, she must give the patient the names of a number of physicians who make that particular condition their specialty.

Emergency Treatment for Cuts and Burns or Skin Wounds may be given once by the nurse if necessary, and the parents then advised to continue the same, or to have the child placed in the care of a doctor.

All diseases will be indicated by code number. Avoid as far as possible allowing other children to learn what affliction any particular child may have by using these code numbers only in speaking of the affliction.

The nurse keeps a special set of index cards. All cases of contagious disease found are noted on these cards. Special cards are kept for the recording of cases of pediculosis; these cases are under the exclusive care of the nurse. Other cases are noted and ordered to report to the medical inspector for the purpose of confirming the diagnosis. The nurse must exclude all children showing symptoms of Diphtheria, Scarlet Fever, Whooping Cough, Chicken-pox, or Mumps, and if the inspector is not in the school to confirm the diagnosis, telephone the name and address of each excluded child to the Central office. An inspector is then sent to the home of the child and takes further charge of the case.

The nurse forwards each day to the central office a record of the work performed, a duplicate thereof being sent to the supervising nurse, on the blank provided for the purpose, including:

- Number of children examined.
- Number of children excluded.
- Number of children treated.
- Number and character of diseases treated.
- Number of visits made to children at their homes.
- Number of visits made to dispensary, whether the case has been taken there before or not, and the cause of the visit.

The nurse will find cards covering each individual case placed on file in the school by the inspector and when treatment of the case has been completed or the parents refuse to provide the case with medical care, she will take the child to the inspector for re-examination and signature and forward the cards to the central office.

The printed form giving the nurse authority to take a child to a physician or dispensary is worded as follows:

"To Whom it May Concern:—

I, the undersigned, hereby request.....to give to or to provide for my (son) (daughter), (ward)..... such medical care as has been suggested as necessary by the medical inspector of schools. (Signed and dated)."

When the nurse considers a case cured it is referred back to the medical inspector and if he agrees the card is signed and sent in to the Central office for tabulation.

The nurse also reports bad housing conditions to the Central Office, and these are reported to the Health Department for investigation. Cases of parental neglect or abuse are taken up with the probation department of the Juvenile Court and there disposed of according to the judgment of the court.

The Department of School Inspection also maintains a close relationship with all the charitable and relief organizations of the city and through their agency is enabled to satisfy many hungry little mortals and clothe many shivering bodies. Thus the department comes in touch with all civic problems of health and happiness. Its opportunities for doing good are enormous.

Tabulation of Results. The results of the work of inspectors and nurses are tabulated daily. Five forms are used: one covering Contagious Diseases, one Physical Examinations, a Nurses' Control & Tabulation Sheet, and a Physical Examination Control Sheet, and finally, a Monthly Report Sheet.

The first is a sheet covering each school so that at all times it may be known exactly how many children are absent from a school due to a contagious disease. The name and address of each case is entered on the back of the sheet, with the cause, dates of exclusion and re-admission and the name of the acting inspector. Thus the breaking out of an epidemic in a school is at once noted and steps taken to control it.

The second is a tabulation of the physical examinations made by each inspector, and the disabilities found.

The Nurses' Control and Tabulation Sheet gives the work of the nurses done in each school, one sheet being carried for each school.

The Physical Examination Control Sheet shows the number of children in each school who received a physical examination, the number needing medical treatment, and the number who either accepted or refused the advice given by the inspector.

Finally a monthly tabulation is made of all the work done in each school.

Unfortunately some children and even some parents welcome an exclusion by an inspector as an excuse to keep their children out of school to assist in work about the house or in a business. When the child does not report at the school for re-examination on the date set by the examiner and the nurse on a visit to the house does not find

it to be a case of inability to report, owing to sickness, a card is given to the Truancy Department which reads as follows:

"Your attention is respectfully called to the fact that....., attending the.....Dist. School No.....was told to report for re-examination for re-admission..... and failing to do so, is out of school illegally. Kindly investigate. (Signed and dated.)"

An officer of the Truancy Department is sent to the home at once and proper steps are taken to compel attendance at school, according to law.

CLINICAL DEPARTMENT.

ACUTE GONORRHEAL PYELITIS. AN ILLUSTRATIVE CASE.

BY J. D. MADISON, M. D.,

MILWAUKEE.

It is not many years ago that an infection of the kidney by the gonococcus following on acute urethritis was considered to be very rare and of doubtful authenticity. A good many very probable cases appeared in the literature, but only later were cases reported in which satisfactory bacteriological proof was presented. Young, writing in 1900, was among the first to produce complete bacteriological proof of the condition. Today no one doubts the occurrence of pyelitis and other infections of the kidneys due to the gonococcus. Not infrequently the infection is not pure and a number of organisms have been found associated with the gonococcus none more frequently than the colon bacillus. The kidney involvement may be either the result of an ascending infection or simply a focus of infection in pyaemia.

The following case is reported not because of its rarity but rather because it illustrates well a form of gonorrhoeal infection, which is probably not very uncommon, and should be recognized more often than it is.

F., a female, married, age 54, was first seen October 11, 1908. Patient has given birth to five children. The confinements were all normal. Menopause occurred about four years ago. She has always been strong and healthy. There has been no vaginal discharge in the past and no pains in back or groin. In Aug., 1908, patient suffered from a rather severe attack of influenza and later went into the coun-

try for a short time to recuperate. Sept. 28, she returned home feeling very well. On the third or fourth day an acute vaginal discharge first appeared. A few days later she first noted pain across the small of the back not severe in the early stage. The pain was continuous but was a good deal better when she was lying in bed. Some pain was referred to the right thigh, but there was none in the abdomen or in either groin. The patient was first seen at 2 A. M., October 11, and stated that at about twelve o'clock she had been awakened by a severe pain across the abdomen, especially in the umbilical region. There was but little pain at that time in the back. The pain rapidly became more severe. She vomited and after a time began to have a gripping pain, as she described it, running down the right groin to the region of the bladder. At this time there was frequent and rather painful micturition. When seen at two A. M. the temperature was 101.5; pulse 85. She was complaining of a severe pain across the middle of the abdomen and especially on the right side from the kidney region down toward the bladder. The desire to frequently urinate had passed. No pain was complained of in the bladder region nor was there any special tenderness here. On examination the abdomen was found to be held quite rigid throughout, though it was found to relax a good deal when the patient's attention was attracted to something else. This stiffness of the abdominal muscles was distinctly more pronounced on the right side in the kidney region. Pressure nearly everywhere caused pain, but this pain was largely referred to the right side. The region of the right kidney showed marked tenderness both front and back and very distinct tenderness could be traced from here down towards the bladder. Vaginal examination revealed an acute vaginitis with a quite profuse purulent discharge. A catheterized specimen of urine was obtained and smears were made from the vaginal discharge. Examination of these will be described later.

The pain and tenderness in the region of the right kidney and groin continued quite severe for several days and then began to show distinct improvement. For six or eight weeks however some pain and tenderness persisted. The patient occasionally complained of sharp darting pains passing down the right groin to the bladder. The vomiting ceased after the second day. The temperature continued for about six days and ranged between 99 and 102. The vaginal discharge subsided rapidly under treatment.

About October 25, the patient began to have pains on the left side behind and in the lower axillary region. Slight tenderness could be made out in front in the region of this kidney and somewhat in

the left groin. This condition persisted for some time but never became severe. About this time Dr. Ernest Copeland made a careful examination but found no evidence of Fallopian tube disease. Dr. A. G. Jenner also saw the case in consultation and agreed that there was pyelitis of both kidneys.

Urine Examination. Catheterized specimens were obtained. The urine was moderately acid and contained many urates. During the first few days a distinct cloud of albumen was present. The amount was not measured. The microscope showed many pus cells and at first a few red corpuscles were found. A few casts were also seen and some of them had pus cells attached to them. A good deal of mucus was present. There was a considerable sediment of pus and on straining many cocci were found, both intra-cellular and extra-cellular. They did not stain with Gram's but with Loeffler's alkaline methylene blue showed the typical bipolar staining of the gonococcus. No other organisms were found.

The same organisms were found abundantly in smears from the vaginal pus. Cultures were made from urine which was obtained by catheterization and collected in a sterile bottle. At first the attempt to grow organisms on blood agar failed, undoubtedly due to the irregularity of the thermostat. However, no other organisms grew. Another thermostat was then used, and now a few colonies grew on the blood agar. These colonies became perceptible in 24 to 48 hours. They were small, slightly opaque and smears made from these colonies showed organisms which decolorized with Gram's and had the characteristic morphology of the gonococcus. In cultures four to five days old the cocci showed considerable swelling and irregularity in staining all of which is characteristic of the gonococcus. There was undoubtedly then a pure culture of the gonococcus.

The vaginitis rapidly disappeared with the use of bichloride of mercury 1-2000 irrigations and occasional applications of 5 per cent silver nitrate solution. Urotropin in $7\frac{1}{2}$ grain doses t. i. d. was started as soon as the case had been sufficiently studied, and was continued for several weeks or until the symptoms had disappeared. Since that time, on two or three occasions, there has been some return of the pains in the back for a few days. At these times urotropin has been used.

It seems satisfactorily proven then that in the case presented we have to deal with a rapidly ascending infection of the genito-urinary tract, which involved in succession the vagina, urethra, bladder, ureter, and finally the pelvis of the kidney.

It will be noted that no attempt was made either to obtain urine direct from the kidney by catheterization of the ureter or by aspiration of the bladder. These procedures were not deemed advisable though they would have added something of interest to the case. However, without these, the evidence in favor of double acute gonorrhoeal infection of the pelvis of the kidney seems satisfactory. There was pain and tenderness in the region of both kidneys. The urine obtained by catheterization contained albumen and casts with pus cells attached and on cultures and smears no organism but the gonococcus was found.

An Epitome of Diseases of Women. By CHARLES GARDNER CHILD, JR., M. D., (Yale), Clinical Professor of Gynecology, New York Polyclinic Medical School and Hospital. 12mo, 210 pages, with 101 engravings. Cloth, \$1.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1909. (Lea's Series of Medical Epitomes. Edited by Victor C. Pedersen, M. D., New York.) This manual containing nearly two hundred pages of subject-matter would be a valuable addition to any library. The several chapters follow each other in logical sequence and the sub-chapters are marked by bold black type, reducing to a minimum the task of reference. It should be particularly serviceable to those preparing for State Board examinations and to busy practitioners.

The chapter on the Causes of Diseases of Women is divided into the following well chosen sub-headings: civilization, menstruation, dress, prevention of conception, criminal abortion, venereal diseases and child birth. The chapter on History of the Patient is supplemented by a well-arranged and concise history-card.

Normal and pathologic anatomy is represented by standard cuts and a few new ones. There are also cuts of the more recent Gynecologic instruments. The authors forceps for correcting posterior displacements of the uterus, trowel-retractor and angiotribe should all make easier the work for which they were designed. The technic of correcting recent retro-displacements and of the introduction of pessaries is simplified by excellent illustrations.

The book is quite as good a manual on the subject as we have seen.—
J. P. M.

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No. 3

EDITORIAL COMMENT.

THE CARNEGIE REPORT AND MEDICAL EDUCATION IN WISCONSIN.

The Report on Medical Education in the United States and Canada prepared for the Carnegie Foundation for the Advancement of Teaching by Abraham Flexner, with its Introduction by Henry S. Pritchett, President of the Foundation, is an exhaustive study of the present situation in medical education in this country, presented in a most interesting and readable form by an acute observer who also possesses to a remarkable degree the power of lucid expression of his very clear cut opinions. Part I. is a general survey of the subject with chapter headings as follows: Historical and General, Proper Basis of Medical Education, Actual Basis of Medical Education, The

Laboratory Branches, Hospital and Medical School, Financial Aspects, Reconstruction, Medical Sects, The State Boards, The Postgraduate School, Medical Education of Women, Medical Education of the Negro. Part II consists of a study of the individual medical schools "arranged alphabetically by states and provinces and separately characterized."

While the ultimate effect of this report cannot now be even guessed at, its immediate action has been so stimulating that it must be considered one of the most important medical publications of the last decade.

The first chapter reviews briefly the three stages through which the development of medical education in America has passed—the preceptorship, the didactic school, and the scientific discipline; and also discusses the overcrowding of the profession. While every reasonable person will admit that we are turning out of our medical schools more physicians than we need, the calculations used to prove the degree of overcrowding, based upon the state of affairs in Germany, seem rather poorly adapted to the purpose. The care of 60,000,000 people living in an area of about 200,000 square miles is quite a different problem from the care of 90,000,000 scattered over 3,600,000 square miles. As an additional evidence of overcrowding even in the rural districts towns are mentioned in various sections of the country in which villages of two or three hundred inhabitants have two or three physicians apiece. This may or may not indicate overcrowding as it fails to take into consideration the character of the rural districts in which these communities are situated. Instances could be cited in Wisconsin, where under these very conditions, the physicians are wearing themselves out with overwork or having to employ assistants to aid them. As to the financial aspects of a practice of this kind, it may be said that in this portion of the country, at least, a young physician of average ability has a better chance of becoming self-supporting in the minimum length of time, and eventually of acquiring a modest competency, in these small towns, than under any other circumstances with which we are familiar.

As to the applicability of Gresham's law—that the inferior medium tends to displace the superior—we must admit our doubts. It should be as true of medical schools as of medical men, and instead of Gresham's law, that of the survival of the fittest is slowly but surely working itself out with them. In the practice of medicine training and ability count in the long run and one has but to look about him to see that the superior members of the profession are not being dis-

placed by the inferior ones. But, despite these minor criticisms, the fact is well established that an overproduction of physicians is going on.

In the discussion of the *Proper Basis of Medical Education* the conclusions reached are of such great importance that they are quoted verbatim: "By the very nature of the case, admission to a really modern medical school must at the very least depend on a competent knowledge of chemistry, biology (including botany) and physics. Every departure from this basis is at the expense of medical training itself. From the exclusive standpoint of the medical school it is immaterial where the student gets the instruction. But it is clear that if it is to become the common minimum basis of medical education, some recognized and organized manner of obtaining it must be devised: it cannot be left to the initiative of the individual without greatly impairing its quality. Regular provision must therefore be made at a definite moment of normal educational progress. Now the requirement above agreed on is too extensive and too difficult to be incorporated in its entirety within the high school or to be substituted for a considerable portion of the high school course; besides, it demands greater maturity than the secondary school student can be credited with except towards the close of his high school career. The possibility of mastering the three sciences outside of school may be dismissed without argument. In the college or technical school alone can the work be regularly, efficiently and surely arranged for. The requirement is therefore necessarily a college requirement, covering two years, because three laboratory courses cannot be carried through in a briefer period."

As to the *desirability* of such an arrangement there can be no question. Medicine today exists as a developed science of such extent that in the four years devoted to its acquisition no time ought to be spared for the introductory work which is needed for its comprehension.

As to the *feasibility* of such a requirement, here and now, argument must be heard. Medical Education in a large sense is the affair of Society as a whole; the medical profession does not exist for its own advancement, but for the service, along special lines, of the general public. In this sense the public pays both for the education and for the support of the medical profession. From this point of view the physician is not a work of art to be wrought to the highest possible pitch of perfection, placed upon a pedestal, and admired by a limited audience of connoisseurs; he is a tool, or a part of the machine,

to be made of good material, adapted to the requirements of the work expected of it, suitably but not extravagantly finished, and fitted into its place and put to use when prepared to stand the strain. Good medical education is cheaper in the end than poor medical education. But how good shall it be? No school can teach all there is to learn in medicine. The question becomes at what stage in this process of education is it safe and is it economical to give the student his degree.

Now some preliminary training such as that to which reference is made in the above quotation, is economical because it enables the student to assimilate promptly what is presented to him. The less the preliminary training the greater the difficulty and expense of thorough instruction. But at this point we must guard against our national besetting sin of extravagance. The handicap to the poor young man must not be made too heavy either as to time or as to money. The latter can be overcome by the giving of the required courses at the partial expense of the State, but the former must also be considered or else some of the talents intended for and needed by the medical profession will be diverted into other channels. Looked at in this way the requiring of an adequate preparation in chemistry, physics and biology is economical, while the requirement of a full degree might be considered somewhat extravagant.

Leaving this point for the present to consider the *Actual Basis of Medical Education* we discover some startling conditions. An examination of the statistics presented in this chapter shows an existing laxity in regard to the entrance requirements which is continued by the rivalry of schools dependent upon fees for their support.

With the development of laboratory teaching the cost of giving anything like a good training in medicine has increased tremendously. With this increase in cost has come to a majority of the schools in all sections the necessity for enlarging the revenue by securing more students. To secure the requisite number of students in the face of strong competition with other institutions similarly situated the fitness of the student and his preparation for undertaking the work have received scant consideration.

Now if the overcrowding of the profession means anything, it indicates that there is no justification for soliciting students. If the solicitation of students ceased the laws of supply and demand would operate undisturbed to regulate the number of students and of physicians and in a comparatively short time a readjustment would have occurred, although an exact mathematical calculation of the number required seems to us neither possible nor desirable. But if this over-

stimulation is withdrawn and the number of students is allowed to sink to its normal level, it is obvious that the medical schools must look elsewhere for the income required to carry on their work. This can come from only two sources, from private individuals (endowment) or from the State.

In the chapters on *Laboratory Branches* and *Hospital and Medical School* there is a further discussion of the importance of the laboratory in teaching the fundamental branches; the inevitable expense of this method; its neglect in the schools dependent upon fees for their support; the absolute necessity of hospital facilities in teaching the clinical branches and the need of harmonious co-operation between hospital and medical school to secure the best results to both. There can be so little difference of opinion on these points that their consideration here is not necessary.

To hasten on to the practical bearing of this report on our problems in Wisconsin we must pass over much that is interesting and instructive. Of the three schools in Wisconsin the two in Milwaukee are looked upon by the author of the report as being inadequate, while the half school at the University is highly commended. There is no need of our feeling hurt about the treatment of the Milwaukee schools; the report is no more severe in its condemnation of them than it is of scores of others in the class of schools dependent on fees for support. But in the opinion of the author of the report schools of this class belong to the past and not to the future. The situation is the same here as elsewhere. The best medical education costs more than the student can be asked to pay. If we want the best the alternatives are State Aid or Endowment, for to do nothing, to stand still when the rest of the world is advancing is to fall behind.

The solution of the Wisconsin problem suggested by the author of the report leaves out of consideration the quite important factor of human nature. The idea that the State Board of Medical Examiners by requiring "a year or two of college work as preliminary to practice would quickly leave the medical department of the State University in sole control" is much like advising a man to lift himself over a fence by pulling on the tops of his boots. Any step taken by the State Board of Medical Examiners must have the support of the united profession to be effective. The graduates and the faculties of the Milwaukee schools number about twenty-three per cent of the profession in Wisconsin today and it is probable that this proportion will steadily increase rather than diminish. Obviously these schools cannot be dealt with in this summary manner. If improvement is to

take place, if medical education in Wisconsin is to be conducted on the highest plane, a course must be pursued which will commend itself to all as reasonable, fair and just.

The Report concludes with the following paragraph referring to the Medical Department at the University:

"This department has wisely resisted efforts to make of it a divided instead of a half school; nothing worse could ever happen to it than that it should be rounded off with a clinical end at Milwaukee—made up, perhaps, in part out of the two schools now there. When the time comes for the completion of the department, it must be completed at Madison. The difficulties due to the size and residential character of the town are not insuperable. There is not the least doubt that wise administration can develop on the site of the university a medical school large enough to train the doctors of the state. But its scope will run far beyond this primary duty; for it will inevitably be a producing department. Assuredly, Wisconsin, fortunate beyond almost all other states in the concentration of its higher institutions of learning, will not be guilty of the folly of detaching in whole or part the medical department from the University whose ideals it can share and help to create."

With this view we do not find ourselves in agreement. Let us give another quotation of our own choosing, not from the Carnegie Report: "A man was so eager to be in advance of his age that he pretended to be in advance of himself. Institutions that his wholesome nature and habit fully accepted he had to sneer at as old-fashioned, out of a servile and snobbish fear of the future. Out of the primal forests, through all real progress of history, man had picked his way obeying his human instincts, or (in excellent phrase) following his nose. But now he was trying; by violent athletic exertions, to get in front of his nose" (Chesterton).

We do not feel called upon to sit in judgment upon the Milwaukee schools. They have undoubtedly done the best they could with the means at their disposal. All will agree, however, that one strong medical school in Wisconsin would be better than three competing schools. Adequate endowment for the Milwaukee schools being very improbable and state aid unlikely, the solution offered in the Report might be considered the ideal one, but its realization seems to us so nearly impossible that striving for it would seem very like trying to get in front of our noses. For the present "the ideal" is a point of the compass, not the destination printed on our ticket. The next move in its direction would seem to be the merging of all the existing

schools, as has been done in several neighboring states. Even if this involved the carrying on of the clinical end at Milwaukee for the present, the inconveniences could be endured and the advantages gained would far outweigh the disadvantages.

EHRlich-HATA PREPARATION 606.

The scientific name for this preparation 606 is the Dichlorhydrate of Diamido-arsenobenzol. The lay press has lately been exploiting the wonders of this preparation, although the preparation itself has not as yet been placed on the market. Although this preparation 606 may do all that is claimed for it, still a word of caution does not come amiss at this time. It is, of course, too early to say anything definite about the preparation either for or against it. Many new anti-syphilitic preparations have been announced from time to time, arsenic being prominent in many of them; but the time honored mercury and iodide treatment has always retained its unassailed position. Any new anti-syphilitic preparation must fulfill two conditions—(1) it must be no more harmful than mercury, and (2) it must work more efficiently upon the symptoms of syphilis than does mercury. Has this diamido—arsenobenzol fulfilled these conditions? Not as yet, for it is still in an experimental stage. The results on syphilitic rabbits and monkeys have been good, but the syphilis from which these animals can be made to suffer is less virulent than human syphilis. Then, too, the arsenical preparation might be much more toxic for human beings than for the lower animals. Some successful experiments on humans have been announced but they are as yet too few for drawing any conclusions. Some years ago another arsenical preparation called "Atoxyl" was placed on the market with great eclat, and wonderful results were published. Atoxyl was heartily endorsed by several very prominent French and German investigators who promised much for it. But soon cases of blindness and neuritis were reported from its use, and now Atoxyl is heard of but little, and used still less, in syphilitic cases. This new preparation of Erlich's (606) may be of inestimable use in treating syphilis but until it has been "weighed in the balance and found (not) wanting", we ought not be carried away by the new until the treatment that has been faithfully tried for so many centuries shall be found justly superseded. C. A. B.

SCHOOLS AS LABORATORIES.

The article on *Some Considerations of the Pure Milk Question in Country Districts* which appears in this issue of the Journal is of more general interest than a first glance at its title might imply. In-

stead of being of value only to those who are interested in sanitary and pediatric questions, it deals in a very entertaining way with a practical method of solving one of the most difficult problems before the medical profession today; that of making the great mass of the public understand what modern medicine is attempting to do. No amount of talking or lecturing or writing can compare in educational value with the laboratory method of letting the people see things for themselves through the sharp eyes of their children, who, in turn, will become the parents of the next generation.

There are many ways in which this method of instruction may be utilized and if it is not abused by attempting too much in the line of the medical education of the people much good may be accomplished by its use.

ANOTHER VIEW.

An easy and fairly accurate clinical test for the amount of righteousness and decency present in rebating and the giving and taking of commissions is carried out as follows: After the operation is over, convalescence completed, the surgeon or specialist paid, and the rebate or commission safely pocketed, tell the patient all about it. The amount of decency and square dealing contained in the transaction is directly proportional to the look of pleasure which overspreads the patient's countenance on hearing the details of the arrangement, and in inverse ratio to the amount of explaining it requires to convince him that he has not been "worked" as well as operated upon.

THE LURE OF THE REPLY CARD.

The readiness with which the members of the medical profession rise to the fly of the mining promoter has had ample corroborative testimony in the past from the large number of circulars and prospectuses of infallible "sure things" in the way of gold, silver or copper mines which have deluged our desks. Of late the number of these invitations to get rich quick seems to be diminishing and it may be hoped that gradually we are ceasing to be "easy marks" financially.

But when it comes to matters of reform and regulation we still have much to learn. We are so anxious to help our fellow men that we occasionally rush in and offer our services where angels would have feared to tread. We are so anxious to have the world running smoothly that when our opinion is asked most deferentially in regard to a matter to which we have given no attention, especially when a

reply card is attached, we fall such an easy prey that the angels weep (from laughter).

The following quotation from the Journal A. M. A., Aug. 6, 1910, shows our latest effort to tie our own hands before the fight, for the proposed bill will undoubtedly be of a vicious character requiring our most determined opposition:

OPTOMETRY CAMPAIGN IN WISCONSIN.

The Optical Journal and Review for June 30th says:

"Good ammunition for the opening gun of their new campaign for an optometry law has just been secured by the Wisconsin association. The following postal and reply card was sent to each of the 2,700 physicians in the state:

Dear Doctor:—At the next session of the legislature there will be introduced a bill providing that all persons other than physicians who practice optometry, or in other words, who examine eyes and fit glasses must pass a satisfactory examination before a board appointed by the governor for that purpose.

We believe that you favor such a law, and will be thankful to you if you will so state on the attached reply card and mail same. If you do not favor such a law, we will be glad to hear from you and to know your reasons.

Hoping for a prompt reply, I am

Very truly yours,

C. D. WAUGH, Secretary, Milwaukee.

I do.....favor the passage of a law requiring all persons, other than physicians, to pass a satisfactory examination before being allowed to practice optometry, or in other words before being allowed to examine eyes and fit glasses in Wisconsin.

.....M. D.

If you do not favor the proposed law, fill in the word "not" in the proper place at the top of the card.

"A recent number of the WISCONSIN MEDICAL JOURNAL contained a reproduction of the card and an article asking physicians not to indorse the proposed law. In spite of this, however, 1,050 of the 1,100 replies received indorsed the proposed law. Coming from physicians, the optometrists think that they have in these replies an excellent weapon to use as soon as the legislature meets. This will not be for seven months yet."

CORRESPONDENCE.

August 11, 1910.

To the Editor of the WISCONSIN MEDICAL JOURNAL.

At the recent meeting of the Congress of American Physicians and Surgeons held in Washington in May, 1910, a joint session of the American Orthopedic and American Pediatric Societies was held and the subject of epidemic poliomyelitis was discussed. The following resolution was adopted:

"It having been shown by recent epidemics and investigations connected with the same that epidemic infantile spinal paralysis is an infectious communicable disease that has a mortality of from 5 to 20 per cent., and that 75 per cent. or more of the patients surviving are permanently crippled, state boards of health and other health authorities are urged to adopt the same or similar measures as are already adopted and enforced in Massachusetts for ascertaining the modes of origin and manner of distribution of the disease with a view of controlling and limiting the spread of so serious an affection."

A committee with Dr. Robert W. Lovett, President, Boston, Mass., Dr. Irving M. Snow, Secretary, Buffalo, N. Y., was appointed to urge the various state and municipal health authorities to take up the work of investigation of the various foci of epidemic poliomyelitis, to study its epidemiology and to instruct the public that the disease is at least mildly communicable.

May we ask you to publish this letter and the resolutions in your journal and also to allude to the matter editorially, urging the Health Commissioners of the various states of the United States and of the provinces of Canada to follow the example of the Massachusetts health department in studying the epidemiology of poliomyelitis.

Respectfully yours,

ROBERT W. LOVETT, M. D., President,
Committee on Poliomyelitis, American Orthopedic and Pediatric Societies.

IRVING M. SNOW, M. D., Secretary,
476 Franklin St., Buffalo, N. Y.

NEWS ITEMS AND PERSONALS.

Dr. H. F. Prill, Augusta, has returned from a trip through the west.

Dr. E. H. Federman, Plainfield, broke his arm in a fall on August 5th.

Dr. Albert E. Voss, Watertown, has returned from a trip to the Pacific coast.

Dr. G. R. Baker, Tomahawk, left on July 28th for an extended trip through the west.

Dr. D. B. Hamilton, Dodgeville, had his right hand broken in a runaway accident, August 5th.

Dr. G. P. Barth, Milwaukee, was reappointed as chief of the public school medical staff, August 3d.

Dr. W. W. Tarter, Mellen, was badly burned by an explosion of alcohol. His recovery is doubtful.

Dr. J. B. Brewer, Jefferson, who was taken to Chicago for treatment of an infected arm, is improving.

Dr. L. R. Head, Madison, who has been seriously ill with an infection of the hand, is reported much improved.

Dr. K. W. Doege, Marshfield, was injured, though not seriously, by the dropping of a railroad gate, August 4th.

Dr. W. M. Wochos, Kewaunee, has returned after five weeks of post-graduate work at Johns-Hopkins University, Baltimore.

Dr. Carl F. Bachman, Neillsville, was seriously injured in a runaway, August 4th. It is reported that amputation of the leg will be necessary.

Dr. T. E. Loope, county supervisor of the town of Rushford, whose home is at Eureka, is gradually regaining his health after a long and confining illness.

The Wisconsin Board of Medical Examiners, on July 13th, elected Dr. L. F. Bennett, Beloit, president and re-elected Dr. John M. Beffel, Milwaukee, secretary.

The St. Luke's and Alice Horlick Memorial Hospital, Racine, was reopened, July 29th, after being closed for ten weeks, while extensive repairs were made.

Deaths. Dr. Joseph Brinton Crandall, Clinton, one of the most widely known physicians in Rock County, died on July 3d, aged 92 years.

Dr. Crandall was born in Rhode Island, May, 1818. He came west in 1864 and settled at Madison, where he engaged in the commission business. Later he removed to Iowa and in 1872 came to Clinton, where up to ten years ago he practiced his profession.

Marriages. Dr. W. E. Gochenour, Poynette, and Miss Myrtle Alice Pease, Otsego, July 1st.

Dr. W. J. Foote, Appleton, and Miss Nellie Frawley, Chilton, August 10th.

Dr. Herbert B. Crommett and Miss Pearl DeGolier, both of Anery, July 5th.

Dr. John T. Laughlin and Miss Melinda Irene Nottleson, both of Rosholt, July 20th.

Dr. A. T. Shearer and Miss Mabelle Lucile Willson, both of Edgerton, July 28th.

Dr. E. C. Cary, Manitowoc, and Miss Eleonora Schulte, Centerville, August 3d.

Dr. A. W. Schoenwetter, Lowell, and Miss Leona Beatrice Raymond, Valparaiso, Ind., July 11th.

Removals. Dr. Kerner, Milwaukee to Berlin.

Dr. K. T. Bauer, Kewaskum, to Adell.

Dr. John Corbett, Reeseville, to Oregon.

Dr. J. T. Bowers, Osceola, to Gully, Minn.

Dr. W. R. Bell, Wausaukee, to Marinette.

Dr. L. Breitzman, Neenah, to Rhinelander.

Dr. Sarah Washburn, La Valle, to Hudson.

Dr. J. H. Proudlock, Birchwood, to Radisson.

Dr. A. J. Berger, Johnson Creek to Jefferson.

Dr. C. E. Sargent, Oshkosh, to Mobridge, S. D.

Dr. H. A. Radermacher, Spooner, to Gilbert, Minn.

Dr. Gordon Dwight, Janesville, to Los Angeles, Cal.

Dr. John W. Goggins, Manawa, to Royalton, Waupaca County.

The August issue of *Pediatrics* is a special edition of 100 pages devoted exclusively to the study of **Acute Poliomyelitis**. "The Pathology of Acute Poliomyelitis" is written by I. Strauss, A. M., M. D., of New York City. "Experimental Poliomyelitis" is from the pen of Simon Flexner, M. D., New York City. "A Small Epidemic of 17 Cases of Acute Poliomyelitis" from John Milton Armstrong, M. D., St. Paul, Minn. "Additional Observations on Acute Poliomyelitis" by F. E. Coulter, M. D., Omaha, Nebraska. "A Contribution to the Study of Acute Poliomyelitis, Based on the Observation of Thirty-eight Recent Cases" is from Colin K. Russel, M. D., F.R.C.P., Montreal, Can. "A Plea for the 'Abolition' of the Term 'Infantile Paralysis' as a Synonym for 'Acute Poliomyelitis'" is contributed by Geo. P. Shidler, A. B., York, Nebraska. "Acute Poliomyelitis" by J. S. Fowler, M. D., F.R.C.P., Edinburgh. "Report of an Epidemic of Two Hundred and Seventy-nine Cases of Acute Poliomyelitis" is written by C. A. Anderson, M. D., Stromsburg, Nebraska.

The discussions before the conjoined meeting of the American Orthopedic and Pediatric Societies bearing on this subject are included.

The retrospect of current pediatric literature in this number contains the digest of the latest teachings of the world's greatest authorities and writers on the subject of Poliomyelitis, during the past year.

THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORGANIZED 1841.

Officers 1910-1911.

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J. M. Dodd, Ashland, 1st Vice-President.	T. J. Redelings, Marinette, 2d Vice-President.
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Delegates to American Medical Association.

L. F. Bennett, Beloit.	C. S. Sheldon, Madison.	A. H. Levings, Milwaukee.
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Alternates.

F. S. Wiley, Fond du Lac.	Wilson Cunningham, Platteville.	R. G. Sayle, Milwaukee.
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Councilors.

TERM EXPIRES 1911.		TERM EXPIRES 1914.	
1st Dist., H. B. Sears, - - Beaver Dam	7th Dist., Edward Evans, - - La Crosse	2d Dist., G. Windaheim, - - Kenosha	8th Dist., T. J. Redelings, - - Marinette
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NEXT ANNUAL SESSION, WAUKESHA, 1911.

The Wisconsin Medical Journal, Official Publication.

SOCIETY PROCEEDINGS.

LA CROSSE COUNTY MEDICAL SOCIETY.

A special meeting of the La Crosse County Medical Society was held at the La Crosse Lutheran Hospital June 2d. This meeting was called in order that action might be taken in regard to the Anti-tuberculosis Work in this city. The following resolution was finally adopted: Resolved, that the committee of the La Crosse County Medical Society appointed to co-operate with the Board of Trade committee appointed to consider the Anti-tuberculosis Question, approve of the survey of the city as proposed by Miss Gedney, Field Worker of the Wisconsin Anti-Tuberculosis Association.

The application of Dr. Martha McCullough having been read and approved by the censors, was accepted by the Society.

The meeting then adjourned to the dining-room of the hospital, where a bountiful and delicious supper was served by the hospital authorities. A vote of thanks was tendered the head nurse and the hospital authorities for this entertainment. Seventeen members were present.

M. W. DVORAK, M. D., *Secretary.*

AMERICAN PUBLIC HEALTH ASSOCIATION TO MEET IN MILWAUKEE.

The American Public Health Association will hold its 38th annual meeting in Milwaukee, Wisconsin, September 5th to 9th next. Representatives from many of the national organizations working in the interest of the public health have been invited to be present and to discuss methods for the correlation of the work of such organizations, and for co-operation with a view to increasing efficiency and economy. Sanitary engineering will occupy a conspicuous place on the program.

This Association is the oldest national sanitary organization in the United States. Its membership extends over the United States, the Dominion of Canada, Mexico, and Cuba. Information concerning it can be obtained by addressing Dr. Wm. C. Woodward, Secretary, Washington, D. C.

BOOK REVIEWS.

New Edition of Gray's Anatomy. A man may be a great anatomist or a great teacher, but when one man combines these two faculties his single mind, by its complete co-operation, can produce a teaching book in which matter and method blend into a result obtainable in no other way. This double-sided genius was possessed by Henry Gray, and until Nature grants to one individual like endowments, his work will stand. In the fifty years since the author's early death Gray's Anatomy has grown beyond even the leadership in its own subject, and has become one of the foremost medical books in all English literature.

Eighteen editions have been demanded in the course of its half century, and they have enlisted many of the ablest anatomists of this period. The principles on which Gray built his book have been followed, and it is not too much to say that during two generations it has guided the teaching of its subject in America as well as England.

Of all the editions, this new one represents the most thorough revision. Rearrangement has eliminated many duplications, and this, together with condensation in style, has rendered it possible to present more information in one hundred pages less space, to the reader's obvious advantage. Professor Spitzka, the editor, is one of the foremost anatomists in the world, and he joins to this the apt qualification of being himself an artist as well, so that the drawings from his own hand present his knowledge directly to the mind of the reader. Another of Gray's fundamental improvements, in which his book has always been unique, was the engraving of the names of the parts directly on them, so that the student learned at once not only their nomenclature, but also their position, extent and relations, the four cardinal points. The advantage of this graphic method over the elsewhere customary lines and reference letters is obvious. Gray's book was also the first to contain illustrations in colors. In this new edition, besides all the improvements in the text, the splendid series of characteristic illustrations has been equally revised, many cuts being re-

placed and more added, and the use of colors is more lavish than ever. It suffices to say that the new edition will excel any of its predecessors.

My Personal Experience with Tuberculosis. By WILL M. ROSS. 64 pages. Price 50 cents. Published by the author. Stevens Point, Wis., 1910.

This little book of some 60 odd pages is written by a layman, and is a safe and rational discussion of the subject with which it deals.

The scientific matter is simply but correctly presented. In addition there is presented much useful information in regard to the management of tuberculosis. His advice to the convalescent is especially sound and to be commended. The book contains much good advice, and little or none that is bad, and undoubtedly is a very valuable one to place in the hands of tuberculosis patients, and especially those who are attempting to carry out the treatment at home.

Handbook of Therapy, 421 pages, price \$1.50. American Medical Association, Chicago.—A valuable collection of articles on treatment of disease. The book is a reprint of a series of articles which have appeared from time to time in the Therapeutic Department of the Journal of the American Medical Association. The subjects discussed are those met in every-day practice by the general practitioner and the drugs described are those used by the busy man. It is a valuable reference book containing also a list of new and non-official remedies accepted by the Council on Pharmacy and Chemistry, and handy tables and compilations of miscellaneous data. This very practical handbook should be in the possession of every practitioner and student. A number of illustrative prescription formulas are presented. M. M. S.

Contribution to the Value of Wassermann's Reaction and the Diagnostic Injection of Old Tuberculin for Ascertaining the Etiology of Parenchymatous Keratitis. KUMMELL, R. (From the eyeclinic of Prof. J. Oeller in the University of Erlangen. *Klinische Monatsblaetter fur Augenheilkunde*, XLVII, 11, p. 731.) Reports the clinical histories of 13 cases of parenchymatous keratitis in 7 of which lues was probable or certain, in 4 tuberculosis, according to anamnesis and general examination. Wassermann's reaction was positive in 11. It is still undecided which of both reactions deserves preference, but Wassermann's reactions seem to be of greater importance.—C. Z.

THE WISCONSIN MEDICAL JOURNAL

SEPTEMBER, 1910.

ORIGINAL ARTICLES.

THE WASSERMANN REACTION IN 'THE PATHOLOGY,
DIAGNOSIS AND TREATMENT OF SYPHILIS.*

BY RICHARD M. PEARCE, M. D.,
NEW YORK.

Introduction.

Metchnikoff in his preface to the recent treatise of Levaditi and Roché on experimental syphilis compares the evolution of our knowledge of syphilis to the three phases of the development of human thought as established by Comte: the theologic, the metaphysic, and the scientific. He briefly sketches the history of syphilis through its first period, that of superstition, in which the only advance was the discovery of the specific remedy, mercury; through the second period of empirical medicine with its thorough clinical studies of the varied manifestations of syphilis and the recognition of gonorrhœa and chancre as disease entities; and through the period represented by the past half decade of scientific investigation during which the experimental transmission of the disease has been demonstrated, the etiology determined and a method of serum diagnosis established.

He makes the statement, somewhat pardonable in one so largely responsible for our new knowledge of the disease, that the study of syphilis, until now purely clinical, has become so much a matter of laboratory method that the diagnosis can be made without seeing the patient by the simple examination of his blood or of the secretions from his lesions. Be this as it may, it is not my intention to laud the achievements of the laboratory nor to go into detail concerning its methods as applied to syphilis. I do wish, however, to demonstrate

*Annual Address in Medicine delivered before the State Medical Society of Wisconsin, at Milwaukee, June 23, 1910

to you that these methods are destined to ultimately establish the pathology of syphilis on a sound basis, to afford thereby a clear insight into many obscure conditions heretofore but imperfectly understood clinically and to result eventually in a rational therapy.

The methods at hand are (1) the recognition of the *Spirocheta pallida* which we owe to Schaudinn and Hoffmann (1905); (2) the experimental production of the disease by inoculation as first clearly shown by Metchnikoff and Roux (1903); and (3) the method of serum diagnosis with which we associate especially the names of Wassermann, Neisser and Bruck (1906). The first and second of these I will discuss briefly, as their use is practically limited to the primary and secondary manifestations of the disease. It is of the more obscure manifestations of late syphilis affecting the cardio-vascular and nervous systems, the bones and joints, and the organs of special sense, to which can be applied only the method of serum diagnosis, that I wish especially to speak. It is to this phase of the subject that I will give most of my time, but, in order to round out my presentation, a few words may be said concerning the results of animal inoculation and the distribution of the *Spirocheta pallida*.

It is a tribute to past generations of syphilographers that the conclusions which they reached concerning many of the problems of infection, extension of the virus, acquired immunity, etc., have been confirmed by our present knowledge of experimental syphilis and of the distribution of the spirochete, as have also, through the use of the Wassermann method, many conclusions of the pathologist concerning the chronic lesions more or less frequently found in individuals with syphilitic history. It is no mean triumph that the views concerning a disease of unknown etiology, based on clinical and pathological observations, should have been thoroughly supported when the causative agent of the disease was discovered and its distribution in the tissues and fluids of the body determined.

In the first place, a word may be said as to the importance of the experimental work in the establishment of syphilis as essentially a disease of man, and incidentally confirming man's blood relationship to the higher apes. Although it has been claimed that lesions similar to the chancre have been produced in various animals, no disease at all comparable to syphilis was ever produced in animals until the ape was used. In view of our comparatively recent knowledge of the blood relationship of various animals, as definitely established by the use of the biological blood test (precipitin test), this is not surprising. But even to one familiar with zoölogical relationships, it is interesting to note the varying susceptibility of various members of the monkey

family to syphilis. As Metchnikoff and Roux clearly brought out in their first communication on experimental syphilis, success or failure depends chiefly on the species of monkey used. Niesser has shown that this depends on the position of the species in the zoölogical series, the higher monkeys (chimpanzee, gorilla, orang-outang), nearest to man in the animal scale, take syphilis typically and present the primary and secondary lesions as they occur in man; that is chancre, enlarged glands, secondary eruption and mucous patches. The lower monkeys react locally only, while the gibbon, which is intermediate in the scale, gives atypical primary and secondary lesions. It is evident, therefore, that the production of syphilis in the anthropoid apes was not merely a matter of demonstrating that an animal susceptible to the virus of syphilis had been found. Such information would have been of no more aid to us than our present knowledge that the rabbit is susceptible to infection with the pneumococcus, which organism does not produce a typical pneumonia in this animal. The experiments on apes showed not only the possibility of reproducing syphilis with its primary lesions and many of its secondary manifestations in typical form, but, and this is of greatest importance, of reproducing these lesions in an animal so closely related to the human species that conclusions reached for simian syphilis could be applied immediately to the disease in man. Man was no longer the only animal available for observations on the nature of syphilis and experiments in therapy. The anthropoids, on account of their close blood relationship, became available for experiment, and many investigations impossible on man could be undertaken. Much has been accomplished. Among other things it has been found that only when the virus is inoculated into the skin proper, either by deep scarification or into actual pockets in the skin, could the disease be produced. Inoculation into the subcutaneous tissues, into the blood vessels or into the peritoneal cavity all fail. It is evident that the spirochete finds conditions for initial propagation only in the skin, and that there it must undergo a certain degree of development before the general invasion of the blood occurs or the local lesion appears. On the other hand, the invasion of the blood may occur before the appearance of the initial lesion, which is in accord with our clinical experience concerning the futility of early excision of a chancre. This is demonstrated in experiments on monkeys, in which it was found that as early as the fifth and eighth days after inoculation the virus is present in the blood and can produce local lesions in other monkeys. Thus, the blood of an animal in which chancre was not evident until the 22nd day was found to be

virulent on the fifth day; in another, in which chancre developed on the 28th day, the blood was virulent on the 8th day.

Experimental syphilis also throws light on the question of the localization of the virus during the florid period of syphilis, and especially during the quiescent periods which separate the active stages. Of all organs in the infected animal capable of transmitting the disease, infection follows most frequently after inoculation with the bone marrow, the spleen, the lymph nodes and the testicle, in the order named. The localization in the first three of these, all hematopoietic organs, reminds one of the localization of the malarial parasite during certain stages of its development. As Niesser has found these tissues to be capable of transmitting the disease after nearly 300 days, there can be little doubt of their importance in the preservation of the spirochete. As to the predilection of the spirochete for the testicle, it is not surprising to find that this localization has been invoked as an explanation of the transmission of hereditary syphilis, it being assumed that the transmission occurs in the semen, with infection of the ovum, but no infection of the mother. In this connection it is noteworthy that Finger and Landsteiner have produced syphilis in the monkey with the sperm of a syphilitic.

As to the presence of the virus in the circulating blood of man there is little evidence. Experimental inoculations of the monkey have given positive results in a few instances in which the blood has been taken from individuals in the first two months of the disease, but they have usually been unsuccessful. Likewise it has been found extremely difficult to demonstrate the spirochete by direct examination of the blood. It is necessary to conclude, therefore, that although it may occasionally occur in the peripheral circulation, it is localized for the most part in the bone marrow and spleen.

Experimental syphilis also explains the relative infrequency of infection from contact with tertiary lesions. While monkeys may readily be infected with material from chancre and mucous patches, inoculation with material from tertiary lesions has seldom been successful. There is, however, some evidence at hand that the spirochete may exist in some tertiary lesions in very small numbers. This conclusion is supported by the experience of those who have made a search for the spirochete in such lesions by direct examination.

Of extreme importance, in view of the well known involvement of the vascular structures in syphilis, is the histological observation that in all early lesions of syphilis the spirochete is found most abundantly in the cell accumulations in and about the blood vessels and lymphatics, and is presumably directly responsible for the endothelial

and peri-vascular changes so characteristic of the disease and which explain so much of its pathology.

The Wassermann Reaction. As the diagnosis of syphilis by the recognition of the spirochete is limited to the primary and secondary lesions, the internist and the specialist interested in the late lesions of syphilis must have recourse to the method of serum diagnosis as described by Wassermann, Niesser and Bruck. Although the literature of this diagnostic method is now enormous, its use in this country has been limited to a few medical centers, and its general importance has not, I am sure, been thoroughly appreciated by the profession at large; nor have the results of its use been presented, from the clinical point of view, in comprehensive form. My interest was first stimulated by the work on this subject carried out in my laboratory at New York University during the past two years by one of my assistants, Dr. Homer F. Swift. Day by day I have followed his results, impressed by the constancy with which a positive reaction supplemented definite clinical diagnosis, now and then amazed by the marvelous success of the reaction in establishing the diagnosis of obscure or doubtful syphilitic conditions, and finally I have been forced to the conclusion that in this method we have at last the means not only of clearing up the pathology of many phases of syphilis, but of establishing definite rules for treatment, and, apparently, as recent work indicates, of recognizing complete cure. I will therefore outline for you the work which has been accomplished, emphasizing the importance of this method in medicine, in surgery, and in the various specialties; its relation to certain conceptions of syphilis hitherto considered fundamental, as those embraced in Colles' law, and will conclude with a discussion of the importance of the reaction in controlling treatment.

The time at my disposal will not allow of a discussion of the principles and technique of the Wassermann reaction. For such information I refer you to the numerous communications on this subject, and more especially to those of our own workers: Noguchi, Swift, Kaplan, Gay and Fitzgerald. I will, however, in order to demonstrate the efficiency of the test, present a tabulation of extensive observations in primary, secondary, tertiary, latent and hereditary syphilis:

TABLE I.

Observer—	Primary Syphilis		Secondary Syphilis		Tertiary Syphilis		Early Latent Syphilis		Late Latent Syphilis		Hereditary Syphilis	
	No. of Cases.	P.C. +	No. of Cases.	P.C. +	No. of Cases.	P.C. +	No. of Cases.	P.C. +	No. of Cases.	P.C. +	No. of Cases.	P.C. +
Collected by												
Noguchi ¹	416	69.8	1605	89.4	581	78.1	1233	51.	861	47.	125	94.5
Noguchi ²	70	92.8	197	96.	177	89.9	115	75.6	150	79.3	17	100.
Swift	21	81.	137	97.	83 ³	89.	79	76.	94	46.	14	86.
Kaplan	138	90.	281	86.	191	73.	Latent Cases Per cent. 79 51				20	90.
Collected by												
Bruck ⁴	520	64.4	1301	71. to 100.	512	63. to 100.	1549		47.5			
Bruck, Stern, Merz and Grosser...	111	72.1	528	94.	224	73.6	867		30.5			

¹10 observers; ²By Noguchi modification; ³Cutaneous lesions of tertiary syphilis; in a second group of 52 cases of visceral syphilis positive results were obtained in 79 per cent; ⁴21 observers.

With this table may be compared the following, which includes the reaction in individuals in whom syphilis could be excluded by history or clinical symptoms with a fair degree of certainty.

TABLE II.

Observer—	No. of Cases.	No. +	Per Cent. +
Swift	272	3	1.1
Noguchi	333	12	3.6
Bruck's collected cases*.....	4432	57	1.2
Bruck, Stern and Merz.....	596	2	0.3
Matson	313	1	0.3

*33 observers.

These figures give some idea of the results in large series. Many of the individual series are, however, more striking. Thus, in primary syphilis we frequently find reports of 90 to 98 per cent. positive results; in secondary lesions, 100 per cent. (Boas in 393 cases), with never less than 80 per cent.; in tertiary syphilis the figures vary from 60 to 100 per cent., and in hereditary syphilis, they are uniformly high, 70 to 100 per cent.

The highest and most constant results are obtained in secondary and hereditary syphilis; the most irregular in primary and latent. It is evident that these variations depend on many factors, as technique, the influence of treatment, and, especially in primary syphilis, on the length of time which has elapsed since infection; it is noteworthy that early cases are frequently negative. Also the view is now definitely established that in late syphilis treatment causes the reaction to disappear.

In Swift's experience all cases of syphilis react by the end of the fourth week after the appearance of the chancre, so that in doubtful cases a diagnosis is possible two weeks before the appearance of the

roseola. The earliest reaction is reported by Lesser, who found the blood positive eight days after exposure; 14 days later an initial lesion appeared, and six weeks afterwards a typical roseola. Experiments on apes (Bruck) indicate that a positive reaction is evidence of general invasion of the body, and with this is correlated the observation that the ape resists reinfection after a positive reaction.

If this interpretation is correct, one might assume that with the demonstration of the spirochete in the primary lesion and a negative Wassermann excision of the initial lesion might prevent or modify the subsequent course of the disease. Theoretically, this would appear possible, but experience indicates that this result is rare.

In other diseases than syphilis, the reaction occurs in leprosy, scarlet fever, yaws (frambesia) and trypanosomiasis frequently, and, to a slighter extent, with tuberculosis, carcinoma and certain diseases of the blood, conditions which, with the exception of yaws, however, are not usually confounded with syphilis and for which we have definite diagnostic methods.*

That the Wassermann reaction should be positive in yaws, a disease due to a spirochete and frequently confounded with syphilis, is a matter of biological interest, but not of diagnostic importance in northern countries, in that yaws is essentially a disease of the tropics. As to scarlet fever, it may be pointed out that with convalescence from scarlet fever the positive reaction disappears, whereas in syphilis it persists. The occasional positive reaction in tuberculosis, cancer and diseases of the blood appears to be dependent in some instances on a condition of profound cachexia, in others the condition may be *syphilis ignorata*.

With this demonstration of the diagnostic value of the Wassermann reaction, a method which should be in use in every modern clinic and in every state and municipal laboratory, we may turn to a consideration of those lesions of general interest to the internist.

THE NERVOUS SYSTEM.

An early application of the Wassermann reaction was naturally made to the well known metasyphilitic affections, tabes and general

*Positive results in leprosy vary from 10 to 70 per cent. Noguchi has collected from the reported results 86 cases of leprosy, of which 72.4 per cent. gave positive results. The results for scarlet fever vary from 1 to 50 per cent. of positive or doubtful results according to various observers. The cases collected by Fuá and Koch give 12 per cent. of positive results in 353 cases, though in 59 cases which they examined no positive results were obtained. Swift has analyzed 562 examinations by various observers and finds 5 per cent. of positive results.

paralysis. As a result, not only has the general opinion concerning the syphilitic nature of these affections been confirmed, but many suggestive observations concerning the possible relation of syphilis to other diseases of the nervous system have been made.

The results of the more important investigations of tabes and general paralysis, covering large series of cases, are shown in the following table:

TABLE III.

Observer—	—GENERAL PARALYSIS—				—TABS—			
	Blood Serum. No.	Positive. Per Cent.	Cer. Spinal Fl. No.	Positive. Per Cent.	Blood Serum. No.	Positive. Per Cent.	Cer. Spinal Fl. No.	Positive. Per Cent.
Lederman	23	87	..	..	68	76	..	..
Hoehne	30	80	..	..	45	60	..	..
Schütze .....	..	..	..	..	79	65	29	83
Boas	42	100	..	..	20	80	..	..
Lesser	62	100	..	..	61	56	..	..
Sachs	31	68	..	..	28	64	..	..
Plaut	156	100	147	95	14	79	11	64
Stertz	45	89	..	..	..	..	..	..
Marie, Levaditi and Yamanouchi	27	59	30	93	..	..	..	..
Eichelberg .....	..	..	61	93	..	..	49	56
Raviart, Breton and Petit .....	..	..	72	93	..	..	..	..
Smith and Chandler McCampbell and Rowland	10	90	64	59	..	..	..	..
Noguchi ¹	50	96	50	84	..	..	..	..
Noguchi ² .....	..	..	..	..	22	41	..	..
Noguchi ²	15	87	..	..	125	68	..	..
Swift	3	66	..	..	54	62	..	..
Kaplan	61	65	..	..	205	60	..	..
Rosanoff and Wise- man ²	75	49	57	76	..	..	..	..
Totals	630	81	424	85	721	65	89	68

¹Original Wassermann method used.

²Noguchi's modification used.

It will be seen that in general paralysis the average of positive results obtained by the various observers is about 80 per cent., with extremes of 49 and 100 per cent. The most remarkable results are those of Plaut, Boas and Lesser, each with 100 per cent. of positive reactions in 156, 62 and 42 cases respectively. In tabes the percentages are lower, with, however, an average for all investigators of 65 per cent., the extremes being 41 and 83.

There has been some discussion about the relative frequency of the reaction in the blood and in the cerebro-spinal fluid in cases of tabes and paralysis. The following table, taken from Noguchi's collected data, shows but slight difference, though individual workers vary somewhat in their results. (Compare Table III.)

TABLE IV.

	—Blood Serum.—		Cerebro-Spinal Fluid.	
	Cases.	Per Cent.+	Cases.	Per Cent.+
General Paralysis.....	498	88.1	432	90.
Tabes	216	62.66	52	56.2

An important question is that concerning the interpretation of a negative reaction with the cerebro-spinal fluid when the blood serum is positive. Some investigators insist that as any syphilitic affection may give a positive reaction with serum it is necessary to have the cerebro-spinal fluid positive also to be sure of a diagnosis of general paralysis or tabes. This question must be considered for the present as undecided.*

The results in cerebro-spinal lues vary from 16 to 88 per cent. The figures collected by Noguchi give an average of 47.6 per cent. Swift obtained 54 per cent. of positive results in 11 cases clinically diagnosed as cerebro-spinal syphilis, and in 66 per cent. of 9 cases clinically termed syphilitic meningitis. The percentage of positive results obtained by all investigators is as a rule lower than in general paralysis and tabes. However, if the figures for these three groups are compared with the following series representing psychiatric cases in which there was no evidence of syphilis or meta-syphilitic disease, the importance of the Wassermann reaction in the study of diseases of the nervous system becomes evident.

TABLE V.

Observer—	Character of Cases.	No.	Positive.	Doubtful.
Plaut	Psychiatric	95	4	0
Noguchi	Psychiatric	140	20*	12*

*12 of the cases with positive and 9 with doubtful reactions were epilepsy.

Some confusion, however, is caused by certain forms of psychiatric disease of non-syphilitic origin, which give a fair proportion of positive reactions. This is seen in the following summary abstracted from one of Noguchi's tables.

TABLE VI.

Clinical Diagnosis—	No. Cases.	Syphilis Reaction Known.	Reaction Positive.	Reaction Doubtful.	Reaction Negative.
Alcoholic psychosis	9	4	2	3	4
Dementia praecox	131	5	15	17	99
Manic depressive insanity.....	14	1	2	3	9

To what extent these positive reactions are due to unrecognized cerebro-spinal or latent syphilis, it is difficult to say. The same is true of suggestive results obtained in the study of idiocy, epilepsy and various dementias; thus Raviart, Breton and Petit obtained positive reactions in 76 of 246 cases of idiocy or imbecility, with and

*For a discussion of the relative importance of the Wassermann reaction, the cytological and globulin methods, see Noguchi, McCampbell and Rowland and Rosanoff and Wiseman.

without epilepsy; in five of 31 cases of epilepsy alone; in three of 5 cases of senile dementia, and in five of 19 cases of dementia praecox. Roubinovitch and Levaditi in dementia praecox obtained positive reactions in three of 15 cases; Noguchi in the study of 69 cases of epilepsy had positive results in 12 and doubtful in 9; Rosanoff and Wiseman in epileptic psychoses in thirteen of 73 cases; in dementia praecox in twenty-one of 122 cases, and in manic depressive insanity in four of 21 cases. These and other reports of occasional positive results in idiots (Bergmann, Frenkel-Heiden, Knoepfelmacher and Lehdorf) have led to special investigations of the Wassermann reaction in this group of diseases. The results cannot as yet be definitely stated. One investigation, however, that of Kellner, Clemenz, Brueckner and Rautenberg, who have studied 216 idiots of various types, is fairly conclusive. They obtained a positive Wassermann reaction in 9 cases, but all except one of these occurred in a group of 16 cases with definite clinical evidence of hereditary syphilis. It is evident, therefore, that idiocy may be frequently associated with hereditary syphilis, but, on the other hand, syphilis is not as common a cause of idiocy as has been heretofore held. So also with epilepsy and the dementias, which give 20 to 40 per cent. of positive results. The percentage is too low to assume that these conditions are usually of syphilitic origin, but it indicates rather that they are associated occasionally with hereditary or acquired syphilis.

Other conditions in the central nervous system giving a positive Wassermann reaction are apoplexy and hemiplegia, as observed by Marie, Levaditi, and Yamanouchi in three of six, by Hoehne in three of seven, and Swift in ten of twelve cases; chronic internal hemorrhagic pachy-meningitis (Pick and Proskauer), multiple sclerosis (Nonne, Eichelberg, Swift) and myelitis (Citron, Swift).

It is evident from this summary that the Wassermann reaction has been of value in corroborating opinions concerning the relation of syphilis to tabes and general paralysis and that these diseases may now be regarded as metasyphilitic manifestations. It also promises to be of great value in the diagnosis of other forms of syphilis of the nervous system. As Sachs has pointed out, any method which will differentiate between disseminated sclerosis and multiple cerebro-spinal syphilis, or central gliosis and syphilitic central myelitis, or between malignant tumor of the brain and gumma, is most welcome. In this connection, Sachs states that the method should be practiced in every neurological ward as a guide to therapeutics, and adds that an operation should not be done in a case of suspected tumor without a Wassermann test. He also speaks of the value of the test in doubtful

cases of hemiplegia and in cases of mysterious epilepsy beginning late in life. A negative reaction he regards as of almost as great value as a positive reaction, and is influenced accordingly in his treatment.

THE CARDIO-VASCULAR SYSTEM.

It has long been recognized by the clinician and by the pathologist that certain affections of the vascular system are as constantly associated with syphilis as are the so-called metasyphilitic affections of the nervous system. Aortitis, aneurism and aortic insufficiency represent the group of conditions which clinically have been considered as frequently syphilitic. The relation of aneurism to syphilis we find emphasized in the writings of all able observers. Thus in the 16th century Ambroise Paré suggested the relation of syphilis to aneurism, and Osler, in his Schorstein Lecture, refers to Fernelius, a contemporary of Vesalius, who described a venereal form of aneurism. Lancisi in 1728, and Morgagni in 1761, recognized the great influence of syphilis, as did also many Italian physicians of the seventeenth and eighteenth centuries. In recent times the association of aneurism and syphilis was brought out most prominently by F. H. Welch, who, in 1875, found that in 56 cases of fatal syphilis among English soldiers aortic disease was present in 60.7 per cent. and aneurism of varying grades in 32 per cent. In 34 cases of fatal aortic aneurism there was a syphilitic history in 50 per cent., without other etiologic factors for the causation of aneurism. Welch also recognized the fact that the aortitis of syphilis was different macroscopically from ordinary arteriosclerosis.

The most definite advance, however, in our knowledge of aortic syphilis dates from 1885, and is due to the work of Heller and his associates (Doehle, Backhaus, Phillipe, Moll and Eisenberg) in Kiel. Until this time the lesions of the aorta known under the general head of arteriosclerosis or atheroma had been considered more or less as an entity and due to various causes, of which syphilis was only one. It is true that Köster in 1875 had described a chronic mesarteritis which he considered the essential factor in aneurism, and that Heiberg in 1877 had advanced convincing evidence of a lesion occurring in comparatively young individuals, affecting especially the arch of the aorta, limited almost entirely to the media and due to syphilis, but it is from Doehle's first publication from the Kiel laboratory that the detailed study of syphilitic aortitis dates. As described by the Heller school, it is a mesaortitis involving especially the arch of the aorta, characterized by the presence of fleshy nodules, involving media and adven-

titia, with cellular infiltration about the vasa-vasorum and the presence in the media of focal areas of necrosis, by some (Laveran) considered to be gummatous. Later the formation of cicatricial tissue leads to scarring, with either thickening or shrinkage of the vessel wall. The intima is unchanged or involved only secondarily: calcification and atheromatous ulcers are infrequent. It is the injury of the media that predisposes to aneurism, and Heller makes the statement that syphilitic aortitis is the cause of aneurism in 90 per cent. of all cases. Numerous confirmations of these observations appeared, the most important of which are Puppe's study of sixteen aneurisms, three of which he ascribed to ordinary atheroma, one to senile atrophy and the remaining twelve, all in young people, to progressive mesarteritis, and Straub's investigation of aortitis in 84 persons dying of progressive paralysis, in 69 of whom he found syphilitic aortitis.

In 1903 the question was thoroughly discussed by the German Pathological Society when Chiari distinguished two types of aortic disease, one of which he termed "Form A," the usual lesion of arteriosclerosis, an endarteritis with primary changes in the intima, and the other "Form B," corresponding to Heller's "mesaortitis syphilitica," but which he termed "mesaortitis productiva." This latter he found in 16 of 27 individuals (59 per cent.) in which syphilis was established by clinical or anatomical diagnosis, or by both, and in which arterial disease was present; in the other 11 cases endarteritis ("Form A") was found. Moreover, mesaortitis was found in a further group of 20 cases of probable but not definitely established syphilis, in 14 of which, however, progressive paralysis was present. Chiari further states that mesaortitis was found in 47 per cent. of all cases of progressive paralysis which he examined. Aneurism occurred in four of the individuals with the medial disease and in three with the intimal form.

Chiari concludes that mesaortitis frequently accompanies syphilis and may be caused by it; that it is most frequent in younger individuals and is associated with aneurism and with narrowing of the coronary arteries. He implies, however, that syphilis may not be the sole cause of mesaortitis, and apparently for this reason uses the term "mesaortitis productiva" instead of Heller's earlier term "mesaortitis syphilitica." At the same meeting Benda brought forth evidence to indicate the syphilitic nature of the necroses (miliary gummata), in the early vascular lesions, of the transition of such lesions to the late scarring, and of the relation of this sequence of lesions to aneurism.

Since this exposition, mesaortitis has had a very definite standing

as a type of aortitis presumably due to syphilis and distinct from endarteritis deformans. This view is supported by the studies which Weisner, Bruhns and Klotz have made of congenital syphilitic aortitis, which they find is a disease of the outer layers of the media and adventitia, quite analogous to mesaortitis in acquired syphilis. The verdict, however, is not unanimous. Marchand, while admitting that mesaortitis may be associated with syphilis, is not convinced that the lesion is histologically specific and adheres to his earlier opinion that the majority of aortic aneurisms are caused by the ordinary form of arteriosclerosis. In this country also, Ophüls considers arteriosclerosis of the aorta to be a unit; the disease affecting all coats, but involving at times one coat more than the others. He does not deny the importance of syphilis as an etiologic factor, but believes in the unity of the disease, anatomically. "even if in some cases the syphilitic virus should be eventually demonstrated in the lesions."

It is of interest that at the time of this declaration the spirochete of syphilis had already been demonstrated in mesaortitis. Ophüls' communication was published in June, 1906; in the preceding April appeared a note by Reuter concerning the finding of the spirochete in a mesaortitis of the Heller type. This was followed by similar communications by Benda in July of the same year and by Schmorl in January, 1907. During the past year (1909) Wright and Richardson have found the spirochete in five cases of syphilitic aortitis. Owing to the possible error of confusing degenerated tissue fibrils with the spirochete, and also owing to numerous negative findings, the earlier reports were received with some skepticism, but it is noteworthy in this connection that Schaudinn, to whom Reuter's preparations were shown, confirmed the finding of the spirochete, and Reuter's illustrations in his second communication are very convincing. Benda found the spirochete in a cerebral artery in tertiary syphilis, the vessel lesion being characteristic of fresh arterial syphilis, spirochetes, both typical and granular, being found in a focus in the outer portion of the media. Levaditi and Roché in their monograph on "Experimental Syphilis" state that one of them had examined Benda's preparations and was convinced of the identity of the organisms with the *Spirocheta pallida*. Schmorl found the organisms in a mesaortitis of tertiary syphilis, as did also Dr. Oscar Klotz.*

In the five cases of Wright and Richardson the age of the individuals varied from thirty to forty-three. An aortitis limited mainly to the ascending portion and arch was common to all, as were also

*Quoted by Osler; confirmed by personal communication.

well marked fibrous changes in the aortic valves, the other valves not being affected. The coronary arteries were not remarkable except in that their orifices were more or less occluded by the fibrosis in the walls of the sinuses of Valsalva. Hypertrophy and dilatation of the heart occurred in three and aneurism in one. The aortitis was of the type usually described as syphilitic; calcification of the aorta or the aortic valves was found but once. Necrosis of the media was common to all five cases, and it was in this necrotic material that spirochetes were found. In only one instance were spirochetes found in a granulomatous area. The number of the organisms varied greatly in the different aortas and in different places in the lesions. They were not found in all necrotic cases, and when present were usually few in number, though in one case they are described as fairly numerous and in another as present in enormous numbers. In two cases atypical forms predominated, but as similar atypical forms were found not only accompanying typical spirochetes in other cases but also in the livers of congenital syphilis, they conclude that these were degenerated spirochetes. Although these investigators state that they are not thoroughly convinced of the identity of these forms with the *Spirocheta pallida*, their control observations, including a careful study of tissue fibrils, leave no other conclusion. From this description and drawings the organisms appear as typical as any found in congenital syphilis.

Perhaps the most important observation which they make, in that it has a bearing on the etiology of mesaortitis, is that concerning the relation of the spirochetes to the necrotic areas. "The finding of the spirochetes in an area of primary necrosis in the media, as well as in association with the necrosis in the fibrous tissue, seems to justify the belief that the micro-organisms are the cause of the necrosis by their local action on the tissue and that they are to be regarded as the cause of the whole process, although the possibility that they may be merely secondary invaders cannot be denied. Their numbers and distribution in the lesions would suggest that they rapidly multiply at a given point, produce necrosis and then degenerate and disappear."

In view of such evidence it is difficult to deny that the mesaortitis found under such circumstances is a lesion of syphilis due to the local action of the *Spirocheta pallida*. We may confidently expect further observations to confirm this view.

AORTIC INSUFFICIENCY.

Although the spirochete has been demonstrated only in mesaortitis, we have other evidence, that based on the method of serum diag-

nosis, to indicate that various lesions of the vascular system may be caused by syphilis. Most of the work by this method has had for its object the demonstration of the syphilitic origin of aortic insufficiency. That syphilis is a common cause of aortic insufficiency is a matter of common clinical knowledge, and pathologists have long been aware of its frequent association with the mesaortitis ascribed to syphilis. Indeed, recent investigation seems to show conclusively that the lesion of the valve is an extension of the disease in the aortic wall. Numerous statistics based on clinical and pathological observation are available, and of these a few may be given. Thus, Saathoof has emphasized the close relation of aneurism and aortic insufficiency to syphilis, and describes seven cases of luetic aortitis, in six of which aortic insufficiency was present. Mönckeberg analyzed thirty cases of mesaortitis, in eleven of which there was a definite history of syphilis. Narrowing or occlusion of the coronary arteries occurred in eight, aortic insufficiency in thirteen, and aneurism in ten. He further states that fully 33 per cent. of published cases of mesaortitis offer a history of syphilis, and of the remainder 44 per cent. are associated with metasymphilitic conditions. Citron has shown that in thirty-five cases of pure aortic insufficiency, a definite history of syphilis was present in 14.2 per cent. and a history of probable syphilis in 25.7 per cent. His results with the Wassermann reaction, as will be shown later, give syphilis a most prominent place in the etiology of this lesion.

The subject has recently been investigated clinically and pathologically by Longcope, who has utilized the material of the Pennsylvania Hospital. In a series of 930 autopsies, 76 cases of chronic aortic endocarditis were found. Twenty-one of these were unassociated with lesions of any of the other valves and constantly accompanied by mesaortitis, which was always confined to the arch of the aorta, sometimes extending only a few centimeters from the aortic cusps. The gross and histological lesions of the aorta in all cases were those of syphilitic aortitis. Aneurism was present in four; calcification in one case only. Moreover, in those cases in which the valves were studied histologically the process in the aorta could be followed to the attachment of the cusps, and in the cusps certain features of the histological lesions of mesaortitis could be found. In eleven of the individuals, all of whom were young or middle aged, there was a definite history of syphilis or the diagnosis was established by finding gummata at autopsy. Eighteen of the twenty-one gave clinical evidence of aortic insufficiency.

In a second group of twenty-one cases with clinical evidence of

aortic insufficiency but with other valves also affected, lesions of the aorta were absent. These were, for the most part, in young persons with, as a general rule, a history of rheumatic fever.

In a third group of thirty-four cases, in which the aortic valves alone were affected, no mesaortitis existed. They were for the most part elderly individuals, and in all but nine the intimal type of arteriosclerosis or endarteritis deformans characterized by calcification, was present. In only four were signs of aortic insufficiency present during life.

These results may be expressed in tabular form as follows:

TABLE VII.

WASSERMANN REACTION IN CARDIO-VASCULAR LESIONS.

	AORTIC ENDOCARDITIS		Other Valves and Rhenmatism.
	Pure with Mesaortitis	Pure with Endarteritis	
Aortic Insufficiency	18	4	21
No Aortic Insufficiency.....	3	30	0

Thus it is seen that a pure aortic endocarditis with insufficiency is in the great majority of cases associated with mesaortitis and is presumably of syphilitic origin.

To this anatomical evidence of the importance of syphilis in vascular disease may be added that obtained by the use of the Wassermann reaction, as presented in the following table:

TABLE VIII.

Observer—	Aneurism.		Aortic In-		Other Valvu-		Mesa-		Arterio-	
	No.	Positive	No.	Positive	No.	Positive	No.	Positive	No.	Positive
Kroner .....	..	..	1	1	..	..	..	..	1	..
Citron .....	..	..	16	10	3	1	..	..	..	..
Schütze	3	3	6	5	..	..	1	1	1	1
Danielopolu	2	2	2	2	..	..	10	5	..	..
Laubry and Parvu.	6	4	6	3	14	3	9	8	7	3
Donath	3	3	23	19	..	..	1	1	..	..
Collins and Sachs..	5	5	13	10	16	3	..	..	2	1
Swift	3	1	12	6	..	..	..	..	..	..
Hochne	3	1	2	1	..	..	5	3	1	1
Noguchi .....	..	..	1	1	..	..	..	..	..	..
Ciongh ¹	20	10	9	6	..	..	2	2	..	..
Bellner and Musca- tello .....	..	..	1	1	..	..	..	..	6	2
Beckers .....	..	..	2	2	..	..	..	..	..	..
Hasenfeld and Szili	..	..	..	..	..	..	..	..	188	20
Löhlein ² .....	..	..	..	..	..	..	3	3	..	..
Fränkel and Much ² .	4	2	..	..	..	..	23	19	8	1
Schlimpert ²	1	1	..	..	..	..	16	15	..	..
Reinhart ²	7	6	3	3	1	1	..	..	..	..
Deneke .....	..	..	13	3	..	..	..	..	..	..
Saathoof .....	..	..	12	12	..	..	..	..	..	..
Totals	57	38	122	85	34	8	70	57.	214	29

¹Includes the 9 cases of Barker, quoted by Osler.

²Reaction with postmortem blood.

From this table it will be seen that the general theory concerning the association of mesaortitis, aortic insufficiency and aneurism and the relation of these conditions to syphilis is supported. In a total of fifty-seven cases of aneurism the reaction was positive in 66.6 per cent.; also positive in 69.6 per cent. of one hundred and twenty-two cases of aortic insufficiency and in 81.4 per cent. of seventy cases of mesaortitis.

The most striking results are those of Citron, with positive results in 62.6 per cent., Collins and Sachs 77 per cent., Clough 66 per cent., and Swift 50 per cent. in aortic insufficiency; Fränkel and Much* in 83 per cent. of cases of mesaortitis; Collins and Sachs in all of five cases of aortic aneurism, and Donath's 85 per cent. of 27 cases of mesaortitis, aneurism and aortic insufficiency. If doubtful reactions were included some of these percentages would be higher.

On the other hand, it is seen that positive results in valvular lesions other than aortic insufficiency are relatively infrequent, in less than 25 per cent. of those given in the table. Also in arteriosclerosis of the intimal type it occurs infrequently; the largest series, that of Hasenfeld and Szili, giving but 10.6 per cent. in 188 cases.*

In view of these results it is evident that a more thorough investigation of this field may lead to a very satisfactory separation of syphilitic from non-syphilitic vascular lesions and therefore to a more rational therapy. The three important conditions described have long

*It must be admitted that some doubt has been raised recently concerning the accuracy of results with blood taken at autopsy. Thus, Bruck points out the frequency of positive reaction with postmortem blood from definitely non-luetic individuals. The results of Fränkel and Much and of Schlimpert must therefore be accepted tentatively. In this connection see Löhlein, M., *Zur Frage der Verwertbarkeit der Wassermannschen Syphilisreaktion an der Leiche*, *Folio serologica*, 1910, IV, 227.

*In addition to the tabulated cases it may be noted that Lenhartz has recently commented on the frequency of a positive Wassermann in aneurism, early aortic disease and sclerosis of the coronary arteries. Saathoof reports positive results in cases of aneurism and angina pectoris, but gives no figures. Oignard did the test on twenty-five patients with cardiac disease, and obtained a positive reaction in all of those suffering from aneurism or uncomplicated aortic insufficiency and negative results in the cases of mitral disease. Sonnenberg reports 9 cases of aneurism with aortic insufficiency, in 5 of which a positive Wassermann was obtained, as it also was in half of 16 cases of arteriosclerosis in young individuals. M'Intosh reports a positive Wassermann in one case of aneurism, as do Coenen and Wolfsohn in one each of aortic insufficiency. More recently Krefling has reported positive results in eight of nine cases of aortic insufficiency.

been treated by many practitioners as syphilitic affections, this treatment being based on a history of syphilis and the knowledge that as a result improvement was not infrequent. One can not hope to cure an aortic lesion, but the process, be it aneurism, mesaortitis or insufficiency, may perhaps be arrested or the progress of the disease influenced by vigorous antisyphilitic treatment. This view is supported by Longcope and also by Cabot, who states that since the discovery by Wright and Richardson of the spirochete in mesaortitis it has been his practice to "push antisyphilitic treatment in all cases of non-rheumatic cardiac disease in which there is a history of syphilitic infection, especially if the Wassermann reaction is obtained." Such patients, he thinks, respond to this treatment better than would be expected under the ordinary treatment of rest, purgation and cardiac stimulation. Collins and Sachs definitely recommend antisyphilitic medication in cardio-vascular conditions giving a positive Wassermann, and state that marked improvement has followed such treatment. Laubry and Parvu report improvement in certain cases of aortic lesions giving a positive Wassermann reaction and placed under antisyphilitic treatment.

There is some evidence that the Wassermann reaction may also lead to the recognition of the syphilitic nature of various vascular conditions not included in the group just discussed, and also of diseases of the myocardium. The view that a primary interstitial myocarditis associated with panarteritis may be due to syphilis is held by many writers, and in this country has been emphasized, especially by Adler, who reports very satisfactory results from antisyphilitic treatment. It is not surprising therefore to find that Schlimpert reports a positive Wassermann reaction in two cases and Schütze in one of coronary sclerosis; Reinhart in three of six cases and Citron in one case of myocarditis. Positive reactions have also been obtained in individuals with sclerosis of the pulmonary artery and cerebral aneurism (Schlimpert), and by Clough in one case, and by Laubry and Parvu in three cases of obliterating endarteritis with gangrene, and by the latter also in one of diffuse endarteritis of the extremities.*

Much work must be done before definite conclusions can be reached concerning the more obscure vascular lesions. We may hope, however, in view of what has already been accomplished, for results which may be utilized to shape therapeusis.

*Kaliski and Buerger have failed to get a positive reaction in 16 cases of thrombo-angeitis obliterans. This statement is made by Noguchi in reporting two cases of Raynaud's disease with negative reaction.

I have been especially impressed, in studying the statistics of syphilis, by the frequent association of cardio-vascular lesions with the so-called parasyphilitic affections of the nervous system and their relative infrequency in syphilis without paralysis. Thus Straub found mesaortitis in sixty-nine of eighty-four paralytics (82.1 per cent.) with syphilis, but, on the other hand, aortitis was present in only seven of seventy-one syphilitics (9.9 per cent.) without paralysis. It was present in 47 per cent. of the cases of progressive paralysis examined by Chiari and in 63 per cent. of twenty-four cases of tabes described by Müller and Rogge (Strumpell's clinic), and Mönckeberg states that an analysis of the published cases of mesaortitis shows that 44 per cent. are associated with metasyphilitic affections of the nervous system.

Such vascular lesions are apparently as truly parasyphilitic as are tabes and progressive paralysis; and this view, suggested by pathological studies, is supported by the results of the Wassermann reaction. One wonders whether the individuals with parasyphilitic vascular and nervous lesions are those in which active virus persists, while those without such lesions represent individuals in which the spirochete has been destroyed by proper treatment. If the former, one may advance a second hypothesis, that based on the finding of the spirochete in mesaortitis, to the effect that the nervous lesions may be due to the poison of the spirochete persisting in the chronic vascular lesions.

CIRRHOSIS OF THE LIVER.

Aside from affections of the cardio-vascular system, the only disease of interest to the internist concerning which we have much data is cirrhosis of the liver. Of the reports* which I have been able to collect, twenty-two of thirty-one cases have given a positive Wassermann reaction. Of these about half were in individuals with a history of syphilis; in the others a history of antecedent syphilis was absent or doubtful. Of special interest is the negative result in a case of Banti's cirrhosis (Pick and Proskauer), a lesion which has been considered as possibly syphilitic. Esmein and Parvu report a positive reaction in a case of cirrhosis with hypertrophy; under mercurial treatment rapid improvement was noted. Clough found five alcoholic cirrhoses negative and one, clinically syphilitic, positive. It is possible, therefore, that further work may show that the etiology of

*Citron, 2 cases; Hoehne, 2; Fränkel and Much, 2; Ballner and Muscatello, 1; Noguchi, 7; Esmein and Parvu, 1; Pick and Proskauer, 1; Clough, 4; Swift, 7; Cheney, 1.

various cirrhoses may be determined by this method, thus adding to our knowledge of the pathology of the liver and aiding in the establishment of a satisfactory treatment. It is also possible that the ascitic fluid of cirrhosis may be utilized for the test, as demonstrated by Esmein and Parvu, by Swift and by Cheney.

SURGERY.

Among the first to recognize the importance of the Wassermann reaction in the practice of surgery were Karewski and Coenen. Karewski early in 1908 emphasized the value of the method in the differential diagnosis of gunma and tumor, of tuberculous and syphilitic affections of bone, and as an additional means of establishing the diagnosis in those cases in which, although the presence of syphilis is probable, an absolute diagnosis could not otherwise be made. On the basis of his experience with twenty-eight tests he emphasizes the value of the reaction in the recognition of syphilis of bone and in the determination of treatment, and comments on the advisability of replacing the therapeutic test by the serum reaction.

Coenen, later in the same year, published the results of seventy observations. His cases include a great variety of surgical affections which may be grouped in three classes; diseases of bones and joints, tumors, diseases of blood vessels. Of the seventy individuals tested, thirty presented clinical evidence of syphilis and twenty-six gave a positive Wassermann. Of these latter, mainly individuals with disease of bone, a history of syphilis was lacking in nine. Coenen also emphasizes the importance of the reaction in the differentiation of syphilitic bone disease from tumors, especially sarcoma. He points out the difficulty of making a histological diagnosis between an inflammatory condition of bone, syphilis and sarcoma on the small piece of tissue removed at operation and hastily examined. The Wassermann reaction under many circumstances may therefore be preferable to a histological examination. He also considers it important in the diagnosis between syphilitic leukoplakia and early cancer of the tongue. Here, however, one must interpret with caution, for cancer frequently develops in the lesion of leukoplakia.

Baetzner, after a study of one hundred and twenty cases, urges the use of the reaction in the differentiation between chancre and peculiar localized inflammatory conditions and between gummata and necrotic tumor-like masses: a positive reaction assuring early treatment. He has also found it of assistance in joint and bone disease. He concludes that the method ranks in importance with those of his-

tology, bacteriology and radiography in the diagnosis of syphilitic disease. Pick and Proskauer likewise emphasize the importance of the method in certain lesions, as sarcoma, infectious granuloma and chronic inflammation, which are not readily differentiated from syphilis by histological examination.

Clough refers to two patients with tumors of the chest wall clinically resembling sarcoma. Each gave a positive Wassermann and upon exploratory excision and histological examination evidence of lues was found.

Swift, who has obtained positive results in three of four cases of gumma of the testicle, makes an interesting observation on this subject. In one patient a testicle was removed because of a diagnosis of tuberculosis; subsequently the other testicle became involved. A positive Wassermann at this time led to antisiphilitic treatment and marked improvement.

Several references to the use of the reaction in the recognition of syphilitic strictures of the rectum are also at hand (Wolfsohn, Clough), and Wolfsohn, who details some observations on its use in surgery, classes it with the tuberculin reaction in importance.

Several observers (Citron, Reinhart, Noguchi, Clough) have obtained positive reactions in chronic bone and joint disease, as chronic arthritis and spondylitis. Donath and Heckman have called special attention to these conditions. In Donath's twenty-seven cases of vascular disease, of which 88 per cent. gave a positive reaction, polyarthritis occurred in three. Although these cases all gave a history of articular rheumatism, he believes that certain special features of the joint affection show the lesion to be of a syphilitic nature rather than a true rheumatic polyarthritis.

Swift also emphasizes the value of the test in disease of bone; he having obtained sixteen positive results in seventeen cases of osteomyelitis, periostitis, and gumma of bone. Four of these were confirmed by X-ray and all improved under treatment with potassium iodide.

Heckman gives a detailed study of four cases of arthritis deformans of the monoarticular type and eleven of the polyarticular type. A fairly definite history of syphilis was obtained in all of the first group, without evidence of tertiary lesions, and all of these gave a positive Wassermann reaction. In six of the second group (polyarticular type), definite evidence of syphilis was present and less definite evidence in one. In seven cases the Wassermann reaction was definitely positive, and in four weak or doubtful. Upon this evidence of the frequently positive Wassermann, the fairly constant history of

syphilis, and the improvement under antisyphilitic treatment, Heekman comes to the conclusion that not only the monoarticular, but also to a large degree the polyarticular form of arthritis deformans, has a luetic basis. Swift reports positive results in two cases of monoarticular and one of polyarticular chronic arthritis, with cure under anti-luetic treatment.

It is evident from this summary that in surgery the Wassermann method for the diagnosis of syphilis is at least of equal importance with the tuberculin reaction. Although, as Baetzner points out, a positive reaction is an indication of general disease and not of local lesion, nevertheless, with a doubtful local lesion, a positive reaction supplementing other methods of examination, is of great value. The reaction has not thus far been extensively employed in surgery, but if the reported results are confirmed we may confidently expect it to become one of the common procedures of the surgical clinic.

(Concluded in October Issue.)

THE WASSERMANN REACTION.

BY CLARENCE ALLEN BAER, M. D..

MILWAUKEE.

During the last two years a great deal has been written about the Wassermann Reaction—many articles have been published and books, even, have appeared on the subject. Yet nearly all this mass of literature has dealt with the subject in an advanced and often complicated manner. The main principles have often not been clearly expounded and many of the contributors have taken for granted too much theoretical knowledge on the part of their readers. Most of us have heard of the Wassermann reaction, many of us have an indistinct idea of what it is, but few, I dare say, have a clear idea of the reactions involved. The object of this short exposition of the subject is to try to make lucid the underlying important steps.

The Wassermann reaction is a Blood Serum Diagnosis of Syphilis. The reaction is expressed in terms of *hemolysis*. What is *hemolysis*? Many different substances when brought into contact with the red blood corpuscles of animals cause the hemoglobin contained in those corpuscles to be set free and a clear solution results. This phenomenon of solution is called *hemolysis*. The substances causing hemolysis are *hemolytic* for the blood corpuscles that they dissolve.

What are the factors concerned in hemolysis? Three factors are

essential for hemolysis—namely, the red corpuscle or let us say the “receptor”; the *amboceptor*, and the *complement*. For example—let “A” represent the red corpuscles or receptor, “B,” the amboceptor, “C” the complement. If the red corpuscles which contain “A” be added to a serum containing “B,” they will absorb “B” and “AB” will be formed. “AB” is now ready to receive “C.” When a serum containing “C” is added, then “ABC” or hemolysis results. “A” and “C” brought together without “B” would not produce hemolysis because “A” and “C” cannot be held together without the amboceptor “B.” For example, a button “A” cannot be fastened to a piece of cloth “C” without thread “B” (the amboceptor). Red corpuscles “A” to which “B” has been added are therefore ready to attach themselves to “C” and form “ABC” (hemolysis). Thus, A and B cannot form ABC unless C be present—just as A and C cannot form ABC without B or as B and C cannot form ABC without A.

Amboceptor (B) and Complement (C) cannot resist exposure to heat in the same degree. Complement (C) is destroyed by exposure to 55° Centigrade for one-half hour, while amboceptor (B) is not injured by such an exposure. Therefore it is easily seen that by exposure for one-half hour to 55° centigrade, complement (C) can be removed from a serum, or in other words the serum is *inactivated*—that is it cannot produce hemolysis (ABC) when added to A and B. But if to an *inactivated serum*, fresh serum be added, the destroyed C is replaced by fresh C and the serum is *reactivated*, and ABC (hemolysis) results. We use fresh serum, therefore, in order to replace the complement (C)—therefore let us call it simply complement or C.

But the fresh blood serum of many species is hemolytic for red blood corpuscles of some species, but not of all species. For example, rabbit blood serum contains no amboceptor for human red corpuscles. But by repeatedly injecting human blood into a rabbit an anti human amboceptor can be produced in this rabbit’s serum. Thus B can be produced by thus injecting or immunizing a rabbit. We, therefore, have “A” which is present in the red corpuscles we wish to use; we can produce “B” for those corpuscles by immunizing a rabbit against the species used to obtain “A”; and C we can get from any fresh blood serum. We now know what hemolysis is, how it is produced, and how we can obtain the receptor (A), amboceptor (B), and complement (C) for its execution. An understanding of the principles of hemolysis just explained is essential for an understanding of the Wassermann reaction.

Now, a step further, what is an *antigen*? An *antigen* is a substance that in combination with a specific *antibody* in the presence of

complement (C) will combine. Let antigen be designated by "D," antibody by "E," and complement, as before, by "C." Let "CDE" stand for a combination comparable to "ABC." "CDE" can be formed only when C, D, and E are present, similar to "ABC." Antigen "D" will combine only with a specific antibody "E" and not with other antibodies E¹, E², E³,—just as in a Widal reaction the serum of a typhoid patient will agglutinate only the typhoid bacillus and not the colon bacillus or related strains of organisms.

The antigen used in a Wassermann test was at first made by extracting syphilitic livers and hearts with water. Later they were extracted with alcohol. Some observers even use extracts of normal hearts and livers and even synthetically prepared lecithin derivatives, on the ground that the reaction is really a lipoid reaction—but many laboratory workers are unable to obtain results except with a fetal syphilitic extract. The writer always uses a fetal syphilitic alcoholic heart or liver extract. The antibody is contained in the serum to be tested—a specific *antibody* for a syphilitic *antigen*, if syphilis be present.

The Complement used is guinea-pig's serum. The Amboceptor used by Wassermann was a rabbit antisheep amboceptor, i. e., one produced by immunizing rabbits with sheep blood. The receptor or red corpuscles used with this system, must then, of course, be sheep corpuscles. For a Wassermann test we therefore need *antibody* (serum to be tested), *antigen* (alcoholic syphilitic liver extract), *complement* (guinea pig serum), *amboceptor* (rabbit antisheep serum), *corpuscles or receptor* (sheep corpuscles).

Let us use our old letters for the sake of clearness:

Patient's serum or antibody.....	E
Antigen	D
Complement	C
Amboceptor	B*
Corpuscles or receptor.....	A*

The *serum* to be tested must always be *inactivated* so as to destroy the complement contained therein.

C, D, and E are added together in a test tube and are incubated at 38° centigrade for 1¼ hours. B and A are added together and are incubated at 38° centigrade for one hour. Then A, B, C, D, and E that have been thus incubated are united in one test tube and incubated at 38° centigrade for two hours. If E be from a syphilitic patient, then it will join with its specific antibody D, and bind C, i. e., will use

*Some other system besides an anti-sheep system may be used.

C for making CDE—therefore, when AB is added, there is no C to make ABC and consequently there will be no hemolysis and AB will remain as a precipitate. But if E be from a non-syphilitic patient or from a patient who is thoroughly under the influence of mercurials, then D will not be its specific antigen, because D is specific only to syphilitic blood and therefore no CDE will be formed, and C will remain free. Then, AB is added and C being present and not bound, ABC is formed and we have hemolysis in the tube.

The steps in the Wassermann test are many and complicated. Whenever a test is made, controls must be run simultaneously—a known positive and known negative serum must be tested at the same time so as to control the test, and controls omitting the antigen and the complement respectively so as to control the factors used, must be performed with each serum.

The principles involved in the Wassermann reaction are then, as we have seen, not so very complicated after all. A thorough understanding of the principles of hemolysis is the main essential—after that is mastered, the deductions follow naturally.

POSSIBILITIES OF PROPHYLACTIC MEASURES IN THE DEVELOPMENT OF INSANITY.

BY ARTHUR W. ROGERS, M. D.,
OCONOMOWOC, WIS.

A satisfactory presentation of the subject in hand would require a canvas of the entire realm of medicine, a delving into social life and conditions and a careful analysis of the complicated subject of heredity. The time allotted to us precludes such a possibility and we shall confine ourselves to a mere outline, a checking up, and a plea to the medical profession of the state of Wisconsin to take combined action against a danger that but few realize.

For some years both the public and the profession have beguiled themselves into the belief that insanity was not increasing out of proportion to the natural increase of population, but of late one painful fact after another keeps coming to the fore, making it impossible longer to avoid the responsibility actually forced upon us. In spite of our crude and incomplete statistical methods, it is an incontrovertible fact that during the past ten years there has been an alarming increase in the number of insane subjects throughout the civilized world.

*Read at the 64th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 22, 1910.

To escape the possible odium of being considered an alarmist, it might be advisable to give a few substantiating figures. According to the census report in 1908 there were throughout the entire registration area of the United States 78,289 deaths from all forms of tuberculosis. During the same year we have reported 71,090 deaths from diseases of the nervous system and when we add 10,782 suicides, we get a total of 82,872. Approximately 4,000 more deaths from nervous and mental diseases than from all forms of tuberculosis in one year. During the 13 years from 1890 to 1904, there was an increase of 100 per cent. in the number of insane in hospitals accompanied by a corresponding increase in the number of institutions involved. The census report of 1904 gives the enormous number of 199,773 persons who were in institutions for the care of nervous and mental diseases and 17,000 who on account of inherited or congenital mental defectiveness were incapable of earning a livelihood. The estimated annual cost to the people for the care of this large number of dependents was \$25,000,000, to say nothing of the loss sustained from the failure of so much earning capacity. In addition it is indisputable that thousands of individuals recognizedly insane have not been placed in institutions. In addition to this large number of insane we find 150,000 feeble-minded receiving institutional care. Taking into consideration the hordes of criminals more or less insane, it is easy to account for an army of over half a million. We are thus justified in seeing in this increase in mental diseases a phenomenon of social pathology. It is not a case of the elimination of waste matters in the social organism. For precisely these elements, morbid in the extreme, are not eliminated as they should be, but are retained and allowed to multiply. The diseased member is not always removed from active social life, but is permitted to mix freely with it, contaminating those who are not diseased and increasing his kind.

The fight against tuberculosis is world-wide, but one hears little of the fight waged against the prevalence of insanity, the most distressing malady which afflicts mankind, causing the keenest suffering to patient, family and friends. It stops the individual's earning capacity for months, years or a lifetime. It taxes the family and state to an incredible degree for their care and finally hands down a heritage greatly to be dreaded.

The causes of insanity may be divided into two general classes. 1st, an unstable and inefficient nervous system, which easily succumbs to the stresses of life; 2nd, physical or mental shock to the nervous system through disease, accidents, toxic conditions, etc.

The two causes usually coexist and there is interaction between

them. Heredity doubtless easily takes the first place as a cause of insanity. On account of its great importance as an etiological factor (in insanity and epilepsy accounting for 50 per cent. or more of cases according to general estimates), the people should by every method possible be constantly told of the probable consequences of the union of the unfit. The enactment and enforcement of whatever laws regarding marriage or procreation may tend toward the production of a stronger race is of paramount importance. Some states have enacted laws requiring a medical examination and certificate as a pre-requisite to obtaining a marriage license. In others there is enforced celibacy of the degenerate and palpably unfit. We desire to go on record as an advocate of the law operating for the past two years in Indiana requiring the sterilization of confirmed criminals, rapists and imbeciles. This, though a rather harsh measure, if adopted by the several states, would seem to give the best promise of improving the race. Indeed non-production must be the chief preventive measure because hereditary degeneracy cannot be cured.

Dr. James T. Surcey of Alabama, speaking on the subject of heredity says, "It is a most perplexing question, a most difficult one to solve and control humanely. The ignorantly and purposely uncontrolled natural appetites of the large majority, rich and poor, tend to oppose and thwart race improvement." The very civilization of which we boast makes for the increase of insanity and degeneracy through heredity. The insane man, for instance, is carefully and scientifically nursed to mental health, or perhaps partially so, and then goes on procreating children with perhaps a predisposition to nervous instability, which leads often to some type of psychosis, epilepsy, inebriety, etc.

While the doctrine of heredity is well established, yet we should ever bear in mind the fact that in a very large measure the evil effects of this tendency can be controlled by the individual. Dr. Drewry says, "Our brains are after all what we make them by proper training and by avoidance of those things which are detrimental. Fifteen years of work among the insane has convinced me that many cases of insanity could have been prevented by proper early training and education. It is a faulty system which recognizes all students in our public schools and universities as equal mentally and physically. There is too much *over* mental and *under* physical development of children. A system of medical examination and supervision could readily prevent many a mental crash during the process of education. There is some good reason why one-fifth of the nervous breakdowns last year in New York City were among school teachers."

The foundations of hysteria and some types of insanity are in-

variably laid in the home and are directly due to the failure of parents and teachers to inculcate in the neurotic child a proper degree of self-restraint and control. No greater privilege nor higher duty can fall to the lot of the physician than that of recognizing in the infant and growing child the latent possibilities of those traits and tendencies which later in life may develop into a full fledged neurosis or psychosis. This must of necessity be the privilege of the family practitioner. To be enabled to perform this high service he must have had not only the preliminary education and training, but the stamina to point out to both parents and child the danger lying in wait. We can train the individual away from tubercular tendencies and we can by education and training develop a constitution that will serve to offset a neuro-pathic or psychopathic inheritance.

I do not presume to suggest a plan for the suppression or regulation of the liquor traffic. Regulation has been attempted in other countries, as well as in many of our states, with ill success. The alarming increase in the consumption of alcoholic liquors and the marked increase in types of insanity directly traceable to the excessive use of alcoholic liquors presents a problem demanding some solution in the immediate future. 20 per cent. of our insane owe their condition to the excessive use of liquor. We must bear in mind that many forms of alcoholism can be classified with the insanities and that excesses in this line are far reaching in their effects, causing in the succeeding generation neurasthenia, epilepsy, insanity and the varying degrees of degeneracy.

The rapid increase during the past 20 years of the opium and cocaine habitues requires drastic and immediate action on the part of the profession and the state. Insanity from the excessive use of these drugs is greatly on the increase and the number of "dope cures" throughout the country is increasing rapidly in number. We agree with Dr. Drewry in his statement. "That there is too much sentimentalism in dealing with the habitual drunkard, who is too often a danger and a menace to the community: he should either be treated as an offender against law and order, or a sick man. Those who wilfully refuse to control their appetites and become nuisances should be confined in jail and made to work under police authority and regulation. On the other hand when an individual has become such a slave to drink or drugs that he cannot control his morbid appetites and desires, he should be placed under institutional care and treated for disease."

Proper legislation will do much to regulate the dissemination of patent drugs carrying opium and cocaine to unsuspecting victims and put an end to the mail order "drug addiction" cures that do not cure.

A significant feature of the times was the recent appointment by the mayor of Chicago of a vice commission of thirty representative citizens, including several physicians, to investigate and report on the social evil. Three years ago the Chicago Medical Society instructed a committee of five of its members to inaugurate a systematic effort for public education in certain phases of public hygiene. Too much emphasis cannot be laid upon the necessity of educating the young against the dangers of prostitution. We must put aside our prudery and, where parent *will not* or *cannot* properly instruct the child, the family physician should assume this responsibility. With the further development of the Wassermann test, we are no longer able to deny the horrible inroads made upon nervous tissue by the syphilitic virus. Having had the misfortune of observing many instances of the late effects of specific infection, I cannot help feeling that many such cases are improperly treated during the early stages of the disease and I take pleasure in referring to an illuminating article on the treatment of Syphilis appearing in a recent number of the Journal of the American Medical Association by Dr. Collins.

Accepting the foregoing statements as facts, what can we do to stem this tide of misery? Until recent years the burden of this branch of the profession has been borne by a few men of stalwart and aggressive minds. Prejudice and ignorance have caused mental diseases to be neglected in the medical colleges and made them unattractive to the medical student. The average man graduates with little or no knowledge of the subject. At present we are experiencing a revival in matters psychological. Christian Science, the Emmanuel movement and the various other cults and creeds give evidence that the layman at last has discovered the virtue of mental therapeutics and in a crude manner is attempting to apply a principle, but poorly understood. Much is being done to relieve the mental attitude of the public from the incubus it has carried for centuries and of late years the insane more frequently receive the consideration due them.

Whatever reform is brought about must emanate from the medical profession. Organization and education can accomplish much. How is this to be done? Organization of the medical fraternity is in its infancy. What a power rests in the aggregation of brilliant men constituting the medical world, if thoroughly organized and properly applied. The physician has too long been only a *medical* man. He must also be a good citizen. His influence must be directed to make the local, county and state medical societies a power for good in the community. Medicine and politics must be separated to reduce to a minimum the possibilities of graft and other irregularities. Our local

boards of health must be composed of capable physicians and receive the unqualified support of the entire profession. An aggressive fight must be waged until the medical profession is represented in the president's cabinet and a national Board of Health established. In a recent speech in congress advocating the creation of a national department of health, Sen. Owen pertinently remarked: "Why conserve coal fields and not coal miners? Why conserve plant life and not human life? We conserve our water power and forests and forget our people. We have a great department conserving animal and plant life and no department conserving human life." This cannot continue. Gentlemen, this distressing condition will continue until our profession is properly organized and appreciates its power and causes it to be felt.

We are prone to deprecate the fact that the public remains so benighted in its comprehension of the subject of insanity and it is well to make every possible effort to enlighten the lay mind on this subject. Education, however, should begin in the ranks of the medical profession. It is little short of criminal to grant physicians and nurses the privilege of practicing without proper training in nervous and mental diseases. Hundreds of physicians and a greater number of nurses are turned upon the public annually from schools that do not even pretend to give such instruction. So long as this inexcusable condition exists we cannot expect the family physician to recognize incipient insanity and border-line cases. We cannot expect him to know that the earlier these cases come under proper environment and treatment, the greater the prospect of recovery. Proper training will teach the general practitioner that 25 per cent. of all cases of insanity make a complete recovery and 25 per cent. more recover sufficiently to live at home and partially care for themselves. It will prevent him from resorting to the common indiscriminate use of opiates, a harmful if not dangerous practice. I believe the profession at large are rapidly reaching a more comprehensive view of pathological mental conditions and at present the unfortunate sufferer from mental unbalancement is usually recognized as a sick individual instead of as a mean person, or a criminal or a nuisance. This recognition is evidenced in the disappearance of all means of restraint in our best-conducted hospitals and the establishment of psychopathic wards and hospitals in our largest cities. We surely continue to fall far short of our duty as physicians so long as we tolerate the practice of locking up a sick man or woman in our city jails with ordinary criminals, or placing them in our county almshouses. Every state should have a separate hospital for the epileptic, the criminal insane and the uncontrollable drunkard, and to this end let us use our influence.

The first duty of the medical profession lies along the line of prophylaxis. How are we to apply this to the problem of insanity? It is a subject beset with difficulties well nigh impossible to surmount and involves problems yet unsolved and largely unsolvable. Nevertheless by the application of knowledge we have already acquired, by tireless investigation and study, and by a wider dissemination of the facts much more can be done and more satisfactory results obtained. In short, if we would reduce the number of insane and epileptic and degenerates of every class, we should as far as possible remedy the conditions that are responsible for their existence.

In conclusion we would emphasize one all-important feature of this subject—*Education*. Reduce by 50 per cent. the number of our medical colleges and raise the standard of the remainder so that competent men are sent forth. With a well equipped profession, we can wage a campaign through the medical and lay press, through the local and state, and we trust national boards of health, through the teachers in the public schools and universities, that will give the layman a clear understanding of the term insanity: that it is a well defined sickness, frequently curable and chief of all often preventable.

If we once fully recognize that not only in the insane but in a large percentage of drunkards and criminals we are dealing with a pathological condition, we are obliged as physicians to support all efforts to treat them as diseased subjects. Let us urge our larger daily papers to add to their staff one or more capable medical men. Let us give closer medical supervision to the growing child and give our support to those who advocate the establishment of psychopathic hospitals and the creating in our larger hospitals for the insane of departments where abnormal mental conditions may be scientifically studied and greater means of prevention developed.

Such are some of the measures which will teach the people that it is to prevention rather than cure that we must look for the checking of the development and increase of insanity and mental degeneracy and the consequent crowding of our institutions with ruined minds.

Discussion.

DR. W. F. BECKER, Milwaukee: We have really reached the time when we can seriously face the possibility of prevention or attacking the problem of the increase of insanity, and I think it is a matter of great rejoicing, like the rising of the sun on a long period of darkness.

To discuss the prophylaxis of insanity is a very formidable undertaking. It is so wide in its scope, and involves such large economic, industrial, and social problems. In a way there have already been made large strides, almost unconsciously perhaps, towards solving the problems of insanity. All the

activities that are making for human betterment are solving the problem of insanity. The various endowments, such as the Carnegie Foundation, the Rockefeller Endowment, and the Russell Sage Foundation, and all those endowments by rich and philanthropic men are solving the problem; the increase of social activities, settlement work, civic organizations, the anti-liquor crusade—these activities are already solving the problem of the prevention of insanity, indirectly.

I know it would have been deemed somewhat Quixotic twenty years ago to attack this problem in a direct way and to think that we could diminish the amount of insanity thereby. But since we have had the inspiration of the men who are working in the antituberculosis crusade, it seems to me that we can have an extra inspiration to do on somewhat similar lines what they have done and are doing so very well.

We have to meet certain prominent indications, for instance the subject of heredity; that is so large a subject that one hardly dares speak of it. The question of alcohol was hardly emphasized enough by Dr. Rogers. I looked through some statistics in the New York hospital reports and learned that out of the number of new admissions in 1908, among men, there were about 30 per cent. of the cases whose insanity had directly, or was supposed to have, alcohol as an etiological factor. Among the women of course it was not so much. In the women there were other influences that replaced this etiologic factor. I noticed that there was about one in fourteen women admitted in the hospitals in the districts surrounding New York City, who had been deserted or divorced or whose husbands had separated from them. I think the alcoholic feature is even larger than 30 per cent. in hospitals like the Manhattan Hospital immediately surrounding New York City.

When we come to the question of sterilization which we have to meet in discussing this problem, we also must pause. We know that on the one hand there are forces which are making for the betterment of mankind and may make it unnecessary that we adopt such extreme and uncertain measures. We know, for instance, that in the matter of the insane, insanity is often associated with or nearly related to genius. We have geniuses in history who were the offspring of more or less insane heredity, and we must remember that genius is the greatest asset we have, and so we hesitate to apply rules for sterilization—particularly because rules cannot easily be applied without hardship.

When we come to the criminal I cannot endorse the sterilization of the criminal as practiced under the laws that govern the practice in Indiana. It seems to me that we cannot apply that to the criminal. The criminal is so often largely the offspring of his environment; industrial and social conditions have so much to do with his production, that it is said that almost every community has the criminals it deserves. If we apply it in criminals we must apply it not because they are criminals but because they are psychopathic in some way.

I cannot forget the story of Henry George that I read in his autobiography, which would show the evil of applying any method which would annihilate human life, which is the practical result of asexualization and sterilization. This county has produced no more patriotic citizen than Henry George, a man willing to lay down his life for his principles, as he practically did in the campaign in New York, and a most high-minded man and a great asset to the world. Yet when he was a young man, a printer,

looking for work in Sacramento (he has this in his autobiography), he was in great distress, could not find work and was very poor; his wife was ill; and at this time there are little entries in his diary something like this: "Still no work. Had a row with a Chinaman to-night," etc. About this time his wife was expecting to be delivered of a child, and on the day of the delivery of the child there is this entry substantially, "Wife delivered of a child this morning; still no work. Was desperate last night and went out on the street and stopped the first man I met and made him give me five dollars; if he had not done it I think I should have killed him." Those are substantially the words of Henry George. Supposing the man had not done it and there had been an assault and murder had been the result of the assault. Henry George would have been branded as a criminal and the world would have lost the services of one of the greatest men that ever lived in this country.

When we come to the imbecile I think heredity has shown that we need not hesitate there. It is known that a child who is the offspring of imbecile parents is almost necessarily defective or imbecile, and we have many cases in history and in the records showing this, like the case of Dr. Bowers, where an imbecile married a weak-minded woman and there was born nineteen children in twenty years—all imbeciles.

I want to say that one of the direct ways to attack this question is on the line of what has been done in New York for the last four years, and that is the establishment of societies in connection with the state hospitals for the after care of patients from these hospitals, in order to save them from the buffeting of adverse incidents which might reproduce the attack. And these societies have not only limited themselves to the care of these people who are discharged, but have taken under their care people who are related to them and others who are in danger of becoming insane; and it seems to me we are just about ripe for the establishment of these societies. We have done it on a small scale; and it seems to me from those societies there will come the right education of the public and profession to enable us to do this thing which we now want to establish; and I hope that we are not going to simply talk about this, but that we are going to do it, and organize to that end; and I hope this day will be the beginning of a plan for the prophylaxis of insanity based somewhat upon that which has been done in the antituberculosis crusade.

DR. A. W. ROGERS (closing): The subject of sterilization is one that could be discussed a long time and still a great many disagreements come up. In the matter of sterilization I refer particularly to the chronic insane, the imbecile and the chronic criminal, the criminal recurring and the criminal of years' standing. It is quite possible that anyone might be placed in an environment or situation where, as in the case of Henry George, to which Dr. Becker refers, the crime might be almost justifiable according to the moral law at least.

In closing the discussion of this subject we would call your attention to the fact that a campaign against the rapid increase of the insane and degenerate has already been launched. A reader of the daily papers and the monthly magazines cannot fail to observe the tendency of the times in the increasing number of articles on the subject discussed by our papers and it was with pleasure that we noted the great amount of work done along this line at the recent meeting of the A. M. A. In fact a number of the chairmen

of sections chose for their addresses subjects along this very line. The President, Dr. Welch, dealt extensively in his address on medical education, with the necessary improvement of vital statistics and need of a national department of health. The orator on state medicine spoke at length on the possibilities of preventive medicine and the need of other professions than medicine co-operating in the work. Dr. Meyer of New York expatiated on the problem of the physician concerning the criminal insane and border-line cases, particularly the necessity of restricting the liberty of the dangerous border-line case. Finally Dr. Diller, chairman of the section of nervous and mental diseases, spoke with great feeling and at length of the necessity of each state having hospitals for the treatment of inebriety. To-day Massachusetts and Iowa are the only states with sufficiently progressive legislatures and sufficient public enlightenment to treat inebriety with any degree of rationality. Minnesota is just launching out upon such an experiment.

Wisconsin, which has developed the Wisconsin idea in the treatment of the insane, should endeavor to maintain its progressiveness in medical lines; and I believe much would be accomplished for succeeding generations if this society went on record as advocating two measures, namely the establishing of a law for the sterilization of the chronic criminal, the chronic insane and the degenerate, as well as going on record as to the need of a hospital to properly care for the inebriate.

They have no place to go. There are plenty of graft places to go to—Keeley cures—they are not wanted in private sanitariums; they are not wanted in public institutions; you get them in there and you cannot keep them there. I have worked two or three days at a time to get a man committed to the county asylum. He would stay there two or three days until sober and then hire a lawyer to get him out on habeas corpus.

CONCERNING DERMATITIS OF UNUSUAL EXTERNAL ORIGIN.*

BY O. H. FOERSTER, M. D.,
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It has in recent years become increasingly evident to those who closely observe and study diseases of the skin, that in proportion as the term dermatitis, accompanied by a qualifying designation, is gaining in accuracy and value, the limits within which the term "eczema" remains applicable are gradually growing more restricted. This interchange in values is but the natural result of the application, during recent years, of scientific methods to the study of diseases of the skin and is an expression of the fact that dermatology, in common with other branches of medicine, is no longer tolerant of loose conceptions which serve only to conceal our lack of knowledge. There was a time

*Read before the Milwaukee County Medical Society, June 17, 1910.

when the designation "scrofula" had its place in medical nomenclature, but it has long since outlived its usefulness and has been superseded by terms of scientific accuracy. Similarly, the recognition of definite groups of inflammations of the skin, with an established etiology, and their consequent deliverance from out of the chaos of "eczema," under which term they have been classed, indicates that at no very distant time the designation eczema will probably be found in the company of the porrigo, lichens, and humors of the older writers.

The position of those who would discard the conventional notions in regard to eczema as a disease entity, and who would define more accurately its position in the group of inflammations of the skin, is well stated by Pusey (*Principles and Practice of Dermatology*, 1907). He says: "We cannot avoid the position that eczema is dermatitis; and as far as the lesions in the skin are concerned, this statement represents the fact. The eruption of eczema is the same as that of dermatitis, and as the only essential feature of eczema is its eruption, we are forced to the definition that the term eczema connotes various forms of simple dermatitis. By the qualification 'simple' is meant that the process is such as can be excited by ordinary external irritants. For example, erythema multiforme, herpes zoster, psoriasis, and various other dermatoses are inflammatory processes, but they are not forms of simple dermatitis that can be reproduced by ordinary irritants, and their eruptions do not come within our conception of eczema. Usage has further limited the term eczema to certain forms of dermatitis. A violent dermatitis with bullae, such as is produced by a superficial burn or by an intense reaction from croton oil or poison ivy, or a dermatitis which is but a part of a deep cellulitis, does not come within the accepted conception which usage has given to eczema; further, most circumscribed forms of dermatitis produced by drugs or other external irritants of definite character are by usage described by dermatitis. But these are matters of convention—justified in most instances by convenience in describing briefly clinical differences—and have nothing to do with the essential identity of the processes. According to this conception, eczema is not a distinct pathological entity; it is rather a group of symptoms in the skin which can be produced by innumerable causes. And this is the fact.

"This conception of eczema does not necessitate that every inflammatory process in the skin be regarded as an eczema. We can eliminate from our conception of eczema all definite forms of dermatitis as rapidly as we discover that they are definite, just as gonorrhoea was separated from other forms of urethritis when its specific character was determined. . . . As our knowledge becomes fuller, eczema

becomes more and more circumscribed. It is impossible, in my opinion, ever to separate a disease, to which we will confine the term eczema, from all the forms of dermatitis to which the name eczema has so long been applied. The tendency of scientific classification is in the opposite direction, and as soon as a definite clinical form of dermatitis is established in the group of eruptions that we now call eczema it is taken out of the group and given an independent place in nosology."

As another indication of the dissatisfaction existing among dermatologists in regard to the further usefulness of the term eczema, I will quote from an editorial by J. Nevins Hyde, entitled the "Passing of Eczema" (*Journal of Cutaneous Diseases*, 1904, p. 30), which has since received much favorable comment both here and abroad. He says: "Dermatitis has been clothed with a new dignity since the culture tubes and the stained sections of the laboratory have declared what, in many cases, it represents. Nearly a score of names in combination with the simple title indicates today how extensively the ancient demesne of 'eczema' has been appropriated by the later invaders. The word 'eczema' in the mouth of the expert, has become a feature of the language of the street, of the advertiser, of the charlatan. There are few experts who now use it without a species of mental reservation or qualification. There is no 'eczema' in the absence of dermatitis: is there any dermatitis without some of the accepted symptoms of 'eczema'? Even von Hebra wrote of an 'artificial eczema'. The doom of the word is probably written. It will survive where it belongs, and with no greater repute than attaches in general to the outworn and discredited."

From this it will be seen that the recognition of definite causes in the production of forms of dermatitis heretofore considered as belonging within the province of eczema, at once eliminates them from this group, and in their further study leaves us unhampered by the conventional notions regarding eczema. The tendency with the great majority of practitioners is to diagnose as pemphigus any affection of the skin in which bullae are present irrespective of the fact that bullae may occur in many diseases which have no relationship with pemphigus. Similarly, the diagnosis of eczema is too often made whenever redness, papulation or vesiculation are present, and unfortunately in consequence an attitude of passive acquiescence is assumed which prohibits any further inquiry into the etiology of the inflammatory process. It appears as though the term eczema carried with it a certain finality in regard to any question of etiology.

There are, therefore, numerous instances of acute inflammatory

processes due to definite external causes, which in every respect resemble the acute outbreak of eczema, and have been regarded as eczema until their cause was determined. Some of the forms of dermatitis are familiar to all, as for example the acute dermatitis resulting from contact with ivy, poison oak, sumach, and the like, and these will not be considered here, as I desire at this time to relate instances due to causes considered as more unusual.

In 1903 I called the attention of local physicians to the fact that contact with certain species of the primrose—*primula obconica* and *primula sinensis*—resulted in many persons in the production of an intense dermatitis indistinguishable from eczema. All grades of inflammation can be observed, from a simple erythema with moderate swelling of the skin to a violent dermatitis with marked cushion-like edema and the formation of large vesicles and bullae. Recurrences are frequent and due to repeated contact with the plant, if the cause is not recognized, and a truly distressing condition may result, lasting for years. The hands and face are naturally the region most often affected, though there are recorded instances of involvement of other regions. I have been able to confirm Nestler's assertion that the secretion from the leaves of the plant contains crystals which are the exciting cause of the dermatitis. Many of the cases observed by me had been treated over long periods as examples of gouty eczema, mild erysipelas, and the like, until the recognition of the primrose as the cause solved the mystery. The fact that I have personally observed some forty to fifty cases of this form of dermatitis, and have learned through others of at least an equal number of instances, shows that the condition is not at all infrequent, and that in recurrent "eczematous" inflammations of the hands and face the primrose as a possible cause demands consideration.

Several instances have come to my notice of erythematous inflammations, accompanied by intense burning and itching, limited to the neck and lower parts of the face in women, and occurring during the first cold days of winter. One of these developed into an intense seborrheic dermatitis which extended over the shoulders and upper back and chest, and proved very refractory to treatment. They were all finally found to be due to a chemical used as a preservative in the storing of fur collars during the summer months.

Of interest in connection with the instances just related, and equally instructive, is the case of an architect who presented himself in the winter of 1908 with an intensely itching and burning erythematous-squamous inflammation of the neck, ears, lower part of the face, dorsum of hands and both wrists. He had suffered severely from a

similar eruption during the entire preceding winter, and had finally been obliged to remain indoors, for every time that he had ventured out the "eczema" had recurred with increasing violence. During the remainder of the year he had been entirely well, but after the first cold days of early winter the eruption again appeared in the same locations, and with the same intensity. This patient also developed a severe acute seborrhoeic dermatitis which, however, rapidly subsided. His "eczema" also disappeared during his stay in this city, but at once recurred upon his return home to the northern peninsula. The evidence of an external origin in this case appeared clear, and careful search finally located the cause in the dye of the cheap fur used to edge the collars and cuffs of his overcoat. The fur was removed and he has not had "eczema" since, except for an outbreak experimentally provoked by rubbing the fur on the arm.

During the past winter I had an opportunity to see a case in all respects similar to the one related, except that it was of greater severity, and brought on an obstinate seborrhoeic dermatitis which lasted for several months.

A similar instance of poisoning by fur-dye is recorded by J. C. White (Boston Med. and Surg. Journal, March 6, 1902), and there are doubtless many other unrecognized cases which remain hidden under the diagnosis of eczema.

Among amateur and professional photographers it is not uncommon to find inflammations of the hands resulting from the action of various chemicals. After repeated acute outbreaks these frequently assume a condition in which infiltration and fissuring are prominent, presenting the picture of fissured eczema, but extending usually also over the dorsum of the hands and fingers and to the wrists. The recognition of the chemical cause of this condition is essential for its relief. Such cases are frequently diagnosed as eczema, no inquiry is made for a possible external cause, and they persist until the true nature is perhaps accidentally discovered, usually by the patient himself, whereupon the process definitely disappears. Such cases reflect no credit on the physician and it is usually with considerable chagrin that he learns of their true nature. Within the past few years the use in photography of a chemical known as metol has resulted in the production of many cases of dermatitis, as it appears to be especially irritant. I have seen a photographer who for months was compelled to wear bandages on his hands and arms while under treatment for "eczema". He had found it necessary to instruct his wife in the method of taking photographs, but persisted in developing them himself. His occupation was thought a sufficient reason for inquiry into a

probable external source of the dermatitis, and metol was definitely determined as the cause. Under simple protective treatment and avoidance of contact with metol entire recovery resulted within a few weeks.

Dermatitis due to formalin is not infrequent among laboratory workers, chemists, and undertakers, and may assume severe proportions. I recently saw a laboratory assistant who had developed an intense inflammation of both hands, with marked edema, formation of vesicles and bullae, with later deep fissuring, as the result of prolonged contact with formalin, though he had formerly often escaped without developing a dermatitis. A similar instance of dermatitis of the hands due to formalin was recently observed by me in a tannery worker.

Acute violent forms of dermatitis in women affecting the face and neck, extending downward from the hair margin and involving the ears, should always arouse a suspicion of their artificial production as the result of the application of a dye for the hair. This form of dermatitis usually begins within a few hours after application of the dye with a sensation of heat or burning confined to the scalp. After some hours, frequently during the night after the hair has for some time been pressed closely to the head by the pillow, the eruption makes its appearance at the hair margins as an intense erythema, and on the edge of the ears in the form of minute vesicles on an erythematous base. Rapidly extending over the entire face, and often the neck, accompanied by considerable swelling, edema of the lids, and conjunctivitis, and exhibiting the formation of small vesicles, it presents a formidable inflammatory picture, the true origin of which is usually not even suspected by the sufferer. In the cases observed by me I have been particularly impressed with the dusky red character of the erythema, its invariable extension from the hair margin, and the frequency with which collections of minute vesicles were to be found on the edges and posterior surfaces of the ears, and regard these symptoms as highly indicative of an artificial origin of the inflammatory process. In two instances I saw the patients in their third attack, the true nature of the previous attacks not having been recognized. In both of these cases the dermatitis initiated a stubborn seborrheic dermatitis of the scalp, with some consequent loss of hair. The preparation known as Mrs. Potter's Walnut Juice Hair Dye was responsible for the dermatitis in two of the cases, but I am not informed as to the chemical nature of the irritating principles which it contains.

A puzzling series of cases of supposed eczema of the lips came to my notice several years ago. All patients were women and presented substantially the same clinical picture of moderate swelling and stiff-

ness of both lips, but especially the upper, confined to the muco-cutaneous surface, with persistent exfoliation in small flakes, and slight fissuring, accompanied by a marked tingling or burning sensation most marked in the morning. The commissures were not affected and the neighboring cutaneous and mucous surfaces were not involved. This condition had existed for several months in one case, and in the others for a shorter time. The resemblance to the condition described as eczema of the lips was complete in every particular, and yet the process was entirely an artificial dermatitis due to some ingredient contained in a proprietary mouthwash which was being extensively advertised at that time. The actual cause was discovered by one of the patients, who had entirely recovered during a journey of several weeks duration when she had been without this particular mouthwash, and had experienced a prompt recurrence following the use of the mouthwash after she had returned to her home. I could confirm her suspicions as I recalled having seen, while abroad, an instance of dermatitis of the lips from the use of a mouthwash of which the American preparation is an imitation. The European preparation is said to contain formalin, and I infer a similar composition for the home product.

It is, of course, well known that a large number of drugs when applied externally give rise to dermatitis; in this list are included turpentine, camphor, capsicum, chloroform, iodoform, and others. It is, however, not so well known that certain other frequently used drugs occasionally cause a dermatitis. Among these is boric acid, which I have seen cause a vesicular dermatitis of the face, ears and neck when used as a dusting powder after a mastoid operation. When used as an ointment for a length of time, boric acid frequently provokes an erythematous or vesicular eruption. Ammoniated mercury occasionally causes an erythematous eruption studded with clear vesicles, and orthoform may produce an intense dermatitis, and even produces gangrene as I have observed on more than one occasion. Resorcin is frequently the cause of a dermatitis, usually erythematous-vesicular in character, especially when used as an ingredient in "hair tonics", because it is then usually well rubbed into the scalp.

Among workers in wood inflammatory conditions of the skin at times result from an idiosyncrasy to certain resins or oils contained in the wood. Wechselmann (*Deut. Medizin. Wochenschr.*, 1906) has reported a number of cases of dermatitis among workers in satin wood, and numerous instances are recorded of a similar condition resulting from contact with sandal wood. This list might be considerably extended, for there are reports of dermatitis caused by the handling of innumerable varieties of wood.

In fact, the number of substances which may give rise to a dermatitis are legion, and in many instances it will be found impossible to determine the causative agent.

From a consideration of the foregoing it is evident that in many instances the true character of an inflammatory process of the skin remains unrecognized because no attempt has been made to discover an external source of irritation. The fact that such external causes can at times be detected, and will expose the true character of the process under observation, ought to be kept in mind by all who are called upon to treat diseases of the skin.

CLINICAL DEPARTMENT.

PROPER DRAINAGE TUBE FOR GALL BLADDER OPERATIONS.

BY CHARLES J. WALLACE, M. D.,
SUPERIOR, WIS.

A great deal has been said and written giving the minute detail of operations for removal of gall stones and the drainage of the gall bladder in cases of gall stones and catarrhal conditions where evacuation may be deemed necessary, and it is really wonderful how fully these operations are described and how closely they direct the work in general.

But I think one of the most important parts has been generally overlooked or neglected, and that is the method of drainage. It is generally treated as a very unimportant part of the operation and a great many methods of drainage are simply referred to, such as the cigarette drain, split tube drain, Mikulicz's drain or a rubber tube, or simply a gauze strip. These may all work nicely in the hands of some surgeons but I have had the best results with the rubber tube of large size and long enough to protrude through the wound for at least twelve inches. I use a heavy tube, the lumen of which is at least one-half inch in diameter. The reason for using such a large tube is that by so doing it is not so apt to clog during the passage of remaining calculi, nor will it kink so readily down near the bed causing a filling of the tube and resulting in the sudden expulsion of the contents of the tube which will act as a syphon on the contents of the gall bladder. The vacuum caused therein will sometimes suck the loose gall bladder wall over the end of the tube, entirely closing it, thus preventing the escape of bile. This has often caused trouble which

was hard to diagnose and has caused a great deal of worry on the part of the surgeon, and pain and distress to the patient. It may also cause a leakage around the tube, due to blocking of the outlet, followed by infection and further trouble. The long tube allows the free end to pass through all dressings and for some distance away from the abdominal wound before it is spliced or connected in any way to another tube, lessening the danger of the separation of these connections and leakage of bile over the dressings or contamination of the wound. Such a tube is inserted about two inches and fixed to the gall bladder which is closed around it snugly by the use of a purse string suture, the edges of the incision being inverted, thus getting an approximation of the serous coats and a rapid closing of the fistula on removal of the tube. During the closure of the abdominal wound the gall bladder is caught up by two retaining sutures passing through its peritoneal coat, then through the parietal peritoneum together with the deep layer of the rectus sheath, making as complete an approximation as possible. The tube is again caught by a skin suture to prevent any accidental removal. The tube is then continued to a receptacle and drainage should be thus carried on with little if any soiling of dressings or bedding, often not being necessary to change the first dressing before five days have passed. The tube generally loosens and comes away after about one week and if there is no obstruction, the fistula will close rapidly.

FRACTURE OF THE STYLOID PROCESS OF THE ULNA.

REPORT OF A CASE.

BY R. G. SAYLE, M. D.,

MILWAUKEE, WIS.

I present this subject because of the infrequency of fracture of the styloid process of the ulna, the lesser frequency of a diagnosis, and the little that is to be found in the literature on the subject (many special works on fractures not even mentioning it). But it does occur, and although generally not of much consequence, it may occur with complications or be overlooked or be impossible of diagnosis without the aid of the X-Ray.

On examination of the literature, I find as I have said little written. Surgical anatomists mention its occurrence by avulsion and that it may occur with Colles' fracture. Scudder does not mention it, Stimson mentions it in the last edition. Keen's System of Surgery

gives it in a schematic cut of fracture lines of the ulna but does not mention it in print. Von Bergmann's system is quiet on this subject. In Ashhurst's System several cases are reported; one reported by Malgaigne in the experience of Voisin; one by McCleod (*Edinburgh Medical Journal*, Nov. 1874), caused by striking a blow, fracture of the styloid process and separation of the triangular ligament; one by Callender, styloid process and triangular ligament, where on examination the ulnar nerve was found wedged between the two portions of bone. I find nothing said on symptomatology, prognosis, or treatment.

The principal anatomy concerned is: The lower end of the ulna composed of head and styloid process; the interarticular triangular fibro-cartilage of the inferior radio-ulnar joint; the internal or ulnar portions of anterior and posterior radio-carpal ligaments of the wrist joint; the tendon of the extensor carpi ulnaris, and the ulnar nerve.

The lower end of the ulna consists of the head and styloid process. These are separated on the under surface by a groove or fossa into which the apex of the triangular fibro-cartilage is inserted. The head adjacent to the groove plays upon the fibro-cartilage and is separated from the wrist joint by it. The styloid process projects from the inner and back part of the bone and is a continuation of its posterior border. To its rounded summit the internal lateral ligament of the wrist joint is attached. It is a landmark, palpable, most prominent.

I think it is of some importance to remember that the posterior surface is grooved for the passage of the tendon of the extensor carpi ulnaris. The ossific nucleus for the lower end of the ulna appears at the 4th year and fusion occurs about the 18th year.

The internal lateral ligament is important among the structures to be considered. It is fan-shaped, apex above at the styloid process to which it is attached on all sides and blends with the apex of the fibro-cartilage. Some fibers pass forward and outward to the base of the pisiform bone and the adjacent upper border of the anterior annular ligament where this structure passes to be inserted into the same bone. This part of the internal ligament forms a thick rounded fasciculus on the front of the wrist. Other fibers pass vertically downward to the inner side of the cuneiform bone and others outward to the dorsal surface of this bone. All fibers pass on to the lower carpal bones and the proximal heads of the inner metacarpal bones and their interarticular ligaments.

Perhaps the inner portions of the anterior and posterior radio-carpal ligaments are of some import here, passing as these fibers do parallel to and in part between the same structures as the internal lateral ligament.

The triangular fibro-cartilage has its base attached to the margin of the radius between the sigmoid cavity and the articular surface for the carpus. The apex is fixed to the groove or fossa at the base of the styloid process of the ulna. It is joined by fibers from the internal lateral ligament and some fibers from the internal parts of the anterior and posterior radio-carpal ligaments. It serves as a bond of union between the lower ends of the radius and ulna and to limit their range of movement upon one another although supination is mainly checked by the internal lateral ligament. The internal lateral ligament, in addition to this, limits somewhat the flexion and extension in the wrist joint and although it is said that abduction of the wrist is checked by the styloid process of the radius impinging on the trapezium, it also limits abduction or is a very important check to the next movements from abduction to flexion or extension in circumduction permitted in this joint.

The extensor carpi ulnaris tendon passes in a groove on the posterior surface of the process and continues along the posterior surface of the internal lateral ligament.

The ulnar nerve at the wrist lies with the ulnar artery on the radial side and the flexor carpi ulnaris tendon to the inner side pierces the deep fascia and passes in front of the anterior annular ligament to which it is bound down by a slip from the carpal flexor tendon. In the palm of the hand it supplies the integument of the hypo-thenar eminence, the little finger and half of the ring finger and part of the skin of the dorsum, the short intrinsic muscles of the hand with the exception of the abductor, the opponens, the outer head of the flexor brevis pollicis and the outer two lumbricales.

The fracture may be produced by direct violence but is usually produced by avulsion. In fracture of the process alone by avulsion the force must be extended through the internal lateral ligament. As the triangular fibro-cartilage is separated with the process in some fractures the internal ligament may or may not be assisted by the radio-carpal ligaments as all three are attached to this structure.

The internal lateral ligament with muscles, which are the strongest guard to overaction relaxed, is rendered taut by flexion, extension and abduction or their combination in wrist joint movements and also is taut in full supination.

This makes it seem possible for more than one or a combination of directed forces being instrumental in the production of this fracture through falls upon the hand.

The symptoms are those of a sprained wrist. The hand remains weak and disabled. It may be possible by palpation to note the lack of prominence of the process. Swelling is present on the ulnar side externally.

Complications are separation of the fibro-cartilage, fracture of the lower end of the radius, injury to the extensor tendon, joint injury, and as has been reported, entanglement of the ulnar nerve between the two parts of bone.

It would seem that the proper treatment would be immobilization of the hand with the joint in any position but abduction, much flexion, or extension, and midway between pronation and supination, rather

away from supination. The usual position for dressing Colles' fracture would seem to meet requirements for this fracture.

As the ulnar flexor and extensor tendons are so intimately connected with the process it seems to me that the fragment must be fairly supported with the hand in simple abduction and left at rest for a short time with avoidance of extremes in early movements of the joint. Open treatment may be needed with nerve involvement.

The prognosis is good.

CASE.

Female well past the fusing period for this bone, on Nov. 20, 1908, on mounting a chair to reach a shelf lost her balance and fell with hand extended, against a door casing. The exact manner of contact with casing or door is not known.

The immediate result of the impact was severe pain in the wrist and swelling which patient states extended towards the hand.

It was on Sunday and all efforts to secure a physician at once were futile. Hot compresses were applied by a masseur who lived near by and the following day a physician was summoned and on examination thought the injury to be only a sprained wrist, and advised continuing with the compresses and thought the first attendant mentioned would be able to treat the case later and did not repeat his attention to the case. In a few days the hand was manipulated and massaged and no attempt made to maintain immobilization for longer than the intervals between daily treatments.

After about five weeks of this care the wrist remained swollen and tender and disabled and the patient consulted a surgeon who, she states, examined the injured parts and concluded that there might possibly be a tubercular process, immobilized the hand and later advised consultation with internist and together they decided to test tuberculin reaction. This was done, the ophthalmic test being employed. The reaction was reported as positive and the surgeon then advised a prolonged stay at a Sanatorium for tubercular patients. This the patient refused to comply with. The hand had by this time been in splints about four weeks and the injury was of a little more than two months' standing.

As the patient did not take kindly to the tubercular theory she changed attendants and a few days later, viz. on January 29, 1909, came under my care for examination and opinion. She had secured a skiagraph to be sent to me for inspection.

The hand was partially ankylosed and there was not much swelling in the wrist. The skiagraph showed a fracture of the styloid process of the ulna and evidence of fracture of lower end of radius without displacement of fragments.

Repair of the bony injury had been secured by the rest and it only remained to loosen up the stiff joints. In less than a month the patient was able to execute all movements of wrist and fingers freely and made a perfect recovery, at present experiencing no disability or distress.

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EDITORIAL COMMENT.

MEDICAL HISTORY OF WISCONSIN.

An effort is being made by the museum of the State Historical Society of Wisconsin to assemble in its exhibition halls in the Historical Library building, in Madison, a collection of such materials as will prove of future value and interest in illustrating for the benefit of the public and members of the profession, the history of the advancement of medicine and surgery in Wisconsin.

There are desired for this purpose old-fashioned surgical and other implements, physicians' certificates and diplomas, "doctor" books, medical almanacs, prescription blanks, samples of old-style herb and patent medicines, photographs, and manuscript and printed matter, such as may be included in an exhibit of this nature. The nucleus of

a collection of this kind already exists in the museum, but it is small and unimportant, and should be greatly increased.

It is expected that all Wisconsin physicians will realize the interest and importance of having the state's medical history fully represented in the museum, and be willing to contribute to it such specimens as they may possess. Members of the State Medical Society of Wisconsin who are in a position to aid in this valuable undertaking are requested to communicate with Mr. Charles E. Brown, chief of the State Historical Museum, Madison, Wis.

THE MEDICAL SCHOOL SITUATION.

In an editorial in the August Journal the situation of Medical Education in Wisconsin was considered in connection with the Carnegie Report and the obvious suggestion was made that a single medical school was highly desirable. During the month of September several conferences have been called by the authorities of Marquette University to discuss the possibility of bringing about such a condition. The departments of medicine, dentistry, and pharmacy of this institution have outgrown their present building and the problem of their care presents itself as a pressing one.

These conferences have been of a most informal nature and no official representatives of either of the two Milwaukee schools have been present at them. It is not even known whether, or on what terms their respective boards of trustees would consider a merging of the schools. The object of the meetings has been simply to attempt to discover the attitude of the medical profession toward such a plan and to discuss methods by which it might be brought about.

With regard to the first point there seems to be great unanimity of opinion. As abstract propositions every physician admits that one medical school can fully supply the needs of Wisconsin today, and that competitive schools striving for an existence which depends upon the number of their students are not wholesome influences.

But the question of methods by which improvement may be secured is a more complicated one. In order to obtain expressions of opinion on this point a plan was suggested which involved the issuing of bonds to secure the funds for buying up the Milwaukee schools in order to unite them, and also for purchasing land and erecting a building suitable for the use of the combined schools; the bonds to be secured by mortgages on the real estate and buildings. As no formal propositions had been made to either of the schools no definite figures

of the amount required to finance this plan could be given. As a basis for discussion the sum of five hundred thousand dollars was mentioned. It was argued that with a combination of the schools a student body of nearly four hundred in the department of Medicine alone would be created and if the profession of the state united in support of the institution this number could be considerably increased so that a sufficient income could be derived from tuition fees to support the school and take care of the interest on the bonds.

Would such a course be a step in the right direction? Would it be a good thing for the people of Wisconsin or for the medical profession of the state?

Primum non nocere is an excellent rule in education as well as in therapeutics. At present Wisconsin is not suffering from a scarcity of doctors although the ratio of physicians to total population is comparatively low being 1:936. Utah has the same proportion, North Dakota shows 1:971, Minnesota 1:981, North Carolina 1:1110, South Carolina 1:1168. In the other states of the Union the proportion is higher, rising in Colorado to the excessive figure of 1:328, and in the District of Columbia to 1:262.

To maintain the present proportion with the present rate of growth of the state, a large school is not necessary. As the adjoining states are well supplied with medical schools the great bulk of the medical students would continue to be derived from Wisconsin and the graduates would tend to remain here. The result of a large school would soon be an over-crowded profession, which is an economic mistake with demoralizing tendencies.

While the hospital facilities in Milwaukee are constantly improving the amount of clinical material available for teaching purposes is still very limited and widely scattered. The same is true of pathological material. Of anatomical material the supply is limited. With proper systematizing the anatomical, pathological, and clinical material would suffice for a small school. For a large school it would be utterly inadequate.

As Flexner has so clearly pointed out in the Carnegie Report a school entirely dependent upon the fees of its students for its support must sacrifice its independence. It must have students, and therefore must sometimes take them on their own terms. When in addition the student body is expected to carry the burden of a large bonded indebtedness the school's hands are completely tied. It can compel neither adequate preparation for the work nor conscientious completion of it.

Medical education today is extremely expensive. A good course costs all that the student can possibly pay. In fact the income from students ought to be supplemented by aid from endowments, instead of being depleted by interest charges.

By those whose ears are open the call of today can be heard to be not for more doctors but for better ones. We must ever strive to do better and better work and we must urge those who are to join us in the ranks to give themselves the most thorough and efficient training within their means.

Whatever truly tends to elevate the standards and ideals of medical education and medical practice in Wisconsin can count upon the support of a united profession, but to start a school with a burden of half a million of indebtedness, without a hospital to call its own, dependent on a great number of students for its very existence, is to pay too high a price for a reduction of one in the number of medical schools in the state. Surely some better plan can be devised.

CORRESPONDENCE.

OF THERAPEUTIC INTEREST.

Milwaukee, Wis., Sept. 8, 1910.

To the Editor.

In connection with a case of pleurisy recently under my care at one of our hospitals, a therapeutic suggestion of such interest was given by the sister in charge that it seems desirable to preserve it in medical annals. As was to have been expected the patient suffered pain; his complaints of pain, however, seemed inconsistent at times with the sleep secured, and with his physical condition.

In commenting on these apparent inconsistencies to me the sister remarked: "As an experiment the other night, when he was complaining so much, I gave him a *placenta* (sic!); he promptly dropped asleep, and told me the next day that was the best medicine he had received during his stay in the hospital."

Fraternally,

X.

NEWS ITEMS AND PERSONALS.

Dr. J. B. Brewer, Jefferson, has recovered from an attack of blood poisoning.

The Hudson Sanitorium at Hudson has been sold to Wallace Campbell, Minneapolis. The consideration was \$60,000.

The report of the **Children's Free Hospital, Milwaukee**, for August, shows that 104 cases were treated during the month, 30 of these being operations. Thirty-seven patients now remain in the hospital.

Marriages. Dr. A. A. Mesch, Port Washington, and Miss Mathilda Krieg, Milwaukee, Aug. 18th.

Dr. M. Brennan, Ashland, and Miss Madge Young, Wausau, Aug. 23rd.

The Kenosha Hospital Association received a gift of \$10,000 on Sept. 8th, to be added to the general fund of the institution. But \$5,000 now remains to be raised to complete the total fund of \$100,000. The institution is nearing completion.

The American Public Health Association, which closed its session in Milwaukee on Sept. 9th, has chosen Havana, Cuba, as the next place of meeting. Dr. R. W. Simpson, Winnipeg, Canada, was elected president, Dr. Rudolph Hering, New York, consulting engineer and sanitary expert, Dr. G. A. Bading, Milwaukee's former health commissioner, was elected third vice-president.

Removals. Dr. S. T. Reeves, Tomah to Albany.

Dr. M. C. Barber, Shullsburg to Medford, Ore.

Drs. J. B. and W. M. Edwards, Mauston to Milwaukee.

Dr. W. A. Henke, Tomah to La Crosse.

Dr. A. J. Krahn, South Germantown to Beaver Dam.

Dr. F. J. Feehter, Newburg to St. Anna.

Dr. C. B. Richards, Oshkosh to Waldo.

Dr. H. H. Sellers, Eau Claire to Minneapolis.

Dr. W. J. Ragan, Jr., Shawano to Zaehow.

Deaths. Dr. Wiley W. Tarter, Mellen, died on August 18th at Ashland. He was severely burned on August 17th by the explosion of a barrel of alcohol and died the following day.

Dr. Tarter was born in Virginia 27 years ago, and was a brother of Dr. J. W. Tarter of Iron River.

Dr. Emil Wahl, one of the best known physicians in Milwaukee, was accidentally shot and killed while hunting at Muskego Lake on Sept. 9th.

Dr. Wahl was born in Milwaukee, 48 years ago. He received his early education in Milwaukee and later went to Germany, where he studied at Leipsic, Strassburg and Marburg Universities. He received his degree in medicine at the University of Marburg about twenty-five years ago.

Members of the **Douglas County Medical Society** gave a farewell banquet for Dr. Lewis Moody, president of the organization, who leaves shortly

for Seattle. Those present at the banquet were: Drs. Baird, Lee, Hatch, Goodfellow, Mason, Specht, Beebe, Wallace, Giesen, Hoffmier, McGill, O'Leary and Orchard. Attorney Eckman and P. Ackerson were also present. Several talks were made by those in attendance. The banquet was given at the Rositer cafe.

At the close of the feast the toastmaster called on nearly all of the guests and all responded in words that bespoke the high esteem in which Dr. Moody is held by his fellow professional men of the city, and the regret felt at his departure. The guest of honor responded feelingly to the sentiment spoken. As a memento of the occasion he was presented with a beautiful knife fittingly inscribed. Dr. Moody said that while he felt that in a professional way it would be to his advantage to enter the field which he has chosen he leaves Superior with many regrets both on account of the pleasant relationships formed during his ten years of practice here and also from the fact that he believes this city has just entered on an era of prosperity that will eclipse its most halcyon days of the past.

Practical Medicine Series. Edited by GUSTAVUS P. HEAD, of Chicago. Volume VII. Pediatrics. Edited by Isaac A. Abt, M. D. Orthopedic Surgery. Edited by John Ridlon, A. M., M. D. Series 1909.

The section on pediatrics comprises 184 pages, the arrangement being much the same as in previous editions. In a short paragraph on intracranial hemorrhage in the new born, the author urges careful observation during the first days, and emphasizes the comparative freedom from danger in performing craniotomy in these cases, an operation which may not only prevent immediate death, but later serious consequences.

The chapters on hygiene and infant feeding, contain many valuable hints, while that on gastro-intestinal diseases is especially instructive. In a brief article on "growing pains" a long list of pathological conditions is mentioned, a careful consideration of which would no doubt bring the term into deserved disuse. The entire subject of pediatrics is covered, and many points of practical value are included.

The literature on orthopedics has been covered very thoroughly, and those interested will find in this short resume a very helpful guide to the original articles. The work of Davis on congenital dislocation of the hip is reviewed in more or less detail. An interesting bit of history in this connection is given by Davis as follows: "In 1894, at the International Congress in Rome, Lorenz and Hoffa came prepared to fight for their respective cutting operations, but Agostino Paci of Pisa had by this time systematized his work. He gave his results on 23 cases of congenital luxations, and submitted a specimen showing a perfect antemortem reposition; and finished by performing his bloodless method on a patient before the assembled surgeons. The effect might almost be described as ludicrous. No more was heard of cutting operations. Lorenz, in the following year, modified Paci's procedure and travelled far and wide exploiting it."

The book as a whole is well up to the standard of the remaining ones in the series, and deserves its share of the popularity of the work.—F. J. G.

THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORGANIZED 1841.

Officers 1910-1911.

BYRON M. CAPLES, Waukesha, President.

J. M. Dodd, Ashland, 1st Vice-President.	Wilson Cunningham, Platteville, 3rd Vice-President.	T. J. Redelings, Marinette, 2d Vice-President.
CHAS. S. SHELDON, Madison, Secretary.		S. S. HALL, Ripon, Treasurer.
ROCK SLEYSER, Waupun, Assistant Secretary.		

A. W. GRAY, Milwaukee, Chairman Program Committee.

G. E. SEAMAN, Milwaukee, Chairman Medical Defense Committee.

J. P. McMAHON, Milwaukee, Chairman, Committee on Public Policy and Legislation.

Delegates to American Medical Association.

L. F. Bennett, Beloit.	C. S. Sheldon, Madison.	A. H. Levings, Milwaukee.
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Alternates.

F. S. Wiley, Fond du Lac.	Wilson Cunningham, Platteville.	R. G. Sayle, Milwaukee.
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Councilors.

TERM EXPIRES 1911.		TERM EXPIRES 1914.	
1st Dist., H. B. Scars, - - -	Beaver Dam	7th Dist., Edward Evans, - -	La Crosse
2nd Dist., G. Windesheim, - -	Kenosha	8th Dist., T. J. Redelings, - -	Marinette
TERM EXPIRES 1912.		TERM EXPIRES 1915.	
3rd Dist., F. T. Nye, - - -	Beloit	9th Dist., O. T. Hougen, - -	Grand Rapids
4th Dist., W. Cunningham, - -	Platteville	10th Dist., R. U. Cairns, - -	River Falls
TERM EXPIRES 1913.		TERM EXPIRES 1916.	
5th Dist., J. V. Mears, - - -	Fond du Lac	11th Dist., J. M. Dodd, - -	Ashland
6th Dist., H. W. Abraham, - -	Appleton	12th Dist., H. E. Dearholt, - -	Milwaukee

NEXT ANNUAL SESSION, WAUKESHA, 1911.

The Wisconsin Medical Journal, Official Publication.

SOCIETY PROCEEDINGS.

THE COUNTY SOCIETY.

"2,000 FOR 1911."

A section devoted to all that can benefit the county society, written by officers and members, and edited by Rock Sleyser of Waupun, to whom all who have the interest of the county organization at heart are requested to send contributions.

This, then, is to be the sequel of the "Booster Sermons." Not that we have grown tired of preaching and boosting (for we are going to boost harder than ever this year), but the Milwaukee meeting of county secretaries deepened our conviction that the county officers are brim full of good practical ideas and that we need a medium for their expression, that we may all benefit from what the other man knows. We urge the county officers to read this section and contribute to it—

to make use of it in any and every way they can. We need your ideas and opinions and questions. Report your meetings that others may know what you are doing and how you are doing it. If you need help and advice send in a question—someone has met the same difficulty and found a way.

So then we want to make this section a clearing house for county society affairs, a place where each officer may contribute what he has for the good of the others—a clearing house from which all may draw. It will be of special value to the county secretaries and is intended primarily for them, but is open to all who take an interest in their local organization. The "Head Booster" has faith in it. What have you, Brother? Answer soon!

A "SPEAKER'S LYCEUM BUREAU."

To be successful a county society must hold successful meetings. Two things are necessary to make a medical meeting a success—a good program and a good attendance. To gain the latter it is necessary to have the former. How can the programs of our county societies be improved this coming year? How can they be made more attractive—more productive? How can they be made to draw a larger attendance and excite a greater scientific interest? I have given this subject a great deal of careful thought since the secretaries' meeting, and I am going to father a plan which will make it easier for the program committee to secure outside speakers for the coming year's work.

Many societies have felt the need and want of outside speakers on good live topics for it adds an interest to the program that nets an increased attendance and adds a drop of new blood to the work. Some societies have made a practice of placing them on their programs once or twice a year. They have found it increased both the scientific value and attendance of these meetings. I have talked with a number of secretaries regarding this and all have said their societies would gladly pay the expenses of good outside men of standing, but invariably would ask "but who can we induce to come?"

We have in our State Society many who are doing work that ranks with the best. Some have and are doing original research that has attracted wide attention. Others have the experiences of years of practice and observation. Often at a county meeting a paper is read that is of such value that other societies would gladly welcome it on their programs. I believe many of these men can be induced to make the personal sacrifice of appearing on the program of neighboring and other counties. A list of such with their subjects would, I believe, be welcomed by every program committee in arranging next year's pro-

gram. This list would perform the service of a Wisconsin Medical Lyceum.

The following letter refers to this plan:

Chicago, Sept. 14, 1910.

Dr. Rock Sleyster, Waupun, Wis.

Dear Doctor Sleyster:—If this proposition is to result in success, it must be taken up by the council. My suggestion was that each councillor should look over his own territory and see what men he could find in that territory who would be willing to sacrifice themselves for this work. He would learn on what subject each man would write, how many times he would read his paper, how far from home he would be willing to go, etc. Some, undoubtedly, would be willing to go outside of the councillor's own territory; then would come the exchange proposition, to be worked out by the council as a whole. If, during the summer months, the councillors would do as I have suggested above, and have a meeting of the whole council in the early fall to discuss the work for the year, the fact would be brought out in the discussion that a certain number of men were available for exchange work.

This, in a nutshell, is the proposition. I think it is practical; I know if carried out it would result in an immense amount of good. But the great trouble is that the councillors do not realize their responsibility. I am not referring to the councillors of Wisconsin, because the few I know impress me with the idea that they are exceptionally good men; I mean the councillors in general. The councillor idea is a new one, conceived in the development of the reorganization. Thus far the councillors have not lived up to their opportunities; but I believe that ultimately the council of the state society will be a most important body in the development of scientific work, as well as in other ways.

While what I have said above is true, at the same time individuals can do a great deal, and possibly it will be necessary for individuals to stir up the councillors to a realization of their opportunities. Take the hint!

Wishing you success, and hoping you will write me again if I can be of any service to you, I am

Very truly yours,

GEORGE H. SIMMONS.

BOOSTERINE—a counter-irritant, indicated in all cases of fatty degeneration of county societies, tired feeling in county secretaries, grouchitis, etc. Send for a trial application.

YOUR NEXT MEETING! I have written and talked about "a half hour at your next meeting to be devoted to discussing your non-members," so much and so often, that I am accused at home of talking of it in my sleep. It has become a habit and I wish it was contagious. "2,000 for 1911" will depend on this idea becoming epidemic. You need that fellow over at the other end of the county and he needs you. Talk him over and see that someone is appointed to rescue him—and make this someone report at the next meeting. Do it now and may St. Boostheimer bless you!

Three kinds there be: Those who boost, those who won't boost, and those who can't boost!

SECOND DISTRICT MEDICAL SOCIETY.

The annual meeting of the Second District Medical Society was held at the Country Club, Racine, on August 17th. The meeting was called to order at 11 A. M. by the President, Dr. S. C. Buchan. Sixty-four physicians from Racine, Kenosha, Walworth and Lake (Ill.) Counties were present. At the business meeting Dr. E. Kinnie of Elkhorn was elected president, and Dr. M. V. Dewire of Sharon, Wis., secretary and treasurer for the ensuing year.

A communication from Mr. William Horlick, Sr., of the Horlick Food Company, asked that he might be host for the meeting. A vote of thanks was extended to him for the same.

A few remarks were made by Dr. G. Windesheim, councilor Second District, on *Membership of the Society and Its Steady Growth*, after which the meeting adjourned and at 12:30 a luncheon was served, at which Dr. S. Sorenson of Racine acted as Toastmaster. There were after-dinner talks by the following physicians: Dr. G. Windesheim, "The Second District"; Dr. G. F. Adams, "Our Southern Suburbs"; Dr. B. J. Bills, "What the General Practitioner Needs Most"; Dr. C. S. Sheldon, "The Medical Factotum"; Dr. J. P. McMahon, "The State Medical Press"; Dr. W. H. Watterson, "A Voice Calling from the Wilderness"; Dr. E. H. Ochsner, "Medical Fellowship."

At 2 P. M. the scientific program was taken up, and a very valuable and interesting paper on *Septic Infection of the Extremities* was read by Dr. E. H. Ochsner, of Chicago. Dr. J. P. McMahon, of Milwaukee, read the paper of Willet M. Spooner on *Medical Defense*, he being unable to attend.

The motion was made and carried at this meeting that Drs. E. H. Ochsner of Chicago and J. P. McMahon of Milwaukee be made honorary life members of the Second District Medical Society. This meeting was one of the largest ever held in this district.

A photograph was taken which is reproduced on page 236.

GEORGE W. NOTT, M. D., *Secretary.*

CALUMET COUNTY MEDICAL SOCIETY.

The meeting of the Calumet County Medical Society held at Chilton, Wis., Sept. 8th, was called to order by the president, Dr. F. P. Knauf, the following members being present: Drs. Doern, Steele, F. P. and N. J. Knauf, Greengo, Martens, McComb and Schmidt. Minutes of previous meeting read and approved. We then listened to an interesting paper on *Goitre* by Dr. R. E. Doern, Stockbridge, Wis., who also presented a clinical case, showing the effects of treatment. Discussion on the paper was opened by Dr. George Steele and participated in by all present.

Motion made and carried that we hold our next meeting and annual election of officers at New Holstein, Wis. There being no further business meeting adjourned.

J. A. SCHMIDT, M. D., *Secretary.*

GRANT COUNTY MEDICAL SOCIETY.

Responding to an invitation by Dr. W. P. Hartford, the September meeting of the Grant County Medical Society was held at Cassville, September 6th. Dinner was served at the Dennison Hotel after which all adjourned to the parlors, where the meeting was called to order by vice-president Dr. W. W. Pretts, of Platteville.



Meeting of the Second District Medical Society, Racine, August 17th, 1910.

The program consisted of the following excellent papers: *Uterine Hemorrhage as Related to Pregnancy*, by Dr. W. W. Pretts; *The Treatment of Puerperal Eclampsia*, by Dr. Frederic J. Ploudke of St. Paul, Minnesota; *The Value of the Splint in Minor Surgery*, by Dr. J. C. Hancock of Dubuque, Iowa.

That all were deeply interested in the subjects presented, and methods of presentation was shown by the free discussion following the reading of each paper.

Dr. W. P. Hartford then informed us that boats were waiting to take all for a ride upon the Mississippi river, stopping at Hartford's Island when the remainder of the program was given.

After a time spent in social cheer, supper was announced, and we sat down to a feast that was fit for a King, at a table where good cheer and plenty prevailed. After a most enjoyable hour the party was taken in launches to Cassville, from whence all returned to their homes.

It was truly a day well spent, and proved to those in attendance that there is a bond of sympathy existing in our organization, and also the truth of the ancient Psalmist "Behold how good and how pleasant it is for brethren to dwell together in unity."

There was a large attendance, members of the Dubuque County Medical Society and also Dr. Frederic J. Ploudke of St. Paul, being guests at the meeting.

On motion a unanimous vote of thanks was extended to Dr. J. C. Hancock and Dr. F. J. Ploudke for their excellent papers, and for their efforts to be with us; also a vote of thanks with cheers, to Dr. Hartford who, assisted by his estimable wife, sister, and Dr. J. J. De Mers had so royally entertained us.

M. B. GLASIER, M. D., *Secretary.*

JEFFERSON COUNTY MEDICAL SOCIETY.

The Jefferson County Medical Society met at Lake Mills, July 19, 1910. Although the attendance was not large, it was a very interesting and profitable meeting and those who were present were well repaid for their trip.

Dr. W. T. Clark, of Ft. Atkinson, read a paper on *Appendicitis*, which was discussed by all members present, the discussion revealing a sentiment in favor of the "Ochsner Treatment." Various other subjects were taken up and discussed.

After the meeting a bounteous five o'clock supper was given by the ladies of the Lake Mills physicians, Mesdames Engsborg, Oatway, Eck and Bleeker, on the beautiful shore of Rock Lake, which will long remain in the memory of all. Quite a number of the members were accompanied by their wives, to whom a special invitation had been extended. Never before did we have a more jolly and sociable time. We'll come again next summer.

CARL R. FELD, M. D., *Secretary.*

OUTAGAMIE COUNTY MEDICAL SOCIETY.

The meeting of the Outagamie County Medical Society, held at the Hotel Falk, Seymour, was called to order by the President, Dr. M. J. Sandborn at 3 p. m.

Dr. J. J. Laird of Black Creek read a very able paper on *Acute Anterior*

Poliomyelitis, and was highly complimented for the thoroughness of his work. The paper was very ably discussed by Dr. G. A. Ritchie of Appleton. Dr. V. F. Marshall read a paper on *The Diagnosis and Treatment of Ectopic Pregnancy* reporting 16 cases, this paper was discussed by Dr. E. W. Quick and Dr. Shepherd. The discussion brought out that the surgical treatment of this condition was the only hope of reducing the mortality. Dr. H. W. Abraham who was on the program for a paper was excused on account of being slightly under the weather and his paper will be heard at the next meeting at Appleton in November.

The trip was made in four automobiles by the Appleton doctors, there being eight in attendance from here. The doctors were accompanied by their wives who seemed to enjoy the trip. The total attendance was twelve. These meetings in the country are usually well attended and the papers that are read are well worth the time lost in attending. The roads were in very fair condition for this time of the year and the day was fine even if it was election day.

FRANK P. DOHEARTY, M. D., *Secretary*.

Appendicitis and other Diseases of the Vermiform Appendix. By HOWARD KELLY, M. D., 502 pages with 215 original illustrations, some in colors and three lithographic plates. Philadelphia and London, J. B. Lippincott Company.

As stated in the preface the book is intended as a compact résumé dwelling with a special care on the practical side of the subject, to meet the daily demands of the general surgeon throughout the country. The first chapters of the book are devoted to the history of appendicitis, its anatomy, physiology and bacteriology and contain much interesting and valuable information. The chapters on pathology are excellent and contain very many beautifully executed drawings to illustrate the text. Practically every conceivable complication is pictured, and a study of the illustrations alone in this section will be of great assistance in unraveling an occasional difficult case. The sections on clinical history and differential diagnosis are among the most helpful, while from those on operative technic, preliminary and post-operative treatment many valuable hints may be obtained.

Dr. Kelly has been aided in this work by such able men as Christian, who contributed the chapter on autopsy findings; by Ford, who wrote on the bacteriology of the appendix and cecum; by Cushing, on cocaine anesthesia; by Hunner, Erlanger and others, while the wealth of material from the clinics of Drs. Halsted and Deaver has enabled him to enhance its usefulness in many ways.

The book deserves to be welcomed as a most valuable addition to every general library.

F. J. G.

THE WISCONSIN MEDICAL JOURNAL

OCTOBER, 1910.

ORIGINAL ARTICLES.

THE WASSERMANN REACTION IN THE PATHOLOGY,
DIAGNOSIS AND TREATMENT OF SYPHILIS.*

BY RICHARD M. PEARCE, M. D.,
NEW YORK.

Continued from September Number.

LARYNGOLOGY.

Specialists treating the throat, nose and ear, have utilized the Wassermann reaction in the diagnosis of obscure ulcerative lesions, in the study of ozena and for the purpose of determining the relation of syphilis to certain forms of deafness.

Ozena, on account of its frequent association with congenital syphilis, has been especially studied. It has long been a disputed point as to what percentage of cases of ozena was to be ascribed to syphilis. Investigations to determine this point by demonstrating the presence of the spirochete have been uniformly unsuccessful, and it is but natural that the assistance of the Wassermann method should be invoked. Alexander has examined twenty-six cases of ozena, free of clinical evidence of syphilis, with negative results in all, but takes the stand that a negative reaction is of no value and does not exclude the syphilitic origin of the disease.

Sobernheim obtained similar results in seventeen cases and concludes, in the light of the frequently positive Wassermann in tertiary and latent syphilis and in tabes and general paralysis, that ozena is not necessarily a metasyphilitic disease. In a later communication he reports a positive reaction in two cases of ozena with evidence of syphilis.

*Annual Address in Medicine delivered before the State Medical Society of Wisconsin, at Milwaukee, June 23, 1910

Scheier reports negative results in eight cases of simple ozena and a positive result in one case in an individual with tertiary syphilis. Negative results have also been reported by Weinstein, who examined eight cases.* Eisenlohr, one of the first investigators in this field, also obtained negative results in fifteen cases. It is as yet a little difficult to decide as to the exact importance of these negative results. It is certain that a negative Wassermann reaction is uncommon, as a constant result, in any large series of cases representing acquired, inherited or latent syphilis. The conclusion therefore seems justified that ozena may occur independently of syphilis.

Sobernheim has also called attention to the value of the Wassermann reaction in the differential diagnosis of Vincent's angina and of early syphilitic ulceration of the tonsil, a negative as well as a positive reaction being of aid both in diagnosis and treatment.

Weinstein called especial attention to the importance of the reaction in the differential diagnosis between syphilis and tuberculosis of the respiratory mucous membranes, both as an adjunct to the histological examination of excised tissue and as a substitute for the therapeutic test. He gives instances in which a positive serum reaction led to the clearing up of a diagnosis which lay between syphilis and tuberculosis, but could not be determined by history, clinical appearance, histology or bacteriology. In all the cases in which the diagnosis of syphilis was established by the serum reaction, appropriate treatment led to rapid improvement.

Weinstein also spoke of the use of this method in connection with the diagnosis of primary syphilitic lesions of the mouth, of leukoplakia, and in the differential diagnosis of Vincent's angina. While a negative result should be considered cautiously, he believes it strong evidence against syphilis.

My own experience has been such as to indicate that the Wassermann reaction promises to be of great value in the diagnosis of affections of the respiratory passages. The following experience is illustrative. A laryngologist sent me a small piece of tissue from an extensive ulcerative lesion of the postpharynx, with a request for histological examination. He was inclined to a diagnosis of syphilis, but as one of the two dermatologists who were consulted concerning an associated lesion of the skin, had made a diagnosis of tuberculosis and the other of syphilis, he was in doubt. Upon examining the sections

*These cases are reported from Scheier's clinic and apparently are the same observations presented above under Scheier's name in the discussion of Sobernheim's work.

I could not make a diagnosis between syphilis and tuberculosis, and in this found myself in agreement with three other pathologists. The serum test was tried, and a strongly positive reaction was taken as definite evidence of syphilis and appropriate treatment instituted.

I have been able to find only one reference to the use of the Wassermann reaction in the study of diseases of the ear. Busch has examined 29 cases of nervous deafness and seventeen of otosclerosis. Positive reactions were obtained in 52 per cent. of the former and in 23.5 per cent. of the latter. He concludes that the method is of value in establishing the proper treatment of these conditions and suggests that it also may be of value in clearing up the etiology of some of the as yet little understood chronic affections of the ear.

OPHTHALMOLOGY.

Leber appears to have been the first to use the Wassermann reaction in the diagnosis of diseases of the eye. In a series of one hundred and sixty examinations he found sixteen certainly syphilitic affections, in 93.7 per cent. of which a positive reaction was obtained, and ninety-five doubtful cases with a positive serum test in 42.1 per cent. He emphasizes the importance of the test not only for diagnosis and treatment, but also as a means of establishing more exactly the etiology of many diseases of the eye. In this connection he states that a positive reaction was obtained in 83.9 per cent. of thirty-one cases of keratitis, exclusive of the suppurative form; in iritis in 33 per cent.; in retinitis and choroiditis in 26 per cent., and, finally, in eye lesions accompanied by cerebral symptoms in 59.3 per cent. He especially refers to the importance of the test in the differentiation of tuberculous and syphilitic disease.

Gutmann comments on the value of the Wassermann for early diagnosis and early treatment, for the differential diagnosis of tuberculosis and tumor from syphilitic disease, as a substitute for the removal of pieces of tissue for diagnosis, and for the recognition of the cause of muscle paralysis. He quotes cases illustrating early diagnosis and successfully treated by mercury which, ordinarily, would have been operated upon.

Cohen has examined sixty-four cases; positive reactions being obtained in cases of iritis, keratitis, choroiditis, cataract, optic atrophy, optic neuritis, and muscle paralysis, in 61 per cent. of known syphilis and in 29 per cent. of suspected or doubtful syphilis. Cohen concludes that a negative reaction is of some diagnostic aid and a positive reaction of direct value both in diagnosis and treatment.

Schumacher reports two hundred and fifteen examinations, with positive results in forty of fifty-eight cases of syphilis and in twenty-four of seventy-three cases of suspected syphilis; his positive results occurring in much the same group of cases as those reported by Cohen, and he supports the latter in the belief that a negative reaction in ophthalmic cases is of considerable diagnostic value. In the doubtful cases he considers the reaction to be of the greatest value, although in hereditary syphilis free from recent acute symptoms a positive reaction is rare. He presents observations concerning the development of tuberculosis secondary to changes due to syphilis in the internal eye, such cases giving both the Wassermann and tuberculin reactions, and for this reason recommends the tuberculin treatment as well as anti-syphilitic treatment.

Best has made observations which lead him to think that the Wassermann reaction may be useful in distinguishing between hereditary syphilitic choroidoretinitis and clinically similar forms of non-syphilitic origin.

Other studies are those of keratitis by Hoehne, Pisani and Silbersiepe. Pisani obtained positive results in all of seven cases of parenchymatous keratitis, and regards these results as definitely establishing the syphilitic nature of the disease.

Silbersiepe has examined one hundred cases of keratitis parenchymatosa with the aid of the Wassermann reaction, and finds that it supports the theory of the great importance of syphilis, especially hereditary syphilis, in the etiology of the disease.

Noguchi gives a table of twenty-nine cases of eye diseases, in fourteen of which a positive Wassermann was obtained; in eight of twelve cases of interstitial keratitis, four of six cases of iritis, one of optic neuritis, and in one of two cases of anisometropia with ocular symptoms. Negative results were obtained in optic atrophy (five), scleritis, choroiditis, and paralysis of the external rectus. Swift has obtained positive results in uveitis, central amaurosis and optic atrophy.

DERMATOLOGY.

The use of the reaction as an aid in the diagnosis of the common skin lesions of syphilis need not be discussed. Its use in this field has been definitely established. Of other diseases of the skin of doubtful etiology, one that has been especially investigated is scleroderma. Castelli reports positive results in two, Noguchi in one of four and Whitehouse in four of five cases. Whitehouse's investigation was sug-

gested by a positive result obtained by Lustgarten. His cases were those of diffuse scleroderma; three gave a strong and one a faint positive reaction, and one was negative. The two latter patients had been under antisyphilitic treatment, one for over a year and the other for six months. In addition to these five cases of the diffuse type, two cases of the band-like morphea type gave negative reactions. Whitehouse considers it not improbable, in view of the histological resemblance between the changes in scleroderma and syphilis, that syphilis may be an etiological factor in the diffuse form of scleroderma. Swift,* however, has examined three cases of sclerodactylide and one of the diffuse form with negative results.

Another condition especially studied is leukoplakia of the tongue. The status of leukoplakia has never been quite clear. That it may occur independently of syphilis is known. But its frequency in well defined syphilis renders doubtful the diagnosis when leukoplakia occurs in the absence of other symptoms of syphilis, that is, in those conditions where it is the only manifestation of an otherwise latent syphilis. Under such circumstances the question of treatment is doubtful and for that reason the help of the Wassermann reaction has been invoked. Pürckhauer has examined twelve cases, with positive results in ten. Positive results have also been reported by Coenen in three cases, by Schlimpert in seven of ten cases, by Swift in six of seven cases and by Joseph. It would seem that, as a rule, leukoplakia is to be regarded as evidence of syphilis and often the only manifestation of a latent syphilis. If so regarded and treated as such, it is possible that cancer of the tongue, of which leukoplakia is frequently a forerunner, may in many instances be prevented.

Neisser has emphasized the importance of the reaction in the differentiation between lupus and tertiary syphilis and between early round cell sarcoma and chancre. He presents illustrative cases, one of which had been wrongly diagnosed as lupus of the nose and treated as such, with the result that extensive destruction of the nose, pharynx, gums and both eyes resulted. A positive Wassermann led to antisyphilitic treatment and improvement, but too late to save the eyes and prevent extreme disfiguration of the face.

The literature contains numerous reports of isolated instances in which the Wassermann has led to the recognition of the syphilitic nature of ulcerative lesions at first supposed to be tuberculous (Clough). In all such cases improvement has followed antisyphilitic treatment. Another use of the Wassermann reaction, as pointed out

*Personal communication.

by Swift, is in those cases in which a syphilitic roseola is masked by other eruptions, as for example, scabies.

GYNECOLOGY, OBSTETRICS, AND COLLES' LAW.

The Wassermann reaction in gynecology is in part a matter of diagnosis, but to a greater extent, and this is particularly true of its relation to obstetrics, it is of importance in the interpretation of those general principles embraced under Colles' and Profeta's laws. The significance of the results obtained concerning this latter aspect of the problem overshadows the use of the method in the diagnosis of local lesions. The results may be said to render necessary a revision of Colles' and Profeta's law and to constitute practically a new biological law.

One of the first investigators in this field was Opitz, who concluded that the reaction merited the earnest consideration of the gynecologist and obstetrician. It became at once not only a means of recognizing syphilis in women and the newborn in which the diagnosis was doubtful, but also a means of clearing up the etiology of stillbirths and habitual abortion. Such observations (Knöffelmacher and Lehn-dorf, Bauer, Bab, Ledermann) led to a thorough investigation, with the aid of the reaction, of the principles embraced in the laws of Colles and Profeta.

It may perhaps be unnecessary to observe that Colles' law covers those instances in which the mother of a syphilitic child is herself immune to infection and cannot be infected, even though she presents no signs of the disease. It has always been a question whether the immunity is real, or whether the mother is so lightly infected as to present none of the actual manifestations of the disease. Profeta's law refers to the reverse condition, that in which an apparently healthy child, born of a mother suffering from active syphilis, can suckle its mother without contracting the disease from her. Here again the question is that of immunity versus latent infection.

The Wassermann reaction has been used to determine whether in the first instance the mother and in the second the child actually has syphilis, or, on the other hand, is really immune to the disease. The use of the test for this purpose is based on the assumption that a positive Wassermann means active syphilis, if not, indeed, the actual presence of the spirochete. All recent work, especially that with latent acquired syphilis, indicates that this assumption is correct. Positive reactions in the mothers of syphilitic children and in the apparently healthy children of syphilitic mothers have therefore been considered as evidence of actual syphilis in each instance, thus remov-

ing any interpretation of Colles' or Profeta's law based on the principles of immunity. The results all hold together. Thus Knöpfelmacher and Lehdorf obtained a positive reaction in 56 per cent of thirty-two women apparently healthy but mothers of syphilitic children; Buer obtained similar results in all his cases, as did also Ledermann and Engelman and Bergmann. Such results in small groups of cases led to the conclusion that these apparently healthy mothers were really affected with latent syphilis, and led to numerous other investigations (Bunzel, Reinhart, Frankl), one of the most extensive of which, that of Baisch, may be quoted in detail. It includes a study of one hundred and forty cases, with a search for spirochetes in the fetus and placenta and the use of the Wassermann method on the mother. Of these, one hundred and two were mothers with positive Wassermann and whose children had syphilis, evident macroscopically or shown by the finding of the spirochete in the tissues. Seventy-five of these mothers were without clinical evidence of syphilis. On the basis of finding spirochetes (Trinchese) in the spaces between the villi in the maternal portion of the placenta in selected cases, Baisch concludes that the spirochetes are present in the blood of the mother and that therefore the positive Wassermann is not an evidence of immunity of the mother, but rather of latent syphilis, or, as he puts it, the mother is refractory to infection with syphilis because she is already infected. He further shows that in twelve mothers giving a negative reaction spirochetes were present in the maternal portion of the placenta, thus indicating that all such mothers are syphilitic and that there are no exceptions to the principles of Colles' law. As to Profeta's law, much the same conclusion has been reached. The children of syphilitic mothers are not immune to syphilis but are either syphilitic, that is, have latent syphilis, or are healthy, and in the latter case may later become infected.

Aside from the light thrown on the problems of congenital syphilis,* the demonstration of latent syphilis under these circum-

*The reaction has added little of special interest to the diagnostic methods of the gynecologist, though some casuistic reports are of interest, as in the case of Neisser in which the uterus was extirpated for what appeared on histological examination to be a round cell sarcoma of the cervix. The later development of the secondary lesions of syphilis and a positive Wassermann indicated the lesion to be a chancre, from which experience was drawn the lesson that if the serum diagnosis had been attempted first the operation might have been avoided. It is also worthy of note that Bunzel found six of seven cases of eclampsia positive at the height of the disease, but negative after the disappearance of the symptoms. Under such conditions, therefore, the reaction is to be considered with caution.

stances is of great importance in that it points to the necessity of treatment in order that active manifestations of the disease may be prevented.

Frankl who has studied in detail eighty-seven cases, states that a woman who has given birth to a syphilitic child and has a positive Wassermann is to be considered as having latent syphilis and should be given specific treatment without waiting for further manifestations of the disease. Also a positive reaction in the child of a syphilitic mother, though the child be apparently healthy, demands specific treatment for the child. McDonagh urges that all apparently healthy pregnant women giving a positive reaction should receive specific treatment through the entire pregnancy, for, as the result of such treatment, women habitually aborting may have healthy children.

A closely analogous investigation is that of wet nurses. Physicians have long sought to rule out two infections, tuberculosis and syphilis, without, however, in the latter having any definite criterion in the absence of symptoms. Bergmann has examined seventy-five wet nurses, only two of whom presented evidence of syphilis, and found a positive Wassermann reaction in seven (9.3 per cent). Rietschel found a positive reaction in 10 per cent of the wet nurses whom he examined. Both Bergmann and Pust state emphatically that every physician or clinic seeking a wet nurse should have a Wassermann done, irrespective of clinical findings. This statement is supported by Bruck and is in accord with the observations of Opitz and Rietschel.

LATENT SYPHILIS.

It has been seen that the study of the principles of Colles' law has furnished valuable evidence in support of the theory of latent syphilis. Of the greatest importance, however, in this regard, as well as from the point of view of public health, are the results of the use of the Wassermann reaction on the prostitutes of foreign cities. Such investigations have been made by Beckers, Hoehne, Jundell, Almkvist and Sandman, and by Dreyer and Meirowsky. Beckers examined eighty prostitutes, of whom 33, or 41.25 per cent gave a positive reaction and 5, or 6.25 per cent a doubtful reaction. Of these reacting positively only eleven, or one-third, presented clinical evidence of syphilis. Of fifty who had had syphilis but presented no symptoms twenty, or 40 per cent, gave positive reactions. Jundell and his associates obtained 23 per cent of positive results in thirty-two prostitutes without clinical evidence of syphilis. Hoehne examined one hundred and seven "puellae publicae" with no manifest syphilis, and obtained a positive reaction in 21.5 per cent.

The investigation of one hundred women by Dreyer and Meirowsky is most complete. They found two with active syphilis and fifty-five with a history of syphilis and earlier treatment but no manifestations. Of these fifty-seven, thirty-nine, or 68.4 per cent, gave a positive reaction. In the remaining forty-three with no history or manifest lesions of syphilis, a positive reaction was obtained in twenty-six or 60.5 per cent. It is seen, therefore, that if the cases with a positive Wassermann only are added to those with a history of syphilis, or with the lesions of the disease, we have 83 per cent* of one hundred women presenting evidence of infection. Or, to put it another way, we have two per cent with active lesions and 81 per cent with either a history of syphilis or a positive Wassermann reaction as evidence of the frequency of infection in this class. Moreover, of those giving a negative reaction all but three had been registered less than a year and none for more than three years. Few, therefore, would appear to escape; all apparently become infected within three or four years of exposure. Syphilis occurred in those between twenty-one and twenty-five years of age in thirty-four of the total number, as compared with seven of the same period free of the disease. In the next period of twenty-five to thirty years, thirty-one were infected, as compared with two free of syphilis. Of the total of one hundred, only one of twenty-four women over thirty years of age was non-syphilitic. These figures, if we accept the Wassermann as evidence of active syphilis, would appear to throw grave doubt on the possibility of a natural immunity to syphilis.

When one considers that in the past the presence of syphilis could be demonstrated by history and examination in only about 50 per cent* of these women, the value of the Wassermann method as presumptive evidence of syphilis becomes apparent. It is evident that in European cities, in which this class of cases are registered and carefully watched, many problems of syphilis may be studied; as (1) the question of the infectivity of individuals with a positive Wassermann as the only symptom of the disease; (2) the control of this mode of infection; (3) the study of the frequency of the development of tertiary and quaternary lesions in individuals presenting only a positive

*The figures given are those obtained by the original Wassermann method. The investigators used also Stern's modification, and by this means obtained a somewhat higher number of positive reactions, i. e., 78 per cent. for the first group, 74.4 for the second group and 89 per cent. for the combined groups.

*Bruhns and Lumme's statistics give 3,179 as treated for syphilis and 3,118 as not treated for syphilis. The figures are for 15 years (1892 to 1907).

Wassermann; (4) the influence of treatment on the Wasserman reaction, and, (5) other general problems concerning individuals who are, essentially, spirochete carriers without evidence of disease.

SPECIAL APPLICATION OF THE REACTION.

The experience with prostitutes, wet nurses, and especially the information brought out by the study of the laws of Colles and Profeta have thrown an interesting light on the question of so-called latent syphilis, or, as it is now frequently termed, "syphilis without manifestations." Many authors are of the opinion that in so-called latent syphilis we have to do with visceral syphilis giving no outward (clinical) manifestations of the disease and recognizable only by a positive Wassermann reaction. If this can be substantiated, and this is a view already supported by many investigators, and we are to regard a positive Wassermann as evidence of active syphilis, the reaction has many other practical applications which are suggested by what has been said in the discussion of Colles' law, of wet nurses, and of prostitutes. One of these is the use of the test in the examination of applicants for life insurance. Ledermann has suggested that it would be of value in those cases in which the examiner suspects syphilis but cannot establish a diagnosis by history or symptoms. This is of particular interest in view of the fact that the vital statistics of all life insurance companies indicate that individuals with syphilis are not as good risks as those who are non-syphilitic. Recently Brockbank, who has investigated the subject most thoroughly, made the statement that "No syphilitic proposer who cannot bring forward satisfactory evidence of having undergone proper treatment should be accepted." The difficulty naturally is to decide upon what is "satisfactory treatment". Swift prophesies that for this the Wassermann method will eventually be the test, and that the evidence required will be repeated negative reactions over a period of time sufficient to show that the individual is free from the disease. He also believes that a positive reaction, even when clinical symptoms are absent, should be considered as sufficient evidence for rejection or for acceptance at an advanced premium. McDonagh holds that a candidate giving a positive reaction, even though years have elapsed since the original infection, should be considered ineligible on the ground that the positive reaction is an indication of a visceral lesion which will ultimately shorten life. On the other hand, he recommends the acceptance of a candidate who after two years of treatment gives a negative reaction after intervals of three, six and nine months. Certainly, if we are to accept a positive Wassermann reaction as a sign of active syphilis and

also accept Bockbank's rule that "no proposer showing signs of the disease in any one of its stages should be accepted", these conclusions are logical.

Another question is that of marriage. The infectious period of syphilis is generally considered to be three or four years. If *lues ignorata* is as common as the Wassermann reaction in the hands of Dreyer and Meirowsky indicates, and if those without manifest lesions but with a positive Wassermann are truly spirochete carriers, whether treated or not, our views concerning the control of those exposed to syphilis must be altered. It seems probable that the reaction will be an aid in deciding the question of marriage, and that to the rule which demands thorough treatment and a lapse of years will be added successive negative Wassermann reactions.

Also it may be used to set at rest the mind of the syphilophobic by convincing him after the repeated negative tests of the non-existence of the disease; in those instances in which the disease really is present a positive reaction allows proper treatment to be instituted before symptoms appear and the fears of the patient are allayed by assurance of a satisfactory outcome. Bruck has especially emphasized the value of the reaction in syphilophobia and Marcus has used it for this purpose with satisfactory results in two cases.

On the other hand, it is of decided value in those instances in which a patient with a doubtful lesion denies, intentionally or otherwise, the possibility of infection.

Finally, it would appear that the Wassermann reaction will eventually replace the therapeutic test. The latter has frequently been of doubtful value, for it is well known that many neoplasms as well as chronic inflammatory and proliferative conditions improve for a time under iodides. If further work supports our provisional view of the accuracy of the serum test we have a more certain means of diagnosis. A negative reaction will save much valuable time which may be applied to other methods of diagnosis and treatment, while a positive reaction will allow thorough treatment and perhaps not infrequently prevent operative interference.*

*Many other phases of the work with the Wassermann reaction might be discussed, as its use by the pathologist to demonstrate the origin, syphilitic or otherwise, of various chronic lesions, as for example, fibrous orchitis (Reinhart, Fränkel and Much, Schlimpert). Also the positive reactions which have been obtained in myxedema (Castelli); infantilism (Pisani); and gigantism (Pisani), and various other conditions of disturbed nutrition are of interest. Much work must be done, however, before any definite conclusion can be reached concerning the significance of occasional positive reactions in these conditions.

EFFECT OF TREATMENT.

Finally, we have the question of the effect of treatment on the reaction and the correlated problem of whether the disappearance of the reaction is to be considered as an indication of cure.

Practically all observers have found that positive results are more frequent in untreated than in treated individuals. In Citron's statistics these two groups are represented by 81 and 65 per cent respectively; in Bruck's by 82 and 29 per cent. So also in cases which have been carefully followed, it is seen that the number of positive reactions diminishes with the lapse of time and bears also a definite relation to the number of courses of treatment. This is best shown in the table of Jesionek and Meirowsky, illustrating the treatment of latent syphilis:

Number of Courses.....	0	1	2	3	4 and 5	6 and 7	8 or more
Number of Cases.....	76	85	76	55	76	38	16
Per cent. Positive.....	97	64	75	47	42	34	31

Swift states that he obtained positive reactions in 74 per cent of cases treated six months or less, with a steady fall to 37 per cent in those treated three years. Blaschko, who has examined his cases repeatedly during treatment, finds a gradual disappearance of the reaction in seventy-six of ninety cases. Boas, who has shown very clearly the effect of treatment in causing a disappearance of the reaction, points out that in the late stages of the disease relapses are usually preceded by a return of the positive reaction,* and that it is possible by treatment at such times to prevent the return of clinical manifestations of the disease.

Lesser, who has studied 525 cases with the Wassermann reaction from the point of view of ultimate cure, finds 49 per cent of properly treated cases negative on repeated examination. Even a single course of treatment greatly reduced the positive results, and the percentage of negative results increased constantly with the number of courses of treatment. Contrary to the experience of Jesionek and Meirowsky he finds the maximum number of negative reactions, 55 to 65 per cent, to occur after four courses. After this the percentage is not increased. He believes that a positive reaction indicates the presence of active spirochetes and that the Wassermann reaction is a reliable

*Donath has described what he calls "provocatory treatment": that is, in persons with syphilis but a negative Wassermann the administration of mercury causes the reaction to become positive. Donath compares it to the influence of quinine on a latent malaria. The observation has not been generally confirmed and its significance is not clear.

index for treatment both as to dose and length of course. Repeatedly negative reactions in later stages indicate the probability of a final cure, but he lays little stress on negative tests early in the disease. He places the period of cure, as indicated by repeated negative tests, at not less than five years, and considers the peace of mind that comes with repeated negative reactions as one of the greatest benefits of the reaction. Butler recommends that a serum test should be made every three months in the early period and every six months in the late period of chronic intermittent treatment. Such a precaution will, he believes, prevent many of the serious and fatal consequences of syphilis.

Much might be added to this discussion of treatment, but it must be sufficiently evident from what has been said that the reaction promises to be a most satisfactory guide to treatment in all its aspects.

Seldom has a new method of diagnosis promised as much as does the Wassermann reaction, and if future work tends to the fulfillment of this promise we have in the Wassermann reaction one of the greatest advances in the history of medicine. The knowledge which it yields, coupled with that resulting from the study of the etiology and from experimental inoculation, should eventually place syphilis in the group of subjugated diseases,—diseases of which the etiology and pathology is known, for which there exist an absolute diagnostic method and a rational specific treatment.

[Since the preparation of this manuscript there has appeared an interesting communication by Delbet on the syphilitic origin of certain malformations. He obtained positive Wassermann reactions in seven children with congenital affections of the nervous system, Little's syndrome or contractures and in a case of cleft palate. In none was clinical evidence of syphilis present. Delbet is convinced that syphilis is responsible for these conditions more frequently than is generally supposed. (Delbet, P., *La syphilis dysplasique*, *Presse medicale*, 1910, XVIII, 273.)]

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RESULTS OF HEREDITY, AND THEIR BEARING ON POVERTY, CRIME AND DISEASE.*

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I find, on trying to write upon this subject, that even the very liberal amount of time granted each paper is hardly sufficient. If, therefore, I dwell very briefly on some of the points, you will know this is the reason. Every assertion made in it is based on reliable authority.

In speaking of heredity, it will be understood that we will touch only such points as tend to degeneracy. Now what is degeneracy?

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If we carry in mind the arguments of the experts in notable criminal cases, where the same points are used to prove and disprove one's mental status, until the Court and Jury are so confused that they do not know which party to believe, or whether to believe either, this may seem a formidable question; but for our use I think it can be made very simple and presented very briefly.

As modern society is organized, it demands only a few simple requirements of its members: that they be sufficiently competent mentally to maintain themselves and those naturally dependent upon them, and further that they shall be sufficiently competent and well balanced mentally to be able to appreciate and respect the personal and property rights of others. If, through any mental inefficiency, they cannot maintain themselves, they are dependent and become a social burden. If they fail to maintain the rules laid down by society for the mutual protection of its members, so far as the personal and property rights of each are concerned, society must deprive them of their liberty, and they are classed at once as incompetents or criminals.

Every person who offends against the law is not necessarily degenerate. Probably every individual's resistance to the instincts of acquisition, or to gratifying nature's instincts, has its limit. It is only when, under usual and normal circumstances, the person's inhibitory power over these instincts is inadequate, and he can be looked upon to fall before temptation each time he faces it, that he may be classed as incompetent, and we can see that his mental condition runs towards degeneracy.

What are the elements constituting degeneracy? We know we have a number of mental faculties whose proper development is essential in order that we may maintain proper relations to society at large, and others of less importance. It is not essential for instance, that a man's musical faculty shall be developed, or that he have a ready appreciation of figures. Many avenues of employment are open to those who are extremely weak along these and similar lines. The essential factors of mental development are memory, judgment and will power, with which might be classed the power of attention and concentration. None of these faculties can be materially weakened, and the individual hope to obtain an average standing among his fellow men.

Memory is a faculty by which impressions, received through the special senses, are stored away for future use. It is the material from which we form all our thought and originate all our actions. On the

ability of the brain cells to rapidly absorb and quickly reproduce these impressions, depends the mental growth of the individual. If this faculty is imperfect the mind must necessarily be undeveloped. If it is weakened through the influence of disease, mental impairment is just as certain. We all know that at a certain age, varying with individuals, we cease to acquire many more facts, but, with the maturing of our judgment, are better able to use such information as we acquire. This limit is reached in the feeble minded before they reach the age of fifteen to eighteen years, leaving them permanently immature. It is also common, almost universal, among our high grade imbeciles, to find that they do not have that hunger for information which comes with the developing brain cells of a normal child, which stimulates the normal child of five or six to distract those about him by innumerable questions. All things must be patiently taught them. They are well trained children who would deceive the careless or inexperienced observer into believing that their minds were undergoing normal development, while their teacher finds that they have reached their limit of improvement while still children. On the other hand, a phenomenal memory, especially along limited lines, is not inconsistent with quite profound imbecility. The example of "Black Tom" and his marvelous faculty of memorizing and repeating the most difficult music at one hearing, and who recently died in Brooklyn, having lived all his life an imbecile of rather low grade, is well known.

The second faculty is judgment, by which we weigh and compare one thought against another, and govern the actions of our daily life by the relative value we give them. This is defective or impaired in all classes of degenerates. It forms a basis of the erroneous mental action of the insane. It is more or less wanting in all of the feeble minded. It prevents the so-called moral imbecile from fully realizing the true import of wrong doing.

Last of all is the will power, by which we control the action of our mind and compel the action of our life according to the dictates of our judgment. This is especially weak in the feeble minded. These people are frequently of excellent memory; can recite the difference between right and wrong acts with the fluency and accuracy of a phonograph, and constantly drift along the current of their desires, simply because, like rowers in a strong current, their strength is insufficient to overcome the power of the stream.

Such are the elements on which our mental life is based, and on whose failure to develop, the unfitness of the individual to mingle on equal terms with his fellows is based.

Having determined the factors which make up the life of the unfit, let us take up the reason which has led to their closer study, and the apparent need of some radical means to check their increase.

It is only recently that public attention has been drawn to this increase, and even now it is sometimes claimed that the increase is more apparent than real. It has been dawning on those who come closely in contact with the mentally incompetent, that some families send many representatives to their care. They, however, have comparatively recently completed histories sufficient to place the matter in a convincing light before a public who are partly sceptical and very largely indifferent.

The agitation over the great army of unemployed in England attracted public attention quite strongly. Those who employed, knowing the difficulty of securing competent men, knew further, that the unemployed were too often, those unprofitable to employ.

The results of the special census in the United States, undertaken in 1903, give the public some startling facts. Statistics of the insane are most complete, because they are recognized as a dangerous factor in a community, and the public, in self-protection, care for the major part of them; while other classes, like the mentally and morally feeble minded, receive much less attention and the major part of them are at large in the community. This census shows, in the thirteen years it covers, that where the general population had increased about 30 per cent, the insane in institutions had increased 100 per cent. No reason could explain these figures adequately, except that the insane, and presumably other groups of mentally unfit, are actually increasing faster than the general population.

Then come the statistics from across the water. In 1859, the total number of insane in England and Wales was ascertained to be 36,762. Recently it was reported as 123,988, an increase of over 230 per cent, while the general population increased, in the same time, 77 per cent; but it is said the insane are more generally cared for now, hence the apparent increase. Let us take a State where no change in the general law of care has occurred. In Wisconsin, in 1898, there were twenty-five asylums for the chronic insane. In 1908, there were thirty-two, an increase of 28 per cent. In 1898, there were 4,572 insane in institutions, under supervision of the State Board of Control. Ten years later they report 6,196; an increase of 35 per cent. If the results, estimated by the census returns, are reliable, the general population has increased by 15 per cent in ten years, and the actual increase of the preceding decade was 29 per cent.

In 1895, the Board reported the ratio of the insane under care to the entire population as 1:475. In 1908, it had increased to 1:359, and this increase appears regular, as followed up year by year. The mentally and morally feeble minded are admitted to be as numerous as the insane, but only come under supervision when they become disturbing elements in the family or in the community.

Now a word in regard to these classes as a financial tax on the community—an outlay which gives no direct returns; money which is absolutely wasted so far as social progress is concerned. Allowing for 200,000 in institutions at this date (not an excessive estimate when we consider there were 150,000 in 1903, and 8,000 more admitted than discharged in 1904), at \$160.00 a year, we have a yearly total of \$32,000,000 for the simple maintenance of this class alone. But this is only a part of their cost. The New York Lunacy Board spent last year for all expenses connected with the insane, nearly \$7,000,000 in that State, and asked for the ensuing year nearly \$8,500,000. Illinois spends in its institutions about \$1,000,000 per month. The major share of which goes for the care of the mentally incompetent. Illinois' proportion of insane is below the average for the country.

Now carry these figures through all the States of the Union. Add to it the maintenance of an equal number, probably, of the feeble minded, who must be supported, whether in an institution, or in their homes. Add to this the harm done to the growing generation of children by having their parents' care centered almost completely on the idiot child of the family (for he usually needs one person's care), and estimate the total.

Let us glance a moment at the offenders in penal institutions. Careful study has shown that probably one-third, and some officials place it much higher, of those undergoing corrective sentences, especially in the cases of younger criminals, are defective in moral sense. They would be more quickly recognized as such were it not for the unreasoning system of judging one's mentality by memory tests alone, which prevails in our schools and is a standard elsewhere.

This class, by which I mean the continuous petty offenders, is responsible largely for the enormous cost of policing. I have not compiled statistics, but you have only to glance at the returns of the State Board of Charities to realize the many millions of dollars that are spent in preserving order, and the thousands that are committed for petty offenses, and very largely for repeated offenses. An English observer following up 182,000 cases in the English petty

Courts, found that 107,000 of them were not for the first offense. The great crimes are planned and executed and the police are powerless. It is the *minor* offenders who are numerous and active, and are present everywhere in the infringement on the personal and property rights of others. Their punishment rarely makes them good, and seldom even careful. Thomas Speed Mosley, Missouri State Pardon Attorney, is said to have estimated the cost of crime in this Country at \$200,000,000 a year.

The cost of human life from the insane and from the degenerate is very large. Accounts of murders and very often suicide, from their hands is almost a daily occurrence. So frequent are they, that the papers give them little space and they attract little attention. These murders from the insane are often multiple. A recent account of a family of six found dead in Chicago after the father had threatened to kill them is one instance. The Davis case in San Francisco, where an insane man was overpowered while reloading his shot gun after killing six people, is another. Examining the papers from different sections daily, it is not often you will miss reading the account of some blameless victim. The egotism of the insane leads them to select victims high in social standing. The brilliant actor, Terrill, was the victim of an insane man. Three Presidents have fallen victims before them if we include Lincoln's slayer. When I was on the staff at the Norristown Hospital a paranoiac was returned to us who was said to have been arrested, armed, in the White House grounds, where he said he wanted to see the President. This man would do anything on impulse, and finally committed suicide by hanging, without apparent premeditation. Had he met the President, we, who knew him well, did not doubt but he would have tried to add one more to the list of the heads of the Nation who had become victims of mental incompetents. Only this week papers cited the case of an armed man anxious to see the President. Note also the horrible crimes of the degenerate, such as the unprintable torture inflicted on the young white woman near Wilmington, Del., where the perpetrator was burned by the citizens of that City. Remember the series of murders that follow each other under circumstances that indicate that only a degenerate of the lowest type could have committed them.

Among those who are regarded as unbalanced or subnormal, how many are due to heredity? Some, even at this day, doubt if mental defects are directly transmitted, though such persons are not many. They lay great stress on education and environment. Of course no act is transmitted; but tendency to certain conduct or condition, cer-

tainly is. This is indicated both by observation and by reason. It is a matter of common knowledge that members of the same family are usually of the same general intelligence; that as a rule, they are about the same mental growth as their parents. Again, all we have in the way of physical endowment comes from our ancestors. Education may develop but cannot create. What should we expect but that persons who have strengthened their instincts and emotions and the centers which preside over them, by constant indulgence, and have subordinated their reason and will power to their desires, should weaken the portions of the brain which govern these higher mental functions? Any way, in the course of natural law, should they not pass these conditions along to those who spring from their bodies?

People suffering from mental unfitness may be divided into two general classes. Those whose condition is accidental; from disease, perhaps, or traumatism, and those who have a hereditary tendency to mental and moral weakness or instability, as shown by other members of the same family. It is not always easy to determine to which group a victim may belong, especially in the insane where their period of care may be short. Friends, if known, are adverse to revealing mental disease among their race. Among the feeble minded it is different. The first information we get is generally false. Sometimes from the reason above stated; sometimes from absolute lack of interest in those who write the history, and again because the information is given by other members of the family not any brighter than the subject themselves and therefore incompetent to decide. Having them under observation for a long period, however, facts come to our notice from neighbors and from correspondence. Other members of the family are admitted; relatives visit them who are evidently subnormal, and in the course of years a great deal of information is collected.

My own observations, and those of others in this country and in Europe, would indicate that at least two-thirds of the feeble minded have defective relatives. This is significant. Mental accident may occur in any family, but it is rarely a second case occurs unless there is a tendency to nerve degeneracy.

I present to you the results of compiling the histories on 1,000 applications, where our information is most thorough; but I am confident that these do not tell the whole story. In 311 of these, any neurotic taint in the family history is absolutely denied. In 365 cases, at least one near relative suffers from one of the graver forms of nervous or mental trouble; in 170, two relatives were found; in

73 cases, three relatives, and in 81 cases, four or more. These figures agree very accurately with the results of other observers in this country and abroad. It is safe to say that less than one-third of the defective classes are the results of disease or traumatism in families capable of transmitting a healthy, well developed nervous system.

Let me cite a few marked instances of this danger. Two children from one family are under our care. From the sheriff, who brought the children and an intelligent neighbor, I learned that the mother was weak mentally. The father seldom worked but managed to raise his family on what he could obtain in other ways. Not one of the eighteen children was a desirable member of society. The girls drifted into disreputable lives; the boys were idlers and thieves, with no moral sense. I know a couple in Pittsburg, Pa., whose nine children were all idiots of low grade. A family in eastern Wisconsin, the father and mother are both feeble minded; at least seven of the eight children are imbecile; five we have cared for. A couple in this state have nine children, all subnormal, and there are several, to my knowledge, in collateral branches of the family. One feeble minded woman, now removed from this state, had by different men, eighteen children in nineteen years, she alleges. I have seen only three of her children. These were feeble minded and especially defective in moral sense. I know a family where the mother and six daughters are feeble minded. The sons are said to be, like the father, quite bright. I could multiply these instances to a great length if time permitted.

Records of a few families are published where the history has been followed for several generations. The so-called Juke family in New York is frequently quoted. Not quite so well known as the "Tribe of Ishmael", so-called, where the offspring of one neurotic man intensified by consanguineous marriages, reached some 5,000 individuals whose continued criminal record has poured over the northwest a flood of imbecility and crime. We must remember the history of "Margaret, the Mother of Criminals", from the mountainous districts of Northern Pennsylvania, whose progeny of paupers, criminals, and prostitutes reached 700, when their history was completed. Their family vigor was preserved by marriage with vigorous families of ruffians. They married young and some of the women had as many as twenty children. One more instance is a family recorded by Prof. Belman of the University of Bonn. They are the offspring of a notorious drunkard who died in 1800. His descendants numbered 834, of whom 709 were traced from their youth. Seven of these were

convicted of murder; 76 of other crimes; 142 were beggars; 64 lived on charity, and 181 of the women adopted disreputable lives.

Some interesting points are found in hereditary transmission. A woman once sent us a child with both legs well developed in form, but absolutely without voluntary motion. He was a mute idiot. Later the woman, herself a high grade imbecile, brought another child, a counterpart of the first in the extent, location and character of his paralysis, and also a mute idiot. She said they were the offspring of different men. I was able to confirm her statement later, as I found that the second father came to that section, a stranger, after the first child was born. The tendency to degeneracy in the mother was persistently transmitted irrespective of the male parent. Another case was an insane man in Bucks County, Pa. He had two sons. One married an exceptionally strong-minded woman. He became insane, but his six children escaped, as long as I knew them. The second son did not become insane, but he became father of nine defective children.

Now a case of persistent transmission. My father knew the grandfather and the father of H. and they were chronic petty thieves. H. was adopted at the age of three years into a childless Christian family in an excellent neighborhood. He was pleasing in face, engaging in manners, but a thief from the time he was able to go after things. He was a successful forger at the age of sixteen. He married into a family of proved integrity at an early age. His many robberies were ingeniously planned and successfully covered. At last he became a fugitive from justice and came West. I last heard of him in Joliet prison. He said that when the impulse to steal seized him he had to obey it. Of three children, one, a girl, showed no trace of her father's weakness; one son died young; the other son was brought up by his mother who kept boarders, and appeared honest until he reached the age of sixteen or eighteen years. One night, after payday, he went through the house stealing all the money within reach, and disappeared. So much for hereditary influence versus environment.

In no place is this subject of the power of heredity in relation to environment so easily studied as among our children. A group of many little children came to us from the State School, being untrainable there. They have had with us the same teaching and the same companionship. Each one has lived, eaten, and slept among the others, and, so far as we know, with but one exception, those of vicious parentage have turned instinctively to vicious traits by preference, while those of simple but honest stock, do evil things only under strong temptation, and do not persist in them after the wrong

is pointed out. That is, they may be easily led into wrong doing but do not seek evil. It is also somewhat remarkable that in children taken young, evil habits, such as stealing, often do not become dominant until they reached the age of fourteen or sixteen years. With their arrival at adult years, their inherent traits intensify.

What shall we do with these people? Their increase should certainly be checked. The lower grades of insanity and idiocy probably will not voluntarily increase, though we have had idiot girls come to our care who were so low in mentality that they could not name the father of their child. The large factors in the increase of this class are the high grade imbecile, who perhaps is considered possibly intelligent, and the habitual petty offender who is so because his animal instincts dominate the inhibitory powers of his weaker higher functions. Also the delusional insane whose physical functions are perfect, and who are discharged, or paroled, to their families from time to time, with the result of continuing their race. All these, like normal persons are liable to mate with those of their own mental stamina. They marry early and often and, too frequently, produce children without assuming any ties.

There are three methods of curtailment available. The restriction of marriage by law. This should be done, if for no other purpose than to remove the seal of public approval, even though as in all laws, only curtailment and not prohibition is the result. A pronounced degenerate, discharged from our care on a slight technical error in his transfer, met a paroled girl from our institution, also degenerate, who is said to have born two children before she came to us. We were informed that they were married by a County Judge, by a dispensation, because they did not wish to wait the legal five days. She was recovered, pregnant, and died in child-bed, the child being mal-formed. This was quite recently. One of our children recently wrote to her cousin, offering condolence on the death of this cousin's husband, but had opportunity shortly after, to forward congratulations on her marriage to this same degenerate boy.

Sequestration, if it could be rigidly carried out, would be the most certain means, but this is not always practicable. Tremendous pressure is brought on the management by friends who cherish the false idea that they can be, and are cured, on the first signs of improvement. or, who, for mercenary or other reason, desire their discharge. I have had a girl discharged by a County Judge, who confessed on the stand to going to a public park repeatedly, and transgressing with as many boys as might come to her. She displayed no

remorse and no shame, and we could only say that her character and tendencies had in no way changed. She was discharged, and, I am informed, resumed her old habits. And should re-examination fail, there is always left the trial by Jury. A jury of his, or her "peers" I think they are technically called, who are summoned to decide questions of mental capacity, on which an expert could not pass on exact opinion offhand. Discharge would probably follow in such a case, especially in the cunning, superficially bright, and often prepossessing moral imbeciles.

There is left only surgical methods. This, I am told, did not meet the approval of this Association. I was not privileged to hear the discussion which led to this decision, if such decision was actually made. In the Legislature, it was denounced as inhuman. Possibly it would be more humane to force into birth human beings who must bear the poverty and mental degradation of imbecility, or the many injuries and constant danger which attend epilepsy, or the horror of melancholia or delirium, or the moral degradation of habitual drunkenness, or the usual life of shame and disease which is enforced on many imbecile girls, helpless against their own instincts and the wiles of vicious men.

I was further told that one of the Legislators read from the Bible, the command to be "fruitful and multiply and replenish the earth", and I wondered if this gentleman had read enough of this chapter to know that the Creator had just drowned the entire human race on account of their degeneracy, reserving only the best family to renew his people. The Lord nowhere commands the perpetuation of evil.

We aid and sympathize with the government in its efforts to keep undesirable and diseased immigrants from our shores. We are indifferent to or encourage the summoning of countless helpless ones from the unknown from which we all emerged. We make no effective protest to the parole of the insane in cases where each visit home may, and sometimes does, mean duplicating their own condition. This subject rests more heavily on us, Gentlemen, than on any other class of citizens, because it comes under the head of "Preventive Medicine", and its fruits are, frequently, long lives of poverty, suffering, crime and foul disease. What shall we do with it?

Discussion.

DR. W. H. WASHBURN, Milwaukee: The two papers that we have just listened to emphasize the importance of the subject of heredity and they sufficiently point out that the time has come when something ought to be

done more than talk. During barbarous times and among primitive peoples natural selection resulted as commonly in the survival of the fittest in the human race as it did in other races of animals. But in the course of time man developed intellect, moral sentiment, moral feeling, altruism, and when that time came the unfit were permitted to survive.

Progress in this direction has advanced increasingly, from the remotest times up to the present. Very commonly the unfit have not only been permitted to survive but have been encouraged to survive and propagate their kind. Laws which protect the improvident against the results of improvidence have this result. The advance in medical science whereby disease, which is a great agent in natural selection, is prevented, and improvements in the practice of medicine, have enabled the unfit to survive into middle life and procreate a still more unfit progeny.

It has been objected when anything has been said about improvement that God had given the command: "Be fruitful and multiply and replenish the earth." If this command is to be carried out indiscriminately, we must also submit to the command that was given immediately following this in Genesis 3-19, "In the sweat of thy face shalt thou eat bread till thou return unto the ground." If these two behests are enforced the unfit will not survive, they will die in infancy, they will starve to death. But it seems to me extremely absurd to insist that the first of these injunctions shall be followed and the second not.

When we take into consideration all of the evil influences that have been at work for thousands of years, the surprise is that the human race is as decent as it is. And we have one thing and one thing alone to thank for this, and that is the female portion of the community. Goethe referred to the female sex as "that stubborn power of permanency". And Lester Ward in a recent work on pure sociology says "the female not only typifies the race, but metaphor aside, is the race", and further along "the female is the guardian of hereditary qualities, the balance wheel of the whole machinery."

Now contrary to the general supposition the female sex is older than the male sex. The male sex was introduced for the purpose of bringing about variation, and that for a long time was the only function he had to perform. So that the female sex is the sex of permanency through which qualities are handed down.

Now I think it is a fact commonly recognized, that of the human family the vicious females comparatively rarely procreate; their vice renders them sterile; it is not the ease with men—and happy would it be if it were.

Dr. Saleeby in a recent book on Parenthood and Race Culture says that in his judgment the choice of western civilization will ere long be the final one between eugenics and extinction. Now by eugenics we understand that science which has to deal with the improvement of the race. Humanity and altruism impose upon us an obligation to those that are already on the earth. They must be provided with the best environment possible and their physical and individual welfare must be conserved. But equally humanity and altruism impose upon us an obligation to the unborn. And here occurs what must be regarded as the first step in eugenics. We cannot eliminate those that are already on the earth, we must supervise those that are in future to come upon the earth.

In 1894 I advocated in a paper before the Milwaukee Medical Society, the emasculation of the chronic criminal and the degenerate. But since that time a different operation has been suggested, that of vasectomy, and I am pleased to note that the operation has been performed and is legal in Indiana, and is being performed there very extensively. I have seen recently that something over 900 cases have been operated upon—men; and some women have been submitted to resection of the fallopian tubes. Very many of these operations were performed at the request of the individual. There are none of the objections to this that there are to the operation of castration.

I think that the medical profession ought to take up this subject and discuss it not alone in medical societies, for what we do here does not count for anything at all, but should discuss it generally. Doctors are the most intelligent people in the community; they do not have to have pointed out to them the importance of a subject of this kind; but the people must be educated and have to be a whole generation in advance of the legislators, and then perhaps another generation must pass before anything is accomplished; but now is the time for the first step.

DR. W. F. BECKER, of Milwaukee: It seems to me that we are not obliged to wait for laws for the inauguration of this necessary thing of sterilization. I want to speak for a moment of an experience at the Milwaukee Hospital for the Insane, where we have gone to work at this without waiting for legislation. There we have made in several cases asexualization a condition of the discharge of the patient. A woman with dementia precox whose husband insisted on her return to the city, made frequent returns and always became pregnant. So we told the husband, you can have your wife if you will consent to her being sterilized, and she may go home if she will consent, and consent was given by both the husband and the wife and the woman was sterilized by the ligation of the fallopian tubes. I do not know why we should not do this generally. We deplore the overcrowding of our institutions. Now we might in many cases safely let imbeciles go at large on condition that they cannot propagate; this can be accomplished by the simple operation of vasectomy, which leaves the patient in no different condition than before, except that he cannot procreate; and the slight operation is very attractive and easily applied. The X-ray has also been used to produce sterilization. I do not know about the result however. I know that men working with the X-ray in some instances seem to have become impotent. We believe more and more in the extrainstitutional treatment of defectives and delinquents; and that is a very good thing and is growing all the time, under the parole system and the system of indeterminate sentences, by which for instance we establish day schools for the deaf mutes; and in order that we may not produce a race of deaf mutes as Graham Bell has shown, we can apply the remedy in these cases. The objection to turning them out has been the one fact that they reproduce their kind, and it seems to me if we can shut that off in this way in individual cases we do not have to wait for legislation or for the two generations that Dr. Washburn says will be necessary to bring about legislation, which is very difficult anyway to establish.

THE VALUE OF ORTHODONTIA APPLIANCES IN TREATING FRACTURES OF THE MAXILLARY BONES.

BY M. N. FEDERSPIEL, D. D. S., M. D.,
MILWAUKEE.

The treatment of factured bones is recognized today as an exact science, yet the general practitioner as well as the dentist is frequently puzzled in treating fractures of the maxillary bones. This is largely due to imperfect reduction and immobilization, and a faulty knowledge of the relative position of the teeth when the jaws are closed. It is not my purpose to elaborate upon methods heretofore used, as the writer feels confident that practitioners in general are familiar with the appliances used in the past such as the four-tailed bandage, clamps, vulcanite splints, etc.

When we consider how crudely and unscientifically patients were treated for jaw fractures, how many weeks of torture and starvation the unfortunate suffered, and how frequently the natural contour of the face was destroyed, the medical profession welcomes the special methods of Orthodontia which are especially fitted to quickly and gently immobilize jaw fractures without the usage of clumsy splints and bandages, allowing the patient the greatest possible comfort in going about his work.

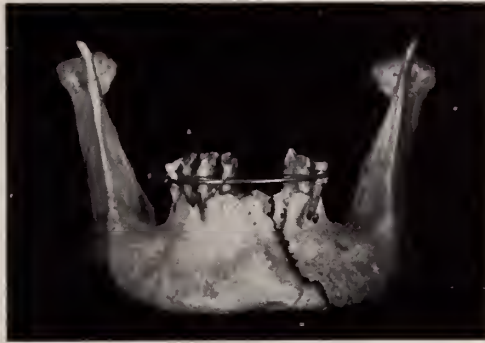
While Gunning, Thomas, Hammond, Kingsley, and many others have devised intra-dental splints, to Dr. Edward H. Angle, a noted author and teacher of Orthodontia, is due the credit of first bringing before the profession the advantages of Orthodontia appliances in the treatment of jaw fractures.

The rapid advancement of the science of Orthodontia, with its wonderful results in correcting irregularities of the teeth and malformations of the jaws, has enabled specialists to construct suitable appliances which will immobilize the fractured bone without any tendency toward displacement of the appliances from such causes as swallowing, coughing, sneezing, speaking, etc.

Knowing that illustrations are instructive I am showing the following which were taken from a number of Orthodontia appliances which I constructed on jaw bones.

Figure 1. is the mandible of a person well along in years, a large number of the lower teeth being lost while the remaining ones show considerable wear. Notice the line of fracture in the region of the left lateral incisor. Nickel silver bands were fitted to the lower left first bicuspid and lower right second bicuspid. These two bands were

FIG. I.



connected by a nickel silver bar, gauge 15. This bar was soldered to the band on the lower left first bicuspid while the other side of the bar was threaded which passed snugly through the tubing soldered to the band. A nut was then placed on the distal end of the bar. This appliance was then cemented into place. Then by turning the nut attached to the bar the broken bone was approximated, and positively immobilized. The remaining teeth were then ligated to the nickel silver bar with copper wire gauge 24.

This appliance if properly constructed will positively immobilize the broken bone and will not inconvenience the patient. It is easy to keep clean and will permit the patient to partake lightly of food as well as smoke, talk, etc.

Figure 2, notice the multiple fracture in region between the cuspid and lateral and between the molar and bicuspid. Nickel silver clamp bands with tubing are fitted to the left second molar and right first molar. A nickel silver alignment arch bar rests on the labial

FIG. II.



surface of the teeth and passes into the tubing on the bands. All the teeth anterior to the molars are securely ligated to the bar with copper wire gauge 24. This appliance is neat in appearance, and permits the patient to articulate while it positively gives rest to the broken bone.

CASE 1. J. S., a laborer, age 45, was admitted to the dental clinic of Marquette University on October 5, 1909; he had fallen from a wagon and sustained a simple fracture between the left lateral incisor and cuspid. The fractured bone at that time was widely separated at the top. The ends of same were placed in normal position and temporarily held there by lacing the teeth with wire ligature gauge 28, after which clamp bands with tubing were fitted to the lower first molars which were connected with an arch bar gauge 15, with the nuts on the posterior surface of the tubing. All the teeth were then ligated to the arch bar with brass wire gauge 28, resting on the labial surface of the lower teeth. This appliance firmly secured the broken part in position. After the second day the patient was able to partake lightly of food and suffered no pain. At the expiration of four weeks the patient had fully recovered and the appliances were removed.

CASE 2. Male, laborer, age 27, entered Trinity Hospital April 16, 1910. History—patient was hit on the lower jaw with a club and suffered intense pain. Examination showed unilateral dislocation and fracture on each side of the mandible in the region of the first bicuspid. The central portion sank and was pulled backward by muscular action. Treatment—after reducing the dislocation of the jaw, nickel silver bands with tubing were fitted to the lower second molars to which bands a 15 gauge nickel silver alignment arch bar was fitted which rested firmly against the buccal and labial surface of the lower teeth. The broken parts were carefully approximated, the teeth anterior to the molars were ligated to the bar, and the nuts on the posterior ends of the tubing were tightened. Strange as it may seem this little appliance positively immobilized the lower jaw and after 21 days good union had taken place. At no time was it necessary for the patient's lower jaw to be bound so as to rest against the upper jaw. During the first week the patient wore an occipital sling so as to give rest to the joint which had been dislocated.

CASE 3. Boy, age 4, had fallen down a stairway and fractured the outer alvolar plate covering the lower four incisors. The teeth with the outer plate were turned down and outward, tearing the gum tissue to the extent of causing considerable hemorrhage. Treat-

ment—depending upon the line of occlusion as a guide, nickel silver bands were accurately fitted to the first molars on each side. These bands were connected by means of a 16 gauge bar of nickel silver resting on the labial surface of the anterior teeth. The appliance was then cemented into place, thus firmly holding the broken parts in position. Great improvement took place and the applications were removed after 20 days.

CASE 4. Girl, age 16, seen March 27, 1910. She had fallen from a street car and sustained a fracture of the lower jaw between the left cuspid and first bicuspid. Nickel silver bands with tubing were fitted to the lower first molars. An arch bar was then constructed to rest on the labial surface of the teeth anterior to the molars. Nuts were placed on the posterior ends of the tubing. These were tightened to bring the broken bone into proper relation. All the teeth were then ligated with copper wire gauge 28. After several days the patient was able to partake lightly of food and suffered no inconvenience by so doing. Firm union took place after three weeks.

CASE 5. Boy, age 11, fell from the roof of a two story building striking his chin on the corner of a piano box. Upon examination I found a compound fracture of the superior maxillary bone in the region of the anterior teeth. The upper incisors were very loose, the crown of the left central being fractured. The mucous membrane of the upper lip was torn in several places and a portion of the fractured bone protruded over the gum tissue. The lower jaw sustained a simple fracture in the region of the left cuspid. The skin covering the chin was severely bruised. Treatment—after carefully cleansing the mouth and wounds the fractured bones were approximated. The boy refused to allow further manipulation so he was anesthetized and the torn membrane was repaired by suturing with horse-hair. Orthodontia appliances were then fitted to the upper and lower teeth which firmly immobilized the broken bones as well as the loose teeth. While I expected some infection in the upper jaw I was surprised to find good union taking place very rapidly. The root canal of the left central was kept clean and later on the family dentist replaced the lost crown with an artificial tooth. The boy's mouth is now in a splendid condition and I doubt if it could have been made so by using methods other than Orthodontia appliances.

The writer does not wish to imply that Orthodontia appliances will fulfill the wants in all forms of jaw fractures; but he is satisfied to say that usually Orthodontia methods are far more practical than other methods heretofore used. The splendid results obtained in a

large number of cases treated during the past seven years justify him in considering the appliances to be of inestimable value for many forms of jaw fractures.

PRACTICAL MEDICINAL THERAPEUTICS AS IT APPEARS FROM THE PRESCRIPTION FILE.*

BY JULIUS NOER, M. D.,
STOUGHTON, WIS.

"There are" says Robert Louis Stevenson "two reasons for the choice of any way of life; the first is, imbred taste in the chooser; the second, some utility in the industry selected." Again, "There are two duties incumbent upon any man who enters upon the business of writing; the truth to the fact and a good spirit in the treatment."

If these simple maxims are applied to the medical profession as Stevenson applies them to the literary writer, the problems with which this paper deals will be comparatively easy of solution and the results will be of inestimable value to our patients.

In order that you may appreciate the importance of the question from the layman's point of view, permit me to assume that you are in the position of the patient that comes to seek medical advice. In the choice of a physician you will naturally assume that he must possess two absolutely essential prerequisites, first, scientific knowledge of medicine and such clinical training as will enable him to make a diagnosis of your ailment, and secondly a sufficient familiarity with the remedial agencies, which clinical observations and scientific investigation has placed at the disposal of the medical profession. A violation of either of these prerequisites places the practitioner on a level with the quack who is long in promises, but very short when it comes to the question of scientific knowledge and professional honor.

Now, I realize that it is a serious matter to challenge the scientific attainments or the professional honesty of my colleagues. It is my desire to simply present facts as they exist and you are at liberty to make such conclusions as may suit your mind and your conscience.

If you will examine a few prescription files it will become evident to you that a very large proportion of the profession have ceased to depend upon the pharmacopeia or upon works on pharmacology for information regarding therapeutic drugs; nor do they any longer

*Read at the 64th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 22, 1910.

think it necessary to make clinical observation regarding the action of single drugs; it is the magic effect of the wonderfully potent mixture exploited in the trade circular of the pharmaceutical house, that has become the all prevailing therapeutic instructor of the profession. If this commercial propaganda is to continue unchecked, a time will come when the pharmacopeia will be under the exclusive domination of the manufacturing pharmacist.

If rational clinical therapeutics is to survive, it is clear that the manufacturing pharmacist must be held responsible for purity, standardization, and correct labeling of the drugs which he puts upon the market, while the physiologic action and the therapeutic indication and clinical uses of the remedy, must be left to the pharmacologist and the physician. The conglomerate mixture, of indefinite composition and with its wide range of general therapeutic applicability, must go the way of all the ancient curative fallacies and be replaced by the use of single drugs of standard purity, and definite clinical action.

In order to ascertain as far as possible the extent of the use of pharmacopeial remedies as compared with other preparations, an examination of prescription files in some twenty-four drug stores in different parts of the state has been made. About 7,000 prescriptions were looked over by myself, the balance being the work of druggists, and doctor's office assistants. It is manifestly difficult to classify the prescriptions found on a receipt file satisfactorily. An attempt has been made to follow the rules of the council on pharmacy and chemistry. The results of this examination are presented for your consideration under exhibit A.

Let me indicate to you some of the difficulties encountered in this work. A prescription calling for rhinitis, tonsillitis, conjunctivitis, anticonstipation or bioplasm, might reasonably be supposed to give even an experienced pharmacist some little difficulty, unless he is familiar with the special code. The habit of calling for certain trade and individual preparations by number is a not infrequent practice; e g. No. 185 P. No. 24 S. H. or 16-1-no initials, or Fe-Q. S.-no explanation. A lot of these hieroglyphic prescriptions are encountered. They are absolutely inexcusable.

Then we have the long list of preparations trade-marked with twisted scientific terms, which are evidently used to produce a favorable psychic effect upon the doctor who habitually prescribes them, under the delusion that he is using a new and wonderful remedy.

Rationally, we might prescribe lactated pepsin in elixir simplex U. S. P. or elixir pepsinii N. F. fully equal therapeutically as per scientific tests, to the brilliant and much lauded elixir lactopeptine; but the psychic effect would not be the same in each case, because in one instance we have simply scientific facts to deal with, and in the other only laboratory testimonials. We might write a receipt for an unguentum having the exact composition of any of the much used trade marked nostrums, but the effect would not be the same in each case because it does not end in "ine" nor has there been any campaign literature, or samples distributed.

It would be manifestly inelegant to prescribe anal suppositories, but if we twist the ending a little, and put a mythical ingredient into the composition, we have an anusol that can produce wonders. The files contain an abundance of prescriptions for these nostrums with pseudo-scientific names e. g. urispetin, uricidin, aseptol, enteronal, hydrozone, glycozone, glycothymoline, listerin, etc., etc.

Again we might prescribe acetanalid with salicylic acid sodium bicarbonate and caffeine with or without codein or quinine. The results produced would be in accord with the well known effects of these remedies. If, however, we change these drugs into antikamnia, penalgin, ammonol, salacetin, sal-codeia, etc. etc., you have a magical composition very often encountered on the prescription file.

Two conclusions are impressed upon my mind from this investigation of the prescription files namely, first, that talismanic therapeutics did not die with Paracelsus, nor has the Mother Church in Boston, a monopoly as a promoter of pseudo science; and second, the excellent work of the council on pharmacy and chemistry A. M. A. is not without cause and justification.

The question of vital importance to us is, however, what are we to do to improve the existing conditions as regards the use of proprietary and semi-secret nostrums.

The first and most obvious duty of every practicing physician is to uphold and to urge the continuance of the monumental work of the council on pharmacy and chemistry. Their exposition of fraudulent formulae and absurd therapeutic claims for exploited mixtures and vaunted new discoveries are of inestimable value to the practicing physician who has neither the time, the training, nor the facilities to make accurate pharmacologic investigations.

Secondly, the forthcoming new edition of the pharmacopeia should contain as nearly as is possible, the remedies which are in general use by practicing physicians, and which have been shown to

possess known therapeutic properties. This list is not easily prepared but a general agreement will be reached that will satisfy ninety-five per cent of the profession.

Third, a pharmacologic laboratory should be established by the American Medical Association, or such an institution could be organized as a corporation, the stock to be held by the A. M. A.

A laboratory of this kind could co-operate with existing hospitals and medical schools and would be able to furnish to physicians reliable information regarding the therapeutic virtues of the numerous new remedies which are daily clamoring for therapeutic recognition.

The cost of construction and maintenance ought not to be insurmountable for fifty or sixty thousand physicians. Inasmuch however, as the healing of the sick has always been considered one of the noblest of charities it might seem that right here is an opportunity for a Carnegie or a Rockefeller.

It might also be suggested that the bulletins of the council should be sent out to the entire profession regardless of association membership. The resultant educational effect would undoubtedly be favorable to the practitioner as well as to his patients.

Population of City.	Number of Files Examined	Total Prescriptions Examined.	U. S. P.	N. F. & N. N. R.	Proprietary Semi-Secret.	Nostrum Secret.	Unclassified.
6,000	2	1,021	654	36	130	39	30
30,000	3	1,296	771	102	147	47	230
20,000	3	691	459	7	188	5	32
.....	.	600	430	35	135	...	...
350,000	.	1,000	11	16	291	37	596
.....	3	1,000	661	16	232	89	2
.....	.	1,000	591	114	73	215	8
28,000	2	600	319	103	97	75	6
16,000	1	500	317	76	86	16	5
12,000	3	3,233	2,444	174	209	80	334
10,000	1	609	325	54	176	8	48
10,000	2	1,000	460	153	367	1	19
5,000	1	500	136	89	141	114	20
Totals..	21	13,050	7,578	975	2,272	726	1,330

Discussion.

DR. NOER (At the conclusion of the paper):—The number of prescriptions examined was nearly 14,000 of which the total number within the pharmacopeia was about 9,000 and 5,000 outside the pharmacopeia. In looking over these prescriptions the benefit of the doubt was always given to the physician, the rules of the council of pharmacy, and chemistry being followed in the classification. I classified for instance, as proprietary, the semi-secret remedies on one list and in another list those which were purely nostrums; but there is no such distinct line. The results are variable. Here is one that ought to challenge your interest, where 1,000 prescriptions were examined

which showed eleven within the pharmacopeia, about sixty within the National Formulary; and the class belonging to those approved by the council, while 596 could not be classified, or were mixed with nostrums and semi-secrets, and 291 were semi-secrets proprietary and about 37 absolute nostrums.

Coming to the city of La Crosse which I am anxious to call attention to because the president belongs up there, you have on one file some 506 examined, 307 within the pharmacopeia, 49 in the national formulary, 80 semi-secret, and 18 pure nostrums and 42 that could not be classified.

Another list: there were 398 in this list and running in the same classification as before, 260-3-113 nostrums 22 unused.

Another series of 1,000 in the city of Milwaukee gave 591 within the pharmacopeia, 114 from the formulary, 73 semi-secrets, and 215 nostrums.

Of 500 in Appleton 128 were pharmacopeia and the rest outside.

And so the list goes along in this way, varying somewhat. You can look it over when published. It will I hope furnish some facts for reflection.

Of 13,649 prescriptions examined in 21 different drug stores in 10 widely separated cities in the state, 9,348 were classified as within the pharmacopeia, the national Formulary, and the new and non-official remedy list of the council on pharmacy: 4,285, or about one-third are semi-secret proprietary nostrums, regularly prescribed by physicians who are supposed to know something about pharmacology and modern scientific medicine.

DR. A. S. LOEVENHART, Madison: We are all much indebted to Dr. Noer for his illuminating discussion and the painstaking way in which he has collected these interesting statistics. It certainly is not very encouraging. Naturally we look about us to see what factors there are to combat this growing nostrum and proprietary evil, and also what are the factors favoring its further extension.

In regard to the factors for the further extension of the nostrums and proprietary evil I might say just a word. We are speaking a great deal of preventive medicine and the altruistic tendency of medicine and the charitable nature of the profession, and it seems that physicians are determined to elevate the morale of the rank and file of practitioners. On the other hand we do not find such factors at work in regard to the drug business. The whole drug business is in a bad state in many ways, it seems to me. In the first place there is an immense amount of money involved. It is purely a business and the object of the business is to make money and nothing else. The vast majority—fortunately there are many striking exceptions—of the drug houses are interested purely and simply in the making of money, and are utterly unconcerned with the question of the public health. The remark applies to both the wholesale and retail drug business.

In regard to the factors at work in the improvement of prescribing I think there are two. In the first place the new revision of the pharmacopeia, and the second place a change in our methods of teaching. As long as there are small medical schools unconnected with universities that are incapable, through lack of funds and otherwise, of carrying on laboratory work to teach the students the fundamentals of pharmacology, and that do not possess the proper equipment to carry out this work, we cannot expect the student to go out into the world and practice medicine with anything like a knowledge requisite to determine the efficacy of a drug.

Every student should know when he leaves the medical school how the efficacy of a drug is determined; and with small medical schools unconnected with universities and unable to sustain large and expensive laboratories, this is impossible.

The crusade against poorly endowed, poorly manned and poorly equipped medical schools must result in the uplift of therapeutics.

In regard to the pharmacopeia I must say that the outlook is not as hopeful as I thought it would be two months ago.

I represented your society in the pharmacopeial convention at Washington last May and was very much dismayed at the meetings.

In the first place I found that many of the best medical schools in the country had either not sent any delegates to the Pharmacopeial Convention, or that they had not sent their full quota of delegates. I found that most state medical societies had either not sent delegates at all or else had not sent their full quota of delegates.

On the other hand all of the poor medical schools, all of the pharmaceutical associations, representatives of the drug trade, were there in full force and completely controlled and dominated the Pharmacopeial Convention. Politics was rife.

The retiring committee of revision, the committee of fifty, brought in certain recommendations for the revision of the next pharmacopeia, the most important being that all drugs which are known to possess no therapeutic value should be excluded from the pharmacopeia regardless of the extent to which they are used by the medical profession.

This recommendation was unfortunately lost by a large majority. The majority of the men in control in the convention did not want to exclude from the Pharmacopeia those drugs which are known to have no therapeutic value.

Now many of these men really represented drug interest in the main and they were working for what they thought were their selfish business interests. It was a very short sighted policy, nevertheless, from the standpoint of the drug firms, because if we look about us we see that the status of drug therapy is not what it should be. It should be stated that representatives from some of the large drug firms voted in favor of this recommendation. We have passed through the age of therapeutic nihilism—drug nihilism—drugs of no use in the treatment of disease! We have passed through that age and have now reached the constructive period. We have torn down the old. We see that drugs are of no avail in arteriosclerosis, cirrhosis of the liver; and that in organic disease we cannot do anything with drugs except to ameliorate some of the symptoms. We no longer expect impossibilities from drugs.

The question arises, have drugs any value, and if so, what is their limitation. Any one who goes into the laboratory and studies the effect of drugs on an anesthetized animal, where the psychic element is of course excluded, is bound to realize that a great deal of good can be gotten by the rational use of drugs; that can be demonstrated to anyone. I do not care how mentally inert he is he can be made to see that drugs are useful if properly applied in the treatment of disease. They are extremely valuable and supplement all our other methods of therapy.

I must say that I fear that the Pharmacopeial Convention overlooked a great chance to better conditions. The remedy is to come, as I have stated,

principally in the younger men, the students that we graduate, in the uplift of the schools, and secondly in introducing the pharmacopeia in our courses in pharmacology. At least that is the standpoint from which I see it as a teacher of pharmacology, yet I cannot at present recommend the purchase of a pharmacopeia to our students, when we know that of nearly 1,000 titles there are probably only 150 or 250 drugs that have ever been of any therapeutic value. For this reason I fear that the next pharmacopeia will not give us as much help along this line as we had hoped.

DR. JULIUS NOER (Closing): I think I have nothing more to add except one thing about the prescription file itself. I believe all old prescription files should be burned at the end of three months anyway. The refilling of old prescriptions is illegitimate and is one of the greatest sources in the country of producing drug fiends; and for that reason I think something should be done to see to it that that is wiped out.

CLINICAL DEPARTMENT.

FOOD FOR THOUGHT.

BY EDWARD EVANS, M. D.,

LA CROSSE, WIS..

Case I. Mrs. C. F., Housewife, mother of two children, consulted me July 12, 1910, giving the following history: In January of this year she caught "cold" and began to cough. This cough continued and she soon consulted her family physician who told her she had bronchitis and continued to treat her for this "Bronchitis" even up to the time she consulted me. In February she had "hemorrhage from the lungs" and had lost considerable flesh, but was still treated for "Bronchitis".

About this time she consulted another physician who was rather doubtful about her condition. His opinion disturbed her peace of mind and she consulted yet a third who thought she had "Bronchitis" and "weak lungs".

She then returned to her family physician and he continued to treat her, as above stated, for "Bronchitis".

On the above date I found this patient had lost eighteen pounds since the beginning of her illness; she had also lost much strength, she was anemic, pulse 120, temperature 99.6 and the right apex, front and rear as far as the third rib in front, was dull and had numerous moist rales; respiration was weak; expiration prolonged, and in her sputum numerous tubercle bacilli were found.

This patient had gone to her family physician in full confidence for treatment and was entitled to proper examination and care; yet in spite of the long continued symptoms and her marked deterioration in health she had never been examined properly. All three physicians

who had "examined" her before I saw her had not gone to the trouble of removing any of her clothing, consequently the examination was a complete farce.

My reason for reporting this case is to endeavor to awaken the profession to the absolute necessity of removing the clothing from the patient's chest, in such a case as this, if we should wish to examine properly. Of course we all know this but evidently all do not do it.

It is surely a grave moral responsibility to assume, on the part of a physician, to let a case like this drift on month after month, without proper diagnosis, which of course, can not be made without proper and perhaps repeated examinations.

Case II. August 24, 1910. A gentleman entered my private office and handed me his card which read X. Y. Z., M. D., * * * *, Iowa. He said he was on his way to Rochester with a patient when he induced her to get off here at La Crosse, and said he had the patient in the waiting room. He said "I suppose you know, doctor, why we do not like to take our patients to Rochester," I said "I did not as I supposed every body went to Rochester." He said "he did not like to take his patients there because the doctors paid him no commission." Further conversation was mostly on my part until the doctor left my office which was not very long.

When our interview ended he informed his patient, when she inquired why she did not see me, that he did not think he cared to do "business" with me.

As the readers of the Journal know I have had written communications asking for commission before, as I presume have all surgeons, but this was the first instance where an utter stranger approached me in this insulting manner.

When we read the Carnegie Foundation Report, of the conditions of the medical schools of this country, so far as the great majority of them exist and teach medicine, and when we see the announcement of certain medical schools declaring that there are two kinds of physicians trained in two kinds of medical schools; the one, the practical school, training practical physicians for family practice and the other a scientific school training their students for a more scientific career, we wonder if there is not more than a passing connection between those two cases which I have reported. In each case there is an unprofessional attitude on the part of the physician, and a total lack of moral, ethical and even intellectual responsibility which bodes ill for the poor individual who falls into the hands of such "practical" physicians.

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J. P. McMAHON, M. D., Managing Editor.

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Vol. X.

OCTOBER, 1910.

No. 5

EDITORIAL COMMENT.

PIGS IS PIGS.

There is no argument on this subject according to our friends the "Doctors" of Optics, Optometry, etc. If they are successful with the next legislature (and they may be—aided by the thoughtless replies eleven hundred Wisconsin physicians gave to their postal) we will soon have another army of "Doctors" thrust on an indiscriminating and easily bewildered public. A few months and we may walk down town some morning to find "Dr. Jones" in brilliant letters decorating the office door across from ours. The public will hail a new Doctor—a real specialist. We may feel somewhat distrustful, and upon breaking into his office and examining his diplomas and

state certificates with a reading glass, find that he is one of those new "Doctors of Optometry". The public wont know though! Tomorrow we may recognize in "Dr. W. Smith", whose new sign adorns the jewelry store, our old friend Bill Smith the watch-repairer. He no doubt will ask you in to see his new diploma hanged with care to display the gold seal and blue ribbon, and here a little nearer the window is his state license, almost a duplicate of yours. Oh fol de rol!

It will ill behoove you to throw mud at the man across the street, even though he be a "Master of Ophthalmic Optics" with a ten dollar correspondence school diploma: for he will have no less a sponsor than the State of Wisconsin, and that is all you have. He will go to the next legislature and ask that a bill be passed providing that all persons other than physicians who practice "Optometry" must pass a satisfactory examination before a board of examiners appointed by the Governor for that purpose. Eleven hundred physicians have failed to read between the lines and have endorsed this farce. Shade of Æsculapius! To think that we have been tricked into helping provide a cloak of authority for the Cut Rate Druggist, the Jeweler, and the Correspondence School Graduate!

There is still time to right this mistake. Every physician should write his assemblyman and state senator as soon as they are chosen at the next election. Every county society should pass resolutions on this at their next meeting and send them to the members of the legislature. Do it now, DO IT NOW!

ACUTE ANTERIOR POLIOMYELITIS AND THE TREATMENT OF ITS EARLY STAGE.

The reappearance of cases of spinal paralysis in Wisconsin, calls our attention once more to the important question of treatment. The crippling and disability which follow this disease are of such tremendous importance in the after life of the patient that every effort must be made to secure the best possible results. While the mortality rate varies in different epidemics, ten per cent might be considered as fairly representative. But the number of complete recoveries is not much greater than this figure and may be estimated at from ten to fifteen per cent. There remain, therefore, from seventy-five to eighty per cent of the total number of cases with more or less extensive permanent paralysis.

The experimental work which has been carried on with the virus of this disease has made clear many points in connection with its

pathology but it has not as yet thrown much direct light upon its therapeutics. One reason for this may be the great mortality from poliomyelitis among the experimental animals. In some series of inoculations all the monkeys infected have died. But indirectly, from the fuller knowledge of its pathology, some ideas have been suggested which may prove to be of value.

First as to its communicability. Wickman has come to the conclusion that practically every case has had contact with another, either directly, or by an intermediate healthy person, or by means of a house.

From the report of the Massachusetts Board of Health the following instances are cited: "From a German village where there had been no case for ten years, the wife of a railroad officer took two children to visit in a village where the disease existed. Five days after their return both children developed infantile paralysis and one died."

"In a small German city there had been no case for many years. Two healthy women came from an infected village to visit. Eight days later a child of the house where they were staying developed infantile paralysis. The healthy children of this house visited the school where the teacher's children lived. In a few days the teacher's child sickened with infantile paralysis."

"On the other hand the disease is evidently not very transmissible. In the epidemic in the Deerfield valley, so carefully studied by Emerson, there were 67 cases. There were 166 other children in the families of those affected, and 86 other children known to be in intimate contact with the 67. Of these 252, 4 later developed the disease."

With these facts in mind, it becomes our duty to aid the state and local health authorities in investigating every case of poliomyelitis and also to instruct our patients that the disease is at least mildly communicable.

Strauss in a recent paper says that aside from the nervous system, the internal organs exhibit changes such as are to be expected in an infectious disease, but that "the most striking and significant lesion in the internal organs is the acute enlargement of the solitary follicles and Peyer's patches of the small intestine and the acute inflammation of the mesenteric glands." That this is an early lesion is shown by its presence in one case in which death occurred only three hours after the onset of the paralysis. Strauss goes on to say that "the presence of this lesion taken in conjunction with the history of anorexia, vomiting and diarrhoea, which often occur early in the disease, led us to the assumption that the gastro-intestinal tract may be one point of

entrance of the virus." Leiner and Wiesner have proven experimentally that infection may take place in this manner. Flexner has shown that infection may occur through the mucous membrane of the naso-pharynx and it is probably that we have in these locations the most important portals of entry of the virus.

The study of the nervous system in poliomyelitis shows that even in the mild cases the extent of the inflammatory processes is much greater than was formerly supposed. The inflammation in the cord is probably always accompanied by an inflammatory process in the pia mater. This meningitis is most marked in the sacral, lumbar, and cervical regions of the cord, but extends to the medulla, pons, cerebellum, and even to the cerebrum. The pathological processes in the cord depend primarily upon vascular and interstitial tissue changes and the ganglion cells are secondarily affected. "The ganglion cells which are degenerated always lie in an area which is markedly infiltrated but the converse is not true for often normal ganglion cells can be found in an area of intense inflammatory change." In those cases in which complete disappearance of the paralysis occurs, it is probable that the inflammatory edema and the infiltration have cleared up before irreparable injury was done to the ganglion cells.

The means which have been used to help limit this infiltration and edema and thus favorably influence the course of the disease, have been numerous and unsatisfactory. Recently, however, Hohmann has advocated the method adopted by Lange of applying a plaster-of-Paris jacket in a position of slight lordosis. Lange noticed that in the initial stages of the disease even the slightest movement of the spinal column caused evident pain which was perceptibly diminished within a few hours after the jacket was applied. Hohmann suggests that the fixation of the vertebral column may favorably modify the inflammatory process in the spinal cord and our present knowledge of the pathological condition at this stage thoroughly justifies this view. The cases reported warrant further trial of the method. The first essential is an early diagnosis, for it is only the early stage that could be influenced, but this ought to be possible when we bear in mind the existence of the disease in Wisconsin.

Another therapeutic suggestion worthy of consideration is the liberal use of hexamethylenamine (urotropin, cystogen, formin) in the early stage with the idea of exercising an antiseptic action in the body fluids, especially in the cerebro-spinal fluid. In a number of cases good results have appeared to follow its use.

We are still so far from knowing the conditions influencing the

severity of the attack that a successful result in a few cases must not not mislead us into expecting too much. But the suggestions given have the advantage of being safe procedures and therefore merit consideration.

COMMISSIONS.

“The question of commission for referring patients to specialists, or on prescription, has been frequently discussed in medical circles. It is generally conceded that the receiving of a commission by the attending physician is reprehensible to the highest degree, and for the following reasons:

1. A commission may and usually does influence the recipient in sending the patient to the highest bidder.

2. It is a petty form of graft with its demoralizing influence.

3. The patient is not aware of the extra tax and consequently has no voice in the transaction.

4. It is a cowardly and dishonest act which cannot but make both parties to the transaction cowardly and dishonest.”—A. R. in Delaware State Medical Journal.

NEWS ITEMS AND PERSONALS.

Dr. F. M. Brewer, Ft. Atkinson, is ill in St. Mary's Hospital, Milwaukee.

Dr. T. E. Loope, county supervisor, town of Eureka, is convalescing from a long illness.

Dr. F. A. Kraft, was appointed health commissioner of the city of Milwaukee on October 10th.

Dr. J. W. Hammond, who recently completed a post-graduate course in New York, has resumed practice at Wyocena.

Dr. J. E. Reichert, Schleisingerville, has gone to Chicago, where he will take up special work in the Senn Laboratory and Hospital.

Dr. W. J. Ragan, Jr., Shawano, has received the appointment of government physician at Neopit, and will enter upon his new duties at once.

Dr. Wm. Lorenz, staff physician of the Illinois State Insane Hospital at Kankakee, has entered the Mendota Institution as a medical superintendent.

Dr. W. L. Herner, Oshkosh, has been appointed a member of the staff at the Northern State Hospital for the Insane, by the State Board of Control.

The Visiting Nurses Association, Milwaukee, in a formal letter issued on September 25th, announces that it will soon open a campaign for funds to endow and maintain its work.

The Wisconsin College of Physicians and Surgeons opened to medical and dental students on October 2d. The enrollment in both departments will exceed that of last year.

An endowment fund of \$150,000 is being raised, several thousand of which has already been subscribed. The fund is to be used in the thorough equipment of the school and to insure the continuance of the established free dispensaries.

Dr. F. W. Kitzki, Tomah, has leased the Lusitania Hospital, recently vacated by Dr. Henke.

An epidemic of diphtheria at Fond du Lac has necessitated the closing of some of the schools.

The Board of Trustees of the Milwaukee Hospital for Insane at their last meeting created a Receiving ward where all patients entering the hospital, except the extremely disturbed, will be received.

As this ward will receive a class of patients who require more active or individual treatment it will have the character and equipment of a psychopathic ward.

For want of space this innovation applies only to the women. The erection of a Psychopathic Hospital on the grounds is contemplated, whereby the treatment would be extended to both sexes.

The Extension Division of The University of Wisconsin has arranged an institute of municipal and social service in Milwaukee, the object of which is to aid in fitting men and women for more intelligent and effective social and municipal service. Included in this Institute is a special course for visiting and instructing nurses.

This course includes a half-hour lecture by Mrs. Spencer, or by local experts on various topics followed by round-table discussion with subjects assigned to class in advance.

Sub-Topics:—

1. The History of Nursing, Private and Public.
2. The Organization of Visiting and Instructive Nursing in the United States.
3. The Relation of Visiting Nursing to Charitable Relief.
4. The Relation of Visiting Nursing to Medical Relief.
5. The Relation of Visiting Nursing to the Public School System and Child-Saving.
6. The Relation of Visiting Nursing to Anti-Tuberculosis and other Health Campaigns.
7. The Relation of Visiting Nursing to Convalescent and Sanatorium Care.
8. The Relation of Visiting Nursing to the Family Life of Patients.
9. The Relation of Visiting Nursing to Churches, Settlements, and Neighborhood Centers.
10. The use by Visiting Nurses of Volunteer Aid.

Deaths.

Dr. George E. Vincent, Tomah, a practicing physician for many years, president of the village board and a former member of the legislature, died on September 18th, aged 67.

Dr. C. E. Phillips, a former well known physician of Wilton, died on September 17th at Silverton, Ore. Death was due to pneumonia. Dr. Phillips was 57 years of age.

Dr. M. D. Lane, Wautoma, formerly an active practitioner of the village, died on October 5th, the result of a paralytic stroke.

Dr. George Witter, a former resident of Grand Rapids, was killed on October 5th, in an automobile accident, at San Jose, Cal.

Dr. O. F. Thomas, for over 30 years a practicing physician in Lakeland, died suddenly of heart failure, on September 28, aged 67 years.

Dr. Peter Orrin Stonebraker, formerly widely known in Racine and Kenosha Counties, died at Sioux City, Iowa, on September 28th.

Dr. Stonebraker was a son of the late Orrin C. Stonebraker, one of the best known of the pioneer residents of the town of Bristol. He was born in Bristol September 6, 1865, and after graduation from Rush Medical College in 1892, he went to the town of Somers to practice medicine, later moving west.

Dr. Fred Norris Brett, Green Bay, died on September 22, after an illness of several months duration.

Dr. Brett was born at Broadhead, in Green County, on November 9, 1871, and came with his parents to Green Bay in 1872. He attended the public schools here and when 16 years of age went to the Minnesota State Normal School. He lived at Duluth for a short time and later entered Rush Medical College. He was graduated in 1896, and was engaged in the practice of medicine with his father at Green Bay.

Removals.

- Dr. P. O. Schallert, Jefferson to Winston-Salem, N. C.
 Dr. E. S. Garner, Red Granite to Stevens Point.
 Dr. B. Ravn, Merrill to Iola.
 Dr. John Prill, Sparta to Bloomer.
 Dr. C. J. Rollefson, Strum to Chippewa Falls.
 Dr. O. P. Schmetzky, Elkhart Lake to Milwaukee.
 Dr. Sinz, Plymouth to Glidden.
 Dr. C. W. Semm, Milwaukee to Ripon.
 Dr. L. W. Juergens, Portage to Eureka.
 Dr. E. J. Tiedeman, La Crosse to De Soto.
 Dr. T. F. Manning, Juneau to Lomira.
 Dr. A. L. Travis, Princeton to Ripon.
 Dr. R. B. Hoermann, Watertown to Milwaukee.
 Dr. Thomas R. Jones, Winnebago to Ripon.
 Dr. Lewis Friek, Glidden to Minneapolis, Minn.
 Dr. C. P. Hutchins, Madison to Bloomington, Ind.
 Dr. C. A. Kissinger, Melrose to Milwaukee.
 Dr. W. H. Lewis, Eau Claire to Aniwa.
 Dr. J. L. Bender, Boaz to Yuba.
 Dr. John Tasche, Glen Ullin, Minn., formerly of Sheboygan, will return to the latter city.
 Dr. Wayne Cowan, Almond, but who for the past five years has been practicing at Washington, D. C., will locate at Stevens Point.

Marriages.

- Dr. F. D. Cook, Chippewa Falls, and Miss Mabel Crouse, South Wayne, September 13th.
 Dr. O. A. Christianson, Luxembourg and Miss Augusta Dishmaker, September 16th.
 Dr. C. B. Richards, Waldo, and Miss Annette Driver, Racine, September 22.
 Dr. A. L. Vanderlinde, Wild Rose, and Miss Frances Wills, Weyauwega, September 29th.
 Dr. E. B. Stebbins, Hurley, and Miss Gertrude Eichten, Stillwater, Minn., September 30th.
 Dr. H. A. Pfeiffer, Jackson, and Miss Frances Murray, Manawa, September 30th.
 Dr. Samuel Bell, Beloit, and Miss Anna B. White, September 20th.

THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORGANIZED 1841.

Officers 1910-1911.

BYRON M. CAPLES, Waukesha, President.

J. M. Dodd, Ashland, 1st Vice-President.	Wilson Cunningham, Platteville, 3rd Vice-President.	T. J. Redelings, Marinette, 2d Vice-President.
CHAS. S. SHELDON, Madison, Secretary.	S. S. HALL, Ripon, Treasurer.	
ROCK SLEYSER, Waupun, Assistant Secretary.		

A. W. GRAY, Milwaukee, Chairman Program Committee.

G. E. SEAMAN, Milwaukee, Chairman Medical Defense Committee.

J. P. McMAHON, Milwaukee, Chairman, Committee on Public Policy and Legislation.

Delegates to American Medical Association.

L. F. Bennett, Beloit.	C. S. Sheldon, Madison.	A. H. Levings, Milwaukee.
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Alternates.

F. S. Wiley, Fond du Lac.	Wilson Cunningham, Platteville.	R. G. Sayle, Milwaukee.
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Councilors.

TERM EXPIRES 1911.		TERM EXPIRES 1914.	
1st Dist., H. B. Sears, - - Beaver Dam		7th Dist., Edward Evans, - - La Crosse	
2nd Dist., G. Windesheim, - - Kenosha		8th Dist., T. J. Redelings, - - Marinette	
TERM EXPIRES 1912.		TERM EXPIRES 1915.	
3rd Dist., F. T. Nye, - - - - Beloit		9th Dist., O. T. Hougen, - - Grand Rapids	
4th Dist., W. Cunningham, - - Platteville		10th Dist., R. U. Cairns, - - River Falls	
TERM EXPIRES 1913.		TERM EXPIRES 1916.	
5th Dist., J. V. Mears, - - - - Fond du Lac		11th Dist., J. M. Dodd, - - Ashland	
6th Dist., H. W. Abraham, - - Appleton		12th Dist., H. E. Dearholt, - - Milwaukee	

NEXT ANNUAL SESSION, WAUKESHA, 1911.

The Wisconsin Medical Journal, Official Publication.

SOCIETY PROCEEDINGS.

SECRETARY'S NOTES.

The summer is past. Vacation is over, and now the trumpet calls to a new campaign and a further advance all along the line. The personnel of the army is excellent. The quality of the material is good and getting better every year. There is, quite generally, a spirit of harmony and loyalty which promises well for the future. What we still lack is more perfect organization, better discipline, and a more genuine enthusiasm for our work. These defects and shortcomings can be corrected, but, to make good, we must all work together, and for a common object. We must realize more keenly that we belong to a great profession which has a character and personality of its own, and that these are wholly determined by the attitude of its individual members. The profession of Medicine is just now slowly awakening

to a consciousness of its own existence, and even if progress in this regard is slow, it is none the less real and permanent. The County Medical Society is each year gaining a stronger foothold as a permanent institution, and, with our 1,500 members, we have been reasonably successful—so far as numbers go. The points to emphasize now, are to secure a more direct and united action in matters affecting the profession as a whole, and especially to stimulate a higher and more uniform standard of scientific work. The number of societies which exist on paper only must be reduced to a minimum. Our standards should be such that if any hostile critic shall ask, "What is the use of a County Medical Society," the work which each Society is doing shall offer a ready and satisfactory reply.

THE JOURNAL.

Let us keep the Journal—which we now own and are personally responsible for—constantly in mind. Like everything else its value depends upon the use we make of it. Its pages are freely open to every member of the Society and if we but choose to utilize its splendid opportunities, it would become the most valuable asset in our possession. It is altogether the best medium for effecting any common purpose we have in mind, and for keeping us in touch with one-another in every way. Every County Secretary should consider himself one assistant editor, and make it a point to send to the Editor of the Journal not only a full report of the regular meetings of the Society, but also personal items of every description, and the most noteworthy papers which are read. The whole membership should report interesting or unusual experiences—ask aid in difficult cases, etc., and make it a general clearing-house for all matters of interest to the profession as a whole.

TO THE COUNTY SECRETARIES.

"Line upon line and precept upon precept." A word, which doubtless has a very familiar sound, may not be amiss just now. Now is the time to gather into the fold the stragglers who were missed last spring. Correct the card-index up to date, and be sure to include every new man who has come into the County during the year. Most of them can be secured as members if properly approached. "Be wise as serpents and harmless as doves." Emphasize the value of our plan of Medical Defense. Convince them of the necessity of organization as affecting progress and reforms in the medical profession, and then show them such a carefully prepared and attractive program of scienti-

fic work for the year, that it will not be necessary to say another word. Moreover, if this year's program has not been already prepared and printed, "do it now!" Whether the meetings are monthly, or less often, it is far better to prepare the program for the whole year, since, while you are about it, the effort is not much greater than it is for a part of a year. When prepared, loyally abide by it. Hold the meetings strictly upon the dates, as announced, so that there will be no doubt nor misunderstanding about it. This matter of the scientific program can not be too strongly emphasized. The quality of the scientific work accomplished is certainly the best test of the value of the efficiency of the Society. We can not afford to stand still, but each year should show a steady growth in this particular. Progress here means progress for the whole profession, and each member of all these 51 County Societies should do his part in promoting it.

It is well to urge again that, if we have it in mind to offer any new measures or amendments at the coming session of the Legislature, that now is the time to get them carefully considered and put in proper shape. The measure most frequently mentioned is one reorganizing our Medical Examining Board. We are realizing more and more how fundamentally important this Board is. It not only determines the character and attainments of the physicians who are admitted to practice in the State, but it is probably the most influential factor in advancing the standards of Medical Education. It should be composed of absolutely the best men in the profession, without regard to their teaching capacity, and should be given adequate financial support. There may be other measures, but whatever they are, we should not delay their preparation till the time of the meeting of the Legislature.

C. S. S.

**THE ASSOCIATION OF
COUNTY SECRETARIES AND STATE OFFICERS
OF THE STATE MEDICAL SOCIETY OF WISCONSIN.**

T. J. REDELINGS, M. D., Marinette,
President.

W. F. ZEIRATH, M. D., Sheboygan,
Vice-President.

ROCK SLEYSER, M. D., Waupun, Secretary.

NEXT ANNUAL SESSION, WAUKESHA, 1911.

Under this heading will be published each month, papers, editorials, sermons, reports of meetings and all that relates to the County Medical Societies of the state. To it all are invited and asked to contribute, especially the County Secretary. It is your—make good use of it, and may it be of help to every County Society. It will be edited by Rock Sleyser of Waupun, secretary of the new association, to whom all communications for this department, reports of meetings and news matter should be addressed.

CONSTITUTION.

ARTICLE 1.

This organization shall be known as the Association of County Secretaries and State Officers of the State Medical Society of Wisconsin.

ARTICLE 2.

The purpose of this association shall be to bring together annually the secretaries of the various county societies of Wisconsin and the officers of the state medical society, to discuss methods and plans for maintaining and furthering these organizations.

ARTICLE 3.

The place and time of meeting of this association shall be at the place and time of meeting of the state medical society in regular session, or such place or time as this association may decide.

ARTICLE 4.

The membership of this association shall be composed of all the secretaries of the county medical societies of the state medical society of Wisconsin, the executive officers and the councilors of the state society.

ARTICLE 5.

The executive officers and delegates of the county societies shall be honorary members of this association.

ARTICLE 6.

The officers of this association shall be a President, Vice-President and Secretary; and they shall be elected annually by ballot.

ARTICLE 7.

Amendments to this constitution may be made by a majority vote of members present at any regular meeting.

REGISTER OF ATTENDANCE.

First Annual Meeting, Association of County Secretaries and State Officers.

W. F. Zeirath, Sheboygan.	J. H. Cleary, Kenosha.
Daniel Hopkinson, Milwaukee.	H. Stalker, Kenosha.
W. M. Ruckle, Grand Rapids.	Flora A. Read, Fond du Lac.
Rock Sleyster, Waupun.	Edward Evans, La Crosse.
Sidney S. Hall, Ripon.	R. E. Davis, Waukesha.
L. J. Dreissel, Barton.	J. M. Dodd, Ashland.
Chas. S. Sheldon, Madison.	M. B. Glasier, Bloomington.
A. T. Gregory, Elroy.	M. J. Sandborn, Appleton.
E. L. Boothby, Hammond.	G. Windesheim, Kenosha.
H. W. Abraham, Appleton.	J. J. Schoof, Malone.
G. F. Adams, Kenosha.	T. E. Loope, Eureka.
V. F. Marshall, Appleton.	A. J. Schimek, Manitowoc.
T. J. Redelings, Marinette.	J. A. Schmidt, Brillion.
F. P. Dohearty, Appleton.	Carl F. Feld, Watertown.
L. J. Friend, Merrill.	W. L. Herner, Oshkosh.
M. V. DeWire, Sharon.	John L. Fleek, Brodhead.
T. E. Loope, Jr., Iola.	R. H. Buckland, Green Lake.
H. A. Jegi, Galesville.	W. H. Banks, Hudson.

George H. Simmons, Chicago.

The initial meeting of the county secretaries and state officers was called to order at the rooms of The Milwaukee Medical Society, June 21st, 11 A. M., by President E. Evans with the above attendance. The morning's session was given to a discussion of effecting a permanent organization, and a committee was appointed to draw up articles of constitution. The afternoon session was called to order at 1:30 P. M. The report of the committee appointed in the morning was accepted, officers were elected for the coming year, and the remainder of the afternoon given to the program, the first number of which follows. Following the regular program a banquet was held at the Pfister Hotel. The meeting was a splendid success from every point of view.

The papers read will appear monthly in this department together with the discussion they brought out.

AIMS AND DESIGNS OF THIS ASSOCIATION.*

BY CHAS. S. SHELDON, M. D.,

Fellow Laborers: It gives me greater pleasure than I can express to welcome you all to this 1st Annual Conference of the County

*Address delivered at the First Annual Meeting of the Association of County Secretaries and State Officers, Milwaukee, June 21, 1910.

Secretaries of the Component County Medical Societies of the State Medical Society of Wisconsin. You may rest assured too, that I fully appreciate the high honor conferred in assigning to me such a delightful task. The subject which has been given me on the program by Head Booster Sleyster, is "The Aims and Objects of this Conference." On such occasions as this, it is always the proper thing for some one to enquire, "What, Mr. Chairman, is the object of this meeting?"—but I feel that it is unnecessary for me to occupy very much of your time in answering such a question. The uses and usefulness of such a gathering as this are as plain as a pike-staff. The only difficult question to answer is why we have not had such meetings always. In the first place, I wish to disclaim any originality so far as the idea is concerned. I had received the accounts of similar meetings in other states and had been impressed with their great usefulness in bringing the County Secretaries in closer touch with each other and with the work of the State Society. In fact, I have long realized that one of the happiest faculties of the human mind is to know a good thing when you see it, and then appropriate it as your own. For years, I have had it in mind to hold a meeting of the County Secretaries during the sessions of the State Society, but our time has always been so fully occupied that each year it has seemed impossible. Last year, however, at the Madison Meeting, I determined to lay my plans a year in advance, and see if I couldn't do better. Now, as it happened, for some years I had noticed that the Secretary of the Calumet County Medical Society (that is a little bit of a County way up North, you know), had shown an unusual and particular interest in his work. (You may think it strange that I should notice this, but, as a matter of fact, there is a difference in County Secretaries in this regard.) He was always writing me voluminous letters and seemed to have ideas. I had never met the young man, but he came down to the Madison Meeting, and from the cut of his jib, he looked as if I might work him. While we were enjoying that sumptuous repast across the lake at Mendota, Friday afternoon, he sat at a table near by, and I could plainly see, by the expression of his countenance, that he was hungering and thirsting after some hard work. My mind was made up in a moment. I went over to him and said, "Sleyster, I've got a lot of work to do this next year, and you must help me out." I then explained to him about this meeting and what I wanted him to do. I said, "I shall put the whole responsibility on you. If it's a failure I shall wash my hands of the whole thing, but if it's a success, I shall expect to get every bit of the glory." He accepted these hard conditions with a smiling countenance and went home to work it out. After he had been there

a while he hatched up that scheme of his about the "Booster Club" and "2,000 for Milwaukee in 1910" and wrote me about it. I gravely smiled at the enthusiasm of youth and inexperience, but told him to boost away,—the harder the better,—and that maybe something would come out of it,—that a number of us had been trying to boost in our feeble way for several years, but that plenty of chances for boosting were left yet, and that this idea of his to boost harder was a good one, and we would adopt it. Well, Sleyster has made quite a clatter, and has clearly vindicated his title of "Head Booster". He has secured, personally 119 applications, of which number we have secured as members and collected their dues nearly all. As to his measure of success in getting up this program, we shall have to wait and see how it turns out.

I must confess that, in forwarding this scheme, my motives have not been entirely free from selfishness. In the pursuance of my official duties as State Secretary the spirited correspondence with all these 60 County Secretaries, which springs up in the pursuit of our common aims and objects, becomes to mean to me more than a formal and official matter. A genuine friendship, on paper, is almost always the inevitable result. This is good as far as it goes, but my soul has been filled with an earnest desire to meet, face to face, the noble men and women who, for small pay, and no thanks to speak of, are spending and being spent in this glorious enterprise in which we have all enlisted—the task of trying to transform 150,000 separate, disjointed, disorganized, and sometimes disloyal doctors—without a common purpose, and apparently without common interests, into our compact, harmonious and efficient medical profession. As I have said, this courtship by correspondence,—this absent-treatment business,—is too cold and distant. My ardent temperament craves more intimate relations, and I want, rather, to grasp you by the hand, and look into your faces, and read there the omens of final success and victory. Therefore, I assure you, that, to me, one of the chief pleasures of this meeting is to behold you in the flesh, gathered together in one body, and see with mine own eyes what manner of men and women you are who are carrying on this work. And here, just a word about the work. What is it? And what has been thus far accomplished? Although ours is unquestionably the greatest and best profession in the world, the most progressive, too, in spite of its defects, and with unlimited opportunities, if properly directed, of doing all manner of good things, both within and without the profession, yet, for a long

time, it had been clearly evident that a screw had been loose somewhere, and that we are not living up to our high privilege.

There was too much of the spirit of "every man for himself and the devil take the hindmost." And, even if we were not "going to the devil", the devil gathered in not a few. There seemed to be lacking in the profession a sense of unity and solidarity—of that "Esprit du corps" which makes a man proud of the greatness, and jealous of the honor of the order to which he belongs, and which makes him eager to defend the good name of a fellow member because he is a member. The popular notion that doctors are usually at sword-points, and are natural enemies rather than natural friends, seemed to be borne out by the facts in many communities. Where there should have been friendship and co-operation, with the mutual benefits arising from such relations, there was too often clearly manifested a spirit of jealousy and hostility and detraction. The inevitable result was a lowering of the public estimate of the whole medical profession. People won't think any better of you, than you think of yourselves, and they were apt to take us at our own valuation. A selfish commercialism was too often present in place of a professional altruism, and a true scientific spirit. The medical expert had become a byword and a joke, while mal-practice suits were made easy by the alliance of disloyal medical men with unprincipled shysters. With the profession apparently divided into a number of hostile sectarian camps we were hopeless in our attempts to secure sorely-needed legislation, and to raise the standards of medical education. The legislators would say to us, "when you have come to an agreement among yourselves on these measures, we will listen to you, otherwise you must wait." For one reason and another medicine and medical men did not seem to be "popular"—that is, they did not seem to be accorded that degree of respect and consideration which their merits and position deserved. One evidence of this was the ready acceptance of such medical fads and hum-bugs as Christian Science and Osteopathy and the like. And so the catalogue might be indefinitely extended. Truly a sad picture! But what could be done about it? It was evident that the disease was constitutional, and might possibly be organic—that the remedies must be thorough and act upon the whole body politic, that the movement must be from within outward, and must be carried forward by higher and better ideals in the profession itself.

The solution of this problem was undertaken by the American Medical Association, and a committee was appointed, of which Secretary Simmons and Dr. J. N. McCormick were the most active mem-

bers. They felt that the first and most important step was a more thorough and perfect organization of the whole profession, and upon a broader and more liberal basis. The slogan was "get together", and inscribed upon it's banners, "a house divided against itself cannot stand." To accomplish the desired ends it was wisely planned to stimulate afresh the "Medical Society Spirit" throughout the whole profession, and to make Medical Societies universal, rather than sporadic. The County Medical Society was made the unit of organization, and membership here was made the condition of membership in the District, State or National Organizations. Past experience made this benevolent,—if somewhat forcible,—assimilation, necessary, and it has proven effective. As in every other department of human endeavor, organization is proving its value and necessity as a means to higher ends. We need not be a "trust"—we need not imitate the methods of the labor unions, but we can, if we will, stand together for those things which we think to be best for our profession and for the communities in which we live. To be sure, in a sense, this movement is only begun. The seed has only been sown. These evils which I have mentioned have, by no means, been wholly corrected. The goal we seek, "a profession of educated gentlemen" is far away, and neither you nor I may be able to reach it in our lives, but already material progress has been made. A better professional spirit is gaining ground. The leaven is gradually leavening the whole lump. The gospel of "Peace and Good Will" is gaining converts. *On the whole* there is less of narrowness and intolerance, and more of reason and good sense. Human greed and selfishness are factors always to be reckoned with, but their manifestation will be less in evidence as a corrected professional sentiment rebukes them. Since this movement began, the standards of Medical Education have been rapidly advanced. We have fewer Medical Colleges than we had 10 years ago, but their character and work have improved to a marked degree. Medical legislation, too, though still unsatisfactory, has gone steadily forward, and all our states now require some definite qualifications for the practice of Medicine. Sanitation and Preventive Medicine have made great strides, as is evidenced by our lessened infant mortality, the greater care for the physical condition of the children in our schools and the crusade against Tuberculosis. Thus gradually some order is coming out of chaos, and this advance, all along the line, has been brought about almost entirely through agencies connected with the Medical profession.

Even here in Wisconsin, though we cannot as yet speak boast-

fully, I am sure we are laying the foundation for better things. Although the reorganization plan was adopted 6 years ago with some misgivings, time and experience have already abundantly vindicated its wisdom and efficiency. Results are not yet as evident as they will be, but still the change is already marked. Before the reorganization plan was adopted, in spite of the most strenuous and persistent effort, not over a dozen County Medical Societies could be kept alive, and it was generally a precarious existence at best, and with them were three or four District Societies. The State Medical Society numbered only about 600.

We now have 54 regularly organized County Medical Societies and a membership in the State Medical Society of over 1,500. I regret to say that it is entirely true that not all of these so-called Medical Societies fully warrant that appellation. A few, but I believe their number is yearly growing less, exist only on paper, by virtue of their organization. In *most* of them the scientific work is susceptible of great improvement. There are numerous reasons to account for this, temporary in their nature, we hope, which need not be mentioned. But even now we can see evidence of substantial improvement. There are at least 25 of these Societies which hold quarterly or monthly meetings with well-digested programs. Fairly good work is done in 20 others, according to the kind of Secretary they happen to have. But, with it all, meanwhile, the Medical Society Spirit" is taking firmer root all over the State. There is a growing appreciation of the real significance and importance of this whole plan. The entire profession is realizing more and more that if we are to accomplish the things which we desire, it must be by acting *together*. A realization of the benefits, and even necessity, of organization in general, is making it easier to maintain our County organizations. Fundamental principles have been pretty well learned, and now the most important, and sometimes the most difficult thing to do, is to get hold of the right sort of a man for the County Secretary. (As a matter of course all who are here to-day are absolutely above suspicion.) There are other influences which are working toward the same end. Our plan of Medical Defense, not only makes for solidarity and unity, but is a striking object-lesson as to what we may do in other directions. The fact that we are all banded together to defend one another against the unjust attacks of blackmailers and legal shysters, gives a real meaning to the "Yours fraternally" with which we usually close our letters.

We are becoming broader and more liberal in our ideas. We

think less of sectarian and other accidental distinctions, and more of the man behind them. What is his character? What are his acquirements? What is his true professional worth? I do not think I have overstated the facts in this summing up of the results of the reorganization movement, and I fully believe that it will go steadily forward, to greater things. In fact we are only on the threshold of achievement, and some of us, like Moses of old, can only gain a glimpse of the promised land before we give way to others who are to come after us.

Some may say nay-nay, but it is too late. The child is born! Organization has come into the life of the Medical profession, and it has come to stay.

I have gone over this ground in the way that I have because the *reason*, the *object*, of our meeting together today in this conference, is to gain greater efficiency and success in the prosecution of the work which I have attempted to describe! And I have dwelt on it as *fully* as I have, that our minds might be better prepared, both to comprehend intelligently the work as a whole, and to attack more successfully the solution of the specific problems with which we have to deal.

We have come together, officers, councilors, and county secretaries, from all parts of the State, each with a story to tell a little different from any other, because of the different conditions under which we do our work. We can help each other a whole lot if we only try. Let us make it an old-fashioned Methodist experience meeting, and just free our minds completely in this whole matter. We are here to oil up the machinery, so that the out-put of the concern this coming year shall be at least 25 per cent more than it was last year. We want the accumulated experience of all for the benefit of all. If any one has had any happy experiences, or has tried any new plan which has worked out well, we want to hear all about it. Bring also, your trials and tribulations, your failures and discouragements, and we will lend a sympathizing ear, while we try to provide a remedy.

The county secretary bears a grave responsibility and we cannot over-estimate the importance and seriousness of his high office. He is the "deus ex machina", from whose fertile brain must come the inspiration and the impetus which shall make out of the dead body a living soul, an active and efficient organism. He must possess not only the "suaviter in modo" but especially the "fortiter in re." He must promptly collect the dues and maintain the organization.

He is responsible for the scientific program and must foster by all means possible the scientific spirit in the Society. He must make it not only useful, but attractive. He must remember that doctors are social beings, and that often the greatest service he can render the profession is to bring the members into pleasant social relations with each other, so the social features of the meetings must not be neglected. What is the best method of preparing our scientific programs? How often shall we hold our meetings and at what hour? In what way can the organization be kept alive and vigorous? These and other like questions are here today for our consideration and discussion. Let us swap experiences,—compare methods,—get hold of new ideas, and so gain a fresh inspiration and a wider knowledge of the work of the County Secretary; and, with it all, let us get better acquainted with each other. I have noticed that almost all doctors improve mightily on acquaintance. If this be true of doctors in general, it would be nothing less than the nth degree with County Secretaries to deal with. So again, all hail and welcome! “Come on in, the water’s fine,” and let us hope that the results of this meeting will far surpass even the most sanguine expectations of our Head Booster.

NOVEMBER SERMON FOR COUNTY SECRETARIES.

No month of the year contains greater possibilities for the County officers, especially the County Secretary, than November. Only nine weeks remain before the new year is ushered in. This is the time ideal to initiate and carry out a membership campaign. At your next meeting *without fail* bring up for discussion the subject of non-members. Talk over the men in your district who do not, but should, belong. Then talk over means of securing their applications. You will be surprised at the results.

We want to help just as we did last year, but to do this we must have a list of all the desirables in your county. It will save me an endless amount of work if you secretaries will take the initiative this year and send in your lists of non-members without my writing for them. Do this *now!* It is far easier to get a 1911 application now than it is after the new year. For this reason I am especially anxious to get the campaign for “2,000 for 1911” in full action this month. Do it now! *Do it now!*

Another subject that should receive attention at the November and December meetings is the campaign of the Wisconsin Anti-tuberculosis Association. Last year Wisconsin led the United States in

the sale of Christmas stamps. No movement of the day is so worthy of the unqualified support of the medical profession as is this fight against the great white plague. Let every member do what he can individually to aid this year's campaign and a public indorsement by your county society sent to the local press would aid in the backing it would give and would be a credit to your society.

During the next two months the majority of the societies hold their "Annual Meeting". Let us give this meeting a thought, for it is the most important meeting of the year. The election of new officers should receive the most careful consideration, especially your secretary. The success of your society next year depends on this officer, so choose him with care. Add social features to your annual meeting and try to make it in every way the banner meeting of the year. Make a special effort to get the attendance of the men who seldom attend for it will aid in retaining them in the coming year. This is the ideal meeting at which to discuss non-members and appoint a Booster Committee. Make it a regular old-fashioned methodist revival and may St. Boostheimer bless you!

Above all else do not neglect to bring up the subject of "Optometry" legislation at your next meeting, and see that each man realizes what it means and that action is taken on it. (See editorials in this number and in the April and August numbers of The Journal.)

BOOSTERINE: A counterirritant, indicated in all fatty degenerations of county societies, tired feeling in county officers, sleeping sickness, grouchitis, etc. Agents wanted!

COUNTY SOCIETY REPORTS.

DANE COUNTY MEDICAL SOCIETY.

The regular monthly meeting of the Dane County Medical Society was held Tuesday evening, October 11th, at Turner Hall with the following program.

Treatment of Pneumonia—H. A. Gilbert, Madison.

Clinical History and Diagnosis of Lobar Pneumonia—A. G. Hough, Morrisonville.

Mortality in Pneumonia—F. I. Drake, Madison.

Discussion by W. H. Sheldon and J. C. Sommers.

JEFFERSON COUNTY MEDICAL SOCIETY.

The quarterly meeting was held in Ft. Atkinson, October 11th. An address on *Blood and Its Diseases* was given by Prof. Bunting of the State University. Papers were read by Dr. J. Cox of Jefferson and Dr. H. O.

Caswell. Some time was devoted to the subject of *Tuberculosis in Dairy Cattle*.

Those present from out of town were: Drs. Wm. White and Carl Feld, Watertown; Reed, Cox and Berger, of Jefferson; J. V. Stevens and Cunningham, of Janesville; Keithly, of Palmyra; Ogden, Weld, Nair, Bennett, Morris, Caswell and Clark, of Ft. Atkinson.

The next meeting will be held in Watertown the first Tuesday in December.

KENOSHA COUNTY MEDICAL SOCIETY.

The last regular meeting of the Kenosha County Medical Society was held Oct. 6th with 15 members present. We also had with us as guest Drs. Foley of Waukegan, Ill. and Dr. Ladwig of the Naval Training Station of Lake Bluff, Ill. Racine County was represented by Drs. Knott, Buchan, Taylor, Tompah, Brehm, Buchan, Jr., Pope and Christensen of Racine. The principal part of the program was furnished by Dr. V. D. Lespinasse of the Northwestern University Medical School, Chicago, with a talk on a new and successful method of blood vessel anastomosis and a demonstration of numerous specimens. His complete paper will appear in an early number of the J. A. M. A.

J. H. CLEARY, M. D., *Secretary*.

THE MEDICAL SOCIETY OF MILWAUKEE COUNTY.

At the regular meeting of the Medical Society of Milwaukee County held October 14, the Legislative Committee presented the following resolution which was adopted.

Whereas, The recent medico-legal scandals in the city of Milwaukee have urgently brought home to the medical profession the necessity of a revision of the laws and statutes governing bastardy, be it therefore

Resolved, That it is the sense of the members of the Medical Society of Milwaukee County that no charge of bastardy should be brought or maintained until the period of five months after the alleged sexual congress has expired, and unmistakable symptoms of pregnancy have supervened.

Be it further Resolved, That the committee on medical legislation of this society prepare and present the substance and intent of this resolution before the proper legislative authorities with instructions to ask for the immediate revision of the laws governing the illegitimacy of birth.

Under the head of new business the following resolution was adopted. "*Resolved*, That The Medical Society of Milwaukee County in regular meeting assembled, disapprove the appointment of Dr. Kraft as Health Commissioner of the City of Milwaukee, because of the absence of proper medical training and efficient medical qualifications.

Dr. C. M. Echols reported a case of double uterus, demonstrating the specimen removed at operation. A paper entitled *Tetanus Antitoxin in Treatment of Tetanus, with report of case* was presented by Dr. A. J. Caffrey. Discussion by Drs. J. M. Beffel and F. C. Gillen.

D. HOPKINSON, M. D. *Secretary*.

WISCONSIN MEDICAL WOMEN'S ASSOCIATION.

The Wisconsin Medical Woman's Society met in Milwaukee, September 14th. The purpose of the Society is to educate the laity along lines of Preventive Medicine. To this end a Journal of Preventive Medicine is published under the editorship of Dr. Julia Riddle of Oshkosh.

The officers for next year are: President, Dr. Belle P. Nair, Ft. Atkinson; Vice-President, Dr. Lucia Hoyer, Milwaukee; Secretary, Dr. Minnie M. Hopkins, Oconto; Treasurer, Dr. Hannah M. Droppers, Milwaukee; Chairman Preventive Medicine, Dr. Julia Riddle, Oshkosh.

The meeting was held at the Republican House, where the following program was given.

Symposium on Germ Carriers. House Fly, Dr. M. Crandall, Milton; Tse-tse Fly, Dr. H. M. Droppers, Milwaukee; Mosquito, Dr. Bell P. Nair, Ft. Atkinson; Flea, Dr. Ella C. Fay, Whitewater; Cockroach, Dr. Anna B. Corr, Juneau; Bedbug, Dr. Julia Riddle, Oshkosh; Tick, Dr. Minnie M. Hopkins, Oconto; Pediculosis, Dr. Mary Houck, Wautoma; Rats and Mice, Dr. Lucia Hoyer, Milwaukee; Dogs and Cats Dr. Luella Axtell, Marinette; Gnats, Dr. H. E. Johnson, Winnebago.

4 P. M.—Business Meeting.

6:30 P. M.—Banquet.

President's Address, Dr. Adeline Riddle; Toastmistress, Dr. Anna B. Corr.

A Manual of Hygiene and Sanitation. By SENECA EGBERT, M. D., Dean and Professor of Hygiene in the Medico-Chirurgical College, Philadelphia. New (5th) edition, thoroughly revised. 12mo, 508 pages, with 97 illustrations. Cloth, \$2.25, net. Lea & Febiger, Philadelphia and New York, 1910.

The increasing interest of the laity in matters of public health makes it imperative that the physician be thoroughly and reliably informed on this important branch of his profession. To the busy practitioner and the medical student, as well as the professional sanitarian, Egbert's Manual will be a source of concise yet absolutely reliable information on the subject of hygiene and sanitation. The new edition has been thoroughly revised and brought up to date, and includes, aside from the usual chapters on personal, school and military hygiene, also chapters on disinfection, vital statistics and methods of water and food analyses, and it will be of particular value to the practitioner who must combine the duties of health officer with those of his private practice.

G. C. R.

A Case of Syphilis Insontium, and a Contribution to the Duration of Life of Spirochete Pallida. Scheuer, Oscar, Wien. (*Deutsche Med. Wochenschrift*, 1910, No. 10, p. 458), found that the spirochete remains infectious in moist media for over 2 hours, which explains the relative frequency of extragenital infections. On the other hand, the experience that the spirochete is killed by drying the material in which they occur, furnishes certain directions for hygiene. C. ZIMMERMANN.

THE WISCONSIN MEDICAL JOURNAL

NOVEMBER, 1910.

ORIGINAL ARTICLES.

THE SERUM TREATMENT OF HEMOPHILIA, PRELIMINARY REPORT OF A CASE.*

BY A. J. PATEK, M. D.,

MILWAUKEE.

"Hemophilia is a constitutional fault, hereditary or acquired, characterized by a tendency to uncontrollable bleeding, either spontaneous or from slight wounds."

Thus does Osler, in language characteristically terse and comprehensive, define this curious and baffling malady. No other known disease, it may truthfully be said, has remained more completely untreated than has hemophilia; and of afflicted ones none have felt their isolation more absolute than have the bleeders. The menacing sword of Damocles never hovered over more luckless mortals. The dread of its unheralded descent is constantly upon them, and, as if to fasten the curse more securely and provide for its propagation, it seems to have been ordained that the disease attack in large proportion the male members of a family, but be transmitted through healthy female members of the same family. Extinction by non-marriage of those afflicted is, therefore, no possible solution.

In the light of these facts the destructive potentiality of this disease must be apparent, and a single experience, as the one I shall presently detail, leaves a deep impress, and a realization of utter helplessness. We must therefore hail any advance in medical science that holds out the hope of a degree of possible relief.

Before presenting a discussion of the blood serum treatment of hemophilia and citing its employment in an extreme case of the dis-

*Read at the 64th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 23, 1910.

ease, I wish to place before you a few brief and hurried facts concerning the malady itself—facts with which many of you are doubtless quite familiar.

While sporadic, i. e. acquired cases of hemophilia are known to exist, by far the greatest number are traceable to an hereditary taint. This heredity manifests itself in an anomalous manner: the disease affects in very large proportion, male members of a family, but is transmitted to them by the female member of a hemophilic family, who herself may be free from any such taint.

The manifestation of the disease is in all cases comprised in the single symptom, hemorrhage, but there is, in individual cases, much variation in the location of bleeding, and in the severity, frequency, and cause—whether spontaneous or traumatic—of the attacks. The hemorrhage may be cutaneous, subcutaneous, interstitial, intra-articular, intra-peritoneal or intra-pleural; from the lungs, stomach, intestines, kidneys, bladder, uterus, navel; and from all mucous surfaces. In the order of their frequency, of 334 cases collected by Grandidier, the chief sources of bleeding were: epistaxis, 169; mouth, 43; stomach, 15; bowels, 36; urethra, 16; lungs, 17. Thus we find no organ or surface, external or internal, exempt from a possible break in the integrity of the vascular structure, whether due to a known cause—such as a trauma, never so slight, or wholly spontaneous.

While in some bleeders slight hemorrhages, such as ecchymoses, are common, of but slight intensity, and in others the bleeding tendency is evident only when traumatically induced, there are some unfortunates in whom no provocation is needed, and in whom the disease is manifested by a great frequency of hemorrhages from various sources, and of great severity. Such a case I shall presently detail—that of a young woman whose skin is never free from myriads of minute petechiæ, frequently large subcutaneous ecchymoses, and who has had massive intra-abdominal hemorrhages and well nigh uncontrollable epistaxes.

One peculiarity, perhaps appropriately mentioned here, is the celerity with which regeneration of blood takes place after a severe hemorrhage. The anemia, frequently intense, quickly disappears, and the return to normal—even after severe losses—supervenes with surprising rapidity.

The prognosis in the case of bleeders is decidedly unfavorable. It is estimated that about 60 per cent. live not to exceed 8 years, and but 11 per cent. develop to maturity. After middle life the bleeding tendency diminishes or disappears.

Our knowledge of the pathology of hemophilia is essentially nil.

Nothing has thus far been found actually to indicate the nature of the serious and characteristic abnormality. In their cytology during life the studied cases have deviated but slightly or not at all from the norm—not in the character of the blood corpuscles—white or red—nor in the blood count or color estimate. To be sure, a secondary anemia of great or small degree is present during and following a severe hemorrhage, and this is particularly in evidence in cases terminating fatally. The spleen has been found enlarged and in some cases the large arteries narrowed and thin walled, the capillaries but little if at all changed.

The one recognized deviation distinguishing hemophilic from normal blood, is in its coagulation time during a hemorrhage. It is also stated that the formed clot is less firm, i. e. more elastic than normal. Were the physiology of blood coagulation known, the pathology of the hemophilic state would probably follow as a natural deduction. The theory prevails that two elements enter into the formation of a blood clot—the blood and the vessel wall, and in hemophilia it is assumed that there is a relative deficiency, absence, or alteration from the normal, of the prothrombin—the ferment in the blood plasma and cellular elements, and the “zymoplastic substance” that is derived from the tissues or vessel walls, this disturbance interfering with the formation in a normal period of time of thrombin—the coagulating ferment.

I would, however, call attention to the following significant fact: while the blood of a bleeder may fail to clot after a hemorrhage, the clotting time of the blood when not in hemorrhage has been found by numerous observers to deviate but little, and at times not at all, from the normal. Furthermore, Sahli and others have found that the elements concerned in the formation of a clot—fibrin, calcium, blood platelets, and leucocytes—are present in normal amounts in hemophiliacs.

We are thus without adequate explanation of the phenomena of clotting, and equally ignorant of the cause of its failure in bleeders. In view of the failure to find any structural or chemico-biological abnormality in the blood and blood vessels, we might assume that there exists an internal secretion that governs the process of coagulation, and that for some as yet unfathomed reason, a deficiency (or increase) of this substance causes in the individual who is hereditarily predisposed—the peculiar symptom characteristic of the disease.

Until a comparatively recent period the treatment of hemophiliacs has been limited to a few expedients of doubtful efficiency—one may even say in the main of absolutely negative value. During a hemorrhage the local styptics in common use, such as iron and alum, have been found of no avail; gelatin has been used subcutaneously and

locally but without satisfactory result; iron, ergot, opiates, are of little service; adrenalin, locally applied, is in some cases temporarily beneficial; pressure—if the bleeding part can be reached—is very effectual provided it can be maintained sufficiently long. The calcium salts, acting as a prophylactic by reducing the coagulation time, are of undoubted value, but, unfortunately, their influence is not lasting. In two cases of hemophilia reported by Hinman and Sladen¹ the coagulation time was reduced: from 12 minutes in one, to 6; and in the other from 30 minutes to 5. Repeated observation indicates, however, that the reduced coagulation time is only temporary, and that after the administration of the drug, even in increasing doses, the clotting period returns to the former level.

The serum treatment of hemophilia has for its basis the following reasoning: granting that in the circulating blood of the bleeder there is lacking some element that is essential to prompt coagulation when the blood leaves its vessel, and that this element—here deficient—is present in physiological amount in the normal individual, the addition of normal blood serum to the blood deficient in the fibrin-forming elements will give to the latter greater clot-forming properties, thereby effectually hastening coagulation.

It were unjust to withhold from the one deserving it the credit of so great an achievement as the discovery of a possible effectual means of lessening the burden of hemophilic habit. Until very recently the name of Dr. Albert Frey, of Newark, has not been associated with the serum treatment of hemophilia. It would seem, however, that his publication in 1898² antedates by several years that of P. Emile Weil to whom priority has been hitherto credited. Frey's work received its stimulus from a publication of Drs. Feltz and Pigot³ who obtained good results with this treatment in a case of purpura, and suggested its use in hemophilia. Frey's first publication concerned a family of eight brothers, five of whom were bleeders, and of these he successfully treated three: one was relieved of joint hemorrhages and ecchymoses by the subcutaneous injection of 300 c.c. of serum in 20 c.c. doses; in the second 200 c.c. cured joint symptoms; in the third periodic meningeal hemorrhages were relieved.

Without in any way detracting from the deserts of Frey, very great credit is due P. Emile Weil, who gave impetus to this study, and who is in large measure responsible for its further development and the present-day enthusiasm. In studying hemophilia Weil "began the use of fresh animal sera injected either intravenously or subcutaneously, as a means of controlling or preventing hemorrhage. Weil's work brought out these facts: that the blood serum of horses, rabbits and

beef creatures, as well as human serum, had the power of controlling hemorrhagic processes by increasing the coagulability of the blood; that beef serum was too toxic for ordinary use; that the serum used should be less than two weeks old; that a dose of 15 c.c. intravenously or of 30 c.c. subcutaneously would obtain results in most cases; that the use of serum locally at the point of hemorrhage favored clotting; that the increased coagulability of the blood persisted for a period of from fifteen days to several weeks. His studies in hemophilia satisfied him that in the hereditary type of the disease the results were at the best temporary, that repeated injections were necessary to control hemorrhages, that the massive type of visceral hemorrhage was controlled only imperfectly, that the greatest value of the treatment lay in the prophylactic injection of serum before operative procedures were practiced. In sporadic hemophilia and acute purpura, on the other hand, the results were permanent, definite cures usually being obtained. In chronic purpura and pernicious anemia the effect of injections was only transitory.”⁴

It may be well to digress here to point out certain dangers that lie in the administration of alien blood serum.

The term “Serum sickness” describes a condition well known to all who have had experience with the administration of diphtheria and other antitoxins. Frequent symptoms are: urticaria, joint pains, fever, swelling of lymphatics, edema and albuminuria. It has been experimentally demonstrated that the ill effects are due not to the antitoxin itself, but that the real source of danger lies in the serum; in other words—that all the untoward, mild or severe symptoms following antitoxin injection may be reproduced by the administration of a *normal* animal serum. It has been further demonstrated that the smaller the quantity of serum injected—i. e. the more concentrated the antitoxin, the less frequently do these symptoms occur. Von Pirquet and Schick found that the individual was “sensitized” by the first injection, and that if a second injection were given about 10 or more days later, serious and sudden symptoms were likely to arise. This condition of hypersensibility has been termed “anaphylaxis.” Rosenau and Anderson have shown conclusively that the danger of anaphylaxis exists only when the human kind or animal is treated with an alien serum, that from one of its own species being innocuous.

These considerations—the dangers of anaphylaxis—have led to the partial abandonment of the use of horse or other serum in the treatment of bleeding, save when there is urgency, in which case any commercial product may be used. Normal human serum is without this danger and may be used liberally.

I wish briefly to outline some of the work that has been done in this field of practical research, since the earlier work of Frey and Weil, already mentioned.

SPECIFIC ANIMAL SERUM.—While normal human serum is the product of choice, the commercial *specific animal sera* on the market have frequently been resorted to in emergencies, wholly disregarding the danger of anaphylaxis. Thus, F. Dejardin of Belgium⁵ advised that antidiphtheritic serum be used when there is urgency. Dr. Lommel⁶ tells of a case of hereditary hemophilia in a 4 year old boy. An attack of epistaxis that resisted all other methods was checked by the injection of 20 c.c. of streptococcus serum—this having been the only serum on hand in sufficient quantity. Ten days after the cessation of hemorrhage the bleeding reappeared following a severe cough, and this time relief was obtained by the local application of the serum. M. Ricard⁷ reports having been called upon to evacuate a hematoma that formed in a laparotomy cicatrix in a hemophiliac. Injections of antidiphtheritic serum checked the bleeding. M. Micleon⁸ tells of having successfully treated a hematoma of the hand with a tampon of diphtheria antitoxin, and of treating a similar condition of the floor of the mouth with injections of the same serum. K. Wirth⁹ cites 20 published cases of hemophilia in which injection of serum arrested the hemorrhage more or less completely. He used diphtheria antitoxin locally and by injection in one case, with good result, and by monthly injections kept the hemorrhagic tendency under control. “Gangani found it necessary to supplement diphtheria antitoxin with fresh rabbit serum to control a severe hemorrhage in a boy, aged 4 years. He is convinced that failures in the experience of others are due to the fact that the serum used was too old, or modified in some way. * * * * Baum reports the use of serum in 3 clinical cases of hemophilic hemorrhage. In one, hemorrhage was arrested by the injection of serum after the failure of tamponing, adrenalin, and the thermocautery. The hemorrhage had persisted two days, but stopped in a few minutes after two local applications of tampons dipped in fresh diphtheria antitoxin. Examination of the blood at the time and later showed normal coagulation, so the hemorrhage had evidently been the result of some transient dyscrasia. The serum treatment in the other cases was disappointing. The patients were children known to be hemophiliacs.”¹⁰

NORMAL ALIEN SERUM.—The normal sera of different species have been much used. Thus, Dejardin⁵ advised the use of human, horse or rabbit serum in the acute hemorrhages of hemophiliacs: if used intravenously, 10 to 20 c.c.; if subcutaneously, 10 to 30 c.c., con-

tinuing 2 or 3 days. Benefit is expected to last one month or more. Weil¹¹ claimed, in 1907, to have had success during the previous two years in 11 cases of hemophilia. He used fresh horse serum prophylactically as well as curatively.

In forms of bleeding other than hemophilia the serum treatment has been found effectual. Thus, Wirth,⁹ reporting satisfactory experience with the use of horse serum in hemophilia, found good results in this and in 8 other cases of severe bleeding; tonsillotomy, epistaxis, arterio-sclerosis, hemoptysis, in phthisis (4 cases), and intestinal hemorrhage. A single injection was usually sufficient to stop the bleeding. In epistaxis serum was used locally, and in one case of intestinal hemorrhage it was used in clysmas.

Wirth⁹ also tells of a hemophilic girl suffering from metrorrhagia and epistaxis who received prompt relief by subcutaneous injection with horse serum, and tamponade of uterus and vagina with gauze dipped in normal serum. He reports having checked skin and mucous membrane hemorrhage in a case of cholemia with advanced hepatic cirrhosis; he stopped bleeding from nose and mouth of a new born infant by local applications; and in cases of hemorrhage in the lower bowel and from hemorrhoids gave relief by the injection of beef or horse serum into the bowel.

Of equal importance to the surgeon, because of no great infrequency, is the danger of bleeding in cholemic patients who are compelled to submit to operation. Nine such cases of jaundice, in all but one of which—as a direct result of the serum—there was no bleeding at operation, are reported by Leary.¹² His total report covers the use of rabbit serum in 20 cases, in 15 of which there had been hemorrhage; in five the serum was employed for prophylaxis. He records one case of hemophilia; one of purpura in which the injection of 15 c.c. rabbit serum was followed by disappearance of rheumatic symptoms and cessation of purpura; several cases of postoperative uterine and typhoid hemorrhages, all of which were favorably influenced. Leary advises the use of human serum, but where haste is needed rabbit serum may be substituted.

NORMAL HUMAN BLOOD SERUM.—The use of normal human blood serum has given the greatest success, obviating at the same time the danger of anaphylaxis. The application of fresh blood from a normal individual is reported by Bienwald¹⁵ to have caused the cessation of bleeding in a hemophilic child that resisted all other efforts. In a personal communication Leary mentions having substituted human serum, intravenously injected, in doses of 10 to 15 c.c. for rabbit

serum in hemophiliacs, and finds that the control of the hemorrhagic tendency persists from 3 to 6 weeks or more.

Spectacular almost, in the startlingly brilliant results achieved, is the recently published work of John E. Welch,¹⁶ pathologist of the New York Lying-in Hospital. He succeeded in saving the lives of 12 bleeding infants, all of whom would probably have succumbed to their hemorrhages under other treatment. (Of 18 such cases previously at the same institution, 17 died.) In all cases the bleeding began during the first week of life, and varied in its source—occurring from cord, mouth, nose, bowel, stomach, foreskin, vagina, subcutaneously, etc. Welch employed the human serum in an average dose of 10 c.c., injecting 2 or 3 such daily doses subcutaneously for several days, the total amounts varying from 16 c.c. in two days to 209 c.c. in 5 days. Perfect recovery followed in every case so treated, the bleeding in most instances being noticeably diminished with the first injection and ceasing entirely in from 2 to 7 days.

Results similar to those of Welch are reported by H. O. Mosenenthal¹⁷ of New York. He has had absolute success, as indicated by an immediate and permanent cessation of hemorrhage, in three cases of *malena neonatorum* by resorting to direct transfusion.

I would degress here an instant to call attention to Welch's demonstration of the bactericidal property of normal human blood serum in his report of the recovery of an apparently hopeless case of streptococemia (puerperal) following the injection on four consecutive days of normal human serum in a total amount of 50 c.c. The subcutaneous treatment of tuberculosis with normal human serum has also given encouraging results.

A word here with reference to direct transfusion: Although this operation is not a product of recent years, the present perfected technic which may be largely credited to Crile, makes resort to it far more readily considered than formerly. With the elimination of technical difficulties, the indications for its employment have increased, and we shall doubtless soon have abundant evidence of its value or futility, or of the limitations of its use. At the present time there is reason for much encouragement. The success attending its use in eclampsia is deserving of emphasis, and the effort is now being made to influence tuberculosis favorably. Total failure has been met in the treatment of pernicious anemia, although in the acute anemias of hemorrhage it has an unquestioned value. Few data relating to its employment in hemophilia are at hand. Serum injections seem to be preferable for the purpose of effecting prophylaxis preparatory to operation; for checking hemorrhage this is likewise deemed sufficient, although Mo-

senthal¹⁷ reported having employed transfusion successfully in three cases of melena neonatorum. On the other hand, Welch, as already reported, obtained the same result in 8 similar cases from the far less dangerous and simpler method of subcutaneous injection of human serum. But one case of hemophilia in which transfusion was employed, has come to my personal notice. This patient had marked hysterical stigmata and had for weeks been vomiting much blood. Curiously enough she had not developed any great degree of anemia. The bloody vomiting became so incessant that, failing to effect any relief with the injection of streptococcic serum, transfusion was resorted to, but without in the slightest degree controlling the hemorrhage. It is possible that the added element of hysteria may in some way have constituted a factor in this case.

PROPHYLACTIC USE OF SERUM.—The prophylactic use of serum injection in hemophiliacs, preparatory to surgical intervention when urgently called for, is suggested among others by Broca¹³ who advises an injection 24 hours in advance of operation. Hubscher¹⁴ “describes the technic with which he was able to correct the contractures in the knees of a boy of 15, a typical bleeder, from a family of bleeders. The process in the knees was the typical hemophilic joint process, and there was a fistula in the arm from a hematoma in the biceps, which bled a little at times. Before attempting treatment, Hubscher injected 10 c.c. of normal horse serum into the region of the pectoralis, and within two days the fistula ceased to bleed. The contracture was corrected with a plaster cast from hip to toes, cut out at the knee, with elastic traction on the leg by means of rubber tubing fastened to a projecting iron frame. The boy was not kept in bed and by the end of the month he was able to use his legs. The last trace of contracture was then reduced under ether after another injection of horse serum; there was no bleeding at any time. The family physician was instructed to keep up the prophylactic injections of serum every six weeks or two months afterward for a time. The influence of the serum was striking in this case; under its protection measures were successfully undertaken even the attempt at which previously had brought on menacing hemorrhages. He used the serum less than two hours after it had been taken from the horse. By this means he believes that it will be possible to avoid fatalities such as those König has reported in which boys of 13 and 18 succumbed to hemorrhage after an operation on the knee for supposed tuberculosis. A cousin of Hubscher’s patient met with this same fate. Tilmann also lost a patient from this cause after an operation on a hemophilic joint which had been mistaken for a lipoma. Frohlich mentions the case of a soldier who was operated on

for a supposed abscess in the hip joint, the fifth process of the kind, each time the fever and hard edema suggesting an acute osteomyelitic process. The patient bled to death 36 hours after the operation. When a process of this kind, generally bilateral and recurring at intervals, develops in a youth of a pale aspect, and especially if Roentgen Ray examination shows the unmistakable contracted bleeder joint, no operation should be attempted if avoidable; but if required, the patient should be kept under the prophylactic influence of injections of normal horse or human serum. In dubious cases, he remarks, it is much safer to make the injections sometimes when they are not needed rather than omit them in the true bleeder cases."

Presumably all surgeons of large experience have stumbled upon bleeders unawares. So disastrous are the consequences of such an accident that an inquiry should be routinely addressed to every individual prior to an operation: when an affirmative response is given, a prophylactic serum injection should precede the operation by about 24 hours. In dubious cases it were better to make a single injection of the serum rather than subject the patient to the risk of possible hemorrhage. If preferred, the coagulation time may be ascertained, and if abnormally prolonged, the same treatment should be instituted. Unfortunately, this is frequently an unsafe criterion, because the blood of hemophiliacs may show no variant in coagulation at such a time. Intricate devices are not needed for determining this, as the simple method of Milian of watching the action of drops of blood on a glass slide gives sufficiently accurate data.

History of Case.—The patient whose case I have had the privilege of studying, is a young woman, aged 26, clerk by occupation. So far as it has been possible to trace her family history which includes two generations on both paternal and maternal sides, there is no record of there ever having been a bleeder in the family. This patient has been a bleeder since childhood. At the age of 12 she had a very severe hemorrhage from the bowels. Bruises, even slight, have always caused large ecchymoses. Menstruation has been excessive and epistaxis common. In April, 1906, she had an intra-abdominal hemorrhage. She consulted me in August, 1907, hoping for relief from the constantly recurring hemorrhages. She looked well nourished, face full, her usual high color replaced by a very pronounced anemia. Mucous surfaces were very pale. Upon arms and legs there were numerous ecchymoses in all stages of development and varying in size from a pin's head to 6 or 8 c.m. A functional heart murmur was present, but aside from this no organic fault was found. The blood showed 60 per cent. hemoglobin, 3,000,000 red corpuscles. Her diet and mode of living were

corrected, and hematinics administered. Later calcium lactate was added, and under this regime she improved greatly and remained well over 4 months. Few new ecchymoses appeared during this period, and a number of scratches and bruises were followed by but very slight hemorrhage—far less than formerly.

In January, 1908, she spent two weeks in Chicago. This visit was attended with much social gaiety, and soon after her return she complained of physical exhaustion. I saw her on January 21st and noted a marked pallor, some dyspnea and languor. The abdomen was rather tympanitic and she associated her abdominal distress with the early symptoms of this attack. During the following three days all symptoms became intensified: her abdomen became greatly distended and caused considerable annoyance; her pallor was so extreme that exsanguination seemed imminent; air hunger was present to a marked degree; pulse hardly perceptible, extremely small, flabby, of no volume. Nourishment was not retained and the bowel action was extremely sluggish. No blood was passed by stomach or rectum. She remained in this almost death-like condition 36 hours when improvement in all symptoms gradually set in. Recovery was complete in 6 weeks. Calcium lactate was resumed.

During the next few months and until October, 1908, she felt reasonably well, although never free from some ecchymotic areas. Had a conjunctival hemorrhage and a nosebleed that was checked by adrenalin. In October, 1908, another intra-abdominal attack occurred, preceded by pain and distension and attended with pallor and weakness. Improvement set in three days later.

Nothing noteworthy happened until August 15th of the following year (1909). She had noticed a gradual oncoming pallor, and experienced some pain in lower abdomen after urination. On the 18th the abdomen was quite distended and sensitive to touch. Lying on left side induced nausea. Pulse very rapid and hardly perceptible, pallor extreme. Vaginal examination negative. At 2 o'clock of this day I injected 18 c.c. diphtheria antitoxin. It was noted that puncture of needle did not cause bleeding. On the following morning the patient was improved and continued to do well. It was conceded by all those about her that the cessation of severe symptoms was decidedly more quickly brought about during this attack than during her several previous hemorrhages.

Another similar and severe attack occurred on November 1st, associated with the symptoms as already described. In the evening of this day, with pulse almost imperceptible, temperature subnormal,

I injected 10 c.c. diphtheria antitoxin. A marked improvement was found on the next morning, and recovery followed rapidly.

On December 17th she appeared at my office complaining of the abdominal symptoms she had learned to interpret as premonitory to a hemorrhage. I injected 10 c.c. diphtheria serum, and found her four hours later much gratified at the evident gradual subsidence of the symptoms.

Another similar attack occurred on February 17, 1910. I injected 10 c.c. antistreptococcus serum at noon. Symptoms became rapidly worse, and at 6 o'clock 20 additional c.c. of the same serum were injected. She spent a rather comfortable night and was greatly improved on the following morning.

Aside from these described attacks, this patient has had several very severe attacks of epistaxis. These were at times easily checked by application of adrenalin, but often were so severe that only a thoroughly applied packing was of value. Serum was injected for the epistaxis, and applied locally, but with doubtful results.

It is my intention now to obtain a donor who will submit to the periodic abstraction of about 20 c.c. of blood so that a course of monthly intravenous injections of normal human serum may be begun, with the hope of eventually lessening the hemophilic habit. Inasmuch as Weil reports success with this treatment in sporadic cases, there is some basis for the belief that much may be done for this patient with normal human serum injections.

Certain deductions are admissible from this study of hemophilia:

1. The etiology of the disease is still enshrouded in mystery.
2. In blood serum there is probably contained a clotting ferment or substance—either present in the circulating blood or released during a hemorrhage—which, in part at any rate, is responsible for the phenomenon of coagulation.
3. In hemophiliacs this clotting ferment or other substance is either absent, deficient, or in some manner held in abeyance.
4. Human or animal blood serum, applied either locally, subcutaneously, or intravenously, may have a styptic action during a hemorrhage.
5. Any commercial specific serum may be used in an emergency, but because of the danger of anaphylaxis when alien serum is employed, human serum is the substance of choice.
6. In view of the danger of surgical intervention in those predisposed to bleeding—more especially in hemophiliacs and in those who are cholemic—the proven value of a prophylactic injection of serum prior to operation should make it obligatory upon surgeons to

seek out these cases in every instance and consider carefully the propriety of giving them this adequate protection against accident.

7. Subcutaneous injection is sufficient and the preferable method in most cases. For massive hemorrhages transfusion should be employed—both to compensate for the loss and with the hope of checking further bleeding.

Thus it would appear that the possibility that in normal blood serum (human and animal) we have a means of favorably influencing various blood dyscrasias and of affecting the course of generalized infectious processes, is not a vain dream. The good results in hemophilia, in indicated cases preparatory to operation, in eclampsia, in a reported case of desperate puerperal streptococcemia, and the encouraging results of subcutaneous treatment in tuberculosis, make us aware that we are face to face with, and approaching the solution of, problems of the greatest magnitude. How large a factor normal human serum will play in the future therapy of these problems, remains speculative; but there are reasons for believing that the advance in this field, from the experimental to the stage of successful accomplishment, is a realization not far distant.

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Discussion.

DR. J. L. YATES: Not only are hemophiliacs more numerous than is commonly supposed but there is a far greater prevalence among females than is usually thought as Dr. Patek's ease and able report so clearly emphasize.

Every branch of the medical profession obviously must be deeply concerned in this disease and particularly now that treatment, especially the prophylactic, has been placed upon a fairly rational and therefore satisfactory basis.

In the taking of case histories, especially of cases liable to any operation however trivial, the question of bleeding in the history of the individual and the family should receive specific attention; an omission of this may lead to dire and often preventable catastrophes as most of us have reason to recall. For example in operations upon the genitalia of female bleeders in which the fatalities are unusually low for this type of patients Frankel and Boehm (*Monatsche. f. Geburtshülf. u. Gyn.* 1909, XXX, 417) found a mortality of 23 per cent in 104 reported cases. Operative therapy in hemophilacs should be restricted to the urgent cases and done then only after attempting to enhance the coagulability of the blood or in case of emergency with the provision of a donor for transfusion if this should come to be indicated.

Whether we consider that this undue bleeding results from the absence in the individual's blood of some secretion, as Dr. Patek suggests, which must be supplied to induce clotting, or that it is due to the presence of an anti-body, (as suggested by Wolf and Henri, *Revue de Medecine*, December 1909, and possibly upheld by Sahli's observation), which must be neutralized to permit clotting, is possibly of little immediate significance to the individual who requires hemostasis, but it is ultimately of the greatest importance in assuring better results.

A remedy is demanded which will virtually be constant in its action, safe and easy of application. These conditions thus far have been met best by serum treatment, particularly the prophylactic, if the established underlying physiological factors are remembered. In this connection we should join with Dr. Patek in giving Frey due credit for his introduction of this method.

Only human, horse and rabbit sera thus far are available for this purpose; bovine serum because of its toxicity must *never* be used.

Anaphylaxis, however rare, gives immediate preference, together with its apparently greater efficacy, to human serum with the important reservation that syphilis in the donor be excluded. The serum recently obtained must be introduced pure (defibrinated blood must not be used as sad experience has determined) or the full blood must be transfused.

Selection between these two methods is simple. Transfusion should be reserved for such cases as require in addition to hemostasis, and because of exsanguination, either the giving of adequate oxygen-carrying capability to the circulation to prevent impending dissolution or the provision of an immediate increase in stamina to enable the individual to tide over a period until the powers of recuperation are sufficiently re-established to insure spontaneous recovery.

A most important adjunct to the therapy of active hemorrhage is the local application of compresses saturated either in normal serum or full blood, especially in epistaxis and menorrhagia.

Dr. Patek alluded to the dangers of transfusion. They are not the fancied terrors of the mild internist, timorous of blood and infection, nor of the laboratory workers dreading hemolysis and agglutination, but the real

dangers of doing mischief in unsuitable cases, e. g., pernicious anemia and of exsanguination of the donor or over distension of the donee's heart.

Anyone having but a dim recollection of the physiological laboratory with the aid of Crile's cannulae can unite the proper vessels. However, this is by no means all of transfusion; it is vitally important to learn how to make the blood flow and when to stop. My personal experience has been limited rather by inability to secure donors than by lack of indications for this procedure.

I can attest its striking efficacy in early eclampsia, in advanced secondary anemia and in hemophilia after gelatine, calcium, and anti-diphtheric serum had failed. Our single effort in the treatment of tuberculosis is too recent to be of value other than giving much encouragement.

Dr. Patek referred to the curative action of serum in the treatment of an acute streptococcus infection attained by Welch and attributed by him to some bactericidal action. Transfusion under these conditions has been found inefficacious by Crile when serum far in excess of that given by Welch probably was introduced which might indicate the action of some other factors in Welch's case.

Having seen Dr. Patek's patient during one of her gravest collapses when recovery seemed dubiously problematic and again more recently when apparently perfectly well and of strikingly high color it would seem that the simple, safe, serum prophylaxis he has advocated demands a much wider recognition and a far more general adoption.

TINCTURE OF IODINE AS A SKIN ANTISEPTIC.*

BY M. W. DVORAK, M. D.,

LA CROSSE, WIS.

I offer no excuses for this paper although it contains nothing original; because the method which I shall bring to your attention is so simple and yet so efficient and reliable, that it is deserving of wider usage. In our visits to the various clinics at home and abroad I have seen but one surgeon make use of this method, Dr. Lilienthal of New York.

Lister, as you know, was the first to make use of antiseptic methods in wound treatment. As in all innovations, various complicated procedures were first introduced. Later investigations and observations showed that many of these were useless and superfluous, and have compelled a return to more simple but effective methods.

To-day the technic followed by most surgeons is the old and tried one of scrubbing with soap and water, shaving, and compressing the field to be operated upon the day previous. The compresses are such

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as bichloride solution, carbolic acid solution, soap, or alcohol, the choice differing with the choice of the surgeon. Immediately preceding the operation the parts are again scrubbed and then follows the application of some antiseptic solution, as above mentioned, or potassium permanganate, oxalic acid, etc. The use of these various antiseptics and variations in technic are directly the result of our constant search for the ideal in asepsis and antiseptis.

Although the above mentioned method has been found effective and has stood the test of time, yet if we have one that is more simple and yet as effective or better, it behooves us to make use of it. Having read an extract of Grossich's article on the uses of Tincture of Iodine as a means of sterilizing the skin before operation, we decided to try it, and with what gratifying results I shall let you judge for yourselves.

Before proceeding I wish, briefly, to review the uses to which iodine has been put locally, from an historical standpoint. Iodine was discovered by Courtais, a soda-manufacturer of Paris, in 1812, and first used as a medicine by Dr. Coinet of Geneva; and soon gained a reputation as a counter-irritant and absorbent in many affections. In lupus it was used for almost a century before the bacillus of tuberculosis was discovered. Various ointments, Lugol's solution, as well as the tincture were used.

As an intra-articular injection in the treatment of joint affections it was used extensively. Orlow in 1878 treated serous as well as purulent affections of the knee joint by injections of a 5 to 10 per cent. tincture.

S. D. Gross, in writing of this subject, says: "Its reputation in erysipelas is fully established, and I have myself found no article to compare with it as an endermic remedy." Lobit also used it for this purpose and attributes its curative effect to its bactericidal properties. Smolitsch, Trichomirow, Rollins, and Sereins all used it for the same purpose and their experiences agree with those just quoted. It has been and still is used for the treatment of actinomycosis and blastomycosis. All these results are no doubt due to its bactericidal properties. Senn says, "It is the most potent and least harmful and most reliable of known antiseptics, and this renders it a very valuable agent in aseptic and antiseptic surgery." As an antiseptic, however, it has not received the attention it merits. In all our text-books its irritant action is placed in the foreground and its antiseptic properties are not sufficiently emphasized. As you all know it is also used as an antiseptic in the preparation of various suture material, but with that we

shall not concern ourselves. Liebig first showed its antiseptic properties.

We have used the 10 per cent. Tincture of Iodine in practically all our work for the last two years, not including that upon mucous membranes. In the latter part of 1908 we first used it on some cases of minor injury, such as crushing injuries of the fingers or hands, also incised and lacerated wounds in these locations, as well as in scalp wounds the results being so excellent we followed by using it in our minor surgery, as amputations of fingers, toes, removal of sebaceous cysts, etc.

The injuries mentioned occurred mostly in laborers, machinists, and woodworkers who as a class are not especially clean and in all cases (without any preliminary scrubbing of any kind nor any attempt to remove the dirt or grease, other than the painting of the area with the tincture), healing occurred *per primam*. The parts were painted, any bleeding checked, sutured if necessary and a dry dressing applied.

We kept no detailed records of these first cases, but as I now recall there followed no infection. The brilliant results obtained here justified us in using the same in minor surgery and the same gratifying results continuing we felt justified in using it in our major work. In the fall of 1908 the first major case we used it on was an ovarian cyst with twisted pedicle. An emergency operation was necessary. After the parts were dry shaved, the area was painted with the tincture. The operation completed, the wound was sutured in the usual way, a dressing applied, and healing took place *per primam*. Recovery uneventful. Since that time we have used this method in all our work, with the exception of that upon mucous membranes.

The method we pursue is essentially that described by Grossich in the *Centralblatt*. In all our hospital cases, the day preceding the operation the patient receives a warm bath and the parts are shaved. Immediately preceding the operation the area is painted with the 10 per cent. tincture of iodine, U. S. P., and we are ready to proceed. A point to be borne in mind is, as Grossich points out, that the field must be absolutely dry before the tincture is applied; and not previously washed with soap and water, for in many of his cases, where an attempt had been made to render asepsis more assured in this manner, infection followed. His explanation is that the soap and water do not allow the alcohol to penetrate the tissues and thus prevent the iodine from exerting its influence. Lilienthal of New York precedes the application of the tincture by a 1-1000 iodine in benzine.

The operation complete, we suture, paint the line of suture with tincture once more, apply a dry dressing and bandage. It is import-

ant not to apply wet dressings, especially of bichloride, or carbolic acid after this, because if this is done a severe dermatitis may result. A week later the sutures are removed, these are usually found hard and dry the skin perfectly healed and clean. The skin as a rule exfoliates, but the tincture produces no other disagreeable symptoms, local or general. We have had only four or five cases of dermatitis follow a painting of extensive areas.

We have detailed records of 260 cases during 1909. Laparotomies, 117 clean cases with but one infection following, and that a superficial one. 39 infected cases. Infection in 17 wounds. When I speak of infected cases I mean cases in which pus was present, i. e., intra-abdominal abscess. In no case was the infection of the wound so severe as to fear a hernia, in fact in all but two it was superficial. General cases, 56 clean cases; infection in one. 24 infected cases, infection in 14 following the line of suture.

There were 24 accidental wounds such as scalp wounds, incised, lacerated, etc., in all of these healing followed per primam.

Under general cases I have included such as nephrectomies, thyroidectomies, amputation of the breasts, decompression operations, opening of joints, operations for hydrocele, varicocele, varicose veins, tenotomies, suture of tendons and nerves, removal of foreign bodies, vasectomies, etc.

I have classed accidental wounds separately because, although these are infected wounds, yet no pus was present at the time, and in order to emphasize the value of the tincture in these cases. You all know how difficult it is to render a field aseptic, especially in open wounds accompanied by bleeding and laceration.

The method will commend itself *first, for its simplicity*—and this is a very important point; the number of aseptic precautions has multiplied to such an extent as to make it desirable to do away with the non-essential elements. Then, too, any complicated system is certain to contain elements which will not be fully comprehended by some person and therefore not properly carried out, and this is true of hospitals where a constant change is being made in assistants. The method is easily applied in hospitals, at the home, and in the office. *Second, it is thorough*—as these experiences as well as the experiments of Dr. Brown indicate. Consequently there is less danger from carelessness and neglect.

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TINCTURE OF IODINE AS A SKIN ANTISEPTIC.*

BY W. H. BROWN, M. D.,

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(FROM THE PATHOLOGICAL LABORATORY OF THE UNIVERSITY OF WISCONSIN.)

The investigation of the antiseptic properties of the tincture of iodine upon skin surfaces was undertaken at the request of Dr. Evans.

The work upon which this report is based has been directed toward the determination of the practical value of the official tincture of iodine for surgical purposes, and deals with only two phases of the question, namely: (1) The bactericidal power of the tincture of iodine when applied to the skin; (2) The effect upon the skin itself. In studying these two questions the rabbit has been employed as the test animal.

The bacteriological tests have been made as follows: The belly walls of the animals were shaved 24 hours before used, the animal was anesthetized, the belly wall scrubbed with soap and water, followed by alcohol and sterile water or salt solution. A 24 hour broth culture of staphylococcus aureus was then rubbed into the skin. After 5 minutes, one lateral half of the belly was scrubbed with 95 per cent alcohol and the other painted with the tincture of iodine. Parallel sets of cultures were made from the two sides at intervals of from 3 minutes up to 1 hour, the animal meanwhile being protected by a canopy of sterile towels. The cultures were taken by scraping the skin with sterile scalpels, in some instances scraping away the entire epidermis for culture. The cultures were incubated at 37° and observations made for several days. Where growth was obtained, the character of the organism was determined by the ordinary staining methods.

In studying the skin effects, observations were made upon the animals from which cultures had been taken as well as upon others that had merely been painted with iodine. For histological purposes

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I have relied mainly on preparations from the rabbit's ear taken 3, 6, 12, 18, 24, 48 hours after painting with iodine.

From the bacteriological standpoint, the results have been exceedingly striking, and may be stated very briefly. Every culture made from the control side, scrubbed with alcohol, has shown an abundant growth of staphylococci and spore-bearing bacilli within 24 hours. Only one tube has shown a 24 hour growth of any character from the iodine side of the animal after 3 minutes, and that a spore-bearing bacillus. No tube has shown a 24 hour growth after the iodine has acted 5 minutes, though two tubes have developed a growth of spore-bearing bacilli after 48 hours' incubation. Not a single tube has shown growth of any character after the iodine had acted 10 minutes. What is of greatest importance is that not one tube has shown any evidence of viable staphylococci, nor organisms of any type except spore-bearing bacilli after 3 minute action of the tincture of iodine.

Turning to the effects of the iodine upon the skin we find, both grossly and microscopically, those signs of inflammation which are familiar to every one. Grossly, the inflammatory reaction is always less in those animals whose skin has not been subjected to the traumatism of culture taking, and more pronounced in proportion to such traumatism. The microscopical picture shows one feature which is somewhat peculiar, namely, a pronounced tendency on the part of the leucocytes to invade the epithelium and form a distinct wall at the inner epithelial border. This feature begins to appear as early as 3 hours after the application of the tincture of iodine and becomes marked in from 6 to 12 hours. In mild cases I have found the duration of the inflammatory reaction to be very short. However, it usually begins to subside after 24 hours with keratinization and desquamation of the epithelium. Animals whose skin has been injured and which have been placed in pens without the protection of sterile bandages, are very prone to subsequent infections which may be pronounced.

The bactericidal efficiency of the tincture of iodine is so manifest as to need scarcely any comment. For practical purposes we may consider it produces absolute antisepsis of the skin in 3 minutes. Further, it penetrates very deeply, sterilizing the entire depth of the epithelium. The bactericidal power seems to be due to the iodine "per se," the alcohol serving almost entirely as a solvent which aids penetration, and it is possible that other solvents might serve equally well.

The skin changes, when carefully considered, are very likely not of any serious import. The milder grades of inflammatory reaction

are certainly of no disadvantage, neither do I feel that the more severe grades of inflammation are of serious consequence, as they are not apt to occur where the skin is properly treated and protected with sterile bandages. I might also suggest that the inflammatory reaction can be obviated to some extent by removal of the iodine with alcohol after it has acted 3 to 5 minutes.

Another possibility which does not properly fall within the scope of this report, is the use of a solution of iodine more dilute than the official tincture, the ideal strength, of course, being that which will exhibit the maximum of bactericidal power with a minimum of damage to the tissues.

The peculiar type of leucocytic reaction obtained after iodine I believe to be of a protective nature, reinforcing the action of the iodine upon the bacteria.

In concluding, I feel that the results which I have obtained from the study of the tincture of iodine are such as to justify me in commending it to the consideration of the profession as an efficient skin antiseptic and a useful adjunct to our present surgical technic.

Discussion.

DR. A. S. LOEVENHART, of Madison: I have been very much interested in these papers. The action of iodine as an antiseptic is probably dependent on two factors, in the first place on its power to precipitate proteid, and in the second place, on its action as an oxidizing agent. From this point of view it would appear that the concentration of the alcohol might have some effect on the antiseptic action, that is to say, iodine could conceivably exercise a more powerful antiseptic action in a fifty per cent alcohol than in a ninety-five per cent alcohol solution.

It would be interesting in connection with a subject that appears to be of so much practical value, to know definitely the effect of different concentrations of alcohol. Alcohol has been shown to greatly reduce the antiseptic action of some antiseptics. For instance carbolic acid in alcoholic solution has much less antiseptic action than in water.

The proteid-precipitating action of iodine would of course make it less efficacious on a surface producing a serous secretion because of the fixation of the iodine by the proteid. I should like to inquire as to whether iodine has been used on bleeding surfaces or serous-secreting surfaces, and whether it has been found as efficacious in these cases as in connection with the unbroken surface.

DR. L. A. MOORE, of Monroe—I would like to ask the doctors if they have ever tried the use of ether before the application of iodine. Ether is a solvent of fat, and we know that the skin is more or less saturated with oil, and by washing the surface with ether and then following with iodine it seems to me that the iodine would get a good deal better chance to penetrate the deeper layers of skin and get a better effect. I have used iodine myself in fresh wounds to my own satisfaction with good results. In a good many

accidental injuries I have used iodine on the raw surface, and although it causes some discomfort to the patient I find that I have a less number of infections following than with the ordinary treatment.

Dr. Joseph F. Smith, of Wausau: Following the publication by Grossich in *Zent. fuer Chirurgie*, 1908, of a method of skin disinfection by the application of tincture of iodine to the dry skin surface, I began the use of this method in injury cases and later on adopted it exclusively in clean cases. I have used it in a considerable number of clean cases and employed essentially the method described by Grossich—simply preliminary dry shaving the night before, and at the time of the operation, painting the surfaces with the official tincture, allowing this to remain three to five minutes and then mopping it off with a 50 per cent solution of alcohol to dry the surface. The results have been very gratifying and I think far superior, so far as aseptic results are concerned, to any method of scrubbing with soap and water and other antiseptics. So far as the action on the skin is concerned, I have not seen any deleterious effects, no severe dermatitis. There has been extensive exfoliation of superficial epithelium in a few cases but not sufficient to cause ulceration or any bad effects. The method is certainly an ideal one and I have found it entirely satisfactory.

Dr. T. L. HARRINGTON, of Milwaukee: I wish to congratulate Dr. Dvorak and Dr. Brown on the presentation of this subject. I believe that in a few years the use of iodine as an antiseptic will be much more general than at the present time. I think in the past we have used strong antiseptics on the skin and more particularly in lacerated and incised wounds, that have done much damage to the tissues, and in trying to render the wound antiseptic we have destroyed tissue which necessarily later sloughed away. I have been using the tincture of iodine for a considerable time in a large number of cases of traumatic injury as in the case of a crushed finger or hand or foot; I do not know of anything that is likely to be more thoroughly covered with micro-organisms than the foot of an ordinary laborer at this time of the year, and when I get those cases I use absolutely no scrubbing with anything; I think if you start to scrub you loosen up the organisms that are on the tissue and carry them into the wound; but if you paint with the tincture of iodine you do not do this; it dries quickly on the skin, and may be compared to the fixing of the smear on the cover glass of the microscope with heat. I have found that in the last year or two since I have been using iodine I have had practically no suppurating wounds of the scalp, unless the scalp tissue was so crushed by the injury that it was destroyed. Previous to this when I used bichloride and carbolic acid to sterilize scalp wounds, before putting in stitches, I had the usual number of suppurating scalp wounds after I treated them.

Dr. C. M. ECHOLS, of Milwaukee: In comparing the disinfecting power of the tincture of iodine with that of ninety-five per cent alcohol, it strikes me this is not fair to the alcohol, because a number of surgeons abroad use diluted alcohol exclusively as a skin disinfectant for the hands, and it has been shown conclusively that fifty per cent alcohol is more efficient than ninety-five per cent.

The President, Dr. E. EVANS: I think you will all recognize the work done by Dr. Brown as being of the very highest significance for us as to the value of utilizing the means we have at the University of Wis-

consin in verifying our clinical conclusions; and there are many things of importance in our work that we as practitioners throughout the state could get scientific confirmation on at the university if we would just use the medical department there as the department wishes us to use it; work such as Dr. Brown's is of the greatest value and significance.

DR. M. W. DVORAK, La Crosse, (Closing): In reply to Dr. Loevenhart I would say that we have used it in bleeding wounds, lacerated as well as clean cut wounds, and in all cases with the same results. Of course there have been some wounds in which there was a marked crushing where necrosis followed.

In some of those, there was infection as the result of the necrosis but not otherwise. The doctor has asked about using ether previous to the iodine. We have in some few cases done that, but have kept no accurate record of those cases, because we found that the tincture of iodine alone would answer the purpose fully as well, and we saw no benefit to be derived from using the ether previous to the iodine.

DR. W. H. BROWN, Madison, (Closing): I wish to explain one point, and that is in the parallel use of iodine and ninety-five per cent alcohol. It was not intended in any way to compare the bactericidal efficiency of tincture of iodine with alcohol but simply to determine whether the bactericidal efficiency of tincture of iodine was due to the iodine or the alcohol in which it was dissolved. I have not tried to parallel the effects of tincture of iodine with any other antiseptic. Of course the fifty or sixty per cent alcohol is more efficient than any other strength of alcohol, but we used the ninety-five per cent as it is approximately what is used in the official tincture.

I did not employ ether in my experiments because I desired to use the simplest means of technique possible. I think I might say in addition that while I have not tested it out thoroughly, I do not believe that any previous treatment is necessary. The tincture of iodine painted on the skin surface direct without washing or previous application of alcohol or ether is absolutely efficient. If we can get absolute antisepsis within three minutes by the simplest form of technique possible, I see no reason why we should go to unnecessary pains to remove grease, etc., to aid in penetration, which is perfect within three minutes.

THE PLACE AND VALUE OF THE SPLINT IN MINOR SURGERY.*

BY JOHN C. HANCOCK, M. D.

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The members of the Society might justly, perhaps, call their secretary to account for allowing a paper dealing with so homely and commonplace a subject to occupy their time at this meeting. When

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it is considered, however, that most of us have more or less to do with railroad or industrial injuries of which the greater number belong to minor surgery, the everyday importance of the subject is apparent. When it is further considered that many of these injuries, directly trivial as to life, may be, and frequently are, serious from the point of view of function and cosmetics even to the point of gradually and permanently lowering the standard of living of an individual through diminished capacity for work or pleasure, the importance of the subject increases. Again, when it is observed that men thoroughly competent and alert in cases of major surgery are prone to slur over or delegate to an assistant the minor cases although, from the point of view of function and cosmetics, these often present problems requiring wide experience and sound judgment in respect to anatomy and technique, the need of further apology ceases. Finally, if by discussion or otherwise the importance of the subject is emphasized and secondary operations and permanent deformities are avoided the subject will have justified itself.

The subject has been suggested by my own mistakes and those of others and is based on a considerable experience with injuries and diseases for which the splint is not only often necessary but oftener advisable. Among the three thousand men employed by firms for which I do work, alone or with associates, a large number and great variety of accidents occur, besides the accidents and surgical diseases of private practice. These cases are to be considered from three points of view; (1) conservation of tissue and function; (2) minimum discomfort to the patient and (3) earliest possible return to work compatible with safety.

By splint is meant any kind of fixed dressing which secures immobilization, be the material wood, metal, fibre, or bandages impregnated with plaster of Paris, silicate of sodium, starch, etc. The use of splints for fractures and dislocations is understood, and is not included in this discussion.

In cases of injury Nature's signal of distress, pain, has a twofold significance; first, to call attention to the insult and localize it; and second, to demand rest and protection for the injured part. With the rest and protection which the fixed dressing or splint supplies the least suffering is experienced and the process of repair is greatly aided. In view of these well known facts the practical application of which is the burden of this paper, I have made it a rule to apply a splint or fixed dressing of some sort as part of the first dressing in almost every instance. It takes a little more time and often some

ingenuity but like thorough cleanliness at the first dressing it pays from the strictly professional point of view, though not, perhaps, from the commercial. In some parts of the body the skeleton itself acts naturally as a splint. In injuries to the scalp, for instance, healing is notoriously free from pain and kindly. The smoothness of repair is, I feel sure, in this class of case due not alone to the rich blood supply, but also to the fixation of the soft parts afforded by the skull. To secure adequate fixation it is usually necessary to immobilize the joints proximal and distal to the injury.

It is common to have patients attribute the pain following the injury and application to the dressing and splint. In some cases I have removed the splint as a demonstration to the patient with the invariable result that the reapplication of the splint has been requested. Experience and the patient's feelings alone help to determine the pressure to be used in applying the splint. Pressure only sufficient to secure immobilization is all that is needed. Patients are given a tablet of morphine and atropine to be taken the first night, if necessary. My experience since using the splint freely in injuries is that the splint alone without morphine is usually adequate for the relief of pain and as between morphine or the splint the latter is much the better anodyne. In severely painful injuries the splint plus a dose of morphine usually secures freedom from pain and rest the first night, after which there is usually no suffering.

In pleurisy we know the value of using the chest wall for relief from pain by immobilizing the ribs with adhesive plaster. In gall-bladder work the same plan relieves the pain of the wound incident to the mobility of the parts in respiration. In abdominal cases which have a cough an adhesive plaster swathe relieves the pain of the wound. In intra-abdominal infections we used to give morphine to splint the intestines in order to relieve pain due to peristalsis. Now we avoid the cause of peristalsis, i. e. the ingestion of food or drink by mouth. It should not be understood that morphine is hereby recommended for peritonitis but is mentioned simply to cite one of the principles of its action when used to relieve pain. Enough has been said to call attention to immobilization as the great factor in securing freedom from pain. Beyond a little smarting and burning usually of short duration an aseptic, well-immobilized wound should not, and, as a matter of fact usually does not, cause pain.

Not only will comfort and repair be aided by the use of the splint but an earlier return to work will be made possible. This is an important item both to patient and employer for whereas a patient

with a splint may not be able to do full work or perhaps not at all his own work, yet he can often do something, without detriment to himself, in return for being kept on the pay roll, and besides keep up his general health and moral tone. For this purpose I have printed cards indicating that the patient can do work not involving the use of the injured member or work involving partial use of the member, or his full regular work. According to the case the card is given to patient to take to the employer when reporting for work.

The splint aids in many cases in preventing deformities due to contractions of tendons and scar tissue. Although almost every muscle has its antagonist it is well known that the strength of antagonistic muscles is not always equal, hence, the stronger tendons may overact and the scar tissue formation may serve to make an easily preventable deformity permanent or only to be relieved by operative procedure.

In what has been said it should be understood that judgment is to be used and the use of the splint not abused. Too long use of the splint leads to atrophy, and consequently loss of time before the function of the part is restored. Also, in such injuries as sprains and joint affections early massage is most important. Here a removable splint may be employed.

As an illustration of a serious omission of the splint I cite this case: A member of one of the teaching orders of sisters presented herself some years ago stating that on account of a previous injury to a finger she had been obliged to give up her life's work. She taught instrumental music on the piano. Upon examination of the left hand I found the middle finger flexed to a semi-circle. Attempts to extend the finger were fruitless and painful on account of contractions of scar tissue. She had cut the finger severely on a broken bottle. The wound had been dressed without a splint and had healed kindly. Since the accident she had been unable to teach. At operation the scar tissue was fully separated from the deeper and surrounding parts, the finger fully extended and in this position dressed with a dorsal splint. The splint was worn day and night for one month although the wound healed aseptically and promptly. For two months more a removable splint was worn at night and the finger exercised by day. The result was a complete restoration of function.

Not all omissions of the splint are, of course, as serious as the above, but, in so far as any unnecessary deformity follows, the result can not be called first class or blameless. Weeks of idleness and suf-

fering both mental and physical, an anesthetic and an operation might have been spared the patient by the simple and timely application of the splint.

Cases illustrating conservation of badly lacerated, contused, and infected tissues with subsequent unnecessary crippling from contractions of scar and tendon tissue could be cited, but would needlessly consume time. Likewise, detailed accounts of experiments in reducing suffering for patients by the use of the splint could be given. The value of a removable splint worn between massage treatments in cases of sprained joints and tendons is particularly striking, as I can personally bear witness. The plate for flat foot is an example much appreciated by the patient. The plaster dressing in spinal curves, etc., relieves pain and diminishes deformity. Instances of the beneficial results of an earlier return to work made possible by the protection of a splint could be cited.

Enough, has been said, however, to show that the extra time and ingenuity used in dressing a case with an appropriate splint will be amply rewarded.

THE PROGRESS OF SURGERY DURING THE MIDDLE AGES.—A REPLY.*

BY T. L. HARRINGTON, M. D.,

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In a rather remarkable paper read before this society on May 24, 1910, on "The Practice of Surgery" (*Wisconsin Medical Journal*, June, 1910), I find a number of statements that are worth examining. I speak of this paper as remarkable, because if these statements are historical truths, it is remarkable that intelligent, cultured physicians were not aware of the facts stated, and if they are "a conspiracy against the truth," it is indeed remarkable that an intelligent physician should present them before this society.

The author says, "My paper might have been entitled the Progress of Surgery rather than the Practice of Surgery, but for the fact that prior to the year 1800 there was no continuous progress in the art of surgery. There were short periods of marked activity in the practice of surgery uniformly followed by longer periods of somnolence, priest-craft, and superstition."

*Read before the Milwaukee Medical Society, Oct. 11, 1910.

On the same line of reasoning the historian should not speak of "the progress of civilization," because there have been periods of considerable length when civilization was at a standstill. Nor should one speak of Peary's progress to the north pole, because there were periods in which he made no progress. The author continues: "It is significant, however, that the periods of progress in the healing art were generally coeval with the periods of action and growth in the other departments of human activity." There is nothing significant about this fact. If the contrary were true, then indeed would it be significant.

In the face of the self-evident statement that the periods of progress in the healing art were generally coeval with the periods of action and growth in the other departments of human activity, I ask you to give your attention to this paragraph: "It is more than passing strange to the contemplative that centuries should have lapsed, ages folded up, and yet, despite the wonderful progress made in the other human activities,—in economics, in the fine arts, in poetry, music and song, in architecture, agriculture and the various crafts,—yet, no beam of light, no stray tangent ray should have been deflected from the fount of ancient and medieval wisdom to fall upon the shrine of surgery."

If one were asked the reason for these contradictory statements, about the only reason one could give is that the author may have thought the elaborate statement just quoted necessary in order to give an opening for this equally elaborate answer: "Were it within the province of this paper to explain why the intellect that could conceive the construction of the pyramids, convey to canvass the wonderful colorings of nature, put in cold marble the soft lines of the human anatomy, transcribe the repertoire of the feathered throngs, and put in song all the suffering and the passion of the human heart—why this civilization with all its physical power and intellectual potentialities should fall short of allaying the pains and anguish it could so graphically depict, my answer to you would be, Superstition." And so, without quoting too extensively, let us get the author's views of the reason that surgery made no progress during the middle ages from the following paragraph: "After Galen came the Arabians. Surgical progress was now no longer possible in the Christian countries. Religion and dogma were at their zenith, and fanaticism flourished. The human body dead, was sacred, and animal experimentations were prohibited by law. The church was dominant and her influence held men in awe. The Bible was construed literally, and dogma based on biblical revelations supplanted the innate human quest for knowledge. All

free exercise of the mind ceased; man vegetated or moved in a circle. The Arabians alone made progress during this age, and in the literature of extra-uterine pregnancy, hernia, amputations and wounds, they are even to-day extensively quoted. Thus passed the middle ages without leaving any mileposts behind."

What are the facts, and how far does history, stripped of religious bias, bear out these assertions? Between the eighth and sixteenth centuries more than twenty medical schools were established in Europe. Most of these were connected with the universities, and the universities of this period were practically all church schools and were the outgrowth of cathedral schools. Among the older medical schools were those at Monte Casino, Salerno, Bologna, Naples, Montpellier, Paris, Padua, Oxford, Rome and Salamanca. The schools at Monte Casino and Salerno were both established during the ninth century.

Down at Montpellier, in connection with the famous medical school of the university, was the best appointed hospital in existence during the twelfth century. At the head of this hospital was Guy de Montpellier, Chamberlain to the pope. Pope Innocent III. summoned him to Rome to organize the hospital of the Holy Spirit, in the Borgo, where it still stands. This hospital was to be a model for hospitals in every diocese in the Christian world. Hundreds of these hospitals were established during the thirteenth century.

Virchow says, in speaking of the development of German hospitals of this period: "The main cause decisive in influencing and arousing the interest of the people of the time in the Hospitals of the Holy Ghost was the papal enthusiasm in the matter. The beginning of their history is connected with the name of that pope who made the boldest and farthest reaching attempt to gather the sum of human interest into the organization of the Catholic Church. The Hospitals of the Holy Ghost were one of the many means by which Innocent III. thought to bind humanity to the Holy See. And surely it was one of the most effective. Was it not calculated to create the most profound impression to see how the mighty pope who humbled emperors and deposed kings, who was the unrelenting adversary of the Albigenses, turned his eyes sympathetically upon the poor and sick, sought the helpless and the neglected on the streets, and saved the illegitimate children from death in the waters. There is something conciliating and fascinating in the fact that at the very same time at which the Fourth Crusade was inaugurated through his influence, the thought of founding a great organization of an essentially humane character to extend throughout all Christendom was also taking form in his soul. And that in the same year (1204) in which the new Latin

Empire was founded in Constantinople, the newly erected hospital of the Santo Spirito, by the Old Bridge across the Tiber, was blessed and dedicated as the future center of this universal humanitarian organization."

At the beginning of the fourteenth century, the University of the City of Rome, with a great medical department, was founded by Pope Boniface VIII.

Pope John XXII. founded two medical schools, one at Cahors, his birthplace, and the other at Perugia. In founding the medical school at Perugia, the pope insisted that there should be seven years of study, three in the undergraduate department and four in the graduate department, before the degree of Doctor of Medicine could be conferred. Another requisite was that the first teachers of this medical school should be graduates of one of two great schools, Paris or Bologna, in order that the standards might be equal to the standards at Paris and Bologna.

In Roth's life of Vesalius, he mentions the record of an autopsy ordered by a judge on the body of a nobleman, who died under suspicious circumstances. This was in 1302, and from the record one would be led to believe that this was a matter of judicial routine. About the middle of this century we have a record of students being taken to court for body-snatching, and about the same time there was a statute of the University of Bologna which required the teacher of anatomy to dissect a body if the students brought it to him. There are records to show that, early in this century, public dissections were held in Venice for the benefit of the doctors, and they were paid for from the municipal treasury. We find also that public money was paid for wine at Bologna for those who attended public dissections.

Mondino, professor of anatomy at Bologna, left records of dissections made before 1315. He published a text-book on dissections, which was the standard for two centuries, and which went through twenty-five editions.

Prof. Lewis S. Pilcher of Brooklyn, made a thorough study of the life of Mondino, spending some time at Bologna, where he consulted original editions of his manual on dissection. In an article entitled "The Mondino Myth" (*Medical Library and Historical Journal*, December, 1906) he says: "The changes have been rung by medical historians upon a casual reference in Mondino's chapter on the uterus, to the bodies of two women and one sow which he had dissected, as if these were the first and the only cadavers dissected by him. The context involves no such construction * * * * It is easy to think of him as having timidly profaned the human body in his anatomizing zeal

in but one or two instances. His own language, however, throughout his book is that of a man who was familiar with the differing conditions of the organs found in many different bodies—a man who was habitually dissecting.” Prof. Pilcher continues in a following paragraph: “All that we know of the work of Mondino suggests that it was not a new enterprise in which he was a pioneer, but rather that he brought to an old practice a new enthusiasm and better methods, which caught on the rising wave of interest in medical teaching at Bologna, and preserved by his own energy as a writer in the first original systematic treatise written since the time of Galen, created for him in subsequent uncritical times the reputation of being the restorer of the practice of anatomizing the human body.”

Besides this we have evidence of the anatomical proficiency of two of Mondino’s assistants, one of whom was a woman, Allassandra Giliani, who became prosector of anatomy at Bologna. The following is quoted by Medici in his history of the Anatomical School of Bologna: “She became most valuable to Mondino because she would cleanse most skilfully the smallest vein, the arteries, all ramifications of the vessels, without lacerating or dividing them, and to prepare them for demonstration she would fill them with various colored liquids, which after having been driven into the vessels, would harden without destroying the vessels. Again she would paint these same vessels to their minutest branches so perfectly and color them so naturally that, added to the wonderful explanations and teachings of the master, they brought him great fame and credit.” This, you understand, was in the early part of the fourteenth century, at a time when according to the author of the article under discussion, “religion and dogma were at their zenith, and fanaticism flourished. The human body dead, was sacred, and animal experimentations were prohibited by law. The church was dominant and her influence held men in awe.” When one reads such statements as these, based on insufficient evidence, one appreciates the force of the statement made in the preface of the first volume of the Cambridge Modern History by the editors who say: “Great additions have of late been made to our knowledge of the past; the long conspiracy against the revelation of truth has gradually given way, and competing historians all over the world have been zealous to take advantage of the change.”

In 1240, Emperor Frederick II. promulgated a law regulating the practice of medicine in Southern Italy and Sicily from which I quote the following (*Journal A. M. A.*, Feb. 1, 1908): “Since students cannot be expected to learn medical science unless they have been previously grounded in logic, we further decree that no one be per-

mitted to take up the study of medical science without beforehand having devoted at least three full years to the study of logic. After three years devoted to these studies, he may, if he will, proceed to the study of medicine, provided always that during the prescribed time he devotes himself also to surgery, which is a part of medicine. After this, and not before, will he be given the license to practice, provided he has passed an examination in legal form, as well as obtained a certificate from his teacher as to his studies in the preceding time. After having spent five years in study, he shall not practice medicine until he has during a full year devoted himself to medical practice with the advice and under the direction of an experienced physician * * * *

"We also decree as a measure intended for the furtherance of public health, that no surgeon shall be allowed to practice, unless he has a written certificate, which he must present to the professor in the medical faculty, stating that he has spent at least a year at that part of medicine which is necessary as a guide to the practice of surgery, and that, above all, he has learned the anatomy of the human body at the medical school, and is fully equipped in this department of medicine, without which neither operations of any kind can be undertaken with success nor fractures be properly treated."

Under the term "logic," as used in this decree, was included mathematics, philosophy, the physical sciences, theology, music and art. Huxley says in his inaugural address as Rector of the University of Aberdeen, in speaking of the university students of these early days: "Thus their work, however imperfect and faulty, judged by modern lights, it may have been, brought them face to face with all the leading aspects of the many-sided mind of man."

We must remember, too, that, in proportion to the population, the universities of these early centuries had a larger enrollment than have the universities to-day. In the face of these facts the author of the paper on "The Practice of Surgery" has the temerity to tell us: "All free exercise of the mind ceased; man vegetated or moved in a circle."

Dr. E. Gurlt, formerly professor of surgery in the University of Berlin, in his History of Surgery published in 1898, devotes more than three hundred pages to the surgery of the middle ages, and expresses regret that he cannot give more space to those old-time masters of surgery, who did so much to lay the foundation of modern surgery. Gurlt says, in speaking of Roger, the first of the great Italian surgeons of the thirteenth century, that "though Arabian writings on surgery had been brought over to Italy by Constantine Africanus a

hundred years before Roger's time, those exercised no influence over Italian surgery in the next century, and there is not a trace of the surgical knowledge of the Arabs to be found in Roger's work."

In Puschmann's handbook of the History of Medicine, Professor Pagel, whose authority will not be questioned, has this to say: "A more favorable star shone during the whole middle ages over surgery than over practical medicine. The representatives of this specialty succeeded earlier than did the practical physicians in freeing themselves from the ban of scholasticism. In its development a more constant and more even progress cannot fail to be seen.

"The stream of literary works on surgery flows richer during this period. While the surgeons are far from being able to emancipate themselves from the ruling pathological theories, there is no doubt that in one department, that of manual technics, free observation came to occupy the first place in the effort for scientific progress. Investigation is less hampered and concerns itself with practical things and not with artificial theories. Experimental observation was in this not repressed by an unfortunate and iron-bound appeal to reasoning."

In an address by Professor Clifford Allbutt on The Historical Relations of Medicine and Surgery (American Medicine, Oct. 15, 1904), I find the following: "Both for his own great merits as an original and independent observer and as the master of Lanfranc, William Salicet was eminent among the great Italian physicians of the latter half of the thirteenth century. Now these great Italians were as distinguished in surgery as in medicine, and William was one of the protestants of the period against the division of surgery from inner medicine—a division which he regarded as a separation of medicine from intimate touch with nature. Like Lanfranc and the other great surgeons of the Italian tradition, and unlike Franco and Paré, he had the advantage of the liberal university education of Italy; but, like Paré and Würtz, he had also large practical experience in camp, hospital, and prison.

"His surgery contains many case histories. He discovered that dropsy may be due to a 'durities renum'; he substituted the knife for the abuse of the cantery by the followers of the Arabs; he pursued the investigation of the causes of the failure of healing by first intention; he described the danger of wounds of the neck; he forwarded the diagnosis of suppurative disease of the hip, and he referred chanere and gangrene to 'coitus cum meretrice'."

This address was delivered by Professor Allbutt at the Congress of Arts and Sciences in St. Louis in 1904, and it is to be regretted that he did not have the advantage of the illuminating exposition given by

the author of the article on "The Practice of Surgery," which would tell him that, because of superstition, priestcraft and an intolerant church the Arabs alone made progress during these centuries.

It is interesting to note that healing by first intention was a contested point even before the time of William Salicet. In 1266 Theodoric, Bishop of Cervia, and physician of Pope Innocent IV, who was the loyal disciple, and probably the son of the great surgeon, Hugh of Lucca, finished writing his surgery. Theodoric says: "For it is not necessary as Roger and Roland have written, as many of their disciples teach, and as all modern surgeons profess, that pus should be generated in wounds." One would not be surprised to find this in the writings of Lord Lister, but to find this in a work on surgery completed in 1266 is indeed a surprise. Allbutt says: "Hugh and Theodoric, for the fresh wound rejected oil, as too slippery for union; and poultices as too moist; they washed the wound with wine, scrupulously removing every foreign particle; then they brought the edges together, forbidding wine or anything else to remain within. Dry adhesive surfaces were their desire. Nature, they said, produces the means of union in a viscous exudation, or natural balm as it was afterwards called by Paracelsus, Paré and Würtz. In older wounds they did their best to obtain union by cleansing, dessication, and refreshing of the edges. Upon the outer surface they laid only lint steeped in wine. Powders they regarded as too dessicating, for powder shuts in decomposing matters; wine, after washing, purifying, and drying the raw surfaces, evaporates." I know a number of twentieth century surgeons who might improve their results by pondering over the words of these thirteenth century masters.

The author of the paper on the Practice of Surgery says: "Fully to understand the contempt in which surgery was held prior to its recognition as a science (1800) we should remember that surgery was mostly practiced by barbers, quacks, and charlatans for many centuries, while medicine was always a substantial, dignified, and gentleman's calling. While medicine was fostered and supported by kings and governments, surgery was despised, neglected, and in not a few instances, even prohibited." It would have been a little more to the point if the writer had told us when, where, and by whom surgery was prohibited. I have been unable to find a reference to any such prohibition, and I am inclined to believe that, like the prohibition against dissection, it existed only in the mind of the writer. It is true that the Council of Tours prohibited priests from practicing surgery, but this was purely a matter of church discipline. It was felt that the priest, going from the operating room to give consolation to the dying,

might not be in a position to do as effective work in his priestly calling, as he would be if he left surgical work in the hands of others. Surgery was heroic work in those pre-anesthetic and pre-antiseptic days, and to most unbiased students of history the fact that the Church forbade her priests from participating in surgical operations will appear as a wise provision of discipline. This prohibition exists to-day, and it does not seem to militate against the progress of surgery at the present time. It is also true that barbers, quacks and charlatans did much of the surgery of these centuries, but this was particularly true in Western Europe, and much less true in Italy and in the adjoining countries where the Church had established universities, hospitals, and medical schools. The physicians themselves were to blame for this in a large part. Those of the profession whom we now term internists, felt strongly that surgery and medicine should be divorced. The great Lanfranc, who was a pupil of William Salicet, protested against this in his *Chirurgia Magna*, published in 1295-6. "Good God!" he says, "Why this abandoning of operations by physicians to lay persons, disdainng surgery, as I perceive, because they do not know how to operate * * * * an abuse that has reached such a point that the vulgar begin to think the same man can not know medicine and surgery * * * * I say, however, that no man can be a good physician who has no knowledge of operative surgery; a knowledge of both branches is essential." This same doctrine has been emphasized by both Osler and Allbutt in public addresses within the last ten years.

In speaking of Lanfranc's surgery, Allbutt says: "It was a great work, written by a reverent but independent follower of Salicet." Lanfranc's pupil, Henry of Mondeville, was surgeon to Phillip the Fair in the early part of the fourteenth century. Aided by Jean Pitard, also surgeon to the king, he attempted to make the profession familiar with the methods of Hugh and Theodoric, but met with much opposition. He insisted that all foreign matter should be removed from wounds; that no probes or tents should be used, except in special cases; that the formation of pus was not a stage of healing but a complication; that Galen's teaching that the wound should be allowed to bleed in order to prevent inflammation, was wrong, as thereby you weaken the patient and give him two diseases instead of one; that an open wound left in contact with the air suppurates; however, if pain or heat arise in a wound, open and wash out again, for if first intention fail, she may succeed in the second. In wounds of the neck he says that alterations of the voice suggest implication of the larynx; that we learn well, not by arguing but by operating.

"Every simple wound will heal without any notable quantity of

pus if treated on Theodoric's and my instructions. Avoid every cause of formation of pus, such as irritating applications, exposure to air, high diet, edema, local plethora. Many more surgeons know how to cause suppuration than how to heal a wound. By the new method you will have no stinks, shorter convalescence, and clean thin scars." Most of this would be considered good surgical teaching to-day, and in the face of the teachings of these old masters, the author of the article on "The Practice of Surgery" says: "It is more than passing strange to the contemplative that centuries should have lapsed, ages folded up, and yet, despite the wonderful progress made in the other human activities * * * * yet no beam of light, no stray tangent ray should have been deflected from the fount of ancient and medieval wisdom to fall upon the shrine of surgery." And why? His answer is "Superstition." One is led to ask which plays the greater part in the mental activities of the "contemplative" superstition or imagination?

We cannot pass over this period without mentioning Guy of Chauliac, the greatest of the French surgeons before Paré, and by some called the "Father of Modern Surgery." Guy says, the surgeon, ignorant of anatomy, "carves the human body as a blind man carves wood." Allbutt says of Guy's surgery: "His *Chirurgia Magna*, I have studied carefully, and do not wonder that Fallopius compared the author to Hippocrates, and that John Friend calls him the prince of surgeons. The work is rich, aphoristic, orderly, and precise. Guy was a more adventurous surgeon than Lanfranc, as was Franco than Paré.

"He did not cut for stone, but he operated for the radical cure of hernia, and for cataract: operations till his time left wholly to the wayfaring specialist. In Guy the critical spirit was awake. He scorns the physicians of his day who followed each other like crones * * * * In respect of principle, however, Guy was not infallible. Too sedulous a disciple of Galen, he was as a deaf adder to the new message of Hugh, Theodoric, and Henry; and not only was he deaf himself, but as the authoritative master of the early Renaissance, he closed the ears of his brethren and successors, even to the day of Lister." In Guy's "*Chirurgia Magna*" we find that he gives definite indications for trephining. He speaks of the escape of cerebro-spinal fluid, and the effect of pressure on respiration. He gives exact and minute directions for the passage of a catheter. He advises opening the chest for empyema. He says that penetrating wounds of the intestines are always fatal unless sutured, and describes a method of suturing such wounds.

In Puschmann's handbook, Pagel says: "Chauliac represents the summit of attainment in medieval surgery and laid the foundation of

that primacy in surgery which the French maintained down to the nineteenth century."

Allbutt continues: "The vigorous life which surgery gave to the medicine of the thirteenth and fourteenth centuries was stifled in the West by the pride and bigotry (?) which, culminating in the Council of Tours, had thrust surgery down into the ranks of illiterate barbers, reckless specialists, and adventurous charlatans. In Italy, however, the genius and bent of the people for art as well as for philosophy, and the ascendancy of the secular element in the universities, still kept surgery in its place as the scientific arm of medicine. Thus in Italy of the fifteenth century surgery did not droop as it did in the West; if it slumbered for a spell, it soon awoke again, refreshed in the Hellenism."

After telling of the work of some other great Italian surgeons, Allbutt speaks of Benivieni (1448-1502), the forerunner of Morgagni, as a man of culture and an eminent practitioner in Florence. He continues: "Yet for us Benivieni's fame is far more than all this; for he was the founder of the craft of pathological anatomy. So far as I know, he was the first to make the custom, and to declare the need of necropsy to reveal * * * * the hidden causes of disease. Before Vesalius, Eustachius, or Fallopius were born, deliberately and clear-sightedly he opened the bodies of the dead as keenly as any pathologist in the spacious times of Morgagni, Haller, or Sinac, or of Hunter, Baillie, and Bright. Among his pathological reports are morbus coxae (two cases) biliary calculus (two cases), abscess of the mesenteric vessels, stenosis of the intestine, polypus of the heart, scirrhus of the pylorus, ruptured bowel (two cases). He gives a good description of senile gangrene. Thus necropsy was first brought into practice to supplement the autopsy which the surgeon had long practiced in the living subject."

And now I would ask you to bear in mind the fact that these masters lived and worked and wrought for humanity during the much despised and much maligned Middle Ages. If time permitted, I might speak of others who left their impress on their times, and who played a material part in the progress of surgery during these centuries, and their work will always find a place in every unbiased history of the growth and development of surgery.

In speaking of the progress of surgery up to the sixteenth century, Allbutt, himself an internist, has this to say: "While surgeons from generation to generation were making the solid progress I have indicated, what were the physicians about? Now, of the fantastic conceits they were spinning, of the gross and blundering receipts with which

they stuffed their books, I have not time to speak; fortunately, history has but too well prepared you to dispense with this side of the story."

I have traced briefly and in a fragmentary way the establishment of medical schools and hospitals, the growth and development of dissection and post-mortem examination of the human body. I have shown something of the progress of surgery,—not only of wound surgery, but of amputations, surgery of the head and viscera, and plastic surgery. I have quoted sufficiently from the old masters of the Middle Ages to show that many of the questions which we are discussing in our medical societies to-day were a cause for dispute six, seven, or eight centuries ago. I have quoted from authorities of our own time, who are not so blinded by religious bias, that they believe that nothing good can come from the Middle Ages, and from these quotations it is evident that the work of these old masters meant much for the surgery of to-day.

That the leaders of the craft often differed on important questions, and that some of them were wrong, does not militate against the importance of the work which they did. And that some of those who took part in the disputes were clergy of the Christian Church, and even the head of that church, is easily understood when you realize that many of the surgeons and physicians were priests. But to say that the influence of the Christian Church was detrimental to the progress of surgery is the very opposite of the truth.

For the benefit of those who think that the influence of the Christian Church has been opposed to scientific progress, or who believe with Andrew D. White that the warfare of science and theology has been a drag to human progress, I would quote the following from President David Starr Jordan of Leland Stanford University (Foot-Notes to Evolution, page 375): "But as I said before, the real essence of conservatism lies not in theology. The whole conflict is a struggle in the mind of man. It exists in human psychology before it is wrought out in human history. It is the struggle of realities against tradition and suggestion. The progress of civilization would still have been just such a struggle had religion or theology or churches or worship never existed. But such a conception is impossible, because the need for all these is part of the actual development of man.

"Intolerance and prejudice are, moreover, not confined to religious organizations. The same spirit that burned Michael Servetus and Giordano Bruno for the heresies of science led the atheist 'liberal' mob of Paris to send to the scaffold the great chemist Lavoisier with the sneer that 'the republic has no need of savants.' The same spirit that leads the orthodox Gladstone to reject natural selection because

it 'relieves God of the labor of Creation,' causes the heterodox Haeckel to condemn Weismann's theories of heredity, not because they are at variance with facts, but because such questions are settled once for all by the great philosophic dictum of monism.

"There is no better antidote to bigotry than the study of the growth of knowledge. There is no chapter in man's history more encouraging than that which treats of the gradual growth of open-mindedness. The study of this history will bring religious men to avoid the mistakes of intolerance through a knowledge of the evils to which intolerance has led in the past. Scientific men will be spurred to better work by the record that through the ages objective truth has been the final test of all ideas. All men will be more sane and more effective in proportion as they realize that no good can come from 'wishing to please God with a lie.'"

President Jordan continues: "The desire of dogmatism to control action is in its essence the desire to save men from their own folly. The great historic churches have existed for the benefit of the weak and the poor. By their observances they have stimulated the spirit of devotion. By their commands they have protected men from unwise action. By their condemnations they have saved men from the grasp of vice and crime."

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EDITORIAL COMMENT.

THE TONSILS.

The physician who desires to practice conscientious preventive medicine in the families on which he is attending cannot afford to neglect the mouths and pharynx of his patients. The importance of sound teeth for a perfect digestion needs no argument. The dangers that lurk in carious teeth are however oftentimes disregarded. They begin to be appreciated by the man who has seen a single case of toxemia, debility and indigestion cured by the dentist, and also by him, who has seen a case of purulent meningitis traced by the pathologist directly to a suppurative process at the base of a canine tooth. Further, although William Hunter may not have proved that pernicious anemia is due to gastro-intestinal infection, starting with an

infection of the buccal cavity,—carious teeth or infectious glossitis,—the arguments are strongly in his favor.

Turning to the tonsils and adenoid tissue. After the wide-spread campaign of publicity as to the good effect of the removal of these structures in mouth-breathing and defective children, almost all physicians have seen the light in those conditions. There yet remains, however, a large group of bright, apparently healthy children in whom the harboring of hypertrophied tonsils has seemed to parents and physicians the lesser of two evils, when balanced against the dangers of an operation under a general anesthetic. The evidence that has accumulated and is accumulating as to the dangers of such tonsils as portals of entry and catch-alls for a great variety of organisms, is such that there can be no question of the position a physician should take upon the question of removal or non-removal. Two recent articles in the *Journal of the American Medical Association*, that of Davis (July 2, 1910) and that of Lord (Oct. 8, 1910) add potent arguments for the removal of such tonsils. Davis has made cultures from the interior of the tonsils of 45 patients with a variety of clinical conditions, including joint affections, nephritis, endocarditis, rheumatic fever, recurrent tonsillitis, etc., and in almost every case has obtained a culture of *streptococcus pyogenes*. Twenty-five strains of the streptococcus were tested upon rabbits and in nearly every case produced purulent arthritis followed by death in from a few days to three or four weeks. Lord has studied carious teeth and also tonsils for the *actinomyces* fungus in individuals not showing evidences of the disease. He has succeeded in demonstrating the fungus in smears from 11 cases and in sections from six cases of carious teeth and in sections of the caseous cryptic plugs in the tonsils of four cases. Further, he has produced the disease in guinea pigs in six out of ten cases where the contents of crypts were injected. There has been so much clinical evidence of the relation of tonsillitis to rheumatic fever and endocarditis that Davis' results are not surprising. Those of Lord however are more unexpected except that Wright has previously suggested the buccal cavity as the probable home of the *actinomyces*.

THE "OPTOMETRIST."

DOES HE DESIRE TO PRACTICE MEDICINE? IF SO, SHOULD HE NOT BE SUBJECT TO MEDICAL LAWS?

The optician will come before our legislature this winter with the request that he be legally given a new name—"Optometrist"—so that his store can become an office and his customer a patient, or his itinerant work have state approval in an unusual degree. He claims that he

is a professional man and seeks to have the state give him, by statute, what he has not earned by study. He would thus become a medical man, but without the examination as to his educational qualification which is required by the state in all other cases where the public health and general good is at stake.

Optician—Optometrist—Optomostanything! "Pigs is Pigs", he cries, "I want to be a doctor." He does not want to spend four years in study and earn the title, not he—there's an easier way; and besides, as yet, you will remember, he is a business man. So he comes before the legislature, his ten or fifteen dollar diploma ("16 x 28") in hand and asks that he be made a "Doctor of Optometry". He asks that he be made scientific by law before he is educated by study. He wants degrees not education.

This so-called science is the only one which would absolutely nullify all educational requirements. They are quoted officially as saying that they need legislation in order to get education, whereas every profession heretofore has first secured the education. The other professions have schools and had them long before state regulation and registration went into effect; these people have none and the American Optical Association has never been able to establish one. Let us glance over the advertisements of their so-called "schools".

LAKE FOREST CORRESPONDENCE OPTICAL SCHOOL (ILL.)

"This is a correspondence course and is taught by mail by a regularly incorporated Optical College, incorporated according to the Illinois State Laws, endowed with the power to confer the degree of Oph. D. (Doctor of Ophthalmology) upon its graduates.

"Time required to complete is *one week* * * * * We guarantee to make all students thoroughly competent. The entire fees, including examination, instruction, graduation and diploma, are \$15.00."

MCCORMICK OPTICAL COLLEGE (Chicago).

The *Optical Journal* carries this advertisement:

"I will for \$25.00. cash with order, give a correspondence optical course that will make the others sick; degree, Doctor of Ophthalmology."

ROWLEY OPHTHALMOLOGICAL COLLEGE (St. Louis, Mo.)

"The cause of 85 per cent. of all human ills is permanently removed by following our teachings. Tuition \$25 for a short time, and students are guaranteed satisfaction or money refunded. When proficient the degree of Doctor of Ophthalmology is conferred on them. We also teach an attendance course in optics, the price at present being \$10, but will soon be advanced."

THE SOUTH BEND (Ind.) COLLEGE OF OPTICS.

"This school advertises a correspondence course, reduced from \$25 to \$7.50, and carrying the diploma and title of Oph. D. (Doctor of Optics). This college also has a \$4 course which graduates one as "Master of Ophthalmic Optics" on a 21x16-inch diploma.

"That many availed or were expected to avail themselves of this offer is indicated in a statement in the prospectus: "We asked our engravers to name their lowest cash price on a thousand diplomas in one lot."

THE MANHATTAN (N. Y.) SCHOOL OF OPTICS.

This concern says: "With the passing of recent laws wherein Optometry is recognized as a profession a new and highly profitable occupation is opened to the retail pharmacist and jeweler."

In regard to the eye, they profess to instruct in anatomy, acuteness of vision, visual defects, complications, hypermetropia, myopia, presbyopia, astigmatism, strabismus, and muscular asthenopia, which seems a decidedly medical training for the druggist and jeweler.

You get all this ~~at~~ from ten to twelve weeks at the rate of three lessons a week. You pay \$50 for the attendance and \$25 for the correspondence course and "This institution awards a handsomely engraved diploma to its graduates. This is an official document and a work of art."

THE NEW YORK INSTITUTE OF OPTOMETRY.

This school has for its president the oldest living ex-president of the American Optical Society, and he is also an ex-president of the New York State Optical Society. Among the things they teach are "First aid to the injured, salesmanship, advertising, diet, and physical development." Two degrees are conferred by this school—"Bachelor of Optics" and "Doctor of Optometrical Science."

THE KANSAS SCHOOL OF OPTOMETRY (Boston).

"A complete course and diploma for only \$10. The title in this case is "Doctor of Optometry." On a glass door as you enter the school, this large painted sign stares you in the face:

"Eyestrain causes Headache, Stomach Trouble, Epileptic Fits, St. Vitus's Dance, Cross Eyes, Cataracts, Female Trouble. We can cure you with glasses."

(I am wondering how the average Wisconsin physician will enjoy having a sign like that stare him and his patients in the face as they pass the door of the new Doctor of Optometry to get to his.)

THE NORTHERN ILLINOIS COLLEGE OF OPHTHALMOLOGY AND OTOTOLOGY.

This school grants the following degrees: "Fellow of Optics," "Doctor of Optics," "Bachelor of Optics," "Master of Ophthalmology" and "Doctor of Ophthalmology." They also announce an additional, but unnamed degree (Honorary), and announce finally that they are not empowered to grant the degree of Doctor of Medicine. One of their diplomas is mentioned as being 28x28 inches in size. If the others be of this size you can, or could, secure from this school over 25 square feet of diplomas, and do all this in an eighteen weeks' correspondence, or eight weeks' attendance course.

The president of this College is prominent in the American Optical Society. He is also the president of an Eye Remedy Co., which advertises such miracles as "removal of floating spots from the interior of the eye, the clearing of the retina of congestion, and the absorption of cataract" by the use of his wonderful preparations.

This, then, gives a very fair idea of the preparation the members of this new-born profession are able to secure. They are not Doctors by education as every profession has always been, so they wish to gain this title in a day by legislation. "Optometrists" are simply Opticians. Their proper field of work is the making and adjusting of glasses in accordance with the directions of the Oeulist. They are not physicians and hence are not competent to recognize the different diseases of the eye, and much less competent to treat the same efficiently and safely. They profess to examine eyes for refractive errors and to send all cases of disease to the physician. This claim means that they are able to diagnose affections of the eye, a claim that has no foundation. The leaders of this movement are seeking an opportunity under the apparent sanction of the state to practice ophthalmology, one of the most important branches of medical science, without an adequate knowledge or training.

It is time the medical profession came to a realization of the seriousness of this matter. A license from the state, together with their specious degrees of "Doctor of Optics," "Doctor of Optometry," etc., will enable these people to place themselves before the public upon the same footing as the educated members of the state societies, who devote their energies to ophthalmology. The movement is most pernicious, and will be productive of harm to the public. It will tend to place ignorance upon a legal level with knowledge, training and experience, and for this reason alone it should be strongly opposed by every one who appreciates the importance of a high standard in the medical profession and in the laws of the commonwealth.

Ridicule the claims of these business men, if you will, yet the fact remains that their organized and persistent effort, coupled with the apathy of the medical profession, has caused a so-called optometry law to be enacted and placed on the statute books of Indiana, California, Tennessee, Nebraska, Idaho, Utah, Montana, Minnesota, Oregon, North Dakota, Arizona and New Mexico. This law was also passed by both branches of the Illinois legislature but was vetoed by Governor Deneen.

We shall hope that the medical profession of Wisconsin will not allow a law of this kind to be passed without unitedly entering the strongest kind of a protest. The officers of the various county societies must not fail in having this matter brought to the attention of every member. See to it that he understands the importance of it. *Act, one and all! Do it now!*

THE CHIROPRACTOR.

While we are considering the interesting subjects of fakes and fakirs masquerading as doctors, let us give a moment's attention to the Chiropractor. The following advertisement from the last issue of a popular magazine helps us to an understanding of what *he* is:

THE NEW PROFESSION.
BE A DOCTOR OF CHIROPRACTIC.

The most remarkable system of drugless healing ever discovered is the Howard System of Physiological Adjustment. It finally solves the cause of all diseases and their permanent and prompt cure. If you will study and practice the

HOWARD SYSTEM

you can earn from \$50 to \$100 a week. It is a new profession, the field is world-wide, the demand for operators in this system far exceeds the supply. It enables you to detect disease at once, know the cause and remove it. It will make you financially independent.

\$574.50 IN FIRST 60 DAYS.

Dr. Walter says: "I took in \$100 the first month after graduating, and \$474.50 the second and \$500 the third month."

This new system is based on unchangeable, natural laws. Its results are positive. It is so simple that anyone with ordinary intelligence can learn it quickly. If you cannot attend our school in Chicago, we teach you at home.

YOU CAN LEARN IT IN YOUR SPARE TIME.

You receive the personal attention of the entire faculty. Be a Howard System graduate and you will achieve honor and reputation in your community. Don't hesitate about your career—the Howard System awaits you. Besides, you

MAKE MONEY WHILE LEARNING.

Write for our free book "How to Learn Chiropractic," together with proof of graduates' wonderful successes, and our special scholarship offer to the first student in your vicinity.

NATIONAL SCHOOL OF CHIROPRACTIC
CHICAGO.

CORRESPONDENCE.

Milwaukee, Wis., Nov. 7, 1910.

To the Editor.

I would like to state before I answer Dr. Harrington's valuable paper that the position I am forced into by the essayist is extremely distasteful to me. I am not the bigot that would like to place the faults of the dark ages at the door of the Church,—least of all the Catholic Church. I have no fight with any church. The errors and superstitions of bygone generations were not due to the church, but were part and parcel of the age.

Catholicism has nothing to apologize for in surgery and needs no defenders

like James J. Walsh and my good colleague Dr. Harrington. To read the history of surgery like a Mississippi judge reads the history of the Civil War, with that singleness of purpose of placing blame where it does not belong, and extolling virtues that had no existence, is quite unworthy of the truly scientific mind. In science we must pluck the truth wherever it is found—be it on pagan or Christian grounds.

It will not do for the essayist to follow in the path of James J. Walsh, who is no surgeon, and climb with him the tree of knowledge, with the sole purpose of gathering blossoms and throwing bouquets at his church. We must be scientists first and churchmen second, if we aspire to keep the confidence of our fellow physicians. There is no war between science and religion—it is science and theology that alone remain irreconcilable.

It is wholly futile to talk about the progress surgery made prior to the year 1800. When the essayist quotes Walsh in extolling the grandeur of the 13th century he simply shows a total absence of a proper conception of what constitutes surgery. The 13th century was an intensely superstitious age and every man was simply a product of that age. Look at Dante—his beautiful poetry under the dominance of the church! So was everything else at this period. Painting, sculpture, architecture, law and surgery—all alike under the influence of the church! Progress was impossible. Yet Walsh and Harrington would make you believe that this was the most enlightened period in surgery.

Surgery rests on four legs: Applied Anatomy, Pathology, Anesthesia and Asepsis. We had no applied anatomy in the 13th century. Those that dissected the body did not apply the knowledge they thus gained to relieve the sufferers from surgical diseases. The anatomist seldom was a surgeon. Pathology we had absolutely none. Even Dr. Walsh and now again Dr. Harrington only cite one pathological observation, namely, the co-existence of dropsy and disease of the kidneys. But even this single pathological phenomenon was not understood at that age. Anesthesia and asepsis were barely hinted at in this dark age. I again repeat that there could have been no progress in surgery before the principles on which modern surgery rests were discovered. You cannot build before you lay the foundation.

The essayist has wholly misinterpreted the meat of my paper, harping on that which is not vital and overlooking the fundamental principles I emphasized. I showed how the practice of surgery began, how it flourished, how it was handicapped, and finally, ended with a plea for less operative glamour and a more painstaking diagnosis,—a plea for the return of surgery to its legitimate sphere—the complement of Medicine.

To my best recollections I did not even touch upon the pope's bulls and other controversial points. True, I said that Luther remained essentially a Catholic after his apostasy, simply to show you that every man is a product of his age—the mediocre the modicum, the genius the composite of the best. I did not even imply censure or approbation in making this statement. I also said that Calvin burnt my friend Servetus before the latter could complete his dissections. I did not mention this in a spirit of criticism, but simply to point out the faults of the age. It is certainly fortunate for me that the Calvinists have no Harrington, otherwise my position in this society would be anything but pleasant.

Those of you that are familiar with the great work of Virchow on the "Foundation of German Hospitals" will remember what fine tributes this

great man pays the Catholics in medicine. Yet even Virehow observes that in the establishment of the first hospitals the pope's desire was to draw the people to the Holy See, and not to benefit the people. Our early hospitals were not hospitals in the sense we use the word to-day—but rather places to give shelter to the traveler—the poor—the indigent. Hence the name hospital from the word hospitality.

The essayist has drawn almost wholly on the evidence of James J. Walsh for his material. As it appears to me the good Doctor approached his essay while in preparation, not with an open mind, to cull facts for or against him, but with the sole object of glorifying his church. In other words, he writes like Walsh—not as a scientist but as a theologian.

To my mind such a course is out of place in this century. James J. Walsh does not believe in the evolution of the intellect—neither does Dr. Harrington. James J. Walsh calls the 13th the greatest of centuries and confirms that Guy de Chauliac was the master of modern surgery. Yet Guy believed it was heretical to have wounds heal by first intention, while even William and Theodoric believed that wounds should heal thus.

As I said before, my paper is not controversial, its influence is wholly practical—it is a plea for enlightenment—a cheerful message to the younger surgeon, and a warning to the older surgeon. I do not even attempt to interpret the meaning of the papal bulls promulgated. I only know that the direct result of some of these bulls did not bring greater enlightenment and greater liberty to the people. Talleyrand once said that language was made to conceal thought. Both Richelieu and Mazarin were experts in wording messages wholly meaningless, of not meaning what they say. Now to my mind if a papal bull has the moral effect of doing a certain thing or omitting to do a certain thing, and if for decades no other interpretation is placed on the subtle words, then it is but little glory to read a different thought in the bull at some later century.

For example a certain papal bull promulgated in the 13th century by Innocent III, prohibited the practice of chemistry. Walsh naively tells you to-day that the bull only prohibited alchemy, not chemistry. Yet chemistry was known by the name of alchemy in those times. When it comes to the subtlety of a papal bull, and to Dr. Harrington's distinctions in the matter of extra-uterine pregnancies, both remain wholly beyond my comprehension, and, as I sometimes suspect, are intended to remain so.

Dr. Harrington's paper must stand alone as a splendid piece of critical work—academically interesting, and historically, highly disputative, and I shall not detract from its lustre by deeming his paper an answer to my paper. I ask in my closing paragraph for a union of medicine and surgery—the latter the complement of the former; while the essayist writes in his closing paragraph for a greater glorification of the influences that made modern surgery possible. His is a plea for greater reverence for old masters; mine a plea for better work. Dr. Harrington wrote his paper with the singleness of purpose of getting at the truth to glorify his church. I, on the other hand, strove to account for the reasons that handicapped surgery for so many centuries, and carefully weighed the factors that endanger my profession now.

In other words, the doctor wrote as a theologian, while I wrote as a man of science, and in the last analysis this is just what we are. Our respective pens have truly painted our own pictures.

RALPH ELMERGREEN, M. D.

THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORGANIZED 1841.

Officers 1910-1911.

BYRON M. CAPLES, Waukesha, President.	
J. M. Dodd, Ashland, 1st Vice-President.	T. J. Redeliogs, Marinette, 2d Vice-President.
Wilson Cunningham, Platteville, 3rd Vice-President.	
CHAS. S. SHELDON, Madison, Secretary.	S. S. HALL, Ripoo, Treasurer.
ROCK SLEYSER, Waupun, Assistant Secretary.	
A. W. GRAY, Milwaukee, Chairmao Program Committee.	
G. E. SEAMAN, Milwaukee, Chairman Medical Defense Committee.	
J. P. McMAHON, Milwaukee, Chairmao, Committee on Public Policy and Legislation.	

Delegates to American Medical Association.

L. F. Bennett, Beloit.	C. S. Sheldon, Madison.	A. H. Leviogs, Milwaukee.
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Alternates.

F. S. Wiley, Food du Lac.	Wilsoo Cunoiogham, Platteville.	R. G. Sayle, Milwaukee.
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Councilors.

TERM EXPIRES 1911.	TERM EXPIRES 1914.
1st Dist., H. B. Sears, - - Beaver Dam	7th Dist., Edward Evaos, - - La Crosse
2nd Dist., G. Wiodesheim, - - Keosha	8th Dist., T. J. Redeliogs, - - Marinette
TERM EXPIRES 1912.	TERM EXPIRES 1915.
3rd Dist., F. T. Nye, - - Beloit	9th Dist., O. T. Hougen, - - Grand Rapids
4th Dist., W. Cunoingham, - - Platteville	10th Dist., R. U. Cairos, - - River Falls
TERM EXPIRES 1913.	TERM EXPIRES 1916.
5th Dist., J. V. Mears, - - Food du Lac	11th Dist., J. M. Dodd, - - Ashlaod
6th Dist., H. W. Abraham, - - Appleton	12th Dist., H. E. Dearholt, - - Milwaukee

NEXT ANNUAL SESSION, WAUKESHA, 1911.

The Wisconsin Medical Journal, Official Publication.

SOCIETY PROCEEDINGS.

EAU CLAIRE COUNTY MEDICAL SOCIETY.

The regular monthly meeting of the Eau Claire County Medical Society was held Monday evening, October 31st, at the Library Building. The following doctors responded to roll call: Ashum, Tupper, Baird, La Breek, Derge, Cook, Williams, Midelfart, Hayes, Parker, McKittrick, Payne, Riley, Hahn, Farr, Goddard, Sevesey, Chase and Mason.

Program: *Hodgkins Disease, Report of Case*, Dr. Tupper; *Strabismus, a Symptom, Not a Disease*, Dr. Payne; *Ileus*, Dr. Midelfart.

Every member present was asked by the president to discuss each paper, and the responses were unusually interesting.

The following resolution was passed by the Eau Claire Medical Society: *To the Honorable Mayor and Councilmen.*

We, the members of the Eau Claire County Medical Society, do heartily commend and support your proposed employment of an anti-tuberculosis nurse, believing as we do that her work is needed from a humanitarian, hygienic and economic standpoint, and we hereby petition your honorable body, that you lend your aid in securing and maintaining a qualified nurse for tuberculosis cases.

We, the members of the Eau Claire County Medical Society, recognizing as we do the terrible loss of life from consumption, and knowing that to prevent the spread of the disease is to save life and conserve health and happiness; believing that the county should be the unit of protection against this terrible disease, which takes about one in seven of its citizens to a premature death; do most earnestly urge the county board to take steps to construct a sanitarium for the care of advanced cases of tuberculosis, thus removing those patients from the danger of spreading the disease and giving them a much larger chance of recovery.

Resolved, that this expression of our judgment be presented to the county board at its next meeting, and also be placed on the minutes of this society.

The following committees for District Meeting, November 28th, were appointed by the president: Program—Drs. C. A. Hayes, A. L. Payne, E. L. Mason; Reception—Drs. R. R. Chase, E. S. Hayes, E. H. Parker; Banquet—Drs. R. F. Werner, H. A. Fulton, P. McKittrick.

E. L. MASON, M. D., *Secretary.*

FOND DU LAC COUNTY MEDICAL SOCIETY.

The Eighth Annual Meeting of the Fond du Lac County Medical Society was held at the Erving Hotel, Fond du Lac, Wednesday, November 9, 1910, at 7:30 P. M.

After supper President Schoofe called the meeting to order, and after the reading and acceptance of the minutes of the previous meeting, the president's address was given. *The County Medical Society and Its Members* was Dr. Schoofe's subject, and he emphasized the importance of the county society in the reorganization of the American Medical Society. He thought more interest was demanded of individual members than a mere payment of dues, that a 25 per cent. attendance of all meetings should be demanded of each member, and that appointed papers should be sent to the secretary to be read at the meeting if the writer was unable to be present.

Dr. P. J. Calvey read a paper on *The Large Bowel—Pathologic Physiology*, which elicited many compliments from the members present, and considerable discussion.

The following officers were elected for the coming year: President, Dr. G. P. McDougall; vice-president, Dr. P. J. Calvey; secretary and treasurer, Dr. Flora A. Read; delegate, Dr. S. E. Gavin; alternate, Dr. G. P. Boyd; censor, Dr. G. V. Mears; all of Fond du Lac.

F. A. READ, M. D., *Secretary.*

FOX RIVER VALLEY MEDICAL SOCIETY.

The Fox River Valley Medical Society met at the Hotel Athern, Oshkosh, October 18th, at 2 P. M. The program was as follows:

Occlusion of the Ductus Choledochus, Dr. Edw. Quick, Appleton; *Early Diagnosis of Cancer*, Dr. F. Gregory Connell, Oshkosh; *Fractures of the Neck of the Femur*, Dr. W. E. Doern, Milwaukee.

Discussion on these papers were assigned to be opened by Drs. W. E. Minnehan, Fond du Lac; W. R. Hicks, Menominee; H. Schaper, Appleton; J. P. Noer, Wabeno and A. P. Holtz, Seymour.

GREEN LAKE-WAUSHARA-ADAMS COUNTY MEDICAL SOCIETY.

The regular meeting of the Green Lake-Waushara-Adams County Medical Society was held in the Court House at Wautoma, September 29th. The following physicians were present: Drs. Walbridge, Scott and Prince of Berlin; Dr. S. S. Hall of Ripon, Dr. Riordan of Neshkora, Dr. Beck of Caloma, Dr. McCallin of Hancock, Drs. Mary and Osear Houck of Wautoma, and Drs. Baldwin and Buckland of Green Lake. The men who were to furnish papers were all present. Dr. Baldwin presided.

After reading and correcting the minutes of the previous meeting, the following program was given: Dr. Walbridge gave an instructive talk taken largely from his own experience on the *Common Ailments of the Eye*. He deprecated the fact that so little about this important organ is known by the general practitioner and emphasized the importance of every physician paying some special attention to the eye. Dr. Walbridge took up some of the simple troubles, as foreign bodies, and pink eye, and brought out the special need of ability to diagnose serious diseases of the eye.

Dr. Riordan then read a paper on *Some Practical Considerations in Refraction for the General Practitioner*. Some of the strong points in the paper were these: There is a great loss to the practitioner by failure to take advantage of his great opportunity of refracting such cases as come within his ability. Our negligence of this field has meant a heavy pecuniary loss to the profession. A worthier reason for taking up refraction is in the protection to the public. Many of us are permitting the jeweler, the druggist or the shop keeper to do refracting which legitimately and morally belongs to the general practitioner. The blame of this can be traced to our own indifference. No other than a physician should be entitled to do refracting. Some good men who are other than physicians are engaged in refracting work, but the best of them will at time overlook some serious organic eye disorder which might have been recognized by the intelligent physician.

Dr. Riordan stated that in taking up this work the use of the ophthalmoscope should first be mastered. He then gave an outline of the apparatus needed in the fitting of glasses, and he also gave a few concrete examples showing how to make up a prescription for glasses, closing the paper with the hope that each one present might be influenced to embark on this work at their earliest convenience.

Dr. Osear Houck of Wautoma then read a paper on *Remedies Used in Ophthalmic Practice*. He brought out the fact of the great advance during the last half century in the treatment of diseases of the eye. This can largely be accounted for by the discovery of the following drugs: Atropine, Cocaine, Chloroform, Adrenalin and the Antiseptics. The stand-bys of former generations were: Leeches, Cupping, Applications of Heat and Cold, Silver Nitrate, Alum, Tannin, etc. Some of these are still counted very valuable but their use is limited and modified. Among the measures now in use, are moist heat for inflammations and exudates, rest, dark room, or by the use of paralyzants of accommodation as atropine, homatropine, duboisine, scopolamine, hyosine, etc. Atropine in 1 per cent. solution is the remedy par excellence in cases needing prolonged ciliary rest, while for refraction we use homatropine. Mydriatics dilate the pupil as do most cycloplegics, but mydriatics do not always paralyze the accommodation. Cocaine increases the mydriasis of exophthalmine, and this fact is made use of in ophthalmoscopic examinations. This

is also true of cocaine with homatropine. Instruct the patient to keep eyes closed during the action of cocaine. Do not use atropine in glaucomatous eyes. The myotics are not much used but are needed in glaucoma and peripheral ulcer of the cornea. Eserine, physostigmine and pilocarpine are the myotics used. Cocaine is the great local anesthetic used. Holocaine has to some extent displaced cocaine. Dr. Houck gave us a short but complete description of the uses of beta-naphthol, eucaine, dionine, adrenalin, silver nitrate, protargol, argyrol, nargol, argentum, zinc and copper sulphate, etc., also of the bacterines.

Following these papers came an interesting discussion in which the remarks of Dr. S. S. Hall were of special value, coming from a long experience in this line of work. The meeting adjourned to the Wautoma Fair, then being held. The next meeting will be held at Berlin, December 15th.

R. H. BUCKLAND, M. D., *Secretary*.

LA CROSSE COUNTY MEDICAL SOCIETY.

The seventh regular meeting of the La Crosse County Medical Society was held at the La Crosse Club, October 6, 1910. The applications of Drs. Flynn, Wakefield, and Scheurich were accepted.

The State Board of Medical Examiners having met here, it was decided to invite them to a dinner given by this Society. The dinner was arranged and ready, but at the last moment, our guests excused themselves stating they could not attend. The dinner having been prepared the members had to console themselves with one another's company which, judging from the laughter and happy faces, they did with success. In spite of our most keen disappointment the dinner was an enjoyable affair and delicious. We have, however, been taught an excellent lesson by being so presuming with our invitations.

M. W. DVORAK, M. D., *Secretary*.

LAFAYETTE COUNTY MEDICAL SOCIETY.

The quarterly meeting of the Lafayette County Medical Society was held at Belmont, Tuesday, October 11th. Ten members were present, viz.: Drs. Gratiot, Ennis, Hausen, Scott, Peck, Orton, Cooke, Latham, Hubenthal, and Alexander. Drs. Etticher, Dunn and Gasser were present as guests.

At 12 o'clock an elegant banquet was served and a general good time had. The following papers were read and discussed: *Acute Anterior Poliomyelitis*, Dr. Scott, Argyle; *Eclampsia*, Dr. Hubenthal, Belmont; *Goitre*, Dr. Susanne Orton, Darlington; *Duke's Disease*, Dr. Jean M. Cook, Darlington.

C. O. LATHAM, M. D., *Secretary*.

LINCOLN COUNTY MEDICAL SOCIETY.

A meeting of the Lincoln County Medical Society was held at Hotel Badger, Merrill, November 2d. The following program was given:

Complications and Sequelae of Scarletina, Dr. F. H. Kelly; *Diagnosis of Scarletina*, Dr. Herbert Saylor; *Prophylaxis of Scarletina*, general discussion opened by Dr. Reinhart.

MARINETTE COUNTY MEDICAL SOCIETY.

The annual meeting of the Marinette County Medical Society was held at Murray's Restaurant, Marinette, November 9th. After the banquet papers were read by Drs. T. A. Lid and Berglund. Eighteen were present at the

meeting. All officers were re-elected as follows: President, Dr. F. H. Schroeder; vice-president, Dr. S. Burglund; secretary-treasurer, Dr. S. E. Wright.

The next meeting of the society will be held at Menominee, Dec. 14th.

THE MEDICAL SOCIETY OF MILWAUKEE COUNTY.

At the meeting of November 11th, 1910, the following resolution, presented by Dr. W. H. Washburn, was adopted:

Whereas, The Russell Sage Foundation desires to establish in this state an organization to be known as "The Wisconsin Co-operative Committee for the Prevention of Blindness," and

Whereas, the proposition has the endorsement of the Central Council of Philanthropies, be it

Resolved, that the Medical Society of Milwaukee County endorses and approves the formation of such committee, and hereby empowers its president to appoint a representative of this society to serve on such committee.

Dr. W. H. Washburn appointed by the president to represent the Society.

A communication regarding illegal medical advertising was referred to the Committee on legislation.

The secretary was instructed to communicate with Dr. J. M. Bessel as secretary of the State Board of Medical Examiners, to inquire as to whether legal proceedings had been instituted in a case of criminal abortion recently committed and referred to at a previous meeting.

The following papers were presented: *Cystocle: Surgical Treatment*, Dr. R. Elmergreen, discussion by Drs. W. F. Malone, P. F. Rogers, C. A. Evans, H. Greenberg, and P. H. McGovern, and *Extra Uterine Pregnancy*, by Dr. P. F. Rogers, discussion by Drs. W. F. Malone, W. C. Doern, P. H. McGovern, H. Greenberg, and C. A. Evans. 36 members were present.

DANIEL HOPKINSON, M. D., *Secretary*.

OUTAGAMIE COUNTY MEDICAL SOCIETY.

The meeting was called to order at Hotel Ritger, Appleton, November 1st, by the president Dr. M. J. Sandborn, at 3 P. M. There being no clinical material the society proceeded to the scientific part of the program. Dr. N. P. Mills read a paper on *Progress in the Surgical Technic and Care of Wounds*. Discussion opened by Dr. V. F. Marshall, followed by Dr. Boyd of Kaukauna, Drs. Reeve and Ritchie of Appleton. Dr. Reeve passed around a new method used by railway surgeons in the treatment of burns, this consisted of perforated paraffin paper. Closed by Dr. Mills. Dr. Boyd next read a paper on *Surgical vs. Medical Diseases of the Stomach*. Discussed by Drs. Mills, Marshall and Ritchie; closed by Dr. Boyd. Dr. W. H. Abraham read a paper on *Intermittent Closing of the Cerebral Arteries*. Discussion opened by Dr. C. Reineck, followed by Dr. E. H. Brooks, A. E. Rector, and G. A. Ritchie; closed by Dr. Abraham.

A committee of two was appointed consisting of the president and secretary to investigate the appointment of physicians to do the work of the Moose Lodge recently organized, and to report at the next meeting. A second committee was appointed consisting of the same parties to investigate the Industrial Insurance examinations, this committee also to report at the next meeting. The application of Dr. C. Carey of Welcome was as required by the constitution laid over for one meeting.

There being no further business the meeting adjourned. 17 members were present and the opinion of all was that the papers were very high class, and showed a great deal of original thought.

FRANK P. DOHEARTY, M. D., *Secretary.*

ROCK COUNTY MEDICAL SOCIETY.

The Edgerton members of the Rock County Medical Society entertained about forty members of the society at a banquet on the evening of October 25th. Motor parties were present from Janesville, Beloit and Evansville. The banquet board was indeed a very appropriate finish for the long auto rides and an equally good start for the interesting meeting that followed. Papers were read by Drs. Fred Sutherland of Janesville and Effie Van Deliner of Beloit.

The next place of meeting was given to Janesville, November 29th.

NINTH DISTRICT MEDICAL SOCIETY.

The Ninth District Medical Society met at Wausau October 13th in the Club House. In both attendance and social good time it was pronounced the most successful in the history of the organization. The local men united in giving a banquet for the visitors after the meeting which has never been eclipsed in any former meeting of the society. There were sixty at the banquet, thirty-eight of whom were visitors. The counties represented were: Portage, Clark, Marathon, Lincoln, Wood and Waupaca. The next meeting will be held in Marshfield some time in January. Dr. H. L. Rosenberry, the president, presided, and the following program was given:

- Exhibition of Cases.....Dr. Joseph Smith, Wausau
- A Few Shots at the Health Officer.....Dr. J. C. Hayward, Marshfield
- Fresh Air.....Dr. Margaret Trevitt, Wausau
- Report of a Case.....Dr. Herbert Saylor, Merrill
- Suggestion or Hypnotism.....Dr. E. B. Quade, Wausau
- Diagnosis of Thoracic Aneurism.....Dr. R. L. Williams, Pine River
- Care of the Infant.....Dr. W. F. Brownell, New London
- Reports on a Few Surgical Cases.....Dr. V. A. Mason, Marshfield

The out-of-town men present at the meeting were: Drs. W. S. Wahl, Stratford; J. A. Jackson, Budoyie; F. J. Pfeifer, New London; J. J. Looze, O. T. Hogen, and N. O. Blancher, Grand Rapids; W. W. Gregory and J. D. Lindon, Stevens Point; H. A. Lathrop and V. A. Mason, Marshfield; F. A. Southwick, Stevens Point; Wm. Hipke, Marshfield; I. G. Schwarz, Chili; G. L. B. Rounseville, Milladore; F. A. Sales, Spencer; A. F. Harter, Marathon City; E. J. Phelps, Elderon; J. B. Vedder, Marshfield; H. Raasoch, Nelsonville; C. V. Neupert, Stevens Point; A. L. Redgman, Grand Rapids; R. L. Williams, Pine River; A. Matheson, Neillsville; J. Richmond, Loyal; A. M. Christaffson, Colby; M. J. Rush, Loyal; H. H. Christofferson, Loyal; R. P. Potter, Auburndale; N. F. Brorowell, New London; Frank Pomainville, Grand Rapids; D. B. Reinhart, F. H. Kelly, Herbert Saylor, C. E. Walsh, and L. J. Friend, Merrill; W. H. Reid, Chicago; R. E. Farr, Minneapolis; J. C. Hayward, Marshfield.

**THE ASSOCIATION OF
COUNTY SECRETARIES AND STATE OFFICERS
OF THE STATE MEDICAL SOCIETY OF WISCONSIN.**

T. J. REDELINGS, M. D., Marinette,
President.

W. F. ZEIRATH, M. D., Sheboygan,
Vice-President.

ROCK SLEYSER, M. D., Waupun, Secretary.

NEXT ANNUAL SESSION, WAUKESHA, 1911.

Under this heading will be published each month, papers, editorials, sermons, reports of meetings and all that relates to the County Medical Societies of the state. To it all are invited and asked to contribute, especially the County Secretary. It is yours—make good use of it, and may it be of help to every County Society. It will be edited by Rock Sleyser of Waupun, secretary of the new association, to whom all communications for this department, reports of meetings and news matter should be addressed.

SOME THINGS THIS ASSOCIATION CAN ACCOMPLISH.*

BY ROCK SLEYSER, M. D.,
WAUPUN.

My first words this afternoon must of necessity be in the form of an apology. I am very much like the absent-minded old lady who became so interested in inviting her friends to a basket picnic that she forgot to prepare her own basket and was forced to fall back on her guests for something to eat. Now my basket was to have contained a contribution known as "Some things this Association can accomplish." Someone has pilfered my basket and I suspect Dr. Sheldon.

There is so much that this Association can accomplish that I was surprised when I found how little there is to say about it. It may all be summed up in these words, "It is a chance to get together and talk things over." It is a chance to learn what your neighbor is doing and how he is doing it. New ideas and methods are brought to your notice and you will go home and improve. But of even more importance is the inspiration and enthusiasm the county secretary should take home with him from a meeting of this kind. He will learn the ideals and results that have been accomplished elsewhere and go home with a full realization of the great possibilities of his position. What has been accomplished elsewhere in national, state or county organization you can accomplish at home; and remember—the standing your profession has with the public in your home is largely dependent on your local organization. These meetings should urge upon you not only a reali-

*Read at the First Annual Meeting of the Association of County Secretaries and State Officers, Milwaukee, June 21, 1910.

zation but a materialization of the possibilities of your positions as county and state officers. If they do this they will have accomplished their purpose. Every officer improved means a society made stronger and more efficient. Every society improved means another step in uniting a once discordant and divided profession.

Now I will return to the old lady of whom I spoke. While she didn't get her basket filled in time for the party, she did learn a lot about her neighbors while she was around with her invitations. During the past six months I have spent considerable of my spare time, as you know, in the "Booster" campaign for 2,000 in 1910. I have been spying in a mean under-handed way in your kitchens. I have been looking in your back-yards, and I have found that some of you are careless house-keepers. I have found that some of you are extravagant and that there is mighty good material around your premises that you are not making use of. I have learned a heap about my neighbors and like the old lady I am itching to tell. I am not going to, for the ones I could tell the most on are not here to-day, and they are the very ones who should be here. I will say this though, that some of our societies need a new house-keeper. There are not many. Most of the county secretaries of Wisconsin are working hard and deserve a more loyal support.

While I have been learning about house-keepers I have been learning about house-keeping. I will take but a few minutes of your time, for there is a splendid programme waiting, but there are a few little points I want to call your attention to for fear they may be overlooked in the other papers. They are not new. I have mentioned them in the *JOURNAL* this year, but they are so important they will bear repeating.

First—What can be done to have a full membership? This is the most important subject and one on which an hour's time could profitably be spent. I shall but name a few things.

At one of your meetings early in the year give an hour's time to discussing in an informal way the non-members of your county. Take them one at a time and talk it over. Some member is sure to be familiar with the case. Let the chair appoint two or three members whose particular business it shall be to get this man's application and report at the next meeting on what they have done. In addition to this, appoint a special membership committee to obtain information, work for new members, and report at the annual meeting. The secretary should invite every eligible non-member to each meeting and urge him just as strongly to come as the members. Never give up! Keep at them! In less than three months' spare time this winter I secured

119 that had been given up. Often an outsider can do more. Your councilor or any of the state officers will be glad to help in any stubborn indifferent case. We need them all for a united harmonious profession and they need us. I can't urge you too strongly to hold one of these booster meetings each year. Start your campaign for 1911 now—do not wait until next summer. Make careful, accurate plans and then carry them out. One little point in this connecton—do not fail to emphasize, in soliciting membership, the value received for the fee—the JOURNAL (\$2.00), membership in both county and state societies, and mal-practice insurance equivalent in value to a market price of fifteen dollars.

A word about collections. Every society should do what it can to relieve its secretary of this bugbear. I believe a resolution should be passed in each organization instructing the secretary to make sight draft through the ordinary commercial channels March first on any and all in arrears. Notify each member of this resolution—then carry it out. None can take offense. This is not new or original. I have inquired where it has been tried and find it works out most satisfactorily. You will have no delinquents, both the county and state secretaries will be relieved of the most odious part of their duties, and your attendance and interest will be increased; for the behind man doesn't come to meetings and do his part.

Report your meetings to the JOURNAL and publish the attendance. Old man Human-Nature likes to see his name there, and does not like to see his name left out. Try it this year and see. In writing or speaking of your society be optimistic. No one loves a knocker. Tell how it is the best society in the state, and bye and bye you will believe it, and so will your members, and then—it will be!

Just one more point. It is about dropping this artificial formal dignity when we meet as doctors and friends. You didn't call Jones "Doctor" with the accent on the last syllable when you were chums back at the dissecting table and the nickel lunch counter. You called him "Jones" or "Bill" or "Fatty." Try it to-morrow and see the mercury go up. Try it next day and see how much better you feel yourself.

Meet as friends and brothers. Meet as chums. Meet as co-workers in the greatest, the grandest work ever given God's noblemen.

Last and above all else

"BE A BOOSTER."

Discussion.

DR. T. J. REDELINGS, Marinette: We are very glad to have had Dr. Sleyster's paper, and I want personally to acknowledge my appreciation of his

efforts in my district. I realize that he succeeded in getting members that I was unable to coerce into line, notwithstanding that I had fairly good support by loyal secretaries. I have in mind one man with whom we plead jointly. The secretary and myself arranged our work so that he would write, and then in a few days I would write, and in a few more days he would write, until he finally wrote us to mind our own business and he would mind his. Some time early this spring we got a notice from Dr. Sleyster including this man's name as one who had expressed a willingness to come in. He did not come in, but his name has a place on our roster as a paid-up member, for which we are grateful, and we hope some day to get him into the field as an active worker.

Dr. Sleyster's point with reference to collections appeals to me. I do not know whether it is the duty of the councilor or not, but I have had that personal interest in my home county society that made it positively painful to think that there might be a loss of membership, and when the secretary reported to me that he could not get Dr. So-and-So, I made a personal call, and dunned the fellow for it. I have dunned these men on the street and in the street cars and at our meetings and when I have been in counsel with them, and we have succeeded in keeping our former members, but we have not got all the members in the county. I believe Dr. Sleyster's recommendation of drawing on these men through commercial channels is a clever idea, and I would like to see it tried.

DR. S. J. DRIESSEL, Barton: As to this matter of sight draft, I notified one man a number of times and did not get any answer, and finally I decided to draw on him, but I never heard from him. I do not know now whether he is offended or not, but I did not hear from him after that. That is my experience with sight drafts. I have not seen him personally since that time. I believe that some men will be offended if they are drawn on.

DR. J. H. CLEARY, Kenosha: I would like to announce that sight drafts should not be drawn on members unless it is according to a resolution passed by the society, and a copy of this resolution sent to every member; then it is a matter of business, and they cannot take offense.

DR. SLEYSTER: That is the point I wanted to make, that if the society wants to adopt this plan it should first pass these resolutions, and then let every member understand it and know that they can expect that after a certain time this will be done. No one could reasonably take offense after the society has passed these resolutions if they were all informed of it in advance.

DR. J. L. FLEEK, Brodhead: A great many physicians are members of secret organizations. Very few of them are expelled for non-payment of dues. Why? Because they believe they get something for their money. I hate to say this at this love feast, but it seems to me that if you will make the doctor believe he is getting something for his money, you will have no trouble in collecting his dues.

DR. SHELDON: The method of collecting the dues by means of a sight draft through the local bank, if authorized by vote of the society, I think is a pretty good means of bringing some of the recalcitrants to time. If it is by the action of the society, and it should be in all cases, it seems to me there is no valid ground of complaint. The fact is that doctors, as far as their society dues are concerned, are hopelessly, irredeemably and inexcusably negligent. There is no use in obliging all these county secretaries to send repeated invitations to pay the dues when those dunned expect to pay all the while. Under those circumstances, unless a man is willing and expects to have his

membership cancelled, and to go out of the medical society entirely, there is no valid ground for complaint, if the society has so ordained, that he should be drawn upon, and he ought to think that it is mighty lenient treatment on the part of the society to reinstate him. It is only after repeated duns and written entreaties that finally the draft is made on him. We adopted this plan in the Dane County Medical Society two or three years ago, and the secretary has not failed to avail himself of this privilege. In our experience it has always been promptly honored, if the man intends to stay in at all. If he does not intend to stay in, and does not intend to pay then or any other time the case is different. But most of the doctors who are regular members expect to pay, and I think, as Dr. Fleek suggested, that most of them realize that they are getting their *quid pro quo*. The realization that they are a part of this great medical profession and have a share in its work, which they cannot effectively do unless they are a part of this organization, is in a measure a *quid pro quo*, and is some satisfaction to them for their \$2 which they pay for their state dues; and so far as the \$1 that they pay for medical defense is concerned, it seems to me that that is the best dollar that they have spent in the whole year. If I could read you the letters I have received from the many applicants for medical defense, you would realize the comfort this plan gives them. They now have a consciousness that there are 1600 good men behind them, when before they were at the mercy of these shysters and blackmailers, often helpless and willing to compromise on any terms if they can only avoid a trial. I am sure, as Dr. Fleek has intimated, we all feel that we get our full money's worth when we pay our \$3 a year for medical defense and state dues.

DR. F. P. DOHEARTY, Appleton: The plan of the Outagamie County Medical Society has been usually at their annual meeting to have one or two good men from some large medical center, for instance, Chicago, come up and address the society, and as a general rule most all of the dues are collected at that time. There is just a few left over, and those few, with the help of the councilor, have not been very hard to collect.

DR. SLEYSER, closing: I want to emphasize the importance of letting the men know the value they receive for their money. When they are made to realize that it includes membership in two societies, the Journal, and malpractice protection they will pay their share more cheerfully and promptly.

NEWS ITEMS AND PERSONALS.

Dr. L. F. Jermain, Milwaukee, has returned from a four months' sojourn in Europe.

Dr. W. D. Neville, Eagle River, who recently suffered a stroke of paralysis, is recovering.

Dr. E. L. Baum has been appointed junior house physician of the Johnston Emergency Hospital, Milwaukee.

Dr. Amanda Thompson, Milwaukee, has been named to take charge of all surgical work in the Municipal Hospital at Shanghai, China.

The National Association of Military Surgeons, at a recent convention held at Richmond, Va., selected Milwaukee as the next meeting place, November, 1911.

Dr. Friend, of Merrill, has disposed of his practice to Dr. Winneman, and will go to Philadelphia, where he will enter the Polyclinic Institute to spend a year in post-graduate surgical work. At the end of that time he expects to return to Merrill.

St. Mary's Hospital, Milwaukee, celebrated its sixty-second anniversary on November 12th. The institution was founded November 12, 1848.

Preliminary steps have been taken for the erection of a hospital at New London. The cost of the building is not to exceed \$25,000.

Fletcher T. Riley and **B. W. Kinsey**, who have operated in Milwaukee as the "United Doctors," were found guilty of the charge of unlawfully practicing medicine and were fined. Notices of appeal have been filed.

A warrant has been issued for the arrest of Simon R. Janusheka, Milwaukee, who is charged with unlawfully practicing medicine.

The **American Public Health Association** will hold its 1911 meeting in Havana, Cuba, from December 4 to 9. The Academy of Medicine has offered its building for the general section meetings. The Hotel Sevilla will be the headquarters of the Association. A few years ago a meeting in Havana would probably have discussed yellow fever. The changed situation in Cuba with respect to that disease is shown by the fact that yellow fever has been so completely extinguished on the island that the local physicians desire rather that tuberculosis be given the most prominent place. The question of the milk supply will also be considered.

It is hoped at this meeting that the recently organized Sociological Section, and the Section, on Sanitary Engineering, which was tentatively authorized by the Milwaukee meeting, may be put upon substantial foundations.

A Swindler Abroad. Hotels, druggists, physicians, livery men and others, are warned against a man traveling from place to place presenting a card with the name "R. F. Hall" printed in the center. In the lower left hand corner are the words "Parke, Davis & Co." and in the lower right hand corner the words "Detroit, Mich." This man is described as follows:

"5 ft. 6 or 8 inches, 150 lbs., fend for Turkish cigarettes, about 27 years, complexion medium, wears nose glasses and continually takes them off and on; he is a swell dresser, good talker, fine appearance, wears one of those light colored slip on or off rain coats."

This individual has no connection with Parke, Davis & Co. and so far as heard uses the card to facilitate the passing of bogus checks.

Because of incidents like these nearly all concerns employing "drummers" forbid them to borrow money or seek credit, except upon individual responsibility and acquaintanceship. Therefore, those seeking credit or loans, especially from comparative strangers, on the strength of their alleged connection with some important concern, should be treated as imposters.

The fourth annual meeting of the **Minneapolis, St. Paul & Sault Ste. Marie Railway Surgical Association** was held at St. Paul, Minnesota, November 16 and 17, 1910. Program: President's Address—"Unjust Verdicts Against Railroad Corporations," Dr. Justus Ohage, St. Paul, Minn.; "Prevention of Accidents," Dr. John F. Pritchard, Manitowoc, Wis.; "Burns—How Are We Treating Them?" Dr. George M. Steele, Oshkosh, Wis.; "Pulsating Exophthalmos," Dr. Albert E. Halsted, Chicago, Ill.; "Mechanism and Significance of the Reflexes," Dr. Leo M. Crafts, Minneapolis, Minn.; "Tendon

Suturing," Dr. Frank S. Wiley, Fond du Lac, Wis.; "Conservative Surgery of the Hands," Dr. Joseph F. Quin, Milwaukee, Wis.; "Medical Expert Testimony," Dr. John W. MacDonald, Minneapolis, Minn.; "Arterio-Venous Anastomosis for Gangrene of Leg, With Report and Anatomical Demonstration of Two Cases," Dr. Roger T. Vaughan, Chicago, Ill.; "Personal Experiences with Bier's Hyperemia," Dr. Knut Hoegh, Minneapolis, Minn.; "The X-Rays in the Hands of the Country Practitioner," Dr. Blake McK. Lancaster, Crosby, N. D.; "Fracture of Anatomical Neck of Humerus with Subglenoid Dislocation of Head," Dr. Thomas J. Strong, Enderlin, N. D.; "Practical Test of Hearing, for New and Old Employees in Railroad Service," Dr. Charles Da Wright, Minneapolis, Minn.; "Significance of Eye Injuries, and the Essentials in Their Treatment," Dr. George F. Scheib, Fond du Lac, Wis.; "Two Cases of Conservative Amputation," Dr. John H. Rishmiller, Minneapolis, Minn.; Operative Clinic, Dr. Justus Ohage, St. Paul, Minn.

Marriages. Dr. J. R. Kellogg, Portage, and Mrs. Dodge, Omaha, Neb., October 13th.

Dr. John T. Elliott, Rhinelander, and Miss Mary Ellen Nicholson, Markham, Ont., November 3d.

Dr. Frank Meade, Madison, and Miss Lucy Wood, Bloomington, Ill., October 25th.

Removals. Dr. Winnemann, Butternut to Merrill. Dr. L. W. Juergens, Portage to Eureka. Dr. E. P. Crosby, Lomira to Arnott. Dr. C. F. Myre, Chippewa Falls to Kaukauna. Dr. E. W. Quick, Appleton to Green Bay. Dr. C. N. Abbott, Fosterville to Chippewa Falls, Dr. Geo. F. Hegner, Milwaukee County Hospital to Melrose. Dr. Longdefer, Knapp to Washburn. Dr. A. D. Beier, Milwaukee to Boyd.

Deaths. Dr. Ernest Stuart Albee, Oshkosh, died on November 2d, of Bright's disease, aged 34 years.

Dr. Albee was born at Oshkosh, May 30, 1876. He was the son of President Geo. S. Albee, who was at the head of the Oshkosh Normal School for twenty-seven years. He received his education at the Normal School and the University of Michigan. He later attended Rush Medical College and was graduated in 1901.

Dr. Albee had been in practice at Oshkosh eight years. He was a member of the Winnebago County and State Medical Societies.

Dr. Samuel H. Friend, Milwaukee, died on October 30th, aged 48 years.

Dr. Friend was born in Milwaukee April 30, 1862. He received his medical education at the University of Pennsylvania and studied for several years under Dr. Vibert of Frankfort and Dr. Virchow of Berlin. After completing his studies he returned to Milwaukee, and was active in his profession until a few years ago when ill health compelled him to retire.

Dr. W. G. Nicholson, Green Bay, died on October 21st, after a brief illness, of pneumonia.

Dr. Nicholson was born at Hayton, Wis., May 13, 1869, graduated from Rush Medical College, and later studied at Berlin and Vienna, specializing in surgery. Dr. Nicholson was a member of the Brown County Medical Society, and State Medical Society of Wisconsin.

BOOK REVIEWS.

The Practitioner's Case Book. For Recording and Preserving Clinical Histories. Prepared and Arranged by the Editorial Staff of the Interstate Medical Journal. Imperial octavo; 286 pages; full cloth binding. Printed on bond writing-paper. With 80 colored anatomical charts (detachable), showing outlines of body and skeleton in light red and the viscera in pale blue. Index for listing patients both by name and case number. St. Louis: Interstate Medical Journal Co. 1910. Price, postpaid, \$2.00.

The importance of making careful notes of cases cannot be urged too strongly on those practitioners who fail to observe this obligation; it has been emphasized both in the teaching and in the practice of every great clinician and it should be one of the first routine habits acquired by the young practitioner of medicine. Exact case records are not only of the greatest value for purposes of study and comparison, but they safeguard the physician to a large extent against suits for alleged malpractice, while their absence may give an undue advantage to a clever opposing attorney. Furthermore, it is always advisable to preserve a record of the information given to the patient or to the family of the patient, a thought suggested by the fact that in the volume now before us a special space is set aside for this purpose.

Realizing the importance of this subject, the editors of the Practitioner's Case Book have endeavored to aid the profession by devising a plan whereby the labor of exact case-recording is reduced to a minimum; the result is a book which can be most highly recommended for the use of the general practitioner and also for many specialists.

The history sheets are complete enough to cover all cases encountered in general practice, since they provide spaces for personal and family history, record of present trouble, subjective symptoms, results of laboratory examinations, and full details of a careful physical examination, followed by space for recording diagnosis (provisional or definite) and prognosis, with a brief outline of the information given to the patient or to the family of the patient. Following this there is space for details of later developments of the case.

Worthy of special mention, is an excellent series of detachable anatomical diagrams printed in light colors so that pictorial records of fractures, dislocations, cavities, areas of dullness, etc., may be made by pencil or pen.

If the convenience and other advantages of this book should be sufficiently appreciated by the profession so that a large number of practitioners will make careful case-records, the editors may well feel that they have done a definite constructive work for the profession.

Practical Medicine Series, Vol. III, is devoted to the Eye, Ear, Nose and Throat. The Eye, Casey A. Wood; The Ear, Albert H. Andrews; The Nose and Throat, Gustavus P. Head. The work is a handy size volume attractively arranged for the student and busy practitioner, and is replete with suggestions of the best practices of the day. The chapters devoted to Mastoiditis and the Brain though brief are particularly interesting. On the whole the work is such as to commend itself most creditably to the profession.

The Essentials of Histology, Descriptive and Practical. For the use of Students. By EDWARD A. SCHAFER, F. R. S., Professor of Physiology in the University of Edinburgh. New (8th) edition, thoroughly revised. Octavo, 511 pages, with 645 illustrations. Cloth, \$3.50, net. Lea & Febiger, Publishers, Philadelphia and New York, 1910.

The new edition of this well-known text book has been thoroughly revised, and numerous illustrations, many in color, have been added. The great wealth and fine quality of these illustrations, together with the arrangement of the subject matter into lessons, the compactness of the book, which yet brings all the essentials, make it one that must appeal to both teacher and student alike. The chapters on the histology of the blood and nerve tissue are particularly good.

G. C. R.

Pathogenic Micro-organisms, including Bacteria and Protozoa. A Practical Manual for Students, Physicians and Health Officers. By WILLIAM H. PARK, M. D., Professor of Bacteriology and Hygiene in the University and Bellevue Hospital Medical College, and Director of the Research Laboratory, Department of Health, New York City; and ANNA W. WILLIAMS, M. D., Assistant Director of the Research Laboratory. New (fourth) edition, thoroughly revised. Octavo, 670 pages, with 196 illustrations and 8 full-page plates. Cloth, \$3.75, net. Lea & Febiger, Publishers, Philadelphia and New York, 1910.

Here is a text book that has shown phenomenal growth and still is growing in every way that is favorable and commendable. Rapidly outgrowing several editions, the present edition again shows valuable additions in the wealth of subject matter of comprehensive and reliable up-to-date information which has made this book one of the most favored and sought after text books in bacteriology. The arrangement of the book, which considers protozoa and pathogenic bacteria in close relation to the symptoms and clinical manifestations produced by them, makes it one of the greatest value to the physician who is looking for the practical application of a rapidly growing branch of the science of medicine. It is a book of greatest value to the practitioner and student alike.

G. C. R.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadelphia, assisted by LEIGHTON F. APPLEMAN, M. D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia. Lea & Febiger, Philadelphia. \$6.00 per annum. Volume 3 of Progressive Medicine deals with Diseases of the Thorax and its Viscera, Dermatology and Syphilis, Obstetrics, and Diseases of the Nervous System. The great value of this publication is that it gives more than an abstract of the work done in these departments of medicine during the current year, it presents an appraisal by a competent authority of the year's progress and so economizes the reader's time by presenting for his consideration only what is important, supplemented throughout by judicious editorial comment.

This first section, by William Ewart, M. D., discusses the diseases of the lungs, heart, and blood vessels.

Section Two by William S. Gottheil, M. D., considers Dermatology and Syphilis and contains many practical suggestions with regard to treatment. Among other things he warns against the indiscriminate use of atoxyl which has recently been lauded in a rather unguarded manner.

The section on Obstetrics is edited by E. P. Davis, M. D., and contains some excellent discussions of the toxemia of pregnancy, eclampsia, placenta previa, and obstetric surgery.

W. G. Spiller, M. D., edits the section devoted to the Disease of the Nervous System and has condensed into a small space a large number of interesting observations.

Typographical errors are few but "Postpartum Cesarean Section" is a contribution to medical gaiety which ought not to go unnoticed, and a mathematical undertaker would be puzzled to know just what preparations to make after reading of "9 cases with a mortality of 1 per cent."

Take it for all in all Progressive Medicine is the best sort of a perennial post-graduate course and we hope its number of readers may steadily increase.

A Text Book on the Therapeutic Action of Light. By C. E. ROGERS, M. D., New York. Published by the author. At last, according to the author of this book, the Panacea for all ills has been discovered. It is, again according to the author, light—particularly the Rho rays. The author's definition of "Rho rays" is not clear to us. But whether one comprehends the formation of the Rho rays or not, the astounding part is what the author claims they will do. Cures are effected, still according to the author, in Tuberculosis, Pleurisy, Acute Rheumatism, Gonorrhoea, Syphilis, Neuralgia, Diseases of the Eye, Puerperal inflammations, Cerebrospinal meningitis, Goitre, Dislocations, and a host of other ills—a glance at the list of contents quite over-awes one.

Cases of miraculous cures (?) are reported—for example that of the cure of a patient suffering from tuberculosis in whose sputum tubercle bacilli were found—the author concludes the case by writing: "in two months the regular treatments were discontinued. During the following months he had eight treatments, when he was discharged, cured." In italics the author also says, speaking about tuberculosis—"After the formation of cavities and the occurrence of hemorrhages, even though severe, recoveries are frequent." A few quotations follow—"In acute inflammations of the brain and its meninges, the new rays are more important than any other known agent." "The disease (pernicious Anemia) yields readily to treatment." "The interdiction of carbohydrates (in Diabetes Mellitus) is wrong in theory." "Erythematous syphilide will quickly disappear under the action of the Rho rays." "Syphilitic Keratitis is successfully treated by the new rays." "The first treatment (for Chronic Gonorrhoea) required but ten minutes. They were continued daily for thirty days when he was discharged cured."

The author even goes beyond the subject of his book. He gives definitions and theories of diseases which are, to say the least, original. The illustrations are good but irrelevant. Pictures of the Calmette Ophthalmic Reaction, von Pirquet's Cutaneous Reaction, and Moro's Cutaneous Reaction,

which constitutes the frontispiece have no relation to the "Therapeutic Action of Light."

For a medical student or unthinking practitioner this book is dangerous, for a thinking physician it is an amusing example of how far wrong a man with a hobby can go. We notice that the book is "published by the Author", and we understand why.

C. A. B.

Nutrition and Dietetics. By WINFIELD S. HALL, M. D., Professor of Physiology, Northwestern Medical School, Chicago. 315 pages.—A manual designed for students, trained nurses, and also the general practitioner. \$2.00 net. D. Appleton Co., N. Y., 1910.

This book embodies the work of Dr. Hall as a lecturer to undergraduate medical students and nurses. Physiological chemistry has made such advances in the past few years that the general practitioner who graduated even within the past decade will find many new and useful ideas in regard to this most important subject. In part I, the chemical composition of the body is discussed with a presentation of the needs of the body in growth, repair, and during work. The various foods are defined and classified, and their preparation treated in a most practical way—the general principles which govern cooking of food are presented.

Part II takes up the use of foods in the body, dealing with digestion, absorption, assimilation and excretion.

Part III treats of diet in health, and indicates the proper balancing of a diet—for the varying condition incident to growth, the occupation, age, etc. The chapters on infant feeding are contributed by Dr. Joseph Brenneman, Prof. of Pediatrics, Northwestern Medical College. The feeding of the healthy infant is considered and many useful suggestions are made both for the breast-fed and the artificially-fed baby. Particular stress is laid upon the proper hygiene as regards interval and amount of feeding, and a very simple scheme for calorimetric control is presented. The chapter on infant feeding in abnormal conditions, where there is nutritional disturbance is most practical, and the causes and treatment of such conditions as malnutrition, rachitis, ileocolitis, etc., are presented most clearly. The author particularly lays stress upon complete rest in acute conditions, and the general danger of fat over-feeding especially in all food intoxications. Diluted fat-free milk is recommended during convalescence after such intoxications.

Dr. Hall then considers the principles of dietetics and rectal feeding; fevers, and the various acute and chronic diseases are dealt with, particular stress being placed upon the diet in the various diseases of the digestive tract. The diet in disorders of nutrition is next treated, and very definite suggestions made in regard to the treatment of obesity, diabetes, etc.

In an appendix are found recipes, also a chapter with brief outline of experimental work, setting forth chemical experiments, which are calculated to aid in an understanding of the chemistry of foods, of digestion and metabolism. The book is finished with a complete index.—W. H. S.

THE WISCONSIN MEDICAL JOURNAL

Nov.
NOVEMBER, 1910.

TRANSACTIONS OF THE SIXTY-FOURTH ANNUAL MEETING OF THE STATE MEDICAL SOCIETY OF WISCONSIN AT MILWAUKEE, JUNE 22, 23 and 24, 1910.

OFFICERS:

PRESIDENT.

B. M. CAPLES, Waukesha.

VICE-PRESIDENTS.

J. M. DODD, Ashland.

T. J. REDELINGS, Marinette.

WILSON CUNNINGHAM, Platteville.

SECRETARY.

CHARLES S. SHELDON, Madison.

ASSISTANT SECRETARY.

ROCK SLEYSER, Waupun.

TREASURER.

S. S. HALL, Ripon.

PROGRAM COMMITTEE.

A. W. GRAY, Milwaukee.

A. J. PATEK, Milwaukee.

C. S. SHELDON, Madison.

COMMITTEE OF ARRANGEMENTS.

W. T. MURPHY, Waukesha, Chairman.

A. J. HODGSON, Waukesha, Vice-Chairman.

Commercial Exhibits—R. E. DAVIES, Chairman, E. W. MALONE,
J. B. NOBLE, G. E. PETERSON, B. U. JACOB, U. J. TIB-
BITS, B. J. WARD, W. B. STRONG.

COUNCILORS.

- 1st District—H. B. SEARS, Beaver Dam.
 2nd District—G. WINDESHEIM, Kenosha.
 3rd District—F. T. NYE, Beloit.
 4th District—W. CUNNINGHAM, Platteville.
 5th District—J. V. MEARS, Fond du Lac.
 6th District—H. W. ABRAHAM, Appleton.
 7th District—EDWARD EVANS, La Crosse.
 8th District—T. J. REDELINGS, Marinette.
 9th District—O. T. HOUGEN, Grand Rapids.
 10th District—R. U. CAIRNS, River Falls.
 11th District—J. M. DODD, Ashland.
 12th District—H. E. DEARHOLT, Milwaukee.

COMMITTEE ON PUBLIC POLICY AND LEGISLATION.

- A. W. GRAY, Milwaukee. J. P. McMAHON, Milwaukee.
 F. F. BOWMAN, Madison.

COMMITTEE ON MEDICAL DEFENSE.

- G. E. SEAMAN, Milwaukee, Chairman, S. S. HALL, Ripon.
 A. J. PATEK, Milwaukee, Secretary.

DELEGATES TO THE A. M. A.

- C. S. SHELDON, Madison. A. H. LEVINGS, Milwaukee.
 L. F. BENNETT, Beloit.

ALTERNATES.

- WILSON CUNNINGHAM, Platteville. R. G. SAYLE, Milwaukee.
 F. S. WILEY, Fond du Lac.

PUBLICATION COMMITTEE.

- A. J. PATEK, Milwaukee; G. E. SEAMAN, Milwaukee; O. H.
 FOERSTER, Milwaukee; S. S. HALL, Ripon;
 C. S. SHELDON, Madison.

COMMITTEE ON THE PREVENTION OF TUBERCULOSIS.

- C. A. HARPER, Madison; G. E. SEAMAN, Milwaukee; J. M.
 BEFFEL, Milwaukee; M. P. RAVENEL, Madison;
 C. H. STODDARD, Milwaukee.

COMMITTEE ON MEDICAL EDUCATION.

- E. S. HAYES, Eau Claire. EDWARD EVANS, La Crosse.
 W. H. WASHBURN, Milwaukee.

COMMITTEE ON NECROLOGY.

- A. J. PATEK, Milwaukee, Chairman; E. L. BOOTHBY, Hammond;
 J. C. REYNOLDS, Lake Geneva.

COMMITTEE ON HISTORY OF MEDICINE IN WISCONSIN.

W. S. MILLER, Madison, Chairman; GEORGE P. BARTH, Milwaukee.

DELEGATE TO NATIONAL LEGISLATIVE COUNCIL, A. M. A.

BYRON M. CAPLES, Waukesha.

DELEGATE TO COUNCIL ON MEDICAL EDUCATION, A. M. A.

M. P. RAVENEL, Madison.

COMMITTEE TO ACT WITH BOARD OF PUBLIC INSTRUCTION, A. M. A.

C. R. BARDEEN, Madison.

COMMITTEE TO DRAFT FORM OF REPORTS FOR COUNTY SECRETARIES AND COUNCILORS.

J. M. DODD, Ashland. WILSON CUNNINGHAM, Platteville.

C. S. SHELDON, Madison.

MINUTES OF THE SIXTY-FOURTH ANNUAL MEETING OF THE STATE MEDICAL SOCIETY OF WISCONSIN.

MILWAUKEE, JUNE 22, 23 AND 24, 1910.

PROCEEDINGS OF THE GENERAL SESSION.

WEDNESDAY, JUNE 22d.

MORNING SESSION, 11:00 O'CLCK.

The Sixty-fourth Annual Meeting of the State Medical Society of Wisconsin was held at Recital Hall, The Auditorium, Milwaukee, June 22, 23 and 24, 1910.

ORDER OF PROCEEDINGS.

Call to order by the President, Dr. Edward Evans.

Invocation, Rev. C. H. Beale.

Address of Welcome for the City of Milwaukee, Mayor Emil Seidel.

Response by the President of the Society, Dr. Edward Evans.

Report of Committee on Arrangements, Dr. P. F. Rogers, chairman.

Report of Program Committee, Dr. O. H. Foerster, chairman.

The meeting was called to order by the President, Dr. Edward Evans of La Crosse.

PRESIDENT EVANS: I am sure, ladies and gentlemen of the State Medical Society of Wisconsin, that with me you are pleased to wel-

come among us this morning, the Mayor of Milwaukee, Hon. Emil Seidel.

MAYOR EMIL SEIDEL: Mr. Chairman and members of the State Medical Society of Wisconsin. I want to assure you that I shall not make a lengthy speech. As the chief executive of this city I want to extend to you the hearty greeting of our community.

I believe of all callings, that of a physician is perhaps the most difficult. I recollect well that when I was a boy I made up my mind that I wanted to become a physician; but I had a poor father and instead of that I had to go to work and help earn a living. Later on I found that the physician must be ready to be called upon at any time, and I thought: "Well, after all perhaps it was the best thing for you that you did not become a physician."

I want to say, my friends, that our administration is with you in your endeavors to do the best for mankind. I want to tell you that our administration realizes the value of men that know their business, that know how to do things. I want to tell you that the affairs of our American cities in the past have rested altogether too much in the hands of men belonging to gangs that did not know how to run, rule, and govern cities.

I want to say furthermore that our present administration is endeavoring to find the best possible talent to put in the proper places, and therefore we recognize the necessity of finding the best man to put in the office of health commissioner. I do not know whether we have discovered him, though we believe we have; we feel that we have secured the best man for the place.

I hope, gentlemen, that those of you who are located in Milwaukee will never find any reason to regret the appointment that our administration has made, and I should like to solicit from you your aid for this office. The administration of that office is very difficult, and I hope that the health commissioner of the city of Milwaukee may bank upon the physicians of the community and receive their co-operation. I request that from you.

I hope that you do not expect of me to turn over the keys of the city to you, because actually there are no keys except those that belong to the City Hall and those I do not want to give away—they belong to the city—and I have no right to give them away. But I do want to assure you that we hope that you will enjoy your stay in Milwaukee.

I don't know that I have much more to say, excepting that our administration wishes you success in your work. We hope that your deliberations will be carried on in the spirit of doing the best you can for mankind, and I feel assured that whatever you do and whatever you say and whatever you attempt to resolve that it will all be with an eye upon the duty that you owe mankind.

You as physicians have received the opportunity of a better education than the great mass of people; it is the accumulation of social activity throughout many centuries that has enabled you to reach that point. I believe that in return you owe these big masses of people that look upon you for their health and the assurance of their health, a duty; and I hope you will not forget that they have a claim on you, and I am sure you do not forget them. I want to thank you one and all for having chosen Milwaukee as your meeting place, and I hope that you will find many occasions in the future to come to Milwaukee, and that each successive time that you come you will find our city improved.

I want to tell you that there seems to be throughout the world, throughout the nations, and throughout our American nation in our communities, an awakening of a civic spirit which promises much for the future, and I trust that you will have your share in that.

I want to tell you gentlemen that there appears to me nothing more sublime than the consciousness that you are working for your fellowman; and in doing that you are working for yourselves. I thank you one and all and wish you much success.

PRESIDENT EVANS: I assure you, Mr. Mayor, on my own behalf and for the members of the State Medical Society, that we appreciate very much your words of warm greeting and wishes for a successful meeting. We will watch with interest, I am sure, as a body of men engaged actively in the uplift of the masses, your administration, which is just begun and which promises so much for the city of Milwaukee. A physician is naturally from his calling the most altruistic and idealistic as well as the most individualistic member of society. But he is also a very trusting individual, and I am sorry that you did not at this particular time—because it may mean a reflection on us and our habits—warn us not to drink Milwaukee water; but to drink Milwaukee beer. You may not have thought it necessary, but I think it is well for us while here to remember that, because of the prevalence of typhoid in your city. (Laughter.)

I am sure, Mr. Mayor, that we are very grateful indeed to you, knowing the busy life you lead, for coming here this morning and welcoming us to your city; and I hope that it is not the last time that we will have the pleasure of hearing you welcome us to the city of Milwaukee, if things turn out for your administration as we hope. We thank you very much.

PRESIDENT: We will now have the report of the Committee on Arrangements, Dr. Rogers, chairman.

Dr. Philip F. Rogers: The Committee on Arrangements has not very much to report except that arrangements have all been made, as far as lay within the power of the Committee. I want to say, in the first place, that I hope every one here has registered, and if not, that they will all register immediately on leaving the hall. The registration bureau is in the corner of the exhibit hall. There will be a telephone installed there which will be open for use, free of charge at any time.

The events outside of the regular program include a smoker this evening at the rooms of the Milwaukee Medical Society in the Goldsmith building; and at the same time, at 8 o'clock, there will be, not exactly an opposition meeting, but at least what one of the lady physicians has called an "anti-smoker," in the rooms of Drs. Seaman and Hitz, third floor, Goldsmith building, right handy by the source of eatables; and the ladies will have their share. We hope that the lady visitors,—physicians' wives and lady physicians, will all turn out and come to that gathering this evening.

Tomorrow evening at 8 o'clock will be held the annual banquet at the Hotel Pfister, and it is hoped that every man on registering will buy his banquet ticket at the same time, and also signify his intention as to whether or not he will attend the excursion to Whitefish Bay on Friday afternoon. The Committee has provided a free excursion and free lunch at Whitefish Bay, to take place immediately after the closing session on Friday, and that

will probably be about 1 o'clock. Chartered cars will be in this vicinity to take the members directly to Whitefish Bay, where lunch will be served and the afternoon spent, returning later in the afternoon; but you can return at any time that you see fit by the regular trolleys. We want very much to have every one turn out and make this excursion a success and the most enjoyable feature of the meeting, as I believe it will be. You who have been at Whitefish Bay know what a beautiful spot it is, and I think it will be a fitting close for the gathering. We had a very enjoyable trip last year at Madison. Those of us who stayed over and went across to the Mendota Asylum, will recall a delightful boat ride, a fine lunch and an altogether enjoyable outing. We expected the trip to Whitefish Bay would be by boat, but owing to the fact that the pier is being rebuilt and will not be ready, the boats cannot land, and shall have to go by trolley; and the trolley cars will be ready for you at the close of the last session on Friday afternoon.

Just a few moments ago the manager of the Auditorium came to me and said he would like to extend an invitation to the society, to attend in a body, if it is possible to arrange it, the orchestral concert that is being given every afternoon and evening this week in the main auditorium, and asked me to notify him when we can take it in. He would be very glad to open the doors to the society.

PRESIDENT: We will now hear the report of the Program Committee, Dr. O. H. Foerster, chairman.

DR. O. H. FOERSTER, Milwaukee (Chairman Program Committee): I have nothing more than a formal report to make, as the Program Committee's report is already in your hands in printed form. I wish, however, to make two announcements: that today at the end of the afternoon session at about 5:30 or possibly a little earlier, there will be an illustrated lantern slide demonstration of the Tsetse fly and its relation to sleeping sickness, by Mr. Alfred C. Burrill, of the Milwaukee Museum, who has made a special study of the subject. Furthermore tomorrow at 1:45 we expect to have some moving pictures illustrating the house fly in its various activities. I think both of these lectures will be very interesting. They are popular in nature and we ask the public to come also. I hope you find the program interesting, and I am sure that it reflects very thoroughly the scientific possibilities that exist in the state, which it was our special attempt to bring out.

Meeting adjourned until 2 o'clock P. M. same day and place.

AFTERNOON SESSION, 2 P. M., JUNE 22d.

Meeting called to order by the Vice-President, Dr. John S. Walbridge of Berlin.

VICE-PRESIDENT: Mr. Williams of Waukesha has a proposition to make and he has the permission of the president to make it.

MR. JOHN J. WILLIAMS, Secretary Waukesha Business Men's Association: Mr. President and Gentlemen, your president is very kind to give me just exactly one-half minute and no more. In that time I want to say to you that I was appointed by the Business Men's Club of Waukesha to extend a cordial

invitation to the State Medical Society of Wisconsin, to hold its next convention at Waukesha, one of the greatest cities I think, in the United States, and when you see it you will agree with me. Rest Haven, one of the most beautiful places in this country, also extends an invitation to you to come and hold your convention at Rest Haven. The city will give you a dinner, will give you a ride around the lakes, if you prefer it, or to any other part of Waukesha. They extend to one and all a kind invitation. Rest Haven has agreed to make a rate of \$3.00 including bath and the best meals, and when you see the building and see the equipments you will agree with me that the price is very low, and I do hope you will decide to come to Waukesha. This is my first attempt in getting out to introduce Waukesha, and the only way we can gain success is to get what we go after and I hope that you will bear me out and come, and if you come, I am sure that you will agree with me that you will have the best time you have had in any city.

VICE-PRESIDENT WALBRIDGE: The next thing on the program is the Annual Address of the President.

The President then read the Annual Address (See July Journal, page 51).

PRESIDENT: This morning you heard Mayor Seidel speak of having secured an excellent health commissioner for the city of Milwaukee. I do not want to present this gentleman to the society as the health officer of Milwaukee, but I want to present to you a first class officer from the Public Health and Marine Hospital Service of the United States Government. I take great pleasure in introducing to you Dr. Rucker.

DR. W. C. RUCKER: Ladies and Gentlemen, I really would have felt a little bit better about it if you had just introduced me as a doctor, one of your own kind. It is mighty good to come back home again and to get into the harness and to get to work trying to down a typhoid fever epidemic on the one hand and dodge brickbats and bouquets on the other.

I think your president's essay is very significant of the trend of medical thought. I venture to state that you cannot pick up a single presidential address of any of the state societies in this country today, and find that that address does not deal in some way with the question of preventive medicine. This question of preventive medicine is in the air. The men who are going into the work of preventive medicine have to depend entirely for their support upon the other members of the profession. We cannot do our work as sanitarians unless we have the backing of the medical profession as a whole; and as I have said to a good many of the Milwaukee men, if the men in remedial medicine will back the men in preventive medicine and if the men in preventive medicine will work hand in hand with the men in remedial medicine, we can do something which will be of great and lasting good to our profession, and better than that we can blaze out a trail which one day will become a great highway wherein the nations of this world may walk in peace.

VICE-PRESIDENT WALBRIDGE: We will now listen to a paper by Dr. H. C. Bradley of Madison, on the subject of "Human Pancreatic Juice."

Discussed by Drs. Wilhelm Becker, Milwaukee, and A. S. Loevenhart, Madison.

PRESIDENT: We will now listen to paper number 2, "Possibilities of Prophylactic Measures in the Development of Insanity" by Dr. Arthur W. Rogers, Oconomowoc.

This paper was discussed by Dr. W. F. Becker, Milwaukee.

PRESIDENT: The next paper is by Dr. A. W. Wilmarth of Chippewa Falls, "Results of Heredity and their Bearing on Poverty, Crime, and Disease."

In the absence of Dr. Wilmarth this paper will be read by Dr. Bayer.

Dr. Wilmarth's paper was discussed by Drs. W. H. Washburn and W. F. Becker of Milwaukee.

PRESIDENT: The next paper on the program is that by Dr. Wilhelm Becker of Milwaukee, on "Co-relation between Splanchnoptosis and Pulmonary Tuberculosis."

Discussed by Dr. John C. Cutler, Mt. Horeb.

PRESIDENT: The next paper will be on "Practical Medicinal Therapeutics as it appears from the Prescription File", by Dr. Julius Noer of Stoughton.

This paper was discussed by Dr. A. S. Loevenhart, Madison.

PRESIDENT: Just a word, gentlemen and ladies. You may have forgotten that we are to have a lecture and lantern slide exhibit by Mr. Burrill of the Milwaukee Public Museum. This I am sure will be of intense interest to all of you, and I hope that you will remain while this lecture is given and exhibit presented.

The next number on the program will be "History of the Tsetse Pest, with lantern slide exhibition", by Alfred C. Burrill.

THURSDAY, JUNE 23, 1910.

MORNING SESSION, 9 A. M.

PRESIDENT: The first number on the program will be a paper on the subject of "The Present Status of Spinal Analgesia" by Dr. A. J. Puls of Milwaukee.

Discussed by Drs. W. E. Kramer and R. G. Sayle, of Milwaukee, and John C. Cutler, of Mt. Horeb.

PRESIDENT: The next paper will be by Dr. Charles H. Lemon of Milwaukee on "The Plaster Spica in High Fractures of the Femur."

Dr. Charles H. Lemon then read his paper and exhibited a patient.

PRESIDENT: The next paper will be read by Doctors M. W. Dvorak of La Crosse, and W. H. Brown of Madison, on the subject of "Tincture of Iodine as a Skin Antiseptic."

These papers were discussed by Drs. A. S. Loevenhart, Madison; L. A. Moore, Monroe; Joseph F. Smith, Wausau; T. L. Harrington, Milwaukee; C. M. Echols, Milwaukee; and Edward Evans, La Crosse.

PRESIDENT: The next paper will be on the subject of "Reconstruction of the Bile Ducts" by Dr. A. S. Sullivan, Madison.

PRESIDENT: I am sure gentlemen that from the character of the last three papers read this morning the society will conclude it is worth while to cultivate the young men in the profession and get them frequently and in numbers on future programs.

The Secretary then read the following communication.

THE WISCONSIN ASSOCIATION OF GRADUATE NURSES.

320 Sycamore Street.

Milwaukee, Wis., June 22, 1910.

Dr. Chas. S. Sheldon, Milwaukee, Wisconsin.

DEAR DOCTOR: The Wisconsin State Association of Graduate Nurses extends to the Wisconsin Medical Society, greeting, and best wishes for a successful meeting.

The Association respectfully requests the interest and assistance of the State Medical Society in its effort to secure and maintain a higher educational standard in nursing schools throughout the state, and also in its endeavor to obtain, in the near future, state regulation of nursing schools and nursing practice.

Respectfully yours,

REGINA WHITE, *Secretary.*

PRESIDENT: The gentleman I am about to introduce did not follow Greeley's advice—"Go West, young man." Instead of going west he went east, and hewed out success by persistent hard work and ability. I have great pleasure, gentlemen, in welcoming and introducing Dr. J. C. Bloodgood of Baltimore, who will deliver the Annual Address in Surgery.

Dr. Joseph C. Bloodgood, of Baltimore, Md., then delivered the Annual Address in Surgery, "The Medical and Surgical Aspects of Tumors, including Inflammatory and Neoplastic Formations" (See August Journal, page 115).

Upon motion a rising vote of thanks was tendered to Dr. Bloodgood for his able paper.

Recess until 2 P. M. same day and place.

THURSDAY, JUNE 23, 1910.

AFTERNOON SESSION, 2 P. M.

Meeting called to order by the President.

PRESIDENT: Dr. L. M. Warfield, of Wauwatosa, will exhibit a case of aneurism.

Dr. Warfield (Exhibiting case): The patient is a middle aged man, who for several years has had an aortic aneurism. The reason for exhibiting him before you is the unusual course which the tumor has taken. You will see that it has pointed to the right of the sternum making a visible and palpable tumor and in growing forward it has eroded two ribs. This erosion has taken place without any pain. The man is, of course, incapacitated for work. As long as he is quiet he suffers little if at all. He has pain occasionally, but this is not severe.

PRESIDENT: The two opening papers on the program for the afternoon cannot now be presented, as the writers are not here.

DR. O. H. FOERSTER, Milwaukee: I move, if it is agreeable, that Dr. G. V. I. Brown who was unable to be present this morning, but who has come down especially from St. Paul, be given the privilege of taking the place that would otherwise be taken by Dr. Ground's paper.

Motion carried.

PRESIDENT: We will listen to Dr. G. V. I. Brown on the subject of "Oral Deformities and Associated Defects."

PRESIDENT: I have had a telegram from Dr. W. S. Miller of Madison who was to read a paper here on the "Early History of Medicine in Wisconsin", stating that he will not be able to be here. His place is unfilled at present.

DR. J. S. WALBRIDGE, of Berlin: I move that Dr. F. Gregory Connell of Oshkosh be given the place of Dr. Miller to present his paper on the subject of "The Early Diagnosis of Cancer."

PRESIDENT: With your permission we will pass over this paper without discussion and proceed with the program, the next paper being that by Dr. L. M. Warfield, of Wauwatosa, "On Enlargements of the Liver."

DR. JULIA RIDDLE, of Oshkosh, then addressed the Society in behalf of the Journal of Preventive Medicine which is published by "the medical women of the state who have organized into a state society, not that we wanted to separate ourselves from the State Medical Society, but because the American Medical Association asked us to take the initiative in educating the public along the lines of health."

PRESIDENT: The next paper will be on the subject of the "Value of Blood Culture in Puerperal Fevers" by Dr. Jos. S. Evans of Madison.

PRESIDENT: A recent editorial in one of our medical journals said that there was great danger of the research work in our universities being very much injured because of the large foundations and the liberal allowances and the broad field of latitude given to the workers in those foundations. However that may be we have with us this afternoon a worker in one of those foundations who has been doing such splendid work that it is not only a great honor but a great privilege for us to have him come all the way out here from New York to tell us what he has been doing. I have great pleasure in introducing to the members of the society Dr. R. M. Pearce of the Carnegie Laboratory, New York.

DR. R. M. PEARCE, of New York, then delivered the Annual Address in Medicine, "The Wassermann Reaction in the Pathology, Diagnosis, and Treatment of Syphilis" (See September Journal, page 181).

VICE-PRESIDENT WALBRIDGE moved that a rising vote of thanks be tendered Dr. Pearce for his able address.

Motion unanimously carried.

PRESIDENT: The next paper will be "The Serum Treatment of Hemophilia with Preliminary report of Case", by Dr. A. J. Patek of Milwaukee.

This paper was discussed by Dr. J. L. Yates of Milwaukee.

PRESIDENT: The next paper will be on the subject of "Chronic Diphtheria" by Dr. G. C. Ruhland of Milwaukee.

FRIDAY, JUNE 24, 1910.

MORNING SESSION, 9 A. M.

Meeting called to order by the president.

PRESIDENT: I wish to introduce to you in a very informal manner, because he was formally introduced to you last night when there were so many more present, the president of the society for the incoming year, and personally as well as on behalf of the society, it gives me the greatest pleasure to introduce as your president, Dr. B. M. Caples of Waukesha.

DR. B. M. CAPLES, of Waukesha: Mr. President, Mr. Secretary, ladies and gentlemen, I wish to express to you and each member of the society as well as the House of Delegates, my sincere thanks for the honor you have conferred upon me. I do not believe it is necessary for me to assure you that I appreciate it more than anything that can come to me. To be President of the State Medical Society of Wisconsin is to me a greater honor than I ever expected to have and I

thank you one and all. I shall endeavor to the best of my ability to make the next meeting a success.

VICE-PRESIDENT WALBRIDGE in chair: The next paper will be on the subject of "Aneurism of the Thoracic Aorta" by Dr. Jos. F. Smith of Wausau.

Discussion by Dr. W. H. Washburn, Milwaukee.

PRESIDENT: The next paper will be on the subject of "Traumatic Hernia" by Drs. T. W. Nuzum and J. F. Pember, Janesville. Dr. Nuzum will read the paper.

This paper was discussed by Drs. T. L. Harrington, H. Reineking, and R. G. Sayle of Milwaukee.

PRESIDENT: The next paper will be "The Nursing Mother from the Baby's Standpoint," by Dr. A. W. Myers, Milwaukee.

This paper was discussed by Dr. G. Windesheim of Kenosha.

PRESIDENT: The next paper will be a paper on "Some Observations on the Smith Operation, or Extraction of Cataract in the Capsule" by Dr. G. I. Hogue of Milwaukee.

Discussed by Dr. N. M. Black, Milwaukee.

DR. C. S. SHELDON, Madison: I move that a vote of thanks be tendered the trustees of the Public Museum for loaning of valuable material for the scientific exhibit.

Also a vote of thanks of the society to Mr. A. C. Burrill, Curator of the Museum, for his very interesting and instructive lecture on the tsetse fly, etc.

Also to the medical department of Marquette University for the use of microscopes during the meeting.

Also to Mr. Claude Williams, the Public Health Officer of Atlanta, Georgia, for valuable photographs for the scientific exhibit.

Also to the outgoing president Dr. Edward Evans, who has made such unusual and successful efforts for a good meeting.

Also to the Committee of Arrangements, especially for the care they have taken in making the secretaries' meeting a success.

Motion seconded and unanimously carried.

Adjourned sine die.

PROCEEDINGS OF THE HOUSE OF DELEGATES, STATE MEDICAL SOCIETY OF WISCONSIN.

TUESDAY JUNE 21, 1910, 7:30 P. M.

Meeting called to order by the President, Dr. Edward Evans, of La Crosse. The roll-call of the delegates showed a quorum present. The appointment of a committee on credentials was dispensed with.

The report to the American Medical Association was presented by Dr. C. S. Sheldon, of Madison, as follows:

Report of delegates to the 61st annual session of the American Medical Association at St. Louis, June 6th to 10th, 1910.

Two of your three delegates attended the annual meeting of our National Society at St. Louis, and take pleasure in making the following report. All in all it was one of the most successful meetings in the history of the Association. The general session on Wednesday morning was especially enjoyable. There were several addresses of marked excellence, the more notable ones being the inaugural address by President William H. Welch, and the addresses of welcome by Gov. Hadley and Dr. Moore, of St. Louis. The section work was up to the usual standard, and is on a thoroughly scientific basis. The attendance was larger than last year at Atlantic City, the registration being slightly less than 5,000.

While there was newspaper talk of "insurgents" and "ring-busters," there was no indication of dissatisfaction in any of the meetings. There was complete harmony and apparent unanimity in the House of Delegates so far as the support of the present administration is concerned. Dr. Simmons had formally resigned the office of Secretary in the printed report placed in our hands, but when, in the election of officers, his office was reached, it was the unanimous demand of the House that he should serve another year, since otherwise it might appear that the campaign of detraction which Dr. Lydston had been carrying on had driven him from office.

The report of the trustees summarizes the work of the society, which is being carried on by means of the various permanent committees and councils. They say, "In looking over their reports one is struck by the numerous lines along which the activities of the Association are extending. Instead of a small body of men meeting one another for social and scientific purposes, we now find a vast organization extending into every county and almost every town in the land, deeply engaged, not only in the scientific work of the profession, but also in the solution of economic and sociologic problems, in a manner scarcely dreamed of by the most enthusiastic worker but a few years ago. Among the numerous subjects which the organization has taken up may be mentioned the systematic and thorough investigation of the medical colleges of the United States, with a view to elevating the standard of medical education. The careful study of the various state laws governing the practice of medicine, with a view to the drafting of a uniform medical practice act. The systematic education of the people in matters relating to both public and personal hygiene, to the prevention of blindness, to the care of dependents, to the prevention of the propagation of the insane and the criminal, etc. The passage of such laws as shall secure for the people wholesome food and pure drugs. The establishment of a National Department of Public Health. The education of the people in regard to the dangers of the patent medicine frauds, and of the profession in regard to the composition and effects of the proprietary drugs,—new remedies, etc.

Of these the Council on Pharmacy and Chemistry and the Council on Medical Education are doing especially good work.

The new building, in process of erection, will be ready for use about October 1st. The weekly issue of the Journal December 25, 1909, was 57,224,

an increase of about 4000 during the year. Ten years ago the subscription list numbered only 13,000, less than one-fifth of the present issue. The number of Wisconsin physicians receiving the Journal is 1,360, 54 per cent of the total number of physicians in the state. The property of the Association now amounts to nearly \$400,000. If Wisconsin is to be adequately represented in the National House of Delegates, care should be taken to select men who will surely attend the meeting, and especially, who will regularly and faithfully, attend to their duties as members of the House of Delegates. It is of the utmost importance that they should be at the first meeting, since at that time all the committees are appointed, and the work of the session mapped out.

Dr. John B. Murphy, of Chicago, was elected as the President of the Association, and Los Angeles was selected as the meeting place for 1911.

KARL DOEGE,

C. S. SHELDON,

Delegates.

On motion the report was adopted as read.

PRESIDENT: The next order of business is the report of the Committee on Medical Defense by Dr. Seaman, chairman.

The report was presented by Dr. Seaman but was withdrawn from the minutes by the Committee as its publication is not considered advisable.

On motion the report was accepted and adopted as read.

PRESIDENT: Of course it is understood that the financial part of this report goes to the Council for action. I probably am expressing the sentiment of the House of Delegates if I say to the chairman of this committee that he should convey to the legal firm which carries on this legal business for us, the thanks of this house of Delegates, and through us the thanks of the Medical Society, for their kindness in the reduction of this bill.

At the risk of tiring you, I want to say that this medical defense means a whole lot to the profession. We have had two malpractice suits in my town during the last year, one of which I had to defend myself, and while the State Society did not defend it, that is, it caused no expense to you, I appreciated then what this organization of ours means to a doctor when he gets into trouble. They had to go outside of town to get a doctor to give expert evidence, and they only got him, because they got him filled up, and he had a few sore spots against me; but when it came to a trial, it took a bench warrant to get him in the witness chair, and when he got there he did not say anything harmful, and the case was thrown out as soon as the prosecution had put in their evidence. In the other case the court allowed it to go to the jury, and within 45 seconds the jury were knocking on the door, and the attorney for the prosecution said, "Your Honor. I think they have

come out for further instructions." But they came out and handed in a verdict of "Not guilty"; and the lawyer said, "I never saw such a bunch of doctors as there are in La Crosse, you cannot get one doctor in La Crosse to testify against the others."

I think one great feature of getting in new members is this feature of giving medical defense, not merely because we defend in these cases, but it creates a sort of goodfellowship such as I think nothing else does.

The next number is the report of the Committee on Public Policy and Legislation, Dr. A. W. Gray, Chairman.

Report presented by Dr. J. P. McMahon as follows:

TO THE HOUSE OF DELEGATES OF THE STATE MEDICAL SOCIETY
OF WISCONSIN.

GENTLEMEN: Your Committee on Public Health and Legislation has nothing of accomplishment to report for the last year because there has been no legislative session.

On the appointment of Dr. J. M. Beffel to the State Board of Medical Examiners, Dr. Beffel's name not having been certified to the Governor on any list by this Society, there was some disposition to contest the appointment. But, inasmuch, as it became evident that there was no objection to the appointment of Dr. Beffel personally, on the assurance of the Governor that there was no desire upon his part to defeat the wishes of the Society, the matter was dropped.

It seems from legal advice received during the time that the matter was under consideration that the law in relation to filing of a list from which the Governor is to make his appointments for this society, is very loosely drawn. It is recommended that the wording of the act be changed so that there can be no possible evasion intentionally, or unintentionally in the future.

Respectfully submitted,

A. W. GRAY, *Chairman.*

J. P. MCMAHON.

On motion the report was adopted as read.

PRESIDENT: The next is the report of the Committee on Publication, by Dr. A. J. Patek.

The report presented by Dr. Patek was published in the July Journal, page 91.

THE WISCONSIN MEDICAL JOURNAL.

STATEMENT OF EARNINGS, EQUIPMENT, EXPENSES AND CIRCULATION,
JANUARY 1ST TO JUNE 1ST, 1910.

Total Expenses.

Equipment	\$ 137.73
Printing	962.60
Salaries	542.50
Commissions for securing advt. contracts.....	552.50

Postage	120.00	
Current expense	94.60	
		2409.93
<i>Total Earnings.</i>		
Advertising	1695.54	
Subscription	27.85	
		1723.39
Deficit.....		\$686.54
<i>Circulation.</i>		
To members of The State Medical Society.....	8295	
On request of Booster Club.....	128	
		8423

The deficit of \$686.54 minus the cost of equipment \$137.73 leaves an actual deficit of \$548.81 which represents the cost to the State Medical Society of circulating 8423 copies of The Journal, or 6½¢ a copy.

(Cost of each copy prior to the transfer of The Journal to The State Medical Society, 10c.)

THE WISCONSIN MEDICAL JOURNAL.

FINANCIAL STATEMENT, JANUARY 1ST TO JUNE 1ST, 1910.

Received from the State Medical Society.....	\$ 943.80	
Collected from advertising.....	753.16	
Collected from subscription.....	1.60	
		1698.56
<i>Disbursements.</i>		
Equipment	112.73	
Printing	550.50	
Salaries	328.00	
Postage	120.50	
Current expense.....	94.90	
		1206.63
Balance on hand June 1, 1910.....		491.93
<i>Assets.</i>		
Equipment	137.73	
Bills receivable	934.29	
Cash on hand.....	491.93	
		1563.95
Bills payable		1177.80
Balance		\$386.15

DR. WILKINSON: I move the adoption of the report, and advise the printing of it in the next copy of the journal. I think it would be well that everybody read that report.

Motion carried.

DR. C. R. BARDEEN, of Madison: I would like to move that a vote of thanks be extended to those who have been conducting the

Journal: They are doing a large amount of work and getting small return.

Motion seconded.

PRESIDENT: I do not believe that motion needs to be put. We will take it as the sense of this House of Delegates that the thanks of the Society are extended to the Publication Committee and the editors of the Journal for the splendid work they have done.

The report of the Committee on the Prevention of Tuberculosis was deferred until the next meeting.

PRESIDENT: We will now listen to the report of delegate to National Legislative Council, Dr. Byron M. Caples.

Report presented by Dr. Byron M. Caples, of Waukeşha, as follows:

To The House of Delegates of The State Medical Society of Wisconsin:

As the member of the Committee on Medical Legislation from the State of Wisconsin I beg to submit the following report:

During the joint meeting of the Council on Medical Education and the Committee on Medical Legislation held at Chicago, March 1st and 2nd, 1910, having been appointed a member of the Committee to define the practice of medicine, the following report was made at that meeting by Dr. Halsey of New Jersey and myself, the other members of the Committee not being present:

"First: Should a specific definition of the practice of medicine be included in the model act?

(1) Yes, in the judgment of the members of the Committee present a specific definition should be incorporated.

Second: If so, what is the ideal form of such a definition?

(2) A person practices medicine and surgery within the meaning of this act who holds himself or herself out as being able to diagnose, treat, operate, or prescribe for any human disease, pain, injury, deformity or abnormal mental or physical condition, and who shall either offer or undertake by any means or methods to diagnose, treat, operate, or prescribe for any human disease, pain, injury, deformity, abnormal mental, or physical condition.

Third: Should limited practice, as midwifery, massage, optometry, osteopathy, mental healing, Christian Science, mechano-neuro-therapy, etc., be defined and provided for in the model practice act?

(3) No. We would suggest the elimination of midwifery, which should be under a special act requiring them to present a diploma from a reputable college of midwifery, and to pass a satisfactory examination before the Board of Medical Examiners. The other practices should be regulated by a special act which shall specifically define their necessary qualifications, and requiring them to pass a satisfactory examination before the State Board of Medical Examiners." Report accepted.

Also as a member of the committee on the federal and state regulation of public health, together with the other member of the committee the following report was made: "We suggest that a bill be passed that will give recog-

rition of the health interests of the country in the title of a Department of Health and that within that department there be organized an efficient bureau of health to consist of all present national public health agencies." Report accepted.

At the meeting the following report was also adopted:

During the year a number of conferences have been held by the committee on medical legislation, and members of that committee have appeared before the senate and house committee in reference to the passage of a law creating a national department of health.

May 1st to 7th. I was present at a conference with the senate committee in reference to the establishment of this department; this committee having been appointed after the introduction of what is now known as the Owens Bill.

I believe every member of the medical profession in the state of Wisconsin as well as the general health societies and medical associations throughout the United States recognizes the importance of the establishment of such a department and while there should be no difficulty in perfecting and establishing such a department and impressing on the people of this country the great importance of organized effort to control such preventable diseases as tuberculosis, typhoid fever, bubonic plague, malarial fever, etc., causing such unnecessary suffering and great financial loss; but there have been many interests at work against the passage of such a bill, such as the patent medicine people, food adulterators, the so-called new schools of healing, as Christian Science, mental healers, osteopaths, etc.

Dr. William H. Welch, president of the American Medical Association, in his address heartily endorsed the efforts made to establish a department of health.

The statement has been made by those opposed to the measure that such a department would attempt to regulate the practice of medicine throughout the country and place the power of this control entirely within the regular profession, but any one familiar with the constitution of the United States will readily understand that this would be practically impossible, and I sincerely hope that we may soon have a national health department established on a basis suitable to the immense resources and great power of this country. I hope the time is not far distant when the United States will be the leading country in the field of preventive medicine.

Coming to our own state, we have some troubles of our own.

The optometrists have put in circulation a postal card stating that at the next session of the legislature they will introduce a bill favoring the practice of optometry. As most of the profession throughout the state have doubtless received the card there is no occasion for repeating it here. Our journal has taken the matter up and has warned not only the profession but the people throughout the state of the character of such proposed legislation. You must not forget, however, that this class of individuals are very persistent and I think there is no question but what we should be prepared to combat the effort on their part to have such a law passed. If a man wishes to practice medicine in any of its branches let him first secure a medical education. I took it upon myself to write each auxiliary member of the committee on medical legislation in this state calling their attention to the great lack of wisdom it would be to sign and return this card as requested. These people by their persistent efforts have been able to secure special legislation

in a number of the states. Massachusetts and Ohio, like ourselves, are attempting to prevent the passage of such special laws.

So far as the legalizing of any sect to practice medicine or healing in any of its phases in this state, I believe that each one so doing should be required to pass the regular medical examination before a state board composed entirely of medical practitioners. Personally I do not favor the appointment of the so-called mixed boards.

There have been other matters of legislation, such as the postal regulation affecting second class matter. This comes home to us as it would affect the postage on our medical journal. While I have taken some interest in this matter I take it that the editors of our journal have attended to that through the proper channels.

I regret that I was not able to attend the last meeting of the American Medical Association in St. Louis and do my part for the profession in our state as a committeeman from Wisconsin on medical legislation, but as we were represented there by our most efficient state secretary and other members of the profession, I doubt not that our interests were entirely taken care of.

Respectfully submitted,

B. M. CAPLES,

Member National Legislative Committee for Wisconsin.

On motion, the report was adopted as read.

PRESIDENT: The next number is the report of the Committee on Necrology, Dr. A. J. Patek, Chairman.

Report presented by A. J. Patek as follows:

To the House of Delegates, State Medical Society of Wisconsin.

GENTLEMEN: The obituaries of many of the members of the State Medical Society, whom death has called from our midst, have been published in extenso in various issues of the Society's Journal. I will therefore merely mention the names, with brief comment, of those who passed away since the last meeting of this Association.

Dr. A. C. Blanchard, of Linden, died on June 18, 1909, aged 36. He graduated from Rush Medical College in 1895, and was a member of the Iowa County, State Medical and American Medical Associations.

Dr. Urban P. Stair, of Ft. Atkinson, died on September 6, 1909, aged 72. He graduated at Chicago Medical College in 1861 and served throughout the civil war. Was a member of the American Medical Association, State Medical Society, Southern Wisconsin Medical Association and the Jefferson County Medical Society.

Dr. Jos. P. Cox, of Spooner, one of the most active participants in the State Society's meetings, was killed in a railroad wreck near Seattle, Wash., October 1, 1909, aged 50. He graduated from the University of Indiana in 1879. Was health officer of the town of Spooner, district surgeon for the Chicago, St. Paul, Minneapolis & Omaha Railway, member of the International Red Cross Society, and had personal supervision of all work of the Association in Northern Wisconsin. He was a member of the American Medical, State and Washburn County Medical Associations.

Dr. Wilbert H. Monroe, of Merrill, died on October 4, 1909, aged 53, of tuberculosis and diabetes. He graduated from Rush Medical College in 1886.

and was a member of the American Medical Association, State and Lincoln County Medical Societies.

Dr. William Alexander Gordon, of Winnebago, died on October 12, 1909, aged 63. He graduated from Rush Medical College in 1869, was superintendent of the Northern Hospital for the Insane at Winnebago fourteen years. He was a member of the American Medical Association, State and Winnebago County Medical Societies. Dr. Gordon's death has taken from our midst one of the brightest medical lights that have ever shone in our State. His loss is deeply mourned.

Dr. Dane Perry, of Bundy, died on October 20, 1909, of typhoid fever, aged 50. He was a member of the State and County Medical Societies.

Dr. Quincy O. Sutherland, of Janesville, died on November 7, 1909, of angina pectoris. He was active in the councils of the State profession, was a member of the State Board of Health, Lake Michigan Sanitary Commission, State Medical and Rock County Medical Societies.

Dr. Joseph C. Grant, of Lena, died on November 28, 1909. He had been a member of the State and Oconto County Medical Societies.

Dr. Wilson H. Van Dusen, of Lancaster, died on December 2, 1909, aged 63. He was a member of the State Society, of which his father was the first president.

Dr. Andrew C. Mailer, of De Pere, died on December 3, 1909, aged 56, of diabetes and tuberculosis. He graduated from Rush Medical College in 1878, and was a member of the State and Brown County Medical Societies.

Dr. Lindsey S. Brown, of Madison, a member of the State and Dane County Medical Societies, died of apoplexy, on December 24, 1909, aged 69.

Dr. Henry Rhode, of Green Bay, died on March 16, 1910, aged 80, of pneumonia. He graduated at the University of Goettingen, Hanover, in 1850, and had practiced in Green Bay over 45 years. He was a member of the State Medical, Brown County and Fox River Valley Medical Societies.

Dr. George T. Blynd, of Berlin, a member of the State and the Green Lake-Waushara County Medical Societies, died on March 16, 1910, aged 36, of tubercular meningitis. He was a graduate of the Northwestern Medical College, Chicago.

Dr. James S. O'Brien, of Milwaukee, a member of the State and Milwaukee County Medical Societies, died on April 24, 1910, aged 51, of general paresis. He graduated from Rush Medical College, in 1884, and practiced in Milwaukee continuously since that time. His untimely death was the toll exacted for devotion to duty, an infection acquired during the course of his professional work about 10 years previously having been the immediate cause of his later fatal illness.

A. J. PATEK, *Chairman.*

Motion carried adopting the report as presented.

The report of the committee to act with Board of Public Instruction A. M. A. was deferred until the next meeting.

The report of the Committee on Medical Legislation was deferred until the next meeting.

The report of Chairman of Council, Dr. Edward Evans, La Crosse, was presented as follows:

DR. EVANS: There is really no report to make. The various matters that the Council has to deal with will be dealt with by the various councilors. While the Council has to do with all the financial matters of the Society, that will appear in the Treasurer's report, so there is no necessity of entering into that. The most important work of the Council during the past year has been the taking over of the control of the Journal, and that has been reported on. So the only thing that remains for me to report upon or to speak about is of a personal nature. I want to thank the councilors for the splendid work they have done during the past year. The only thing I have to grumble about at all is a certain little discourtesy that seems to be inherent in medical men—their inability to answer letters; and that has been dwelt on so much today in the meeting of the county secretaries that I am afraid we would raise the temperature here if I said what I would like to say about it. Aside from that, I am sure the work of the Council has been of the very best kind during the last year.

The next in order is the report of the various councilors. They will please give the reports as the Secretary calls the names.

The report for the 1st District was deferred.

The report for the 2d District was presented by Dr. G. Windesheim, of Kenosha.

The report for the 3d District was presented by Dr. F. T. Nye, of Beloit.

The report for the 4th District was presented by Dr. Wilson Cunningham, Platteville.

The report for the 5th District was presented by the Secretary, Dr. C. S. Sheldon.

Report for the 6th District was presented by Dr. T. J. Redelings, on behalf of Dr. H. W. Abraham, of Appleton.

The report for the 7th District was presented by Dr. Edward Evans, of La Crosse.

The report for the 8th District was presented by Dr. T. J. Redelings, Marinette.

The report for the 9th District was presented by Dr. C. S. Sheldon.

The report for the 10th District was presented by Dr. C. S. Sheldon.

The report for the 11th District was presented by Dr. J. M. Dodd, of Ashland.

The report for the 12th District was presented by Dr. C. S. Sheldon.

DR. J. M. DODD, Ashland: I want to make the following suggestion: That the Society furnish the councilor with a blank report which will give him more detailed information than those blanks of the county societies. It is very unsatisfactory in this particular, that

you do not know where the non-members are located. If, on the other hand, you have a blank which has a list of the towns, and a list of the counties, you could then give the number of doctors in the several towns and counties to which they belong. Then there should be a list of those affiliated and non-affiliated. It will make your record a great deal easier to get at, and your councilor will have something better to go by. You have no way of locating the doctors in a widely scattered district such as mine, without looking up the medical directory, and the medical directories are very unreliable in reference to that district up there. This plan would eliminate a lot of trouble and enable the state secretary and officers to know just where everybody is.

DR. E. L. BOOTHBY, Hammond: I have had this same thought expressed by Dr. Dodd under consideration for a number of years when I was councilor, and I think it is a question well worth taking a few minutes time to consider, and start the ball rolling in the right direction. No two councilors make a report of their district in the same way—they do not cover the same points—and while the reports of the county secretaries are similar in many respects, the point that the doctor brought up is well taken, and I move you that the chair appoint a committee of three to draft reports for county secretaries and for councilors, covering all these points. I think the members of the council had this matter in hand some two years past, and know pretty well what they want. In that way you will get uniform reports covering the whole state, by making it concise, short and complete.

Motion carried.

PRESIDENT: The chair will appoint on this committee Dr. J. M. Dodd, Dr. Wilson Cunningham and the Secretary, Dr. C. S. Sheldon, to draft such a form of report and submit it to the council for their approval or adoption.

These reports of councilors as read will be considered adopted unless there is some objection.

We will now proceed to the report of the treasurer.

The report of the Treasurer was presented by Dr. S. S. Hall, of Ripon, as follows:

TREASURER'S REPORT.

Milwaukee, Wis., June 21, 1910.

S. S. HALL, TREASURER, IN ACCOUNT WITH THE STATE MEDICAL
SOCIETY OF WISCONSIN.*Debtor.*

Balance on Hand June 29, 1909.....				\$3,038.84
Received from Secretary for County Society dues.....	\$3,237.15			
Received from Legal Expense Assessment—				
Racine County Society.....	\$13.00			
Walworth County Society.....	2.00			
Milwaukee County Society Balance.....	21.24	36.24	3,273.39	
		<hr/>	<hr/>	
Total				\$6,312.23

Creditor.

1909—				
July 14—Wisconsin Medical Journal.....	\$	156.50		
Aug. 27—Wisconsin Medical Journal.....		160.90		
Oct. 15—Wisconsin Medical Journal.....		322.00		
Nov. 10—Wisconsin Medical Journal.....		162.10		
Dec. 10—Wisconsin Medical Journal.....		161.70		
1910—				
Feb. 1—Wisconsin Medical Journal.....		161.80	1125.00	
		<hr/>		
Jan. 29—J. P. McMahon, acct. Journal.....		250.00		
Apr. 6—J. P. McMahon, acct. Journal.....		200.00		
Apr. 18—J. P. McMahon, acct. Journal.....		493.80	943.80	
		<hr/>		

Councilor's Expenses.

1909—				
June 30—G. Windesheim		22.99		
1910—				
Jan. 28—O. T. Hougen.....		25.28		
Jan. 28—T. J. Redelings.....		10.27		
May 31—G. V. Mears.....		6.00	64.54	
		<hr/>		

Expense Committee P, P. & L.

1909—				
July 24—G. E. Seaman.....		15.00		
July 24—A. C. Umbreit.....		75.00		
Aug. 9—G. E. Seaman—to pay note \$675 and interest \$10.13		685.13	775.13	
		<hr/>		
June 30—Chas. S. Sheldon—Expense.....		69.79		
July 2—Chas. S. Sheldon—Salary 1909-1910.....		300.00		
July 8—S. S. Hall—Salary 1909-1910.....		125.00		

July 16—Dr. David L. Edsall—Expense.....	63.00	
July 23—University Club—Madison—Expense, G. L. Kiefer \$2.10 and G. W. Crile \$2.70.....	4.80	
Aug. 27—Goodwin McDermott, Reporters.....	242.60	
Sept. 3—C. H. Ellsworth—Printing.....	4.30	
Oct. 19—Tracy, Gibbs & Co., acct. Oct. 15, 1909.....	77.11	
Dec. 4—Globe Wernicke Co., acct. Nov. 11, 1909.....	5.31	
1910—		
Jan. 15—Joseph Kaln, Treas. Milwaukee County Society —Reimbursement Expense Committee P. P. & L	59.27	
Jan. 18—American Medical Association, acct. Jan. 13-10..	4.50	
June 20—S. S. Hall—Postage and Incidentals.....	15.00	973.68

Total	\$3,882.15
Balance on hand.....	2,430.08

Total	\$6,312.23
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Respectfully submitted,

S. S. HALL, *Treasurer.*

TREASURER'S REPORT.

Milwaukee, Wis., June 21, 1910.

S. S. HALL, TREASURER, IN ACCOUNT WITH THE STATE MEDICAL SOCIETY
OF WISCONSIN. MEDICAL DEFENSE FUND.*Debtor.*

Balance on Hand June 28, 1909.....	\$2,308.30
Received from Secretary.....	1,508.50
Total	\$3,816.80

Creditor.

1909—		
July 6—Spooner & Ellis, Atty's.....	\$167.65	
1910—		
Jan. 3—Spooner & Ellis, Atty's.....	912.01	\$1,079.66
Total	\$1,079.66	
Balance on Hand.....	2,737.14	
Total	\$3,816.80	

Respectfully submitted,

S. S. HALL, *Treasurer.*

On motion duly seconded and carried the report was adopted as read.

PRESIDENT: The next in order is the report of the Secretary. Report presented by the Secretary, Dr. C. S. Sheldon, as follows:

SECRETARY'S REPORT FOR 1910.

The Secretary begs leave to submit the following report for 1910. It is now six years since we adopted the present plan of organization, and this report will deal briefly with the progress we have made during the last year.

At the last annual meeting, fifty-two county societies out of fifty-three, had sent in their annual reports. The only county not reporting was Lincoln, which, after the meeting, sent in the dues of five members, making the number of societies fifty-three, as it had been for two years.

During the year no changes have been made in the arrangement or number of the county societies and the number still *remains* fifty-three. Of these, all have sent in the annual reports for 1910. This is the first time that all the counties have reported before the annual meeting. We worried somewhat over the status of Door and Price-Taylor, but they have both lately come bravely to the scratch, and our faith, in human nature is renewed. Door, with a list of six members, a loss of two, and Price-Taylor with nine, the same as last year. Price-Taylor seems now on a solid foundation and plans two regular meetings for the coming year. We hope Door will go and do likewise.

The other fifty-one counties are all pretty well organized and we hope they are on a permanent working basis. Some have shown great improvement as compared with their reports one year ago. Marathon makes a gain of ten, Lincoln and Vernon, each 9; Waupaca, 8; Rock, 7; Green Lake-Waushara and Fond du Lac, 6; Barron-Polk-Washburn-Sawyer-Burnett, Columbia and Dane, 5; St. Croix and Winnebago, 4; Brown-Kewaunee, Grant, Iowa, Sheboygan, Walworth and Wood, 3. The only counties making a loss over 2 are Milwaukee, 18; Chippewa, 5. 39 counties show a gain, 8 a loss, while 6 are the same as a year ago. Last year the same comparison showed a gain in 17 counties, a loss in 28, while 6 were the same.

The number who have paid the 1910 dues is 1549. One year ago, at the annual meeting, it was 1448, a gain of 101. The total membership of 1909 was 1505, a gain during the year of 57. If we gain as many this coming year, our total membership for 1910 will be 1606.

MEDICAL DEFENSE.

We have now had two and one-half years of our medical defense plan. It has grown steadily in favor with the members of the society and there are only five counties where its payment is not practically unanimous. There have been quite a number of applications for defense during the year and no damages have been assessed since the plan was adopted. The defense which the society provides has proven itself absolutely reliable and satisfactory in all ways. Its moral effect in uniting more closely the members of the society in a common defense against what is usually a form of blackmail, is even more admirable. That all the counties will take this same view of it in the near future is almost certain.

THE HOUSE OF DELEGATES.

Two years ago I proposed an amendment to the By-laws, providing that the county Secretaries should be ex-officio members of the House of Delegates.

It was rejected at that time, but I still think as I did then, and shall this year propose the following amendment of Chapter IV., Sec. 2, of the By-laws, so that it shall read. "The Secretary of each component county society shall be ex-officio a member of the House of Delegates; and each county society shall be entitled to send to the House of Delegates one additional delegate for every fifty members, and one for each major fraction thereof; but each component society which has made its annual report, and paid its assessment, as provided in this Constitution and By-laws, shall be entitled to one delegate in addition to the Secretary." The benefits to be derived from such a provision are obvious, and I have already stated them. In fact I notice that many of the other state societies are doing the same thing. It has been urged that the house would be larger than would be desirable, but I do not think this would prove true. The House is the governing body of the society. As such, it should be sufficiently large, and thoroughly representative, and yet not be unwieldy. To be more definite, it would appear that fifty or even seventy-five would not be too large a body to represent adequately our 1500 members. The total number of regular delegates is fifty-eight from the fifty-three county societies. These with the fifty-three county Secretaries make a possible total of 111. Judging from our previous experience it is not probable that we shall ever have over one-half of this number present at once, especially since the Secretary is now chosen as a delegate in about one-third of the counties, and will doubtless be chosen oftener hereafter, since he is already a delegate ex-officio. I hope the amendment will be approved. I would again urge the importance of a prompt attendance of the delegates at the first meeting, when most of the business is transacted.

THE JOURNAL.

At the last annual meeting the society was offered the property, good will, etc., of the Wisconsin Medical Journal on most generous and liberal terms. The offer was made with the idea that the society should own and edit its own official organ, a plan which is now being adopted by most of the other state societies. The proposition came before the House of Delegates and was referred to a committee. I have no time for the details of the negotiation since they are published in the Journal. However, an adjustment was effected which was satisfactory to all parties concerned and the Society assumed control of its own Journal about the beginning of the year. A publication committee, consisting of Drs. Patek, Foerster and Seaman, with the Treasurer and Secretary of the society, was appointed by the council to take charge of the management.

Dr. A. W. Myers was appointed editor and Dr. J. P. McMahon, managing editor, and under their care the Journal has fully maintained the high character which it has always enjoyed. But we must remember that the Journal is now our property and that the 1,600 members of the state society are personally responsible for the outcome of this venture. The committee and the editors will do all in their power to make a good medical journal, but they have a right to expect the loyal support of the real owners of the property. While it publishes the papers and proceedings of the state society, it is especially the medium of publicity of all the county societies. The county Secretaries are urged to send in full reports of their meetings, includ-

ing any papers of especial merit which are presented. Items of personal and local interest from every part of the state can be given the widest circulation, since the Journal goes every month, to every member of the society. Let us all make such use of our new possession that it may be of the greatest possible service to the whole profession of the state.

THE COUNCIL.

The annual meeting of the Council was held January 28, 1910. There were present councilors Nye, Windeshcim, Redelings, Evans, Sears, Mears, Hougén, Cairns and Cunningham.

The Treasurer was authorized to advance to the managing Editor of the Journal sufficient funds to pay outstanding accounts and the necessary expenses in the near future. It was declared the sense of the Council that the Fox River Medical Society be regarded as the District Medical Society of the councilor districts involved, the 5th, 6th and 8th. It was voted to postpone a revision of the Constitution and By-laws for one year.

Reports were received from the councilors present as to conditions in their districts.

Dr. Hall was re-elected Treasurer and Dr. Sheldon, Secretary.

THE YEAR'S PROGRESS.

The information blanks have been sent to the county Secretaries, as usual, and forty-nine replies have been received. While these are largely only statistical, and vary much in the care with which they are prepared, they still convey much valuable information and afford a basis for estimating the work actually being done in the county societies. While there is an occasional note of discouragement, we are justified in believing that we are making headway, and have made constant and consistent gains during all these six years. On the whole, and with some exceptions, it is becoming easier each year to collect the dues and maintain the organization. While it is still a difficult matter to induce the busy country doctor to stop and write a paper for his medical society, it is gradually becoming less so. Time will remedy this, as it will many other things, and we must not be impatient. Our standards of medical education are constantly advancing. Our state examining boards are drawing the lines closer. Legislatures even, are beginning to listen. Now, it is not so easy for the ignorant and incompetent to gain admission into the medical profession, and year by year it will become less so. With men better educated and better prepared for their work in all ways, the scientific spirit will surely grow. The many obvious advantages of genuine medical societies will be more fully appreciated by these men, and they will give them a corresponding support.

In these reports, judging from the number of papers read, the number of meetings and the average attendance it would appear that at least thirty are doing good society work, about a dozen are doing indifferent work and the rest simply hold an annual meeting for the election of officers and do no scientific work whatever. While these figures are about the same as last year, on the whole there is a better showing.

STATISTICS.

Of these forty-nine replies received, one society reports fourteen meetings; two, twelve; one, eleven; four, ten; two, nine; one, eight; one, seven; three, six; one, five; fifteen, four; nine, three; nine, two; three, one; and five, none. The average attendance at these meetings was eleven, and the average number of papers read during the year, about nine. In most of the societies there seems to be a gain both as regards interest in scientific work, and the fraternal and professional spirit.

NOTES AND SUGGESTIONS.

The Secretary would call attention to the change in our fiscal year, adopted at the last annual meeting, which provides that it shall end April 15th, instead of December 31st, as heretofore, so that the 1910 members have paid their dues till April 15, 1911.

During the year we were favored with a visit from the national organizer, Dr. J. N. McCormick. He gave eleven addresses in the state: at Racine, Oshkosh, Milwaukee, Appleton, Wausau, Eau Claire, La Crosse, Beloit, Janesville, Green Bay and Kenosha. These talks were popular in character and addressed to the laity rather than the profession. He was well received everywhere and where adequate preparation had been made, the meetings were very successful. They unquestionably did much to bring about a better understanding between the profession and the general public.

The first annual conference of the county Secretaries has been announced for this meeting, and the program is in charge of Dr. Roek Sleyster of Waupun. The scheme is to get the county secretaries together, to get acquainted, and discuss the best plans for the promotion of county society work. If the plan proves practicable, such a meeting will be held each year, at the time of the annual meeting. Dr. Sleyster has also made a personal canvass for new members, and the increase in our number this year is largely due to his indefatigable efforts in the "boosting" line.

Inasmuch as loss of membership occurs automatically, each year, on non-payment of dues, hereafter—beginning this year, a membership card, signed by the state and county Secretaries will be sent to each member through the different county secretaries. This constitutes a receipt for the year's dues. If all have not received these cards, they will please apply to their county Secretary.

While, as a rule, the reports have been sent in more promptly than usual this year, there are certain incorrigible Secretaries who insist on neglecting to make any effort to collect till three or four days before the annual meeting. The result is a mighty poor showing for their societies, and nervous prostration for the state Secretary. What shall be done with these men? Let us sing the old song again and say that the most important act of the county society in the whole year is the election of a Secretary. If you have a good one, by all means keep him forever. If a poor one, get rid of him as soon as you can, but always try to pick out the very best man for this position in the whole Society. Then you will be happy.

While I am about it, I might as well take a fall out of the council. The personnel of these gentlemen deserves nothing but praise, but if some of them would manifest a more marked and peculiar interest in the affairs of their bishopries, it would be highly appreciated by the members of their flock, and would immensely help the cause. From the reports, it would seem that six members made no visits at all outside of their own county during the year.

All in all, we have had a tip-top good year. We shall show a gain in membership of about 100, and shall reach the 1600 mark before the next meeting. Organization is on a firmer basis and the "medical society spirit" is making headway. We have happily taken over the Journal for our own, to own and edit. We have had a fine President who has strained every nerve for a successful administration and who has succeeded. Peace and harmony have dwelt within our borders, and there has been no one to molest us or make us afraid. We have a great program for this meeting, which is going to beat all previous records. Let us gird up our loins and make the coming year better yet. In behalf of the society, the Secretary wishes to thank all who have aided in the year's work. Respectfully submitted,

CHARLES S. SHELDON, *Secretary.*

COUNTY	Total Membership 1909	Membership June 22, 1910	Gain or Loss	Membership July 2, 1909	Eligible and Non-affiliated	Number of Meetings	Average Attendance	Number of Papers	Councillor's Visits	Scientific Interest and Professional Spirit	Card Index Complete	
Ashland-B-I.....	22	22	(- ?)	22	—	4	10	—	0	yes	yes	yes
Barron-P-W-S-B.....	27	33	(+ 5)	25	—	7	15	7	4	no	yes	no
Brown-Kewaunee.....	32	34	(+ 2)	31	8	4	8	4	0	yes	yes	yes
Calumet.....	12	14	(+ 2)	12	1	4	8	4	0	yes	yes	yes
Chippewa.....	14	9	(- 5)	14	—	—	—	—	—	no	no	yes
Clark.....	15	16	(+ 1)	15	14	0	10	—	0	no	no	yes
Columbia.....	25	31	(+ 5)	25	13	2	1	0	0	no	no	no
Crawford.....	10	10	(+ 2)	8	6	2	7	2	0	yes	no	yes
Dane.....	95	94	(- 5)	89	20	10	20	20	0	yes	yes	yes
Dodge.....	33	31	(- 1)	32	21	3	7	4	4	yes	yes	yes
Door.....	8	6	(- 2)	8	—	—	—	—	—	—	—	—
Douglas.....	25	26	(+ 1)	25	7	12	10	12	0	yes	yes	yes
Dunn Pepin.....	21	22	(+ 1)	21	5	10	7	6	0	yes	yes	yes
Eau Claire.....	31	32	(+ 2)	30	1	14	21	42	0	yes	yes	yes
Fond du Lac.....	42	47	(+ 6)	41	4	6	13	13	6	yes	yes	yes
Grant.....	33	36	(+ 3)	33	12	2	14	8	2	no	yes	yes
Green.....	15	16	(+ 2)	14	6	2	10	4	1	no	same	yes
Green Lake-W-A.....	20	26	(+ 6)	20	9	3	8	2	1	yes	yes	yes
Iowa.....	7	10	(+ 3)	7	13	3	6	6	0	yes	yes	yes
Jefferson.....	25	27	(+ 2)	25	?	4	15	12	2	yes	yes	yes
Juneau.....	18	17	(- 1)	16	3	2	9	4	0	yes	yes	yes
Kenosha.....	31	31	(+ 1)	30	12	12	18	15	12	yes	same	yes
La Crosse.....	29	31	(+ 2)	29	2	10	14	5	—	no	yes	yes
La Fayette.....	18	17	(- 1)	18	—	2	8	—	0	yes	—	yes
Langlade.....	12	13	(+ 1)	12	1	4	7	8	0	yes	yes	yes
Lincoln.....	5	14	(+ 9)	5	4	3	6	1	0	no	no	yes
Manitowoc.....	24	25	(+ 1)	24	7	4	12	4	0	yes	no	yes
Marathon.....	32	33	(+ 10)	23	0	11	14	38	?	yes	?	yes
Marquette-F.....	20	20	(+ 1)	19	7	10	15	24	10	yes	no (?)	no
Milwaukee.....	285	254	(- 18)	272	249	8	43	16	0	same	yes	yes
Monroe.....	25	25	(-)	25	2	4	9	4	0	no	yes	yes
Oconto.....	10	12	(+ 2)	10	4	2	—	2	0	no	yes	yes
Oneida.....	10	12	(+ 2)	10	9	2	4	0	0	yes	yes	yes
Outagamie.....	39	40	(+ 2)	38	3	6	12	12	Nbr.	yes	yes	yes
Pierce.....	15	17	(+ 2)	15	7	4	5	7	Clr.	?	?	yes
Portage.....	16	18	(+ 2)	16	2	3	8	3	0	yes	yes	no
Price.....	9	9	(-)	9	4	1	9	1	0	yes	yes	no
Racine.....	34	32	(- 2)	34	—	3	18	4	2	yes	yes	—
Richland.....	18	15	(- 3)	18	7	1	5	0	0	no	no	no
Rock.....	52	56	(+ 7)	49	22	9	23	14	9	same	same	yes
Rusk.....	8	8	(-)	8	1	3	6	0	0	no	yes	yes
Sauk.....	19	21	(+ 2)	19	16	0	—	—	0	—	yes	yes
Shawano.....	18	14	(- 1)	15	—	—	—	—	—	—	—	—
Sheboygan.....	29	32	(+ 3)	29	21	4	8	0	0	no	?	yes
St. Croix.....	13	17	(+ 4)	13	7	5	5	12	2	yes	yes	yes
Trempealeau-J-B.....	23	24	(+ 2)	22	6	4	8	1	1	yes	yes	yes
Vernon.....	6	15	(+ 9)	6	7	3	6	0	0	no	yes	no
Walworth.....	31	30	(- 3)	27	10	4	13	10	2	yes	yes	yes
Washington.....	17	17	(-)	17	6	4	7	12	6	yes	no	yes
Waukesha.....	38	38	(-)	38	4	9	12	4	0	no	yes	yes
Waupaca.....	23	26	(+ 8)	18	10	4	12	7	1	yes	yes	yes
Winnebago.....	45	49	(+ 4)	45	18	4	—	4	1	no	yes	yes
Wood.....	22	25	(+ 3)	22	4	6	?	?	6	yes	yes	yes

REMOVALS.

R. W. Andre, from Rib Lake to —; S. B. Aekley, from Oshkosh to Waukesha, Wis.; James Burke, from Manitowoc to Maple Grove, Wis.; F. C. Binnewies, from Milton to N. Y. City; E. A. Bowles, from Eleva to Ellsworth, Kan.; Joseph Bellin, from Wausau to Green Bay, Wis.; H. P. Beattie, from Antigo to Merrill, Wis.; J. F. Brown from Waupun to Janesville, Wis.; F. O. Brunekhorst, from Cuba City to Vernon Co.; Albert Brundage, from Milwaukee to —; E. H. Cook, from Dale to Elgin, Ill.; C. R. Caughey, from Genoa Junction to Kenosha, Wis.; F. C. Christenson, from Black Earth to Racine, Wis.; W. S. Cossitt, from Wausau to —; C. A. De Voe, from Rosendale to Berlin, Wis.; F. E. Detling, from Superior to —; S. W. Doolittle, from Lancaster to —; S. T. Elliott, from Richland Center to Waukesha, Wis.; Jos. Erlanger from Madison to St. Louis, Mo.; J. B. Eagin, from Excelsior to Woonsocket, S. D.; Frank Foley, from Neshkoro to Dorchester, Wis.; H. A. Feiker, from Cassville to Montana; Otto Fiedler, from Athens to —; A. J. Hoenes, from Madison to Deunison, Iowa; L. L. Herriman, from Boyceville to —; Herbert Higgs, from Colfax to —; G. M. Helland, from Albany to Minnesota; C. J. Hurlbut, from Omro to Columbia, Tenn.; Henry Hanson, from Milwaukee to —; Kate Kelsey, from Menomonie to Cable, Wis.; H. A. Keenan, from Edgerton to Washington; W. A. Ladwig, from Edgar to Wausau, Wis.; Wm. Lumsden from Clayton to Clear Lake, Wis.; P. G. Lasche, from Lyndon Station, Wis., to —; W. D. Merritt, from Janesville to Albany, Wis.; J. Manning, from Eau Claire to New York; W. G. Merrill, from Wilton to Grand Rapids, Wis.; C. H. Meyst, from Honey Creek to Burlington, Wis.; J. D. Nicholson, from Balsam Lake to Milltown, Wis.; J. E. O'Connell, from Menasha to Milwaukee, Wis.; D. C. O'Connell, from Menasha to Milwaukee, Wis.; F. J. Pfeifer, from Zachow to New London, Wis.; S. J. Phaneut, from Weyerhaeuser to Somerset, Wis.; T. C. Proctor, from Sturgeon Bay to Hannibal, Mo.; C. C. Rowley, from Marshfield to Stevens Point, Wis.; S. T. Reeves, from Tomah to Albany, Wis.; W. C. Reineking, from Horicon to Milwaukee, Wis.; Rose Russell, from Kenosha to Missouri; E. S. Ryan, from Sheboygan to Milwaukee, Wis.; C. S. Smith, from Elroy to Montana; L. R. Sleyster, from Appleton to Waupun, Wis.; S. G. Schwarz, from Granton to Chili, Wis.; G. A. Steele, from Crivitz to Sherwood, Wis.; S. R. Stone from Rhineland to Atlanta, Ga.; D. Sauerhering, from Wausau to Springfield, N. D.; E. L. Sharp, from Fox Lake to Illinois; A. Schneider, from Milwaukee to —; A. T. Shearer, from Walworth to —; H. Thurtell, from Manitowoc to Traverse City, Mich.; John Tasehe, from Sheboygan to Glen Ullin, N. D.; T. W. Trimble, from Waupaca to Washington; F. S. Tuffley, from Livingston to Prairie du Chien, Wis.; L. H. Treglown, from Arthur to Livingston, Wis.; M. von Beust, from La Crosse to New Albany, Ind.; E. E. Whitehorne from Mazomanie to Vesper, Wis.; Adelaide Woodard, from Ashland to Seattle, Wash.; W. H. Zwiekey, from Minong to Superior, Wis.

DEATHS.

L. S. Brown, of Madison, died December 24, 1909; H. L. Bacon, of New London, died —; G. T. Blynd, of Berlin, died March 18, 1910; J. P. Cox, of Spooner, died September 30, 1909; A. M. Fischer, of Kaukauna, died

—; W. A. Gordon, of Oshkosh, died October 12, 1909; J. C. Grant, of Lena, died November 28, 1909; W. H. Monroe, of Merrill, died October 4, 1909; A. C. Mailer, of De Pere, died December 3, 1909; Dane Perry, of Bundy, died October 20, 1909; A. D. Ryan, of Delevan, died October 16, 1909; U. P. Stair, of Fort Atkinson, died September 6, 1909.

Motion carried adopting the report as read.

PRESIDENT: The next order is the election of delegates and alternates to the A. M. A. in place of Karl Doege and C. A. Richards. You are to elect two delegates. I might suggest, without recommending, that on account of our secretary being honored with the presidency of the American Academy of Medicine, he is pretty sure to be at Los Angeles next year. It is a long distance to go, and there may not be very many there. I think it is very important as the secretary of the American Medical Association said today, to have delegates from all the states present.

DR. J. M. DODD, of Ashland: I nominate Dr. C. S. Sheldon as a delegate to the American Medical Association at Los Angeles.

On motion, Dr. C. S. Sheldon was elected delegate to the A. M. A.

PRESIDENT: I will ask for the nomination of an alternate to Dr. Sheldon, and I make the suggestion that we get an expression from those present as to who can go.

DR. M. J. SANDBORN, Appleton: I nominate Dr. Wilson Cunningham.

On motion, Dr. Wilson Cunningham, of Platteville, was elected alternate for Dr. Sheldon.

DR. WILHELM BECKER: I would like to place in nomination the name of Dr. A. H. Levings as delegate to the A. M. A.

On motion, Dr. A. H. Levings was elected as delegate to the American Medical Association.

DR. S. S. HALL: I nominate Dr. R. G. Sayle as alternate.

On motion, Dr. R. G. Sayle was elected alternate.

PRESIDENT: The next order of business is the election of councilors from the 11th and 12th district, to succeed Drs. Dodd and Holbrook. Nominations are in order.

DR. E. L. BOOTHBY: I nominate Dr. J. M. Dodd to succeed himself.

On motion, Dr. J. M. Dodd was elected councilor for the 11th District.

SECRETARY: I have received the resignation of Dr. Holbrook, but haven't it with me this morning. I will present it to the Society. His time expired during the year, and he does not desire to serve another term.

PRESIDENT: What is your wish in regard to the councilor for the

12th district. Dr. McMahan, have you anybody to suggest who would help out with the Journal.

DR. McMAHON: I am not a delegate, but have just been considering the matter with Dr. Sayle, and it seems to me that this district ought to have some active man, to the end that the Ozaukee county men might be induced to join Milwaukee County, or possibly have a live society of their own. I haven't anybody in particular in mind, save Dr. Dearholt, who travels around a good deal by virtue of his position as Secretary of the Anti-tuberculosis Association, and has facilities for correspondence, and I believe would make an excellent councilor from every view point.

DR. SAYLE: I nominate Dr. Dearholt.

Nomination seconded.

The name of Dr. J. P. McMahan was also placed in nomination, but he declined owing to press of business in connection with the Journal.

On motion, Dr. H. E. Dearholt was elected councilor for the 12th District.

PRESIDENT: The next business in order is the election of committees and delegates. According to the rules of the Society those committees must be elected by the House of Delegates. The first is the Committee on Public Policy and Legislation. That committee at present consists of Doctors A. W. Gray, J. P. McMahan and Dr. F. F. Bowman.

DR. E. L. BOOTHBY: I move that the same committee be continued.

Motion carried.

PRESIDENT: The next in order is the Committee on Prevention of Tuberculosis. The present committee consists of Dr. C. A. Harper, the state health officer, Secretary, and Dr. G. E. Seaman, J. M. Beffel, Prof. Ravenel, and C. H. Stoddard.

DR. C. S. SHELDON: I move that the same committee be continued.

Motion carried.

PRESIDENT: The next is the Committee on Medical Education. The present committee consists of Drs. E. S. Hayes, Edward Evans, of La Crosse, and W. H. Washburn, of Milwaukee. We had no report from that committee tonight.

DR. C. S. SHELDON: I move that the same committee be continued.

Motion carried.

PRESIDENT: The next in order is the Committee on Necrology.

That committee at present consists of Drs. A. J. Patek, E. L. Boothby and J. C. Reynolds.

DR. BYRON M. CAPLES: I move that the same committee be continued.

Motion carried.

PRESIDENT: The next in order is the committee to act with the Board of Public Instruction of the American Medical Association. This committee at present consists of Dr. W. B. Hill, of Milwaukee. Dr. Hill was not present tonight, and I do not know whether he has a report or not. What is your pleasure, gentlemen?

DR. WILSON CUNNINGHAM: I nominate Dr. C. R. Bardeen.

Motion carried electing Dr. C. R. Bardeen to the committee to act with Board of Public Instruction, American Medical Association.

PRESIDENT: The next order is the election of a delegate to the National Legislative Council American Medical Association. Dr. Byron M. Caples was the delegate before.

On motion, Dr. Byron M. Caples was elected delegate to the National Legislative Council, American Medical Association.

PRESIDENT: The next in order is the delegate to the Council on Medical Education, American Medical Association.

DR. T. J. REDELINGS: I place in nomination the name of Prof. Ravenel.

On motion, Dr. M. P. Ravenel was elected delegate to the Council on Medical Education American Medical Association.

PRESIDENT: The next in order is the election of a committee of twelve on nominations, one from each district. According to the rules and by-laws that committee is appointed tomorrow, the first day of the annual session, so it does not come up tonight. Is there any miscellaneous or new business to come up tonight?

The following amendments were offered for consideration by the House of Delegates, to be acted on at a later meeting:

That Section 3, Chapter 5, and Article 9, Section 3 be changed so as to read: "Second day" instead of "Last day."

That Chapter 4, Section 2 of the by-laws be amended so that it shall read: "The secretary of each component society shall be ex-officio a member of the House of Delegates; and each county society shall be entitled to send to the House of Delegates one additional delegate for every 50 members, and one for each major fraction thereof; but each component society which has made its annual report, and paid its assessment, as provided in this constitution and by-laws, shall be entitled to one delegate in addition to the Secretary."

That Chapter 4, Section 10 of the by-laws be effaced.

That Section 11 be completed at the end of the first paragraph. That the second paragraph, which reads: "When so organized from the presidents

of such district societies shall be chosen the vice-presidents of this society, and the presidents of the county societies of the district shall be the vice-presidents of such district societies;" be effaced.

That one section be added to Chapter 9, as Section 15, to read as follows: "Each county society shall have the right to admit as an associate member any reputable physician who for well-founded reasons may not be able to become a member of the state society; and may grant to such associate member upon the payment of satisfactory dues, all rights and privileges of other members, with the exception of holding office, voting for officers and voting on any question relative to the state society."

On motion the proposed amendments were laid over for one day, to be acted on according to the by-laws.

The Secretary read a communication from Dr. Hugo Philler dated at Minneapolis, June 14th.

On motion an adjournment was taken to 9 o'clock A. M., June 22, 1910, at the Auditorium, Milwaukee, Wisconsin.

JUNE 22nd, 9 A. M.

Meeting called to order by the President.

Roll-call by the Secretary showed a quorum present.

The proposed amendments to the constitution and by-laws were considered.

DR. G. WINDESHEIM, of Kenosha: Mr. President, I would like to explain the idea of the amendment to Chapter 4 of the by-laws. Section 11 of Chapter 4 of the by-laws provides for the creation of district societies and reads as follows:

"The House of Delegates shall divide the state into councilor districts, specifying what counties each district shall include, and, when the best interests of the society and profession will be promoted thereby, organize in each a district medical society, and all members of component county societies shall be members in such district societies."

That portion of the section is supposed to be left just as it is, but the next paragraph of the section reads: "When so organized, from the Presidents of such district societies shall be chosen the Vice-Presidents of this society and the Presidents of the county societies of the district shall be the vice-presidents of such district societies." We have never yet, since the organization of district societies, chosen, except in one instance, a vice-president of this society from the presidents of the district societies. There are a number of the members in the county societies that are objecting to this clause. They say that some times they may elect a man president of the county society whom they would not recommend as president of the district society

or as vice-president of this society. Therefore, it is proposed to strike out this last clause.

I should also like to explain the idea of this proposed Section 15 to be added to Chapter 9, so that the members may think it over and vote on it more intelligently, perhaps tomorrow. There are in every county, at least in my district, reputable and legally qualified physicians, good men, who, for various reasons may not be able to become members of the state society. Section 5 of this same chapter says that "each county society shall judge of the qualification of its own members, but as such societies are the only portals to this society, and to the American Medical Association, every reputable and legally registered physician who does not practice or claim to practice, nor lend his support to, any exclusive system of medicine, shall be entitled to membership." There are men, and good men, who cannot sign your application blank, and at the same time the county societies wish to have them associate with them as far as the local issues are concerned.

PRESIDENT: Does not that very section exclude that?

SECRETARY: You cannot be members and not members at the same time.

DR. WINDESHEIM: This proposition is not to take them in as members, but as associate members.

PRESIDENT: What is the distinction between a member and an associate member?

DR. WINDESHEIM: The associate member, as that proposed section reads, has no right to vote, has no right to hold office, has no right to vote for officers, nor on any question in reference to the state society. It simply allows him to come in with the rest and discuss papers and eat with them at lunch, and help to keep up the fraternal spirit, that is all, for the simple fee that the county society may adjust.

DR. E. L. BOOTHBY: Why not call them honorary members?

DR. WINDESHEIM: Because we do not want them as honorary members. They do not deserve it. There are also quite a number of men who are out of practice; we have three in Kenosha who are out of practice; they want to come in with the boys, and we would like to have them as associate members.

SECRETARY: Just invite them in.

PRESIDENT: I would like to ask if you would be willing to do this: this is really a matter for the council to vote upon. You refer this to the council, and if they pass favorably on it, take a vote tomorrow—or at least defer it to the meeting of the House of Delegates tomorrow. Are you willing to let this soak into the House of Delegates until tomorrow?

DR. WINDESHEIM: Yes, I am willing.

PRESIDENT: With the consent of the mover of this change in the by-laws, we will let this stand until tomorrow.

The next refers to the announcement of the Nominating Committee. It is moved that Section 3 of Chapter 5 and Section 2 of Article 9 be changed so as to read: "Second day" for "last day". It is simply so that the officers-elect may be announced before every one has gone home. I think that ought to be done; I have felt so for a long time.

DR. WILKINSON: I was a member of the Nominating Committee at Madison last year, and was one of those in favor of this amendment, and if the members wish I will state the reasons, in addition to those which you have already stated. It is owing to the fact that the members of the House of Delegates had to come here a day earlier than the other members, and those appointed a nominating committee of course being delegates had to remain until after the general session had closed. It works a hardship upon members from distant parts of the state to remain; if they do not remain, then we have not a good working force. The amendment was discussed last year by members of the nominating committee, and we thought it would be much more feasible to have an earlier report from them than to hold it for the last day, as then so many had gone.

DR. J. M. DODD, Ashland: I am heartily in favor of the plan, but I would like to suggest that it include the deciding of the place of next meeting. I think that should be part of the same plan.

PRESIDENT: That can be decided by the House of Delegates, but this is simply to change the reading of our constitution and by-laws.

If there is no further discussion, those in favor of the motion to change the announcement of the nominating committee from the morning of the "last day" to the morning of the "second day" will signify by saying Aye.

Motion carried.

The proposed amendment, striking out the last paragraph of Section 11, Chapter 4 was read by the Secretary.

DR. E. L. BOOTHBY, of Hammond: This is what is proposed to be eliminated: "when so organized"—this is, the organization of the district societies—"from the presidents of such district societies shall be chosen the vice-presidents of this society, and the presidents of the county societies of the district shall be the vice-presidents of such district societies." That is all which it is proposed to strike out. It was to complete the organization of the Medical Societies of the state—state, district and county Medical Societies, and weld them to-

gether. If you had lived up to it in the beginning—and I fought for you to do it, and you would not do it, and did not do it when you had a chance, and ignored it entirely—it would have been all right. Strike it out if you are not going to live up to it.

I move the adoption of the amendment.

Motion seconded and carried.

PRESIDENT: It is so stricken.

The next order is the proposed amendment to Section 2, Chapter 4 of the By-laws.

The proposed amendment was read by the Secretary as follows:

“The Secretary of each component county society shall be ex-officio a member of the House of Delegates, and each county society shall be entitled to send to the House of Delegates one additional delegate for every 50 members, and one for each major fraction thereof; but each component society which has made its annual report and paid its assessment, as provided in this constitution and by-laws, shall be entitled to one delegate in addition to the Secretary.”

PRESIDENT: That means, of course, you understand, practically doubling the House of Delegates.

SECRETARY: Possibly doubling it.

PRESIDENT: Practically doubling it.

SECRETARY: No, because there are 60 delegates and there are only 53 possible county secretaries.

DR. H. B. SEARS, Beaver Dam: I recall this amendment being before the House of Delegates a couple of years ago, and I did not feel in favor of it at that time. It seems to me that there are some objections to it. In the first place it may double the representation of certain counties. Certain counties might be disposed to have two representatives instead of one.

SECRETARY: They all have that privilege.

DR. SEARS: Many counties would elect their secretaries delegates, and in that case they would have but one representative, while if some one else was elected they would have two. I do not believe that the efficiency of the House of Delegates will be increased by numbers. I think the quality of the representation is much more important than the number. It seems to me this will make the representation unequal. I feel that it is not the proper thing to do. I think the representation should be equal and should be so that each county society will be represented according to its membership.

DR. E. L. BOOTHBY, of Hammond: I live up in the northwestern part of the state, where it is all country, and I know very well that in my old district—and I think Dr. Dodd will bear me out that there is a similar condition up in some of those county societies—that they

do not hold more than one or two meetings in the year, and they sometimes fail to have a delegate elected. If you make the secretary of the county society a delegate, he is a standing delegate from the time he is elected secretary, and it is not necessary to have a special meeting or do any extra work to have a representative to the House of Delegates. Your secretary is a representative, and if they want to send anybody else they may do so. You have got him all the time. He is the go-between between the state society and the county society. There are quite a few county societies in Wisconsin that do little or no work. Some time during the year they will elect their officers, perhaps in May, or June, or December, according to the constitution, and when the officers are elected and they have a secretary, they have that delegate elected to this society. I believe that is a good amendment; I was in favor of it two years ago, and I am going to vote for it today. It is not going to double the attendance. At most there will be a little more than 100 in the House of Delegates. Now we never have more than 30 in attendance, and you will never have more, but you will be more apt to have a representative from a greater number of county societies—not a greater number of representatives from any one society, but from all of them.

SECRETARY: In stating the reasons last night for this proposed amendment, I said the obvious advantages of making the county secretaries members of the House of Delegates had been dwelt upon last year. The county secretaries are the executive officers of this society. They are the very foundation stone upon which you must rely in the county societies and district societies and state societies and the American Medical Association. Upon the efficiency, the energy, the activity, and the interest of these county secretaries depends the success of this whole movement, and we know that the success of this movement has largely to do with the development of the whole profession throughout the United States, and we can see already the benefits in the profession since the reorganization was begun. These are the men whom we propose to take into our councils as part of the governing body, as the executive body of the state society. In electing a secretary you are supposed to get the best man in the society—and he ought to be a valuable man in the House of Delegates.

DR. L. F. BENNETT, Beloit: I can see the danger in making these county secretaries ex-officio members. I believe there is every danger in getting it centralized. Those that are close to the place of meeting will have a double representation, as Dr. Sears says, and it will throw the balance of power in central places. The county

secretaries from all over the state are not going to come to this meeting. The representatives to the House of Delegates have not been, and the secretaries of the county societies will not all be present. The leading men throughout the state have been sent here as delegates, and we want to leave the matter in the hands of these men. I see an element of danger in putting in these county secretaries, and I believe it will not be a good thing, because it will centralize the power, and some sections will be doubly represented. For instance, here in Milwaukee, or at Madison, they will all be there, of course, and will run things to suit themselves, and the other parts of the state will not be represented in a proper manner.

DR. J. L. FLEEK, Broadhead: Dr. Sheldon has carried the impression ever since we came here that all the credit for the success of the American Medical Association, the state society and the county society is due to their respective secretaries. Great minds differ. It is my opinion that the president of our county societies has more to do with the matter than has our secretary. We choose different timber for our delegates than we do for secretary. Our state secretary is in the place because he is a good man for the place and makes a good secretary and we keep him there. We elect a delegate because we believe he is a good man to come here. They like to go. And I would be opposed to having our county secretaries members of this House of Delegates.

DR. P. M. JORGENSEN, Kenosha: The objection that I see to this amendment is: I believe it is making more of what we say is "what is everybody's business is nobody's business." I think the county societies ought to try to lay more stress on having their delegate attend. If we have a good man as delegate, let us keep him there, because it takes a couple of years before he gets familiar with what he has to do. If we have other delegates from our county societies there will be that feeling of "I guess I will not go, he will want to go." I have never attended a meeting of the House of Delegates when we did not get more help and information from the councilors than we can get from our own body—and why? Because they are a small body, elected for a long term of years, and they become familiar with the society; and in all of the meetings of the House of Delegates the councilors present are the people who have been obliged to lead, because a good many of the others were new and did not know the ins and outs. I think more stress should be laid on seeing that the delegate attends, and when you get a good man, keep him. In those thinly settled counties in the north, if they only elect officers and that

is all they do, I do not see why, if the secretary is interested in it, he cannot be elected as delegate.

DR. WILSON CUNNINGHAM, Platteville: One more point. As to the necessity of the secretary being present, the way we have arranged heretofore, if the delegate is not present some member from that district is appointed, so the district is represented. We have been doing that each year. We did it last year and also the year before.

DR. OSWALD: I do not really think that the secretary is in all cases the best man to send as delegate. In most of the counties in our district the secretaries' duties consist in sending monthly notices of meeting. If it was not for the activity of the president we would not have had a meeting at all last year. As it was, our county reports two meetings, and at one of these meetings the time was consumed in the election of officers and the election of a delegate. In a great many instances, of course, the secretary is a very efficient person, but in a majority of the cases his duty consists in sending out monthly notices.

DR. W. A. EDWARDS, La Crosse: Two points have been brought out which I would like to emphasize: One is the matter of the fitness of the delegates. If it should be considered by the county society that the secretary would be the best man for delegate, why not make him delegate? On the other hand, if certain counties are so situated that they cannot have meetings and do not elect a delegate, why should the rest of the counties in the state, with possibly equal or less membership, be compelled to overcome that apparently, if not really, unequal representation that will be produced by electing two delegates in such county, on the basis suggested.

DR. G. WINDESHEIM: While I am not in favor of the county secretaries being ex-officio members of the House of Delegates, I would be in favor of their being elected delegates. There has been one mistake made which I think ought to be corrected, and that is as far as the inequality of representation is concerned. The Milwaukee county society, for instance, would be entitled to 8 delegates and only one secretary in addition. The smaller counties would be the ones that are benefited by this means, and not the larger ones. It has been stated that Milwaukee and Madison would get increased representation; they would not get an increased representation, they would get a decreased representation comparatively. The smaller counties would get the increased representation. However, I think one delegate from each county is sufficient, and the county societies can certainly leave it with the secretary or the president to have a delegate appointed that will be sure to come here. There is generally some member from a county present here at the state meeting, and that member, whoever he may

be, may be appointed as a delegate by the president. The constitution should provide for that if it does not.

PRESIDENT: You know what the motion is, to the effect that the constitution be so changed that the county secretaries be ex-officio members of the House of Delegates. Those in favor of the motion will signify it by saying Aye, contrary No.

(Vote taken.)

The Noes appear to have it. Unless the mover asks for a division, the motion is lost.

SECRETARY: I call for a division of the House.

A rising vote was taken.

PRESIDENT: The motion is lost.

The next order is the appointment of a Nominating Committee of 12, one from each district, for the purpose of nominating the state officers. This is done, I think, properly and always by the House of Delegates making nominations from the floor. The matter now before the house is the appointment of a Nominating Committee of 12, one from each district.

Nominations were made from each district, and the following committee selected.

1st District, Dr. M. R. Wilkinson, Oconomowoc; 2d District, Dr. P. M. Jorgenson, Kenosha; 3d District, Dr. L. F. Bennett, Beloit; 4th District, Dr. James Oettiker, Platteville; 5th District, (No one named); 6th District, Dr. M. J. Sandborn, Appleton; 7th District, Dr. W. A. Edwards, La Crosse; 8th District, Dr. Oswald; 9th District, Dr. Geo. T. Dawley, New London; 10th District, Dr. J. C. Baker, Hawkins; 11th District, Dr. W. P. Sperry, Phillips; 12th District, Dr. R. G. Sayle, Milwaukee.

On motion duly seconded and carried, the rules were suspended and the Secretary directed to cast the ballot for the nominees mentioned.

PRESIDENT: It is understood now that this committee will report tomorrow morning, the second day, instead of the morning of the last day, with their nominations.

Adjourned to Thursday, June 23, 1910, 8:30.

THURSDAY, JUNE 23, 1910, 8:45 A. M.

Meeting called to order by the President.

Roll-call showed quorum present.

PRESIDENT: We will listen to the report of the Nominating Committee.

CHAIRMAN OF NOMINATING COMMITTEE: The Nominating Committee reports the following nominations:

For President, Dr. Byron M. Caples, of Waukesha.

First Vice-President, Dr. J. M. Dodd, of Ashland.

Second Vice-President, Dr. T. J. Redelings, of Marinette.

Third Vice-President, Dr. Wilson Cunningham, of Platteville.

Motion made that the Secretary be instructed to cast a unanimous ballot for the nominees.

Unanimously carried.

SECRETARY: The Secretary has cast a ballot for the nominees as reported by the Nominating Committee.

Nominees declared duly elected.

PRESIDENT: There are two motions that we had better dispose of, looking to a change in the constitution and by-laws.

SECRETARY: Chapter 4, Section 11 of By-Laws. The idea is to take out that provision of the section which we have always nullified, namely, the election of the presidents of our district societies as vice-presidents of the state organization, and the presidents of our county societies as vice-presidents of our district societies. The amendment proposed was the elimination of this clause:

"When so organized, from the presidents of such district societies shall be chosen the Vice-presidents of this society, and the Presidents of the county societies of the district shall be the Vice-presidents of such district societies."

DR. REDELINGS: It occurs to me that this eliminates the last tie which appears in print in the Constitution and By-Laws, which shows any relationship of the district society to the state society. In our efforts as councilors in the northeastern section of the state, we had great difficulty in getting district societies; we had a good district society which was a local society non-affiliated, and when the councilors advocated converting the local Fox River Valley Society into a district society, the opposition was that it was a paper society and sustained no relation, tie, or obligation to the state society, and in a measure we argued that there would be no change. This was practically the only thing that we could tie to in the constitution and by-laws,—the fact that the presidents of the district societies should be the vice-presidents of the state society. Then immediately came the reply that that requirement had not been complied with, and I do not quite see what we are gaining by eliminating even this. What is the object, and why are we now modifying the by-laws?

PRESIDENT: Dr. Windesheim's idea is that it never has been acted upon.

DR. REDELINGS: That is true. But it seems to me there should

be some kind of tie—if the county society is the unit and the district society the intermediate link, and the state society the fostering organization, there should be some kind of tie between these several organizations that is fixed and definite and recognized and valued, and to me it appears the weak link in the chain of our organization. Perhaps it is more apparent to me, because of the prolonged fight we had in our section on the question of the district societies.

DR. WINDESHEIM: It was my idea to eliminate that clause in that section for the simple reason that so many men in my district have been opposed to it, because they say it creates a kind of chain, a kind of peculiar form of, if you might so call it, a trust, among the officers of the society. They say that sometimes they elect a man as president of the county society whom they would not want eventually to become president of the state society, and many times they elect a man president of the district society who under no circumstances would deserve to be a president or vice-president of the state society. That was the reason. My personal opinion is that that clause is all right, and should be followed, but it has never been followed up, only in the district societies. There has never been a president of a district society elected as a vice-president of this state society—except once. At other times, ever since the organization of the district societies in the state, that clause has always been ignored. So it might as well be stricken out, or else if it is not stricken out it ought to be adhered to. The society ought to adhere strictly to that clause or else strike it out.

PRESIDENT: Those in favor of striking from the by-laws this part of the section eliminating this connecting link will vote Aye.

Motion carried.

PRESIDENT: The proposed amendment to Chapter 9 will be read to the council.

We might fix the place of next meeting now.

DR. J. M. DODD, of Ashland: I want to ask the State Society to come to a place which has not yet had the honor of entertaining the State Medical Society. On the northern border of Wisconsin there is an arm of Lake Superior, which forms one of the most beautiful bodies of water in the world. I have been told by good authority that the world-famed Bay of Naples is scarcely more beautiful than this. I refer to Chequamegon Bay. It is an irregular triangle some 20 miles in its longest direction. The beautiful Apostle Islands, the future summer resort of the North, guard its entrance. Its northwestern border is skirted by verdure-clad hills, across which the setting sun throws a play of gorgeous colors, not to be excelled anywhere in that

latitude. The southern slope gradually rises to the top of the Penokee range, some 20 miles away. At the foot of this slope lies the city of Ashland, a city of 15,000 of the best people in the world, who stand ready with open arms to welcome you if you will come. I speak to you on behalf not only of the profession of Northern Wisconsin and of Ashland, but as president of the Ashland Advancement Association, the business organization of our city.

I will assure you that we have ample means there to take care of you in every way, and all the essential requirements of the state society, not excepting a proper temperature and a suitable place of meeting; and I extend to you, gentlemen, a cordial invitation to come to Ashland for the 1911 session.

DR. G. M. STEELE, Oshkosh: You all know Oshkosh. The Winnebago County Society wishes to extend an invitation to the State Medical Society of Wisconsin to meet at Oshkosh next year, and as the representative of that county society I extend you the invitation.

DR. M. R. WILKINSON, of Oconomowoc: We invite the Society to come to Oconomowoc, to the shores of Lac LaBelle and Fowler Lake, where there are cool lawns, ample hotel accommodations and ample railway facilities to get to any part of the state. While I would like to visit the north, it is so far away that it is difficult to get a good turnout. That is the only objection I can see as to that. I spoke to the mayor of Oconomowoc and the president of the Business Men's League, and they said they would do all in their power to make the stay pleasant for the physicians of the state, if they would see fit to have their convention held in the city of Oconomowoc. Oconomowoc is on the main division of the St. Paul road, where we have numerous trains, and we also connect with the Northwestern, hourly by means of an interurban line. On behalf of the mayor and citizens of Oconomowoc I extend an invitation to the physicians of the State Medical Society to hold the next annual convention in our little city.

PRESIDENT: We have before us Ashland, Oshkosh, Oconomowoc and the invitation extended yesterday by Mr. Williams of the Business League of Waukesha.

DR DODD: I move that the 1911 session be held at Ashland.

DR. HALL, of Ripon: The next meeting of the American Medical Association will be held at Los Angeles, and it will be with great difficulty that we can settle an early date for the meeting of the state society next year. Ashland is a cool place, besides it is an historic place, and they have the Apostle Islands and a lot of entertainment up there, and if a smaller number of members get there they will pro-

portionately reap a larger reward in the cool air and the pleasant time they will have, and I want to second the motion to go to Ashland.

DR. H. B. SEARS: It has been the experience of the Society that when we have had a meeting in the northwestern part of the state the attendance has always been very small. It is a pleasant place to go and many of us would enjoy going there very much. But it seems to me we should endeavor to have the meetings of the society as near central as possible, so that we might have the largest possible representation. I myself would like to go to Ashland, but it seems to me it would result in a more limited attendance, for which reason, not for my own personal feelings, I should prefer to have it more central.

DR. DODD: I think that the enrollment at Superior two or three years ago was almost as much as it has been at this session.

DR. SEARS: I would like to amend the motion by moving that for Ashland we substitute Oconomowoc.

DR. WILKINSON: I second the amendment.

The amendment with respect to Oconomowoc was then put. 8 voted for the amendment and 6 against.

Motion as amended was put, Ayes 8, Noes 4.

PRESIDENT: Oconomowoc is chosen as the meeting place.

DR. WILKINSON: I thank you gentlemen. We will see that you are able to combine pleasure with business and comfort added.

PRESIDENT: The next question is the time of meeting.

SECRETARY: The time of our annual meeting has to bear relation to the time of the meeting of the American Medical Association. Dr. Simmons told me that it would be probably the 1st of June, but they may meet the 1st of May—we don't know about that. I think it should be left to the Committee of Arrangements.

DR. G. M. STEELE, Oshkosh: I move that the Committee of Arrangements be instructed by the House of Delegates to place that meeting not later than the 15th of May, or if later than that to extend it to the 15th of October. The heat is killing the meetings.

DR. WILKINSON: There is one objection to that. I think the meeting should be held in June, especially next year, at Oconomowoc, as our summer hotels will be open then. These meetings have always been held at that time. Work is lighter at this season than it is in May, and I think from all points considered it will be better to hold the meeting in June. If we put it so early in the season it will be a detriment to the attendance of the society. I do not think you need to fear heat next year at Oconomowoc.

PRESIDENT: Then it will be left to the Committee of Arrangements, with your consent.

SECRETARY: We will now listen to the report of Dr. Loevenhart, delegate to the Pharmacopeial Convention.

Dr. Loevenhart then presented his report which is as follows:

Report of A. S. Loevenhart, Delegate to the Pharmacopeial Convention, held at Washington, D. C., May 6 and 7, 1910.

H. W. Wiley was elected President of the Convention. This is the first time in the history of the Pharmacopeia that a man who is practically a non-medical man has been elected chairman of the convention. Politics dominated the convention to a very large extent and the progressive elements in medicine were in the great minority, in fact had almost no voice in the election of officers or in determining the policy of the next pharmacopeial revision. It is a great pity that medical societies and the better medical schools did not send their full quota of delegates. Either the pharmacopeia should lose its medical background, or medical men should exert more influence on the character of the pharmacopeia. A motion to exclude all drugs which have no therapeutic value was unfortunately lost. The failure of this motion injures the cause of good therapeutics more than anything else in the opinion of your delegate.

(Signed) A. S. LOEVENHART.

SECRETARY: I move that the report be accepted and adopted and referred to the Committee on Publication.

Motion carried.

JUNE 24, 1910, 9 A. M.

Called to order by the President.

Minutes of last meeting read by Secretary and approved.

Roll-call showed quorum present.

A motion was made that Section 3, Chapter 5 of the By-Laws, and Article 9, Section 3 of the Constitution be changed so as to read "second day" for "last day".

Motion seconded and unanimously carried.

SECRETARY: At our meeting yesterday there evidently was a misconception, I think, of the proper order of events. We had four formal invitations for holding the next meeting. Of course in courtesy to those giving these invitations all should have been considered. We had a formal invitation from Ashland, from Oconomowoc, from Waukesha and from Oshkosh, and they were given in good faith, with the supposition, of course, that the Society would consider them all, and it is no more than courteous, no matter where we go, that we should consider those invitations, or else an invitation does not amount to anything. As a matter of fact but two places were considered, Ashland and Oconomowoc. One of the objects of this meeting is to consider the other two invitations, and there will be two ways

in which we may do so. We could vote upon all four places at the same time now, and adopt the one finally securing the majority as the place of meeting; or if Ashland were eliminated we could compare Oconomowoc with Waukesha, and then the place having the majority of votes could be compared with Oshkosh.

PRESIDENT: I told the gentlemen of the House of Delegates that they could not depend on me for parliamentary rules. Last night I thought I was at fault, but on thinking it over I feel certain that it was the House of Delegates that was at fault. I want to appeal to Dr. Wilkinson in this matter. In the first place we want to get a good meeting, and in the next place it is not a very desirable place for the Milwaukee men; it is too far away to get there conveniently; it is too near to stay; and I think we will have to appeal to Dr. Wilkinson. I believe we can simplify this matter if he will let us off from Oconomowoc. There has been a tremendous sentiment that this is not the time of year to meet. I was surprised at the men sitting there hour after hour in air so foul that a man who stayed there ought to be put in an insane asylum.

DR. WILKINSON: This, of course, is a question of serious import in many respects. I wish to be as courteous as you wish me to be, and still I should like to see justice done. As to the objections of the physicians in Milwaukee, that is an inconvenient place to go to. We have 11 trains leaving Oconomowoc for the west daily, 11 trains leaving for the east daily, and we have a street car going hourly in both directions which makes connections with the junctions at Watertown and also at Waukesha. It is an hour and 20 minutes ride in an automobile from the city of Milwaukee. Physicians from the city of Milwaukee, enthusiastic and interested as they are, as to the selection of the next place of meeting have shown that it is of little concern to them where the meeting is held, as they really did not show enough interest to be present even at the meetings of the House of Delegates in the proportion in which members throughout the state saw fit to attend. Now, the main point of injustice in taking this matter up again is the fact that these members from throughout the state who were here yesterday, have returned to their homes, thinking their work completed, and that that matter was settled. Is it proper and right for us to reopen that question. I am willing to open it if it is considered right. That is the only question that there is in my mind. We had 15 votes yesterday present. While all cities which extended invitations were not mentioned, a selection was made of one. Now, if a majority were in favor of another city, as it appeared a majority were in favor of Oconomowoc in preference to Ashland, they

could have named any other city. An amendment was made to hold the meeting at Oconomowoc, which was carried, and the original motion as amended carried. Before the question was put for the amendment another amendment could have been made, or some other method taken of casting a ballot for other places, which was not done. Whether you vote a city down by voting not to go there, or whether you take no vote at all is practically the same thing with reference to that city.

As I stated at the outset, I wish to be fair, but I think it is a matter of serious importance for the president of the society, for the secretary and for the members present. If, therefore, it is right, I have no objection. That is all I have to say in regard to it.

PRESIDENT: The point is simply this: After all is it the best place to go. As I said in my remarks, I did not know the place, I do not know it now, and I am sorry that I do not, except by reputation. But what I mean is the hotel accommodations; and I want to say now that Dr. Caples begged me not to say anything about the matter, so that there might be no rivalry with reference to the matter, but many doctors have come to me with objection. But there is no question of this time of the year, and you said yesterday you would like to have us there in June, and I think possibly June ought to be changed.

DR. WILKINSON: There is one way of taking it away from Oconomowoc, which probably might be considered legitimate. The strange part played by those who were kicking is, that did they not come to see the delegates who represented them and have them come to the meeting. Now, they are putting it up to you. You are in no wise responsible for the selection of Oconomowoc.

In regard to the hotel accommodations there, there is accommodation for 250 people in the three largest hotels, and by doubling, as many more.

I am not going to feel hurt if you take the meeting from Oconomowoc, and if the members here think they have the right to take it away, well and good.

SECRETARY: At what time can we go there—between what dates?

DR. WILKINSON: Say any time after the 15th of June.

DR. HOYT E. DEARHOLT, Milwaukee: A great many men have talked to me about this matter, and there was unquestionably a mistake made in the House of Delegates yesterday. Just as Dr. Wilkinson said, there is no question but whatever action is taken there will be a mistake made. The thing which should appeal to the members

here this morning is that the lesser be made. Amongst the men who have spoken to me from Milwaukee concerning the matter, it was thought that Waukesha would obviously be the choice. Singularly enough there was never an opportunity given for final choice between different cities inviting the society to meet there next year, except Oconomowoc and Ashland. One of the men who voted for Oconomowoc yesterday, who is unfortunately not here this morning, told me that his first choice by all means was Waukesha, but that he had no opportunity to vote on it. I admit it was a mistake on his part not to bring that subject up himself. But he was apparently waiting for somebody else to take the initiative, and nobody took it. He said if he had had an opportunity to choose between Waukesha and Oconomowoc, he would have voted for Waukesha. But he only voted for Oconomowoc as against Ashland, thinking Ashland was too far away. I know this morning that he would have no question about desiring to change his vote, and I think that the men who voted yesterday, if they were here, would in many instances have that feeling; but we have no way of knowing. I believe our mistake was made yesterday, and that another one will be made today if we do not correct our yesterday's mistake.

SECRETARY: In view of the experience of the last two years, I believe we ought not to take many chances after the middle of June again. Of course it is a very uncertain proposition even then. We might have had cool weather then as we had cool weather up to within a week or two. But the chances are if we have a meeting during the latter part of the month of June we will repeat the experience of the past two years. If we cannot go to Oconomowoc until after the 15th of June, even though all four invitations had been considered, and we had chosen Oconomowoc, I think we would be justified in reconsidering that action at this time. It seems to me we have either got to have the meeting in the first part of June or in May, or else put it over until fall, if we wish to be sure of having cool weather.

DR. WILKINSON: As I stated, personally I have no axe to grind, any more than I thought we could amply entertain the society out there; but I have no desire to put a rope around the necks of members and pull them out there. The only thing that I regret in regard to this matter is that we have not a larger attendance here this morning to vote upon it. The fact that we had a larger attendance yesterday was not the fault of those who were present. It was the fault of those who did not come to the meeting of the House of Delegates and keep posted. In order to be perfectly fair in this matter, if you wish to

change the date, I am willing to open up the question, and I move that we reconsider the question of the place of next meeting.

Motion seconded and unanimously carried.

DR. WILKINSON: In order to get this matter before the house, it seems that the date is to be changed and more are in favor of Waukesha than Oconomowoc, and I therefore move that the next place of meeting be Waukesha, Wisconsin.

Motion made that the four places submitted, Ashland, Oshkosh, Oconomowoc and Waukesha be voted upon.

Motion seconded and unanimously carried.

PRESIDENT: The first ballot, unless there is objection, will be informal on those four places.

DR. WILSON CUNNINGHAM, of Platteville: I think in choosing the place of meeting, we should select a town where we can get the best attendance. It is to the interest of the meeting we are looking for and not the town. Pick the town suitable to the association where you can get the best attendance. If Oconomowoc is the town, take Oconomowoc; if Milwaukee is the town, take Milwaukee, wherever we can get the best attendance.

Ballot was then taken.

SECRETARY: The result of the ballot is Waukesha 9, Oshkosh 2, Oconomowoc 2, Ashland 1, total 14.

DR. CUNNINGHAM: I move to declare this ballot formal.

Motion seconded and unanimously carried and so ordered.

PRESIDENT: Waukesha will be the next place of meeting.

Adjourned sine die.

MEMBERS OF STATE MEDICAL SOCIETY OF WISCONSIN.

- Abaly, W. C., Madison.
 Abbott, C. N., Fosterville.
 Abbott, Le Roy, Ontario.
 Abraham, Henry W., Appleton.
 Ackerman, William, Milwaukee.
 Ackley, S. B., Waukesha.
 Adams, G. R., Kenosha.
 Adams, H. R., Marinette.
 Adams, John C., Superior.
 Addleman, I. M., Wausau.
 Akerly, A. W., Milwaukee.
 Albee, E. S., Oshkosh.
 Albers, Herman H., Allentown.
 Alcorn, D. N., Stevens Point.
 Alexander, J. H., Belmont.
 Allen, A. L., Rib Lake.
 Allen, C. F., Middleton.
 Allen, Frank, Staples, Minn.
 Allen, J. P., Beloit.
 Allen, S. P., Oshkosh.
 Allen, W. J., Beloit.
 Altman, Maurice, Milwaukee.
 Amsel, J., Milwaukee.
 Amundson, A. C., Cambridge.
 Amundson, P. B., Mondovi.
 Anderson, H. B., Beloit.
 Andrae, R. W., Rib Lake.
 Andre, Frank E., Kenosha.
 Andrew, G. F., Birchwood.
 Andrews, E. P., Lodi.
 Andrews, E. R., Portage.
 Andrews, N. P., Abbottsford.
 Andrews, N. S., Oshkosh.
 Andrus, A. P., Ashland.
 Ankenbrandt, A. A., Schleisingerville.
 Antoine, F. J., Prairie du Chien.
 Aplin, F. W., Waukesha.
 Armstrong, C. A., Boscobel.
 Armstrong, C. E., Oconto.
 Armstrong, L. G., Boscobel.
 Arveson, R. G., Frederic.
 Asham, D. W., Eau Claire.
 Atwood, J. B., Oconto.
 Aubin, J. N., Pestigo.
 Ault, A., Brooklyn, N. Y.
 Aus, J. L. N., Deer Park.
 Austria, W. F., Merrill.
 Axtell, E. E., Marinette.
 Aylward, R. C., Port Edwards.
 Baasen, J. M., Mt. Calvary.
 Babcock, I. G., Cumberland.
 Bach, J. A., Milwaukee.
 Bachhuber, A. E., Mayville.
 Bachhuber, L. M., Mayville.
 Bachman, Carl F., Neillsville.
 Bacon, Kenosha.
 Bading, G. A., Milwaukee.
 Baer, A. N., Milwaukee.
 Baer, C. A., Milwaukee.
 Bailey, F. M., Mineral Point.
 Bair, F. M., Benton.
 Baird, John, Superior.
 Baird, J. C., Eau Claire.
 Baker, C. D., Wasco, Ore.
 Baker, F. M., Fond du Lac.
 Baker, Geo. R., Tomahawk.
 Baker, J. C., Hawkins.
 Baker, W. F., Birnamwood.
 Baldwin, Geo. E., Dartford.
 Baldwin, F. H., Rewey.
 Baneroff, H. V., Blue Mounds.
 Banks, W. H., Hudson.
 Barber, M. C., Medford, Ore.
 Bardeen, C. R., Madison.
 Barnes, E. C., Ripon.
 Barnes, H. T., Pewaukee.
 Barnes, J. S., Milwaukee.
 Barnett, J. R., Neenah.
 Barnett, J. R., Jr., Neenah.
 Barnstein, C., Timothy.
 Barnstein, J. E., Manitowoc.
 Barrett, E. J., Sheboygan.
 Barry, Howard, Sun Prairie.
 Barth, Geo. P., Milwaukee.
 Bartlett, E. W., Milwaukee.
 Bartlett, Edith, Janesville.
 Bartlett, Mary, Beloit.
 Bartram, W. H., Green Bay.
 Bass, E. A., Montello.
 Bassett, V. H., Savannah, Ga.
 Batchelor, Gertrude, Madison.
 Batchelor, W. A., Milwaukee.
 Bath, D. H., Oshkosh.
 Batty, A. J., Portage.
 Bauer, K. T., Adell.
 Bayer, E. D., Appleton.
 Bayer, W. H., Gleason.
 Bear, W. G., Monroe.
 Beattie, H. P., Antigo.
 Beek, A. A., Caloma.
 Becker, B. A., Silver Lake.
 Becker, Wilhelm, Milwaukee.
 Becker, W. F., Milwaukee.
 Beckman, Chas. R., La Crosse.
 Bedley, H. E., Rio.
 Beebe, C. A., Fond du Lac.
 Beebe, Carl M., Sparta.
 Beebe, C. S., Milwaukee.
 Beebe, L. W., Superior.
 Beebe, P. A., Glenwood.
 Beebe, S. D., Sparta.
 Beech, G. D., Baraboo.
 Beffel, John M., Milwaukee.
 Beier, A. L., Chippewa Falls.
 Belitz, Alfred, Milwaukee.
 Belitz, Wm., Cochrane.
 Bell, A. R., Tomah.
 Bell, Samuel, Beloit.
 Bellaack, B. F., Columbus.
 Bellin, J. J., Green Bay.
 Bellis, G. L., Antigo.
 Bender, J. L., Yuba.
 Bennett, Lewis F., Beloit.
 Bennett, L. J., Ft. Atkinson.
 Bennett, Wm. C., Oregon.
 Benuson, G., Richland Center.
 Beutler, Wm. F., Wauwatosa.
 Bentley, Frederick D., Portage.
 Berger, A., Johnson Creek.
 Bergh, C., Whitehall.
 Berglund, C., Marinette.
 Bernhard, A., Milwaukee.
 Berquist, K. E., Galesville.
 Bertrand, J. H., De Forest.
 Berwick, T. A., Saukville.
 Betz, J. C., Boscobel.
 Beust von, M., Albany, Ind.
 Beyer, A. G., Milwaukee.
 Bieckford, L. C., Milwaukee.
 Bill, B. J., Genoa Junction.
 Billmeyer, D. H., Plains, Mont.
 Binnewies, F. C., Milton.
 Binnie, John, Poynette.
 Birbeck, Samuel, Grafton.
 Bird, H. R., Madison.
 Bird, J. W., Stevens Point.
 Bird, M. D., Marinette.
 Birkl, J. A., Milwaukee.
 Bishop, L. A., Fond du Lac.
 Black, N. M., Milwaukee.
 Blackburn, F. E., Beetown.
 Blair, J. C., Hazel Green.
 Blanchor, W. O., Grand Rapids.
 Blauk, Henry, Milwaukee.
 Blewett, M. T., Fond du Lac.
 Blumenthal, R. W., Milwaukee.
 Blumer, Ed., Monticello.
 Bock, F. J., Lancaster.

- Bock, Otto B., Sheboygan.
 Bodam, Thos., Blair.
 Bodden, A. M., Milwaukee.
 Boerner, R. W., Milwaukee.
 Boernstein, Max, Milwaukee.
 Bogan, J. M., Mackinac Islands, Mich.
 Bolton, E. L., Chilton.
 Boorse, Lorenzo, Milwaukee.
 Boothby, E. L., Hammond.
 Borchardt, A. L. C., New London.
 Borden, F. R., Plainfield.
 Bossard, Clemens, Richfield.
 Bossard, M., Spring Green.
 Bothwell, D. F., Kingston.
 Boucein, G. F., Detroit Harbor.
 Bowles, E. A., Ellsworth, Kan.
 Bowman, F. F., Madison.
 Boyce, S. R., Madison.
 Boyd, C. D., Kaukauna.
 Boyd, G. T., Fond du Lac.
 Bradbury, E. L., Neillsville.
 Bradfield, J. A. L., La Crosse.
 Bradford, E. B., Hudson.
 Bradley, C. M., Genoa Junction.
 Bradley, H. E., Milwaukee.
 Braun, Otto, Ashland.
 Breckenridge, H. E., Racine.
 Breed, A. L., Rock Elm.
 Brehm, H. J., Racine.
 Brehm, Theo., Racine.
 Brett, B. C., Green Bay.
 Briggs, S. J., Sun Prairie.
 Broche, A. H., Oshkosh.
 Brockway, F., Oshkosh.
 Bromley, F. W., Palmyra.
 Brooks, E. H., Appleton.
 Brooks, F. D., Fox Lake.
 Brown, A. D., Mineral Point.
 Brown, A. D., Saugatuck, Mich.
 Brown, A. L., Wausau.
 Brown, E. B., Beloit.
 Brown, F. W. A., Oshkosh.
 Brown, G. V. I., Milwaukee.
 Brown, H. M., Milwaukee.
 Brown, H. S., Cushing.
 Brown, J. F., Waupun.
 Brown, J. M., New London.
 Brown, R. C., Milwaukee.
 Brownell, W. F., New London.
 Bruins, D., Milwaukee.
 Brunckhorst, F. O., Hortonville.
 Bryant, J. R., Wausau.
 Bryant, W. V., Madison.
 Buchan, Samuel C., Racine.
 Buchanan, R. C., Green Bay.
 Buck, G. C., Chamberlin, S. D.
 Buckenridge, Isaac, Beloit.
 Buckland, R. H., Dartford.
 Buckley, T. J., Fayette.
 Buckmaster, S. B., Janesville.
 Budge, W. H., Marshfield.
 Buehler, J. W., Prairie du Lac.
 Buelow, R. C., Milwaukee.
 Bugbee, Geo. R., Wausau.
 Bullard, E. L., Rockville, Md.
 Bunting, C. H., Madison.
 Burdick, A. F., Beloit.
 Burdick, J., Milton.
 Burdon, R. M., Green Bay.
 Burger, H. E., Beloit.
 Burgess, A. J., Milwaukee.
 Burke, James, Grimms.
 Burnes, H. J., Bruce.
 Burnes, J. M., Oakfield.
 Butler, F. E., Menominee.
 Butzke, E. J., Jackson.
 Caffrey, A. J., Milwaukee.
 Cahoon, Roger, Baraboo.
 Cain, C. L., Elmwood.
 Cairns, R. U., River Falls.
 Caldwell, H. C., Ridgeland.
 Caldwell, M., Waukesha.
 Calkins, H. J., Shawano.
 Callahan, J. J., La Crosse.
 Calvey, P. J., Fond du Lac.
 Campbell, A. D., Richland Center.
 Campbell, B. L., Milwaukee.
 Campbell, D. J. L., Dunbar.
 Campbell, L. A., Clear Lake.
 Campbell, W. B., Menominee Falls.
 Canavan, J. V., Appleton.
 Canright, O. S., East Troy.
 Cantwell, W. H., Shawano.
 Caples, B. M., Waukesha.
 Carey, G. H., Merrill.
 Cargill, Nellie W., Milwaukee.
 Carnart, G. A., Milwaukee.
 Carnahan, Geo. M., Bruce.
 Casey, Merle, Almond.
 Cassady, W. W., Durand.
 Caswell, H. O., Ft. Atkinson.
 Cavanaugh, T. E., Milwaukee.
 Cavaney, J., Milwaukee.
 Chambers, H. P., Florence.
 Chandler, Ada B., Pardeeville.
 Chandler, Jos., Pardeeville.
 Chaney, Eugene, Wauwatosa.
 Chapman, F. M., Milwaukee.
 Charron, T. A., Rice Lake.
 Chase, R. R., Eau Claire.
 Chilson, Benjamin, Beloit.
 Chipman, H. A., Stoughton.
 Chittenden, G. G., Janesville.
 Chloupek, C. J., Green Bay.
 Chorlog, J. K., Madison.
 Christensen, C., La Crosse.
 Christensen, E. L., Two Rivers.
 Christensen, F. C., Racine.
 Christensen, J. W., Kendall.
 Christian, E. F., La Crosse.
 Christianson, O. A., Hawkins.
 Christoffersen, A. L., Oakfield.
 Christoffersen, H. H., Loyal.
 Christoffersen, P. J., Waupaca.
 Chrysler, Oscar, Milwaukee.
 Clark, F. T., Waupun.
 Clark, R. B., Monroe.
 Clark, W. T., Ft. Atkinson.
 Clarke, Burton C., Oshkosh.
 Clason, J. A., Neosha.
 Clawson, H. E., Red Granite.
 Cleary, B. L., Edgerton.
 Cleary, J. H., Kenosha.
 Coffey, C. J., Milwaukee.
 Cohn, Arthur H., Milwaukee.
 Cole, C. E., Superior.
 Cole, E. J., Rockton, Ill.
 Coleman, H. M., Barron.
 Collins, D. B., Madison.
 Collins, W. P., Racine.
 Cambacker, Henry, Osceola.
 Combs, C. J., Oshkosh.
 Comer, W. C., Cecil.
 Comfort, A. I., Milwaukee.
 Conkey, Chas. D., Superior.
 Conklin, G. H., Superior.
 Conley, John M., Oshkosh.
 Connell, D. R., Beloit.
 Connell, F. G., Oshkosh.
 Connell, James P., Fond du Lac.
 Connor, H. J., Superior.
 Conroy, J. M., Milwaukee.
 Conway, H. P., Spring Valley.
 Cook, D. M., Gays Mills.
 Cook, E. H., Watertown.
 Cook, F. S., Eau Claire.
 Cook, J. M., Darlington.
 Coon, G. E., Milton Junction.
 Coon, J. W., Wales.
 Cooney, E. W., Appleton.
 Cooper, C. A., Montfort.
 Copeland, Ernest, Milwaukee.
 Corbett, J. F., Wauwatosa.
 Corbett, M. E., Oshkosh.

- Corr, Anna S. B., Juneau.
 Corr, John T., Kenosha.
 Corry, L. M., Menasha.
 Cossitt, W. S., Wausau.
 Costello, A. E., Spooner.
 Cottingham, Robert, Bloomer.
 Cotnoir, A. B., Marinette.
 Cottou, H. C., Prescott.
 Coughley, C. R., Kenosha.
 Coumbe, Warren A., Blue River.
 Cox, James, Jefferson.
 Craig, S. S., East Troy.
 Crane, M. C., Osseo.
 Creasey, South Wayne.
 Cremer, C. H., Cashton.
 Cress, P. J., Ellsworth.
 Crikelair, F. T., Hollandale.
 Critman, E. S., Alma.
 Crockett W. M., Beloit.
 Crommett, H. B., Amery.
 Crou, Charles O., Camp Douglas.
 Cronyn, W. J., Milwaukee.
 Crosby, Ed. P., Arnott.
 Cunningham, J. N., Stanley.
 Cunningham, M. A., Janesville.
 Cunningham, R. B., Cadott.
 Cunningham, Wilson, Platteville.
 Currens, J. R., Two Rivers.
 Curtiss, Geo., Eau Claire.
 Cutler, John C., Mt. Horeb.
 Cutler, John D., Tomahawk.
 Cutler, J. S., Wauwatosa.
 Dahl, L. A., Menomonie.
 Daley, F. P., Reedsburg.
 Daniels, Alfred, Rhinelander.
 Daniels, Lewis, Milwaukee.
 Daniels, W. N., Mosinee.
 Darby, G. S., Brodhead.
 Darby, Henry C., Wilmot.
 Darling, Earl, Milwaukee.
 Darling, F. E., Milwaukee.
 Daugherty, C. F., Richland Center.
 Davies, Richard E., Waukesha.
 Dawley, Geo. T., New London.
 Dean, J. F., Madison.
 Dearholt, H. E., Milwaukee.
 De Besche, Johan, Milwaukee.
 Decker, C. O., Crandon.
 Decker, D. H., Menomonie.
 De Cock, J. L., Leeman.
 Deicher, H. F., Plymouth.
 De Lane, Viola F., Neillsville.
 De Laney, H. O., Beloit.
 De Lap, R. H., Richland Center.
 Delting, F. E., Superior.
 Denham, J. F., Downsville.
 Dennis, J. F., Waterloo.
 Derge, H. F., Eau Claire.
 Devine, C. B., Marshall.
 Devine, G. C., Mason.
 Devoe, Chas. A., Rosendale.
 De Wane, Jos., Boyceville.
 Dewey, Geo. W., Burnett Junction.
 Dewey, Richard, Wauwatosa.
 Dewire, Milton, Sharon.
 Dickens, W. C., Wausau.
 Dickinson, G. H., Milwaukee.
 Dill, Geo. M., Prescott.
 Dillmann, A. E., Steuben.
 Dilse, Chas. E., Milton.
 Dirks, C. B., Kankakee, Ill.
 Dobson, J. Helen, Madison.
 Dodd, John M., Ashland.
 Dodge, G. W., Menasha.
 Doege, Carl W., Marshfield.
 Doern, R. E., Stockbridge.
 Doern, W. G., Milwaukee.
 Doerr, August, Milwaukee.
 Doherty, F. P., Appleton.
 Donald, W. J., Tunnel City.
 Donaldson, F. E., Kankakee.
 Donaldson, Geo. F., Shiocton.
 Donnell, J. E., Cuba City.
 Donnelly, F. J., Monches.
 Donohue, E. J., Antigo.
 Donohue, M. J., Antigo.
 Donovan, J. P., Madison.
 Donovan, Jerry, Forestville.
 Donovan, J. P., Madison.
 Doolittle, J. C., Lancaster.
 Doolittle, S. Wade, Lancaster.
 Dorest, B. C., La Crosse.
 Dougherty, A. A., Boaz.
 Dougherty, A. A., Richland Center.
 Dougherty, J. S., Lena.
 Dougherty, P. H., Lowell.
 Doyle, Jos. H., Little Chute.
 Drake, Frank I., Madison.
 Drexel, A., Milwaukee.
 Dries, Jos., Milwaukee.
 Driessel, A., St. Cloud.
 Driessel, H., Kewaskum.
 Driessel, S. J., Barton.
 Dumley, J. H., Laona.
 Dunn, E. A. A., Platteville.
 Durr, Wm., Milwaukee.
 Dusenberry, G. E., Amherst.
 Dvorak, M. W., La Crosse.
 Dwight, C. G., Janesville.
 Dyer, W. O., Oxford.
 Eagan, J. B., Excelsior.
 Eames, H. F., Egg Harbor.
 Eastman, J. Russell, Kenosha.
 Echols, C. M., Milwaukee.
 Eek, G. E., Lake Mills.
 Edsall, Frank H., Madison.
 Edwards, A., Reedsburg.
 Edwards, John B., Mauston.
 Edwards, Sherman, Oakfield.
 Edwards, W. A., La Crosse.
 Edwards, Wm. M., Mauston.
 Egan, Chas., Highland.
 Egan, Gregory, La Crosse.
 Egdahl, A., Menomonie.
 Egeland, Gustav, Ephraim.
 Ehler, E. H., Hartford.
 Ehmer, J. W., Lomira.
 Eichelberg, F. A., Reeseville.
 Eisen, Paul, Milwaukee.
 Eifers, Jos. C., Sheboygan.
 Elkington, C. H., Eleva.
 Ellenson, Eugene, Chippewa Falls.
 Elliot, J. T., Rhinelander.
 Elliot, Sara, Waukesha.
 Elliott, E. S., Fox Lake.
 Ellis, W. E., Alexandria, Minn.
 Ellis, W. H., Barron.
 Elmergreen, Ralph, Milwaukee.
 Elsom, J. C., Madison.
 English, J. E., Baraboo.
 Engsberg, Wm. A., Lake Mills.
 Epley, O. H., New Richmond.
 Erdman, Chas. H., Stanley.
 Erlanger, Jos., Madison.
 Ernst, G. R., Milwaukee.
 Evans, Curtis A., Milwaukee.
 Evans, Edward, South Milwaukee.
 Evans, F. F., La Crosse.
 Evans, J. M., Evansville.
 Evans, J. S., Madison.
 Evans, N. C., Mt. Horeb.
 Evans, O., Bangor.
 Evans, T. W., Madison.
 Everett, E., Madison.
 Everhard, F. A., Rinon.
 Evert, F. V., Retreat.
 Ewing, M. L., Evansville.
 Faber, Chas. A., Milwaukee.
 Fairchild, R. J., Burlington.
 Fairfield, W. E., Green Bay.
 Fales, I. H., Stevensville, Mont.
 Falge, Louis, Manitowoc.
 Farnham, C. R., Milwaukee.
 Farnsworth, A. L., Baraboo.

- Farnsworth, C. P. Chamberlain, S. D.
 Farr, J. F., Eau Claire.
 Farr, Wm. M., Kenosha.
 Farrand, R. H., Houghton, Mich.
 Farrell, A. M., Two Rivers.
 Faulds, Robert C., Abrams.
 Fay, E. C., Whitewater.
 Fazen, L. E., Racine.
 Federman, E. H., Plainfield.
 Federspiel, M. N., Milwaukee.
 Fehr, Henry, Burlington.
 Feiker, H. A., Fairview, Mont.
 Feld, Carl R., Watertown.
 Fellman, Geo. H., Milwaukee.
 Fenelon, Chas. D., Phillips.
 Fetter, Edward, Plymouth.
 Fickes, H. C., Owen.
 Fidler, C. A., Milwaukee.
 Fiebigler, G. J., Waterloo.
 Fiedler, Otto, Athens.
 Field, F. T., Elroy.
 Fifield, G. W., Janesville.
 Finney, W. H., Clintonville.
 Fish, Edmund, Milwaukee.
 Fish, E. C., Mosinee.
 Fisher, B. B., Wild Rose.
 Fitzgerald, J. J., Eagle.
 Fitzgibbon, Thos., Milwaukee.
 Fitzgibbon, Wm., Milwaukee.
 Flatley, M. A., Antigo.
 Flatley, T. J., Antigo.
 Fleek, J. L., Broadhead.
 Fletcher, E. A., Milwaukee.
 Fletcher, F. E., Ashland.
 Fletcher, Wm. T., Salem.
 Flett, Charles, Milbank, S. D.
 Foat, John S., Ripon.
 Foerster, Otto H., Milwaukee.
 Foley, F. R., Neshkoro.
 Folsom, W. H., Markesan.
 Forbush, S. W., Black Creek.
 Force, O. O., Pardeeville.
 Ford, A. M., Roberts.
 Ford, W. B., Norwalk.
 Forkin, G. E., Menasha.
 Fosse, Benjamin, Woodford.
 Foster, A. M., Kaukauna.
 Foster, Fred L., Fond du Lac.
 Fowle, F. F., Wauwatosa.
 Fowler, J. H., Lancaster.
 Fox, Geo. W., Milwaukee.
 Fox, P. A., Beloit.
 Fox, Phillip, Madison.
 Fox, Phillip R., Madison.
 Fox, W. E., Milwaukee.
 France, J. J., Milwaukee.
 Francis, John H., Bloomer.
 Frank, J. H., Milwaukee.
 Frank, L. F., Milwaukee.
 Frankel, A. H., Milwaukee.
 Frankle, H. M., Bloomer.
 Franzel, J. E., Howards Grove.
 Fraser, H. E., West Salem.
 Freeman, Daniel, Colby.
 Frelligh, C. N., Plum City.
 French, S. C., Mountain.
 French, S. W., Milwaukee.
 Frey, G. R., Milwaukee.
 Frick, L., Minneapolis.
 Friend, L. J., Milwaukee.
 Froelich, J. H., Princeton.
 Froggatt, W. E. L., Cross Plains.
 Frost, Carrie, Chippewa Falls.
 Fucile, E. J., Williams Bay.
 Fugina, G. R., Ashland.
 Fuller, C. O., Stratford.
 Fuller, Geo., Madison.
 Fuller, M. H., Anglica.
 Fulton, C. A., Eau Claire.
 Fulton, Wm. A., Burlington.
 Gaenslen, Fred J., Milwaukee.
 Ganzerc, A., Oshkosh.
 Gapen, Clarke, Madison.
 Garlock, r. K., Racine.
 Garner, E. S., Linden.
 Gasser, Herman, Platteville.
 Gates, A. J., Tigerton.
 Gates Eugene, Two Rivers.
 Gault, John A., Lancaster.
 Gaunt, P. L., Oconto.
 Gauvreau, E. T., Superior.
 Gavin, S. A., Fond du Lac.
 Gendron, A. E., River Falls.
 Genter, A. E., Sheboygan.
 Gephart, C. H., Kenosha.
 Germano, G. A., Kenosha.
 Gibbs, G. L., Marshall.
 Gibson, A. D., Port La Vaca, Texas.
 Gibson, J. H., Green Bay.
 Giesen, C. W., Superior.
 Gifford, H. B., Juda.
 Gilbertson, P. P., Black Earth.
 Gilbert, H. A., Madison.
 Gill, J. F., Madison.
 Gillen, F. C., Milwaukee.
 Gilles, A. S., Milwaukee.
 Gilluly, Thos., Union Center.
 Glasier, Mina B., Bloomington.
 Gleason, C. M., Manitowoc.
 Gnagi, W. B., Monroe.
 Gobar, G. G., Muscoda.
 Goddard, J. B., Eau Claire.
 Godfrey, Jos., Lancaster.
 Goggins, R. J., Oconto Falls.
 Golley, F. B., Milwaukee.
 Gommer, Jacob, Gillette.
 Goodfellow, J. R., Superior.
 Goodrich, G. M., Clintonville.
 Goodwin, M. P., Clear Lake.
 Gordon, J. B., Shawano.
 Gorst, Charles, Mendota.
 Gotham, L. E., Sawyer.
 Gould, C. M., Milwaukee.
 Graenicher, S., Milwaukee.
 Grafton G. A., Hayward.
 Gramling, H. J., Milwaukee.
 Gramling, Jos. J., Milwaukee.
 Grannis, E. H., Menomonie.
 Gratiot, C. C., Shullsburg.
 Gratiot, W. M., Mineral Point.
 Graves, L. S., Wilton.
 Gray, A. W., Milwaukee.
 Gray, N. A., Milwaukee.
 Green, W. A., Wausau.
 Greenberg, Harry, Milwaukee.
 Greengo, C. G., Chilton.
 Greenwood, S. D., Neenah.
 Gregory, A. T., Elroy.
 Gregory, D. H., De Perc.
 Gregory, W. W., Stevens Point.
 Greiner, H. A., Fremont.
 Griffin, W. J., Chicago, Ill.
 Grinde, G. A., Cumberland.
 Griswold, Frank, Viola.
 Grosskopf, E. C., Milwaukee.
 Grotian, W. F., Milwaukee.
 Ground, Wm. E., Superior.
 Gudden, B. C., Oshkosh.
 Gunderson A., La Crosse.
 Gunther, Emil, Sheboygan.
 Gunther, W. H., Sheboygan.
 Gutsch, Otto J., Sheboygan.
 Guttman, P., Kellnersville.
 Gyge, John, Big Falls.
 Habegger, C. J., Watertown.
 Hackett, James, Milwaukee.
 Haddy, G. H., Park Falls.
 Hadley, D. A., Oconomowoc.
 Haggerty, E. E., Excelsior.
 Hahn, A. F., Eau Claire.
 Halgh, E. S., Madison.
 Hall, C. H., Madison.
 Hall, S. S., Ripon.
 Hallock, W. E., Juneau.

- Hambley, T. J., Hurley.
 Hamilton, D. B., Ridgeway.
 Hamlin, F. J., Beloit.
 Hammond, F. W., Wycocena.
 Hanbriek, Herbert, Van Dyne.
 Hanneman, E. A. F., Boscobel.
 Hannum, Henry, Bayfield.
 Hansberry, J. S., Wonewoc.
 Hansberry, R. S., Hillsboro.
 Hansen, C. A., Argyle.
 Hansen, J., Glenbeulah.
 Hansen, O. L., Argyle.
 Harbert, Helen, Kenosha.
 Hardy, C. F., Milwaukee.
 Hargarten, L. J., Milwaukee.
 Harlow, G. A., Milwaukee.
 Harper, C. A., Madison.
 Harriman, L. L., Boyceville.
 Harrington, D. W., Milwaukee.
 Harrington, T. L., Milwaukee.
 Harter, A. F., Marathon.
 Hartford, W. P., Cassville.
 Harvie, W. D., Oshkosh.
 Haskell, M. W., Richland Center.
 Hastings, J. F., Kenosha.
 Hastings, T. R., Limeridge.
 Haushalter, H. P., Milwaukee.
 Hausmann, N. E., Kewaskum.
 Haven, W. S., Racine.
 Hawkins, T. R., Cameron.
 Hay, Thos. H., Stevens Point.
 Hayden, A., Shullsburg.
 Hayes, Chas. A., Chippewa Falls.
 Hayes, D. J., Milwaukee.
 Hayes, E. L., Eau Claire.
 Hayman, C. S., Boscobel.
 Hayman, L. H., Boscobel.
 Hayward, J. C., Marshfield.
 Head, L. R., Madison.
 Healy, R. G., Caryville.
 Hebron, R. A., Cataract.
 Heeh, H. J., Milwaukee.
 Heidner, Gustav, West Bend.
 Heising, Alhert, Menomonie.
 Helgeson, E. J., New Glarus.
 Helland, G. M., Spring Grove, Minn.
 Heller, A. J., Milwaukee.
 Helm, A. C., Beloit.
 Helm, Ernest C., Beloit.
 Helz, J. W., Fond du Lac.
 Henbest, C. M., Appleton.
 Hendricks, H. P., Regina, Sask.
 Hendrickson, J. A., Larsen.
 Henika, G. W., Readstown.
 Henke, Wm. A., La Crosse.
 Heraty, J. E., Bloomington.
 Herring, E. R., Shell Lake.
 Herner, W. L., Oshkosh.
 Herron, A. L., Milwaukee.
 Hertzman, C. O., Ashland.
 Hess, C. F., Madison.
 Hewitt, M. R., Burlington.
 Hicks, L. N., Burlington.
 Hidershide, Geo. N., Arcadia.
 Higgins, E. G., Melrose.
 Higgins, S. G., Milwaukee.
 Hildreth, H. L., Bay City.
 Hilger, Wm. F., Milwaukee.
 Hill, W. B., Milwaukee.
 Hillard, H. J., Downing.
 Hilton, G. F., Sturgeon Bay.
 Hincley, H. G., Merrill.
 Hinman, F. S., Rhineland.
 Hinn, Louis F., Fond du Lac.
 Hipke, Gustav A., Milwaukee.
 Hipke, Wm., Marshfield.
 Hirschboeck, F. J., Milwaukee.
 Hitz, Henry B., Milwaukee.
 Hoag, H. T., Cudahy.
 Hobart, J. P., Prentice.
 Hodges, F. L., Monroe.
 Hodgson, A. J., Waukesha.
 Hoerman, R. B., Milwaukee.
 Hoffman, Elmer, Gotham.
 Hoffman, J. F., Chetek.
 Hoffman, J. G., Hartford.
 Hoffman, Norman, Milwaukee.
 Hoffmann, M. A. T., Campbellsport.
 Hoffmann, P. A., Campbellsport.
 Hogan, J. M., Rhineland.
 Hogue, G. I., Milwaukee.
 Holbrook, A. T., Milwaukee.
 Holliday, E. R., Ellsworth.
 Holmberg, L. J., Canby, Minn.
 Holz, A. P., Seymour.
 Holtz, H. M., Beaver Dam.
 Hopkins, F. G., Valders.
 Hopkins, J. W., Madison.
 Hopkins, M. M., Oconto.
 Hopkins, W. B., Cumberland.
 Hopkinson, Daniel, Milwaukee.
 Hopkinson, L., Milwaukee.
 Horn, C. P., Luck.
 Horswell, U. M., Wausaukee.
 Hosmer, M. S., Ashland.
 Houck, M. P., Wautoma.
 Houck, Oscar, Wautoma.
 Hougden, Edward, Pittsville.
 Hougden, O. T., Grand Rapids.
 Hough, A. G., Morrisouville.
 Howard, G. A., Rockford, Ill.
 Howison, N. L., Menomonie.
 Hoyer, A. A., Randolph.
 Hoyer, G. C., Milwaukee.
 Hoyer, Lucia, Milwaukee.
 Hoyt, R. W., New Lisbon.
 Hubenthal, J. C., Belmont.
 Huennekins, J. H., Milwaukee.
 Huff, F. C., Sturgeon Bay.
 Hughes, T. H., Dodgeville.
 Hull, E. S., Milton Junction.
 Hummel, W. J., Abelman.
 Humphrey, A. R., Madison.
 Hunt, Ed. M., Avoca.
 Hunt, F. O., Fall River.
 Huntington, M. L., Platteville.
 Huntington, S. D., Milwaukee.
 Hurd, H. H., Chippewa Falls.
 Hurlbut, C. J., Columbia, Tenn.
 Hurlbut, F. D., Keedsburg.
 Hurlbut, W. H., Elkhorn.
 Hutchins, C. P., Bloomington, Ind.
 Hutchins, S. E., Independence.
 Hyslop, F. R., Whitewater.
 Irvine, Wesley, Manawa.
 Irwin, G. H., Lodi.
 Irwin, H. J., Baraboo.
 Iverson, M., Stoughton.
 Jackey, F. D., Thorp.
 Jackson, F. A., Eldorado.
 Jackson, J. A., Madison.
 Jackson, J. A., Rudolph.
 Jackson, R. H., Madison.
 Jacob, B. U., Waukesha.
 Jacobs, Edward C., Durand.
 James, A. W., Muscoda.
 Jamieson, Geo., Lone Rock.
 Jasperson, Thos., Neenah.
 Jefferson, H. A., Clintonville.
 JEGI, Henry A., Galesville.
 Jenner, A. G., Milwaukee.
 Jenkins, G. W., Kilbourn.
 Jensen, Anton B., Colby.
 Jermain, H. F., Milwaukee.
 Jermain, L. P., Milwaukee.
 Jobse, Peter H., Milwaukee.
 Jobse, William, Milwaukee.
 Johnson, F., North Freedom.
 Johnson, F. J., Iron River.
 Johnson, F. P., Ontario.
 Johnson, H. B., Tomah.
 Johnson, H. C., Glen Flora.
 Johnson, J. C., Ozdensburg.
 Johnson, L. M., Winnebago.
 Johnson, W. H., Billings, Mont.

- Johnston, G. B., Abbottsford.
 Johnston, H. E., Oshkosh.
 Johnston, W. M., Dale.
 Jones, A. N., Reedsburg.
 Jones, A. W., Randolph.
 Jones, D. F., Wausau.
 Jones, E. H., Weyauwega.
 Jones, F. J., Reedsburg.
 Jones, G. M., Minneapolis.
 Jones, J. R., Randolph.
 Jones, R. W., Wausau.
 Jones, Susau, Racine.
 Jones, T. R., Ripon.
 Jones, W. A., Oconomowoc.
 Jorgenson, P. P. M., Kenosha.
 Judd, W. H., Janesville.
 Juergens, L. W., Lureka.
 Junck, J. A., Sheboygan.
 Kahn, Jos., Milwaukee.
 Kargke, W. C., Milwaukee.
 Karnopp, G. L., Mishicot.
 Karsten, A. C., Horicon.
 Kastner, A. L., Milwaukee.
 Kaumheimer, G. J., Milwaukee.
 Kauth, P. M., Schleisingsville.
 Kavanaugh, K. S., Menomonie.
 Kay, H. M., Madison.
 Keech, J. S., Racine.
 Keenan, Geo., Madison.
 Keithley, J. A., Palmyra.
 Keithley, J. W., Orfordville.
 Keller, J. M., Milwaukee.
 Kellogg, E. W., Milwaukee.
 Kelly, C. D., Blair.
 Kelly, D. M., Ferrisburg.
 Kelly, F. H., Merrill.
 Kelly, W. W., Green Bay.
 Kelsey, Kate, Cable.
 Kemper, Wm. G., Manitowoc.
 Kendall, Allen, Prairie du Sac.
 Kennedy, W. R., Milwaukee.
 Kermott, E. F., Hudson.
 Kerr, A. N., Martell.
 Kersten, A. M., De Pere.
 Kersten, N. M., De Pere.
 Ketterer, E. A., Montford.
 Kiefer, J. G., Milwaukee.
 Kimball, G. F., Kenosha.
 King, C. F., Hudson.
 Kings, H. F., Mason.
 Kings, J. T., Concord.
 Kingsley, J. R., Sheboygan.
 Kinne, Edward, Elkhorn.
 Kirk, J. M., La Salle, Ill.
 Kissinger, C. A., Milwaukee.
 Kissling, C. L., Milwaukee.
 Kitzke, F. W., Tomah.
 Kleinboehl, J. W., Milwaukee.
 Kleinhans, M. A., Milwaukee.
 Kleinschmidt, Geo., Milwaukee.
 Klemm, Louis F., Milwaukee.
 Klettsch, Gustav, Milwaukee.
 Kliesc, L. A., Milwaukee.
 Knapp, L. L., New Richmond.
 Knauf, F. P., Kiel.
 Knauf, Geo. E., Sheboygan.
 Knauf, Nicholas, Chilton.
 Knowles, W. M., Spooner.
 Knutson, Oscar, Dallas.
 Koch, A. T., Wausau.
 Kortebein, Henry, Milwaukee.
 Kradwell, Wm. T., Wauwatosa.
 Krahn, A. J., South Germantown.
 Kramer, W. E., Milwaukee.
 Kratzsch, A. W., Milwaukee.
 Kraut, E., Beetown.
 Kremers, Alex., Milwaukee.
 Kreutzer, C. A., Milwaukee.
 Kriz, G. H., Milwaukee.
 Krueger, Bernard, Cudahy.
 Krygiar, A. A., Milwaukee.
 Kyes, S. M., Weyauwega.
 La Breck, P. A., Eau Claire.
 Lacy, S. W., Footville.
 Ladd G. D., Milwaukee.
 Lademann, O. E., Milwaukee.
 Ladwig, W. A., Edgar.
 Laird, J. J., Black Creek.
 Lalor, J. C., Sauk City.
 Lambeck, F. J., Milwaukee.
 Lang, Jacob, Milwaukee.
 Langenderfer, T. V., Knapp.
 Langentfeld, P. F., Theresa.
 Langland, P., Milwaukee.
 Lansdowne, F. B., Kenosha.
 Larsen, L. A., Colfax.
 Larson, G. A., Blanchardville.
 Lasche, P. G., Ithaca.
 Latham, C. O., Darlington.
 Lathrop, H. A., Marshfield.
 Lathrop, C. A., Sharon.
 Lauder, C. E., Viroqua.
 Law, W. G., Glidden.
 Lawler, C. F., Hilbert.
 Lawler, T. L., Lyndon Station.
 Lawrence, G. H., Galesville.
 Layton, O. M., Fairwater.
 Lee, J. H., Iola.
 Lee, J. W., Superior.
 Leeson, T. W., Sharon.
 Lehigh, R. W., De Forest.
 Lehnkering, C. F., Darlington.
 Leich, F. P., Jackson.
 Leith, Robert, Manhattan, Kansas.
 Leith, S. S., Junction City.
 Leland, A. M., Whitewater.
 Lemmell, J. J., Albany.
 Lemmer, G. W., Spooner.
 Lemon, C. H., Milwaukee.
 Lenfestey, J. P., De Pere.
 Leonard, Chas. W., Fond du Lac.
 Lester, Wm. A., Onalaska.
 Lettenberger, Jos., Milwaukee.
 Levings, A. H., Milwaukee.
 Lewis, Geo. A., Ismay, Mont.
 Lewis, James M., Bloomington.
 Lewis, L. V., Redlands, Cal.
 Lewis, S. M., Milwaukee.
 Lewis, W. H., Aulwa.
 Lid, T. A., Marinette.
 Lincoln, W. S., Dodgeville.
 Lindor, J. D., Stevens Point.
 Lindsay, H. E., Whitewater.
 Linn, W. N., Oshkosh.
 Little, W. D., Maiden Rock.
 Lochemes, W. T., Milwaukee.
 Lockhart, Carl, Mellen.
 Lockhart, J. W., Omro.
 Loevenhart, A. S., Madison.
 Loge, Edward, Milwaukee.
 Lohmiller, R. K., Superior.
 Longenfeld, C. F., Theresa.
 Longley, L. R., Fond du Lac.
 Looftbourow, N. A., Monroe.
 Loomis, E. E., Janesville.
 Loope, T. E., Eureka.
 Loone, T. E., Iola.
 Looze, John J., Grand Rapids.
 Lothrop, C. A., Sharon.
 Lotz, Oscar, Milwaukee.
 Love, G. S., Waukesha.
 Ludden, H. D., Mineral Point.
 Lueck, Geo. W., La Crosse.
 Luehrs, H. E., Hilbert.
 Luhnman, F. S., Mauntowoc.
 Lumsden William, Clayton.
 Lumsford, C. B., Gays Mills.
 Lundmark, L. M., Ladysmith.
 Lyman, F. A., Denver, Colo.
 Lyman, J. V. R., Eau Claire.
 Lynch, D. W., Jr., West Bend.

- Lych, H. M., West Beud.
 Lyons, J. A., Welcome.
 McAllin, A. E., Haucok.
 McArthur, D. S., La Crosse.
 Macauley, E. M., Hatley.
 McBeath, H. F., Milwaukee.
 McCabe, Harry, Milwaukee.
 McCarthy, G. W., Athens.
 McCarthy, T. H., Madison.
 McChesney, Willard, Edgerton.
 McCloskey, T. J., Beloit.
 McClure, G. H., Westboro.
 McCollum, C. L., Forrest Junction.
 McComb, I. N., Brillion.
 McCorkle, S. C., Milwaukee.
 McCormick, H. M., New Auburn.
 McCracken, J. O., Kenosha.
 McCracken, R. W., Union Grove.
 McCutcheon, W. H., Thorp.
 McDonald, E. W., Beaver Dam.
 McDonald, Ed., Cuba City.
 McDonald, H. F., Hollaudale.
 McDouald, K. J., Doylestown.
 McDouald, W., Lake Geneva.
 McDougall, G. T., Fond du Lac.
 McDowell, A. J., Soldiers' Grove.
 McFarland, W. E., Trempealeau.
 McGauley, Frank, Fond du Lac.
 McGill, Patrick G., Superior.
 McGovern, John, Potosi.
 McGovern, J. J., Milwaukee.
 McGovern, P. H., Milwaukee.
 McGrath, W. P., Menasha.
 McGregor, Geo., Garfield, Wash.
 McIndoe, T. B., Rhinelander.
 Mack, J. A., Madison.
 Mackechnic, R. S., Hillsboro.
 McKee, F. W., Richland Center.
 McKellar, A., Blanchardville.
 McKinney, Geo. P., Stockbridge.
 McKeon, Philip, New Richmond.
 McKinnon, Hugh, Ashland.
 McKittrick, Eau Claire.
 McKnight, G. P., Fond du Lac.
 McLachlan, W. G., McFarland.
 McLaughlin, J. H., Glen Haven.
 McMahon, J. P., Milwaukee.
 McRae, J. D., Chippewa Falls.
 Madison, James D., Milwaukee.
 Madler, N. A., Appleton.
 Maerklein, B. G., Milwaukee.
 Maes, C. G., Kimberly.
 Malloy, Thos. E., Random Lake.
 Malone, Ed. W., Waukesha.
 Malone, F. A., Waterford.
 Malone, Jas. F., West Allis.
 Malone, T. C., Milwaukee.
 Malone, W. F., Milwaukee.
 Manley, A. B., Shoplere.
 Mann, H. E., Marinette.
 Marchessault, J. A., Ashland.
 Marks, Solon, Milwaukee.
 Markson, S. M., Milwaukee.
 Marquardt, C. H., La Crosse.
 Marquis, A. J., Wausaukee.
 Marsden, A. L., Rio.
 Marsden, T. H., Fennimore.
 Marsh, J. M., Elkhorn.
 Marshall, J. F., Appleton.
 Martin, Geo., Baldwin.
 Martin, Ira P., Green Bay.
 Martin, M. R., Vernal, Utah.
 Martin, M. T., Merrimac.
 Martin, O. H., Kewaunee.
 Martins, Wm. A., New Holstein.
 Mason, C. H., Superior.
 Mason, E. L., Eau Claire.
 Mason, Geo. Milwaukee.
 Mason, J. B., Marshfield.
 Masterson, J. A., Watertown.
 Mathelson, John, Eau Claire.
 Matheson, A., Neillsville.
 Mathews, J. B., Milwaukee.
 Matter, F. E., Lake Geneva.
 Bauerman, J. F., Monroe.
 Maurer, A. A., La Crosse.
 Maurer, H. C., Beloit.
 May, J. V., Mariette.
 Mayer, L. P., Hudson.
 Mechem, J. G., Racine.
 Meacher, Byron C., Portage.
 Mead, Frank, Madison.
 Meany, John E., Manitowoc.
 Mears, G. V., Fond du Lac.
 Meikee, H. A., Clitoutville.
 Melaas, W. G., Stoughton.
 Mercer, W. W., Meudota.
 Merrill, W. G., Grand Rapids.
 Merritt, W. B.
 Merteus, H. G., Bayfield.
 Messman, Hugo, Milwaukee.
 Meusel, H. H., Oshkosh.
 Meyers, J. M., Adanah.
 Meyst, Chas., East Troy.
 Midelfart, Christian, Eau Claire.
 Mieding, A. E., Milwaukee.
 Milbie, H. H., Marshfield.
 Miller, C. J., Whitewater.
 Miller, D. McL., Oconomowoc.
 Miller, E. A., Clitoutville.
 Miller, H. C., Whitewater.
 Miller, Thos., Oconomowoc.
 Miller, T. A., La Crosse.
 Miller, W. F., Milwaukee.
 Miller, W. J., La Valle.
 Miller, W. S., Madison.
 Mills, James, Janesville.
 Mills, Normau P., Appleton.
 Minahan, John R., Green Bay.
 Minahan, Robert E., Green Bay.
 Minahan, Wm. E., Fond du Lac.
 Minshall, A. P., Viroqua.
 Mishoff, I. D., Milwaukee.
 Mitchell, E. J., Brodhead.
 Mitchell, F. B., New Holstein.
 Mock, F. C., Milwaukee.
 Moffatt, Henry R., Poyssippi.
 Monk, R. W., Neillsville.
 Monroe, Wm. B., Monroe.
 Monroe, W. H., Merrill.
 Monsted, J. W., Alderly.
 Montgomery, Alex., Eau Claire.
 Montgomery, R. C., Madison.
 Montgomery, Wm., Eau Claire.
 Moody, Lewis, Superior.
 Moore, E. E., Merrilan.
 Moore, G. W., Antigo.
 Moore, L. A., Monroe.
 Moorehouse, G. W., Wauwatosa.
 Moray, R. D., Manawa.
 Moreaux, F., Luxembourg.
 Morgan, J. J., Durand.
 Morgenroth, H. W., Oshkosh.
 Morgenroth, H. W., Berlin.
 Mork, Ole, Blair.
 Morley, F. E., Viroqua.
 Morris, E. K., Merrill.
 Morris, G., Sharon.
 Morrison, M., Cashton.
 Morse, A. J., Eden.
 Morse, Edwin A., Appleton.
 Moulding, F. C., Watertown.
 Mount, H. A., West Allis.
 Moyer, S. R., Monroe.
 Mueller, H. F., Sauk City.
 Muenzner, R. J., Allenton.
 Mulford, E. R., La Crosse.
 Mulholland, John F., Kenosha.
 Mulvaney, F. M., Marlon.
 Munkwitz, F. H., Milwaukee.
 Munn, W. A., Janesville.
 Munger, D. C., Ellsworthn.

- Munro, Sarah R., Milwaukee.
 Munroe, D. M., Kenosha.
 Murdock, H. D., Tulsa, Okla.
 Murphy, S. W., Kenosha.
 Murpby, W. T., Waukesha.
 Murray, G. O., Tomah.
 Muth, Carl, Sheboygan.
 Myers, A. W., Milwaukee.
 Myers, Chas. F., Chippewa Falls.
 Myers, I. A., Cottage Grove.
 Nadeau, A. T., Marinette.
 Nahib, H. L., Milwaukee.
 Nair, B. P., Ft. Atkinson.
 Nash, Arthur R., Ellsworth.
 Nauth, D. F., Kiel.
 Nelson, A. L., Racine.
 Nelson, C. A., Clear Lake.
 Nelson, Norman, Madison.
 Nelson, Stella B., Oshkosh.
 Nelson, Wm. V., Milwaukee.
 Neville W. D., Eagle River.
 Newell, Frank, Burlington.
 Newell, G. E., Burlington.
 Nichols, F. C., Wausau.
 Nichols, W. T., Milwaukee.
 Nicholson, J. D., Balsam Lake.
 Nielsen, W. H., Milwaukee.
 Nimocks, S. A., La Crosse.
 Nims, C. H., Oshkosh.
 Nixon, A. J. W., Delafield.
 Nixon, H. C. B., Hartland.
 Nixon, R. T. A., Brookfield.
 Noble, J. B., Waukesha.
 Noer, Julius, Stoughton.
 Noer, J. P., Wobeno.
 Nolan, W. N., Kaukauna.
 Nolte, L. G., Milwaukee.
 North, Chas. F., Beaver Dam.
 Notbohm, Wm. R., Dousman.
 Nott, W. G., Racine.
 Nowack, L. W., Watertown.
 Noyes, G. B., Oshkosh.
 Nutt, C. R., Plymouth.
 Nuzum, Thos. W., Janesville.
 Nye, F. T., Beloit.
 Nystrum, C. E., Medford.
 Oakland, H. G., Milwaukee.
 Oatway, Wm. H., Lake Mills.
 Oberempt, B., Milwaukee.
 Obertin, C. A., Union Grove.
 O'Brien, H. J., Superior.
 O'Brien, H. N., Darien.
 O'Brien, J. M., Oregon.
 O'Brien, Thos., St. Nazianz.
 O'Brien, W. T., Ashland.
 O'Connell, D. C., Milwaukee.
 O'Connell, J. E., Milwaukee.
 O'Connor, D. J., Appleton.
 O'Connor, W. F., Ladysmith.
 Oettiker, James, Platteville.
 Ogden, Henry, Ft. Atkinson.
 Ogden, H. V., Milwaukee.
 Ohswald, H. F., Oconto Falls.
 O'Leary, F. J., Fast Troy.
 O'Leary, T. J., Superior.
 O'Leary, T. J., Caledonia.
 Olmsted, A. O., Green Bay.
 Oliver, F. J., Green Bay.
 Olson, A. K., Etrick.
 Olson, E. A., Osseo.
 O'Malley, W. P., St. Paul, Minn.
 Omsted, Nils, Stoughton.
 O'Neill, J. J., Elroy.
 Orchard, H. J., Superior.
 Orr, E. D., Mt. Hope.
 Orton, Susanne, Darlington.
 Osborne, O. G., Winnebago.
 Ott, H. A., Reedsville.
 Overbaugh, J. H., Hartland.
 Ovlatt, Chas. W., Oshkosh.
 Owens, W., Hortonville.
 Ozanne, J. T., Oshkosh.
 Packard, C. D., Rhineland.
 Lake, S. G., Superior.
 Palm, C. A., Kenosha.
 Palmer, J. A., Arcadia.
 Palmer, W. H., Janesville.
 Panetti, E. J., Milwaukee.
 Panetti, P. A., Justisford.
 Parham, G. H., Necedah.
 Park, M. M., Seattle, Wash.
 Park, W. H., Downing.
 Parke, Geo., Sylvan.
 Parke, W. B., Camp Douglas.
 Parker, A. S., Clinton.
 Parker, E. H., Eau Claire.
 Parker, W. E., Whitehall.
 Parkhill, F. G., Delavan.
 Parmley, J. P., Mineral Point.
 Patek, A. J., Milwaukee.
 Patterson, J. A., Iron River.
 Paul, Chester A., Wales.
 Payne, A. L., Eau Claire.
 Peairs, Ralph R., Milwaukee.
 Pearce, W. J., Dodgeville.
 Pearson, Ogema.
 Pearson, L. M., Tomahawk.
 Pease, W. A., Otsego.
 Pease, Wm. A., Jr., Rio.
 Peck, W. W., Darlington.
 Peckett, L. S., Wilson.
 Peebles, Mary, Shullsburg.
 Peehn, Fred G., Corliss.
 Pelton, L. H., Waupaca.
 Pember, John E., Janesville.
 Pembleton, W. E., Wittenburg.
 Perrin, Geo. H., Wauzeka.
 Perrin, H. E., Star Prairie.
 Perry, Gentz, Amery.
 Peter, H. T., Oconomowoc.
 Peterson, C. E., Independence.
 Peterson, Geo. E., Waukesha.
 Peterson, N. A., Soldiers' Grove.
 Petzki, E. A., Hixton.
 Pfeiffer, C. W., Sheboygan Falls.
 Pfeifer, F. J., New London.
 Pfister, Franz, Milwaukee.
 Pflueger, J. H., Holman.
 Phaneuf, S. J., Weyerhauser.
 Phelps, E. J., Eldron.
 Phillips, C. E., Eau Claire.
 Pickering, Chas. R., Muscoda.
 Pierce, E. D., Hillsdale.
 Pierce, W. J., Dodgeville.
 Pinkerton, Wm. T., Prairie du Chien.
 Pogue, M. E., Lake Geneva.
 Pomainville, Frank, Grand Rapids.
 Pomainville, Geo., Nekoosa.
 Pope, F. J., Racine.
 Pope, F. W., Racine.
 Poppe, Alfred, Arkdale.
 Poppe, H. B. B., Necedah.
 Poser, Ed. M., Columbus.
 Post, C. C., Barron.
 Potter, I. Y., New London.
 Potter, L. A., Superior.
 Potter, R. P., Marshfield.
 Powlas, A. J., Onida.
 Pratt, E. C., Casco.
 Prees, G. W., Cambria.
 Pretts, W. W., Platteville.
 Prill, H. F., Augusta.
 Prince, L. H., Berlin.
 Pritchard, J. T., Manitowoc.
 Proctor, Thos. C., Sturgeon Bay.
 Proudlock, J. H., Radisson.
 Prouty, W. R., Burlington.
 Provost, A. J., Oshkosh.
 Puchner, E., Wittenburg.
 Pugh, Geo. H., Kenosha.
 Pullen, A. J., North Fond du Lac.
 Puls, A. J., Milwaukee.

- Purcell, H. E., Madison.
 Purtell, E. J., Milwaukee.
 Purtell, J. A., Milwaukee.
 Quade, E. B., Wausau.
 Quam, Jacob, Deerfield.
 Quick, E. W., Greeu Bay.
 Quin, J. F., Milwaukee.
 Ransoch, H., Nelsonville.
 Racek, G. H., Priceton.
 Radloff, A. C., Eden.
 Ragan, J. F., Gresham.
 Ragan, W. J., Gresham.
 Rauson, C. W., Brooklyu.
 Rasmussen, Hans, Milwaukee.
 Rath, R. R., Granton.
 Rathbun, John W., Prairie du Chien.
 Ravenel, M. K., Madisou.
 Ravn, B., Iola.
 Ravn, Michael, Merrill.
 Ray, C. F., Milwaukee.
 Raymond, R. G., Browsville.
 Rea, J. E., Waldo.
 Read, Flora A., Fond du Lac.
 Reagles, Robert, Arlington.
 Reector, A. L., Appleton.
 Redelings, Theo. J., Marinette.
 Reed, W. N., La Crosse.
 Reed, W. W., Jeffersou.
 Reeve, J. L., Superior.
 Reeve, J. S., Appleton.
 Reeves, S. T., Albany.
 Regen, E. D., Milwaukee.
 Reich, Wm. F., Milwaukee.
 Reichert, J. E., Schleisingerville.
 Reineck, C., Appleton.
 Reinekiug, H., Milwaukee.
 Reinekiug, J., Hortouville.
 Reineking M. C., Milwaukee.
 Reinert, E. N., Cleveland.
 Reinhard, C., Milwaukee.
 Reinhard, H. A., Milwaukee.
 Reinhardt, J. P., Foutain City.
 Reinhart, D. B., Merrill.
 Reitman, Arthur, Milwaukee.
 Remally, Chas. S., Grand Rapids.
 Reynolds, B. A., Lone Rock.
 Reynolds, B. O., Lake Geneva.
 Reynolds, D. S., Appleton.
 Reynolds, J. C., Lake Geneva.
 Rhode, Henry, Green Bay.
 Rhodes, Edson, Galesville.
 Ribenaek, G. A., Dresser Junction.
 Rice, D. S., Stevens Point.
 Rice, E. M., Kewaunee.
 Rice, F. A., Delavan.
 Rice, R. H., Milwaukee.
 Rice, R. H., Stevens Point.
 Rice, Ray H., Delavan.
 Richards, C. A., Rhinelauder.
 Richmond James, Loyal.
 Riddle, Adeline, Oshkosh.
 Riddle, Julia, Oshkosh.
 Rideout, M. E., Hortonville.
 Ridgeman, A. L., Grand Rapids.
 Riehl, Fred W., Milwaukee.
 Riley, E. A., Park Falls.
 Riley, P. E., Elk Mound.
 Rinehart, W. F., Ashland.
 Riordan, E. J., Wilton.
 Riordan, J. F., Neshkoro.
 Ritchie, G. G., Appleton.
 Ritenhouse, Walter, Lake Geneva.
 Roberts, Geo. W., Albany.
 Roberts, John, Portage.
 Roberts, J. A., Manitowoc.
 Robinson, H. A., Kenosha.
 Roby, H. S., Milwaukee.
 Rock, A. A., Bancroft.
 Rock John N., Milwaukee.
 Rockwell, J. W., Grand Rapids.
 Rodecker, R. C., Holcombe.
 Rodermund, A. M., Athens.
 Rodmau, A. J., Delavan.
 Rogers, A. C., Cascade.
 Rogers, A. W., Milwaukee.
 Rogers, B. W., Neenuah.
 Rogers, E. H., Stevens Point.
 Rogers, P. F., Milwaukee.
 Rolfs, T. H., Milwaukee.
 Ronneburger, G. F., Milwaukee.
 Rood, Galen, Stevens Point.
 Rood, Johu F., Darien.
 Roos, Adolph, Oshkosh.
 Rose, J. F., Lena.
 Rosenberry, A. B., Arbor Vitae.
 Rosenberry, B. P., Arcadia.
 Rosenberry, H. L., Wausau.
 Rosenheimer, Max, Milwaukee.
 Ross, H. R. T., Ladysmith.
 Ross, P. M., Granton.
 Rostad, K. T., Spring Valley.
 Rothert, E. T., Tigerton.
 Rothman, L., Wittenburg.
 Rounseville, G. L. B., Milladore.
 Rowles, J. A., La Crosse.
 Rowley, A. G., Middleton.
 Rowley, C. C., Oshkosh.
 Roy, Emil, Wausau.
 Rudolf, S. F., Ellsworth.
 Ruele, William, Grand Rapids.
 Rugh, R. E., Lake Geneva.
 Ruhland, Geo. C., Milwaukee.
 Rupp, P. H., Milwaukee.
 Russell, F. H., Omro.
 Russell, H. C., Milwaukee.
 Russell, Kosc, Granite City, Ill.
 Russell, T. P., Oshkosh.
 Ryan, C. E., Appleton.
 Ryan, D. J., Algoma.
 Salhreiter, W. P., Racine.
 Sanborn, M. J., Appleton.
 Sanford, A. H., Milwaukee.
 Sapper, O. L., Gresham.
 Saraziu, F. C., Superior.
 Sargent, C. E., Moberidge, S. D.
 Sarles, W. T., Sparta.
 Sartell, E. N., Janesville.
 Sattre, O. M., Rice Lake.
 Sauerhering, D. L., Stillwater, N. D.
 Saunders, C. A., Waupaca.
 Sauthoff, August, Madisou.
 Savage, G. F., Pt. Washington.
 Sayle, R. G., Milwaukee.
 Sayles, L. W., Barahoo.
 Saylor, Herhert, Merrill.
 Schaffarzick, Chas., Livingston, Mont.
 Schalleru, O., Ripon.
 Schallert, P. O., Salem, N. C.
 Schaper, Herman, Appleton.
 Schee, J., Westby.
 Scheer, G. H., Sheboygan Falls.
 Scheih, G. F., Fond du Lac.
 Scheid, M. M., Rosendale.
 Schein, J. E., Oshkosh.
 Schell, Ida L., Milwaukee.
 Schiller, L., Milwaukee.
 Schlag, R. A., Prairie du Sac.
 Schmelling, A. F., Columbus.
 Schmidt, Anthony, Beloit.
 Schmidt, E. S., Green Bay.
 Schmidt, E. T., Janesville.
 Schmidt, J. A., Brillion.
 Schmidt, P., Milwaukee.
 Schmidt, W. J., Mayville.
 Schmit, Felix, Milwaukee.
 Schmitt, Louis, Milwaukee.
 Schmitt, Gustav, Milwaukee.
 Schmitz, W. C., Elkhart Lake.
 Schneider, Fred, New London.
 Schneider, Jos., Milwaukee.
 Schnetz, L. N., Racine.
 Schnetzky, O. P., Milwaukee.

- Schockley, H., Lamont.
 Schoez, A. F., Mayville.
 Schoeu, C. M., Milwaukee.
 Schoen, R. E., Beaver Dam.
 Schofield, H. R., Greenwood.
 Scholz, G. M., Milwaukee.
 Schoofe, J. J., Johnsburg.
 Schreier, J. K., Westby.
 Schroeckestein, R. S., Mariou.
 Schroeder, H. F., Marinette.
 Schulz, F. M., Wauwatosa.
 Schung, Max, Bouduel.
 Schwaibach, C. G., Juneau.
 Schwarz, S. G., Granton.
 Schwenderer, Johu, Milwaukee.
 Scollard, John T., Milwaukee.
 Scollard, W. E., Milwaukee.
 Scollard, W. J., Milwaukee.
 Scott, B. E., Berlin.
 Scott, H. E., Argyle.
 Scott, J. J., Westou.
 Scott, J. R., Appleton.
 Seaman, Gilbert E., Milwaukee.
 Sears, Harry B., Beaver Dam.
 Seegers, F. W., Collins.
 Seelye, N. L., Lake Geneva.
 Seidel, J. G., Warrens.
 Selbach, J. J., Eau Claire.
 Seldon, W. B., Thorp.
 Senn, C. U., Ripon.
 Senu, F. C., Oshkosh.
 Severson, Seleua, Madison.
 Sharp, E. L., Waldo.
 Sharp, M. B., Madison.
 Shauger, L. S., Symco.
 Shaw, A. O., Ashland.
 Shaw, B. W., Waunaukee.
 Shearer, A. T., Walworth.
 Shearer, R. D., Milwaukee.
 Shehan, L. B., Superior.
 Sheldon, C. S., Madison.
 Sheldon, Walter H., Madison.
 Shepard, W. A., Seymour.
 Shimek, A. J., Manitowoc.
 Shimoneck, F., Milwaukee.
 Shinnick, T. F., Watertown.
 Sholdski, Jos., Milwaukee.
 Shoykett, F. E., Brandon.
 Shunnels, David, Walworth.
 Sickles, W. A., Milwaukee.
 Sieker, A. W., Franklin.
 Sifton, H. A., Milwaukee.
 Silverthorn, F. R., Berlin.
 Simonson, J., Tomah.
 Sizer, E. M., Fall Creek.
 Slaughter, A. W., Green Bay.
 Sleyster, L. R., Waupun.
 Smedal, Gregor, La Crosse.
 Smiley, R. B., Stevens Point.
 Smith, A. D., Gilmanton.
 Smith, B., Milwaukee.
 Smith, C. C., Scandinavia.
 Smith, C. E., Beloit.
 Smith, C. E., Mukwonago.
 Smith, C. M., Jr., Fransville.
 Smith, E. A., Milwaukee.
 Smith, E. F., Oneida.
 Smith, E. J., Neenah.
 Smith, Geo. L., Jefferson.
 Smith, Jos. F., Wausau.
 Smith, P. H., Racine.
 Smith, Sidney, South Milwaukee.
 Smith, S. M. B., Wausau.
 Smith, W. P., Waupun.
 Soles, F. A., Spencer.
 Sommers, Julius, Madison.
 Sorenson, Soren, Racine.
 Southwick, F. A., Stevens Point.
 Spalding, J. B., Kenosha.
 Spawn, M. G., Beloit.
 Spears, T. R., Washburn.
 Specht, John, Superior.
 Spencer, G. F., Evansville.
 Spencer, Leonard, Wausau.
 Sperry, S. P., Milwaukee.
 Sperry, W. P., Phillips.
 Spitz, Miltou, Milwaukee.
 Stack, G. F., Independence.
 Stack, Stephen, Milwaukee.
 Staehle, M., Manitowoc.
 Stalker, H. J., Kenosha.
 Stanley, W. S., Milwaukee.
 Stantard, G. H., Sheboygan.
 Stantou, Chas., Buck Creek.
 Starr, F. W., Stanley.
 Stebbius, E. B., Hurley.
 Stebbins, W. W., Verona.
 Steele, G. A., Sherwood.
 Steele, Geo. M., Oshkosh.
 Steenberg, H. S., Milwaukee.
 Steffen, I. D., Antigo.
 Stephenson, W. L., Ladysmith.
 Stevens, C. C., De Sota.
 Stevens, Frank E., Bristol.
 Stevens, J. V., Jeffersou.
 Steves, B. J., Menomonie.
 Stewart, S. W., Chetek.
 Stiles, F. P., Sparta.
 Stiles, V. W., Sparta.
 Stirn, F. J., Cudahy.
 Stockman, B. G., Woodville.
 Stoddard, Chas. H., Milwaukee.
 Stoeltiug, C. W., Oconto.
 Stolte, Herman, Milwaukee.
 Storey, C. L., Whitehall.
 Storley, K. C., Coon Valley.
 Stormont, C. J., Viola.
 Stoye, J. P., Theresa.
 Strauss, F. H., Milwaukee.
 Strong, W. B., Waukesha.
 Stubenvoll, C. E., Shawano.
 Studley, F. C., Milwaukee.
 Suby, J. I., Stoughton.
 Suiter, F. C., La Crosse.
 Sullivan, A. G., Madison.
 Sure, J. H., Milwaukee.
 Surensou, M., Viroqua.
 Sutherland, C. H., Janesville.
 Suttle, H. J., Viroqua.
 Swarthout, E. C., La Crosse.
 Sweatman, R. H., Green Bay.
 Sweemer, William, Milwaukee.
 Sykes, H. D., Milwaukee.
 Tanner, G. F., Turtle Lake.
 Tanner, H. B., Kaukauna.
 Tarnutzer, B. C., Beaver Dam.
 Tarter, J. W., Iron River.
 Tasche, C. T., Sheboygan.
 Tasche, John C., Sheboygan.
 Taugher, A. J., Milwaukee.
 Taugher, J. P., Milwaukee.
 Taylor, E. A., Racine.
 Taylor, D. A., Bangor.
 Taylor, E. A., Osseo.
 Taylor, F. B., Mt. Sterling.
 Taylor, I. S., Waupun.
 Taylor, M. W., Kilbourn.
 Taylor, R. W., Pewaukee.
 Tenny, J. S., Alma.
 Tenny, J. T., Alma.
 Tennies, H. B., Merrill.
 Terhorst, H., Milwaukee.
 Teschan, R. C., Milwaukee.
 Thadlic, Jos., Cazenovia.
 Thayer, C. E., Markesan.
 Thayer, F. A., Beloit.
 Thewalt, W. B., Poysippl.
 Thieke, G. A., Wausau.
 Thienhaus, K. O., Milwaukee.
 Thill, D. P., Milwaukee.
 Thomas, W. O., Clinton.
 Thompson, Reedsburg.

- Thompson, A. S., Frauksville.
 Thompson, B. V., Oshkosh.
 Thompson, F. A., Milwaukee.
 Thompson, G. E., Kenosha.
 Thompson, R. E., Milwaukee.
 Thomson, William, Portage.
 Thorndike, William, Milwaukee.
 Thorne, James P., Janesville.
 Thrane, A. D. H., Eau Claire.
 Tibbits, Newton I., Peshtigo.
 Tibbits, U. J., Waukesha.
 Tietgen, Arthur, Manitowoc.
 Timm, E. W., Milwaukee.
 Tisdale, L. C., Milwaukee.
 Titel, E. A., Green Leaf.
 Titus, W. H., Oshkosh.
 Toby, E. A., Cable.
 Todd, Samuel G., Neenah.
 Tomelty, Thos., Big Bend.
 Tompach, Emil, Racine.
 Tormey, Thos., Madison.
 Towne, W. H., Shiocton.
 Townsend, E. H., New Lisbon.
 Travis, A. L., Ripon.
 Treadwell, C. L., Kilbourn.
 Treat, Chas. R., Sharon.
 Treglown, L. H., Livingston.
 Trevitt, A. W., Wausau.
 Trevitt, Margaret, Wausau.
 Trimble, T. W., Waupaca.
 Trowbridge, Chas., Viroqua.
 Trowbridge, J. B., Hayward.
 Trowbridge, W. M., Viroqua.
 Trulson, L. M., Stoughton.
 Tuffley, F. S., Livingston.
 Tupper, E. E., Eau Claire.
 Twohig, David J., Fond du Lac.
 Twohig, H. E., Fond du Lac.
 Urheim, Olaf, Eau Claire.
 Urkart, William, West Bend.
 Urquhart, J. H., Iron Belt.
 Valentine, L. P., Corliss.
 Van Altena, Louis, Cedar Grove.
 Van Altena, L. Jr., Cedar Grove.
 Van Delinder, E. M., Beloit.
 Vanderlind, L. A., Wild Rose.
 Van Kirk, F. W., Janesville.
 Van Westrienen, A., Kenosha.
 Van Zanten, W., Sheboygan.
 Vaughan, C. L., Caroline.
 Vedder, H. A., Edgar.
 Vedder, J. B., Marshfield.
 Verbeck, S. F., Lodi.
 Vercilene, Jos., Hurley.
 Vernon, C. G., Madison.
 Vincent, G. R., Tomah.
 Vogel, C. A., Elroy.
 Vogel, Carl C., Elroy.
 Voight, O. P., Gillett.
 Voje, J. H., Oconomowoc.
 Von Hengel, G. S. A., Waupun.
 Von Neupert, C., Sr., Stevens Point.
 Von Neupert, C., Jr., Stevens Point.
 Voorus, C. Wesley, Beaver Dam.
 Vorpahl, R. A., Springfield.
 Vosburgh, W. H., Cooperstown.
 Vosknil, A., Cedar Grove.
 Wade, Frank S., New Richmond.
 Wadey, B. J., Belleville.
 Waffe, G. C., Janesville.
 Wagener, N. Z., Sturgeon Bay.
 Wagner, K., Milwaukee.
 Wahl, C. M., Mineral Point.
 Wahl, H. S., Stratford.
 Wahle, H., Marshfield.
 Waite, R. A., Columbus.
 Wakefield, P. A., West Salem.
 Wakefield, S. R., West Salem.
 Walbridge, F. E., Stevens Point.
 Walbridge, J. S., Berlin.
 Walker, F. W., St. Croix Falls.
 Walker, L. G., Pound.
 Walkins, W. C., Oconto.
 Wall, H. J., Richland Center.
 Wallace, Chas. J., Superior.
 Walsh, Chas. C., Merrill.
 Ward, John P., Waukesha.
 Washburn, R. G., Milwaukee.
 Washburn, Sara, Hudson.
 Washburn, S. M., Spencer, S. D.
 Washburn, W. H., Milwaukee.
 Waters, D., Grand Rapids.
 Waters, Hugh, Nekoosa.
 Watkins, W. C., Oconto.
 Watson, Fred V., Antigo.
 Webb, E. P., Beaver Dam.
 Webb, W. B., Beaver Dam.
 Weber, A. J., Milwaukee.
 Weber, H. F., Newburg.
 Webster, B. N., Rice Lake.
 Webster, F. E., Amherst.
 Wegge, Wm. F., Milwaukee.
 Wehle, W. J., West Bend.
 Welch, F. B., Janesville.
 Welch, F. C., Waukesha.
 Weid, H. J., Campbellsport.
 Weld, W. H., Ft. Atkinson.
 Wells, A. L., Clear Lake.
 Wenstrand, D. E., Milwaukee.
 Wenzel, J. V., Ashland.
 Werner, C. F., Calumetville.
 Werner, H. C., Fond du Lac.
 Werner, Nels, Barron.
 Werner, R. F., Eau Claire.
 Westedt, Otto E., Logansville.
 Westgate, F. J. E., Manitowoc.
 Westgate, H. J., Ingram.
 Westphal, H. G., Polar.
 Wetzler, S. H., Milwaukee.
 Wheeler, P. A., Oshkosh.
 Wheeler, W. F., Oshkosh.
 White, A. G., Milwaukee.
 White, M. I., Wanwatosa.
 White, Wm. E., Lyons.
 Whitehorse, E. E., Vesper.
 Whitney, D. C., Rice Lake.
 Whyte, Wm. F., Watertown.
 Wichman, G. C., Rib Lake.
 Wilcox, A. G., Solon Springs.
 Wiley, Frank S., Fond du Lac.
 Wilkinson, John A., Hales Corners.
 Wilkinson, M. R., Oconomowoc.
 Wilkowski, C. W., Chippewa Falls.
 Willard, C. J., Prairie du Chien.
 Willard, L. M., Wausau.
 Willett, Thos., West Allis.
 Williams, B. T., Hudson.
 Williams, H. H., Sparta.
 Williamson, J. L., Milwaukee.
 Williams, J. M., Oshkosh.
 Williams, Stephen, Chippewa Falls.
 Williams, W. E., Cambria.
 Williamson, Geo. H., Antigo.
 Wilmarth, A. W., Chippewa Falls.
 Wilson, C. J., Marinette.
 Wilson, H. L., Green Bay.
 Williams, R. L., Pine River.
 Winchester, W. H., Sheboygan.
 Windesheim, G., Kenosha.
 Wing, W. S., Oconomowoc.
 Wingate, U. O. B., Milwaukee.
 Winneman, T. W., Merrill.
 Winter, A. E., Tomah.
 Wintermute, C. E., Kilbourn.
 Witte, W. C. F., Milwaukee.
 Wittman, Adolph, Merrill.
 Woehos, F. J., Kewaunee.
 Woehos, Wm., Kewaunee.
 Wolf, H. E., La Crosse.
 Wolff, Jacob, Milwaukee.
 Wolfrum, O. W., Antigo.
 Wolter, H. A., Green Bay.

- Wood, F. C., Westfield.
Woodhead, F. J., Merton.
Woods, E. F., Janesville.
Woodward, Adelaide, Seattle, Wash.
Woodworth, D. W., Ellsworth.
Woolhiser, C. T., South Wayne.
Wray, Wm. E., Tomahawk.
Wright, F. R., West Allis.
Wright, J. C., Antigo.
Wright, S. E., Marinette.
Wyatt, D. B., Fond du Lac.
Yanke, A. E., Milwaukee.
Yates, J. L., Milwaukee.
- Youmans, L. E., Mukwonago.
Young, A. F., Milwaukee.
Young, G. H., Elkhorn.
Young, J. G., Pontiac, Ill.
Zeiss, Anton, Sheboygan.
Zierath, W. F., Sheboygan.
Zilisch, Wm. E., Wausau.
Zimmerman, A., Kenosha.
Zimmerman, Chas., Milwaukee.
Zimmerman, W. C., Iron Ridge.
Zinns, A. J., Milwaukee.
Zwickey, W. H., Superior.
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ORIGINAL ARTICLES.

THE PRESENT STATUS OF SPINAL ANALGESIA.*

BY ARTHUR J. PULS, M. D.,

MILWAUKEE.

The success of a surgical procedure is greatly dependent upon the restoration of vitality to the patient. The anesthetic is one of the most important factors in surgical anesthesia. No known anesthetic can be given with immunity to all classes of patients. The tendency today is to make use of a mixed narcosis. In operations of long duration the patient's vitality is lowered by the inhalation of ether or chloroform owing to the absence of oxygen. Tissue cells are destroyed in the body and not until a fresh supply of oxygen is carried by the blood circulation does regeneration of the affected organs take place. Lung complications frequently follow general narcosis. In a series of 4,000 abdominal operations 7 per cent developed Broncho-pneumonia and a mortality of 2 to 3 per cent was recorded. Deaths resulting from chloroform number 1:2060 anesthetics, ether 1:5930 (Berl. Cong. 1909). As a substitute for ether and chloroform narcosis local or lumbar anesthesia can be recommended, and to avoid the after effects nitrous oxid gas is given the preference by some American surgeons.

1. Inhalation of nitrous oxid is usually given with oxygen. 2. Local anesthesia should become the routine method for minor operations. 3. Lumbar analgesia introduced by Dr. Bier, independent of Dr. Corning's experimentation on the local medication of the cord published in 1885, was first tried on human subjects in 1898.

*Read at the 64th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 23, 1910.

The discovery of Stovain was eventful in popularising this new method of analgesia in as much as this drug proved less poisonous than any of the known cocain preparations. Of the compounds in use Stovain is considered more reliable than Novocain, Alypin or Tropacocain. Experiments are still being made by the various clinicians in the European countries as to the safest and most appropriate compound to be used with Stovain for injection into the spinal canal. Barker of England adds glucose, Kroening and others prefer adrenalin and Jonnescu adds strychnin to the Stovain. On account of the failures following the injections a number have discarded Bier's method entirely. Many, however, still continue to use this process of anesthesia and are earnest advocates of the procedure; and some like Jonnescu seldom resort to general narcosis. Jonnescu has even extended the operative field to the dorsal region by injecting between the first and second dorsal interspace, producing analgesia of the upper part of the body.

The dangers as well as the failures incident to spinal anesthesia would seem to be due to a faulty technic and likewise to the excessive strength of the cocain preparations which have been used.

Kroening and Gauss who have made careful investigations state, "1. That toxic effects of the drugs can cause fatal results. 2. Injury to the ganglion cells and segments of the cord produce paralysis. 3. Failures to produce analgesia are caused chiefly by faults in the technic."

It was taken for granted that general intoxication was caused by too rapid absorption of the analgesic solution within the subarachnoidal space. This theory was disproved by the experiments of Heineke and Laewen, who on the contrary, found, that the diffusion of the injected fluid takes place slowly, but they proved that the analgesic, when it came in contact with the higher segments of the medulla oblongata controlling the respiratory centres, caused the paralysis of the lungs, whenever toxic effects did appear. Furthermore it was found that when there was injected into the lumbar region of the spinal canal, a solution which is specifically lighter than the spinal fluid, it would rise quickly and anesthetize the segments of the phrenic nerve at the second and third cervical vertebra or ascend to the medulla. To avoid this mishap the specific gravity of the solution should be increased by the addition of chloride of sodium. A solution having the same specific gravity remains stationary in the spinal canal at the seat of puncture. By increasing its specific gravity the solution descends into the lumbar sac and affects only the segments of the lumbar and sacral nerves. A simple method to prevent general intoxication is to

have the patient lying in the postural position at an angle not to exceed thirty degrees, and not to allow the extreme elevation of the pelvis, as is customary in the Trendelenburg posture, until five or ten minutes have elapsed since the time of the injection. Injury to the segments of the cord would be followed by paraplegia of the lower extremities, and paralysis of the bladder and rectum as a result of lacerating or puncturing the nerve tissue with the point of the needle at a point above the first lumbar space.

They selected the first and second lumbar interspace for abdominal operations, and for rectal, perineal and vaginal operations, and for all operations on the lower extremities, the second and third or third and fourth lumbar space, the injection being directly in the median line.

After effects, such as headache, rigidity of the muscles of the neck, and nausea, likewise failures in producing analgesia, are now known to be due to mistakes in the technic. The care of the instruments used is of utmost importance. By boiling the needles in soda solution a trace of the salt within the lumen of the needle can change the chemical nature of the compound and may not only prevent the anesthetic effect altogether but cause the above mentioned after effects. Dr. Poenaru holds that Stovain is decomposed by an alkaline medium. The spinal fluid varies with different individuals in regard to its alkalinity. Whenever the Stovain solution becomes turbid if mixed with the spinal fluid, analgesia is prevented and the procedure proves a failure. He therefore advises to add $\frac{1}{8}$ gtt. of lactic acid to 5 c. g. Stovain.

The following rules should be observed: 1. "Sterilization of the needles with steam heat allowing no antiseptics to come in contact with any part of the instruments.

2. Avoid the application of iodine or ethyl chloride on the seat of puncture, lest the needle point carry particles of these drugs into the dural sac.

3. The solution has sometimes been injected into the subdural space, instead of into the dural sac, with resultant failure.

4. The solution should not be injected before the spinal fluid appears to drop in a steady streamlet so that it can be well mixed with the spinal fluid in the syringe before injecting the mixture into the subarachnoidal space.

Prior to the operation scopolamin and morphin are given hypodermically so as to bring the patient into a semiconscious condition—Daemmerschlaf—Twilight sleep. Scopolamin acts on the cortical substance of the brain and paralyzes chiefly the motor nerves, it also

has a hypnotic influence on the sensorium. Morphin relieves pain, paralyzes the sensory nerves and produces sleep. In combination both have a powerful hypnotic influence and counteract one another.

Kroening as a rule injects 0,08 of a 4 per cent solution of Stovain containing .11 per cent sodium chloride to which is added 0.2 c.c. of a 1-1000 suprarenin solution to each 1 c.c. at the time of the injection. Kroening is of the opinion that the combined scopo-morphin and spinal analgesia offers so many advantages over the general narcosis that the method will not only be the method of choice but in time will supercede the use of the inhalation anesthesia. From a series of 100 consecutive celiotomies he was able to allow 71 to sit up the same day of the operation.

Arthur E. Barker of London reported his first 100 cases of operations with spinal analgesia, in the *British Medical Journal*, March 23, 1907. Since then Barker has offered many valuable contributions to the literature of Dr. Bier's method. He states, "there seems little doubt that it has rendered possible life-saving operations which would have been almost certainly fatal under general anesthesia, and one of our cases seems to prove this." Again, "to inject a small quantity of a toxic agent into the lumbar sac is not necessarily more dangerous than to charge the whole circulation with a poison such as chloroform." Barker now uses 5 per cent glucose with 10 per cent Stovain solution having a specific gravity 1,023 against a specific gravity of spinal fluid 1,007. With this compound he claims to have had no failures and no unpleasant after-effects.

My own experience with spinal anesthesia dates from December, 1907. In the beginning the cases were not selected, minor as well as major operations were performed indiscriminately. Later I used spinal analgesia only on a certain class of patients for select cases. I followed the method in vogue in the Berlin and Heidelberg clinics which is similar to that of Prof. Kroening's of Freiburg. The lumbar injection is always preceded by hypodermics of scopolamin and morphin. The solutions first used were Riedel's (Berlin) and Billon's (Paris) compounds containing, stovain 0,04, sodium chloride 0,0011 suprarenin 0,00013 to each 1 c.c. of a 2 c.c. ampulla of which I usually injected 1,5 c.c. Usually during a very extended operation it was necessary to administer ether by the drop method requiring but very little of this agent. By-effects were at times nausea and dryness of the throat; after-effects, headaches and rigidity of the muscles of the neck. Only in two cases were those symptoms very pronounced, but passed off within several days spontaneously. The youngest patient was eighteen and the oldest seventy-three years of age. Most of the failures to pro-

duce an analgesic effect in my first 40 cases were due to mistakes in some part of the technic and probably in the compound used.

Amongst the last 27 cases with Barkers Compound (Billon) only one failure occurred and no after-effects. None of the older methods, not even local anesthesia allows the operator such freedom and ease while operating as does spinal analgesia. During general narcosis the surgeon cannot give an undivided attention to his task but is alert and on the outlook at any moment for disturbances on the part of his patient. The lumbar method anesthetizes all of the abdominal and pelvic organs as well as the lower extremities.

For the aged and for patients affected with heart lesions, acute and chronic affections of the lungs, arterio-sclerosis, chlorosis, diabetes and cachexia, spinal analgesia should be the method of choice.

Discussion.

DR. W. E. KRAMER of Milwaukee: It seems to me this paper is noteworthy particularly in one respect and that is that the author of the paper offers this method as a method of choice. The method has been extensively advertised throughout the country, particularly of late, and it has probably been taken up by a number of men throughout the country in a desultory sort of way, and naturally any new method is attended with certain difficulties and certain discouragements. It has been particularly so with respect to spinal analgesia. The doctor himself met with many discouragements in the beginning, but by correcting mistakes as they arose he has been able finally to evolve an ideal method of analgesia with respect particularly to the lower extremities, the abdomen and its contents.

Now these discouragements are, as the doctor has remarked, largely due to faulty technique. The particular method in which the instruments are prepared, the particular method in which the parts are prepared, the particular method by which the needle is introduced—all these little details must be mastered and the finest and most particular account taken of small details. The introduction of any foreign material like some portion of the sterilizing fluid that adheres to the needle as it enters the spinal column, may vitiate the entire method. So that technique is very important. One must be supplied with proper instruments—not any kind of old needle is going to suffice in the application of this method; and not only must the technique be perfect but the solutions must be correctly proportioned.

And then also we must have regard to certain limitations in applying this method of anesthesia. For instance, cases, of which we are bound to meet with a great number, of firm and large adhesions which will necessitate a great deal of traction upon the peritoneum, and intra-abdominal operations, are not entirely suited to the application of this method of anesthesia. The anesthesia is one that lasts probably about an hour and a half, and operations that can be performed within that time are eligible. The longer ones may require a second injection, and that is not always feasible.

Now the value of any method of anesthesia must be measured by its degree of safety in the first place, and in the second place by the facility

with which it is applied, and in the third place by the agreeableness of the anesthetic itself.

As to its degree of safety I do not think we are enabled at the present time to say the final word. The method is a comparatively new one; it has not been used extensively in this country and has not been used extensively in this state I believe, and therefore I do not think we are prepared to say in a positive way what our conclusions are or should be.

However in our experience with the anesthetic it has never been followed by any serious complications or any complications that would be regarded as opposed to the use of the method. In the earlier cases headache was a very prominent after-symptom, a very persistent and troublesome headache following not only on the second day but sometimes extending into the third and even the fourth day. This was one of the most troublesome symptoms but never a dangerous one. However this has been overcome by corrections in technique and the use of different solutions and different methods. Nausea has never been a very prominent symptom—in fact that is one of the particular advantages of this method. It enables you to escape the troublesome and persistent nausea that follows the use of a general narcosis. Motor paralysis, or paresis following the injection, lasting a few hours or a day, has been quite common but never troublesome. No after-effects of any consequence have been encountered in the use of the anesthetic in our hands.

DR. A. J. PULS (Closing): Dr. V. Rosthorn told me that he had reduced the mortality rate at least twenty per cent. in debilitated patients; especially in carcinoma of the uterus where formerly he had a mortality of over thirty per cent., it was reduced to ten to fifteen per cent. by means of the stovain analgesia whereas the general narcosis would be followed by pneumonias and shock and carry off his patient.

DR. R. G. SAYLE of Milwaukee: Is that mortality rate from anesthesia?
A. That is what he claimed.

Q. Nobody has had a thirty per cent, mortality rate due to anesthesia in uterine carcinoma.

A. Oh no, you misunderstood me. He could save so many more by using the combined methods of anesthesia. Hysterectomy on the so-called inoperable cases is followed by 35 per cent. deaths with general narcosis, and be lessened to 15 per cent. with stovaine analgesia.

Q. Then you must say that the anesthesia produced the difference in mortality?

A. Certainly,—general anesthesia lowers the vitality of the patient and for this reason I would advise the use of spinal analgesia in preference to ether or chloroform on all emergency and accident cases, suffering from loss of blood or from shock.

DR. JOHN C. CUTLER of Mount Horeb: There is on exhibition in the other room a thirty pound cyst removed by the stovaine method, by an operator in Chicago from whom I received the following letter:

"Mrs. A. was operated with Stovaine Billon. Billon is the name of the manufacturer. The following is the formula for Stovaine Billon:

Stovaine hydrochlorate.....	0.04	centigrams.
Adrenalin borate	0.00013	centigrams.
Sodium chloride	0.0011	centigrams.
Aqua qs. ad.	1	c.c.

We used in operating Mrs. A. about 0.06 centigrams of stovaine hydrochlorate. That is we used about 1.5 c.c. of the stovaine solution. We inject in arm strychnine sulphate gr. 1/30 one hour before we used the stovaine. This differs from the method used by some operators of injecting the strychnine into the cord with the stovaine. We have operated quite a number of Iaparotomies and prostates with stovaine during the last two and a half years, but I have never seen any case where the stovaine worked as perfectly as in Mrs. A's case. There was perfect anesthesia for about one hour and twenty-five minutes. No nausea or vomiting. No gas pains, no shock. She was allowed water one hour after leaving the operating room and had broth for supper." Discharged in three weeks cured.

Before operation patient suffered with what she called asthma, which entirely disappeared on removal of pressure. At present the patient is enjoying the best of health and pursuing her daily avocations with apparent ease.

LOBAR PNEUMONIA.*

BY A. G. HOUGH, M. D.,

MORRISONVILLE, WIS.

I have taken the liberty of departing somewhat from the subject as assigned to me for the reason that an enumeration of the symptoms of a typical case of Lobar Pneumonia to a company of physicians would be as profitless as the oft mentioned carrying of coals to Newcastle. Instead, I have picked out from the literature, some diagnostic points that may be of interest. These I have strung together without any attempt at classification, and present them individually for what they are worth. I will first speak of the urine in pneumonia.

Zak reported the urinary findings in 190 cases of lobar pneumonia in which he made 449 examinations. The results show an almost typical composition of the urine in pneumonia. There is a gradual increase of albumin, acetic acid bodies, primary and other albumoses and urobilin. There is a reduction of lime and chlorides. The most characteristic condition is the presence of a large number of coarsely granular incrustated tube-casts. They are short, grayish-brown with irregular surface, and suggest pneumonia at a glance. They occur in large numbers at the height of the disease, and then suddenly give

*Read at the Meeting of the Dane County Medical Society, Madison, Oct. 11, 1910.

place to hyaline and other casts. While these casts may appear in some other conditions, they are never so numerous as in pneumonia, and do not appear and disappear in such a sudden manner. The urinary findings, although scarcely conclusive alone, can confirm a diagnosis. Concerning the well known retention of chlorides, it might be mentioned that Von Hooslin, reporting the results in a careful examination of ten cases, shows that they do not accumulate at any one point in the body, but are distributed generally. He thinks that this salt retention must be due to relative insufficiency of the kidney. Rowntree of Baltimore, studied the retention of chlorides in ordinary pneumonia, and in influenza pneumonia, and finds a difference. First: retention is not as marked in influenza pneumonia as in ordinary pneumonia. Second: the output may be normal, or if slightly reduced it rapidly increases, whereas in ordinary pneumonia it is invariably low and persists that way during the course of the disease. Third: in influenza pneumonia, a large quantity of urine is not associated with a marked low amount of chlorine in 10 c.c. of urine as in lobar pneumonia.

The protein metabolism in pneumonia was studied by Wolf and Lambert of New York, and results reported last April in the Archives of Internal Medicine. They measured the sulphur and nitrogen output in 19 cases. Milder cases show a smaller loss in nitrogen and sulphur than severe cases. Sulphur excretion runs more or less parallel with that of nitrogen, but in cases progressing unfavorably, there seems to be excessive destruction of proteins, containing much sulphur.

During hyperpyrexia, an excessive amount of creatinin is eliminated, followed by subnormal excretion during convalescence. In severe cases a large amount of creatin is also excreted. In some lethal cases the amount of creatin excreted equals the amount of creatinin excreted the last day.

I should like to call attention to the test of Falk and Tedesko, which is based on the fact that salicylic acid and its salts appear in any serous fluid, and pathologically in inflammation exudates, but does not appear in glandular secretions, as saliva, or in bronchial secretions. It will be found present in the sputum of lobar pneumonia, but not in bronchitis, bronchiectasis, etc. It was found in a case with no physical signs, which proved at autopsy to be central pneumonia.

I should like also to call attention to the fact that Crispolti found the pneumococcus present in the conjunctival secretion in 40 cases out of 45. The other 5 cases had no pneumococci present in sputum, and were probably influenzal. The germs were most numerous the first five days, and then became rarer and atypical. I merely mention

this as showing the necessity of looking out for the serpiginous ulcer of the cornea in the early stages of pneumonia.

In reference to differential diagnosis, I should only speak of one class of cases; those simulating appendicitis. That the subject is important is shown by Melchior, who reported last year ten cases operated on by mistake, they being diagnosed as cases of acute appendicitis. Rapid breathing had been noticed in half the cases before the diagnosis of pneumonia had been made. Melchior says that only peritonitis, tympanites, or effusions, outside of affections of the respiratory apparatus, will cause rapid respiration, and that the prodromal discomfort which is the rule in pneumonia, is seldom observed in appendicitis.

Beuneka states that out of 99 cases of pneumonia, 21 simulated appendicitis, and two were operated upon. Only three of the 21 cases ran a course of the ordinary type. The others were brief or otherwise atypical. His experience confirms the fact that pneumonia of the right upper lobe is most liable to be accompanied by peritoneal and abdominal symptoms.

Glaserfeld, reporting two cases, states that the symptoms of appendicitis subside as severe pneumonia became installed—after an interval of 9 days in one case. He enumerates as points of differentiation: First: the expression of the face is not so distressed as in appendicitis. Second: tongue is moist and not coated. Third: rapid breathing. Fourth: rigidity of abdominal wall never so circumscribed as in beginning of appendicitis. The abdomen is only superficially tender, deep pressure not being particularly painful. Fifth: chest examination should be made in every case of appendicitis.

Other articles on the subject also mention that the abdominal wall relaxes for a moment at each inspiration, and that sudden high temperature has been observed frequently, which is not true of appendicitis.

Among the most frequent complications of pneumonia, are the cardiac and vascular. Two conditions are especially to be noted as each calls for prompt action. First: vasomotor paralysis in the splanchnic area calling for adrenalin, caffeine and hypodermoclysis. Second: dilatation of the right heart calling for venesection.

Von Jurgensen in 1874 said, "The danger to life which croupous pneumonia produces in the patient first threatens the heart. Pneumonia death is caused by cardiac insufficiency." Römberg and Pässler showed in 1895 that the toxalbumin produced by metabolic activity of the pneumococcus paralyzes the vasomotor center in the medulla and Pässler stated in 1901 that this is the most common cause of death in pneumonia in as far as the circulatory apparatus is concerned. This

mode of death may occur irrespective of the health or disease of the heart.

When the splanchnic nerve is cut in an animal an enormous quantity of blood accumulates in the splanchnic area, followed by anemia of all organs, especially the central nervous system and later by death. In paralysis of the vasomotor center by the pneumococcus the same results follow in man: dilatation of blood vessels in the splanchnic area; blood pressure sinks; the heart continues to draw blood from other places, bleeding itself into the splanchnic area, becomes more and more rapid, and ineffectual and finally stops. All this produces the following clinical picture: sinking blood pressure; soon followed by tympanites; exsanguinated appearance; pulse irregular, empty and so rapid it cannot be counted; symptoms of cerebral anemia—delirium, hallucinations, etc., later stupor and coma; collapse increases, heart sounds disappear, and patient dies.

Musser says that tympany is a serious toxic symptom, and its increase with defective elimination is a point that he depends on as suggestive of vasomotor failure. He says that colitis plus toxemia invites an intestinal paresis, and to prevent this colitis, he regulates the diet carefully and washes out the bowels. He also says that cardiac symptoms are threatened when renal insufficiency appears and for that reason he early begins the use of caffeine, the only remedy he begins with as a routine measure.

Dilatation of the right heart presents an entirely different picture: Cyanosis; great dyspnea; increased activity of all the obligatory as well as accessory respiratory muscles; jugular veins over-filled; movement of heart very much increased; area of dullness increased to the right. There is accentuation of the second pulmonic sound which disappears as the case progresses. The liver is enlarged. The patient dies in asphyxia, not in collapse.

THE MORTALITY OF PNEUMONIA.*

BY FRANK I. DRAKE, M. D.,

MADISON, WIS.

To prepare a paper on pneumonia or on any phase of the disease is to travel a road already worn bare by the feet of the wisest, the greatest, the best of the medical fraternity. There is not a by-path

*Read at the meeting of the Dane County Medical Society, Madison, Oct. 11, 1910.

but every nook and corner has been thoroughly explored and, strange to say, within the memory of the oldest here present not one whit of information of real, practical scientific value has been added to our store of knowledge of this disease, except the memorable discovery of its specific, causative, micro-organism in 1884. Opinions are so at variance with one another that to make a statement about any phase of the disease is to invite criticism or flat contradiction. While its microbic cause has been known for twenty-five years, no rule of hygiene or sanitation has been advanced, nor has any plan of treatment been devised that influences the general mortality of this, the most fatal of the acute infectious diseases. Indeed the death rate of pneumonia is exceeded only by that of tuberculosis and through the decline in the death rate of tuberculosis it promises soon to win the unenviable distinction of being the "Captain of the Men of Death."

The micrococcus lanceolatus, whether the honor of its discovery belongs to Fränkel or Friedlander or Sternburg, is one of the most ubiquitous of micro-organisms. From the equator to the pole, no people is entirely exempt from its devastating presence, and our colored population seems to be especially susceptible to its destructive influence. Austin Flint, writing in 1873, says that pneumonia is severer and more fatal in the South than in the North, and that it often becomes a veritable scourge on the cotton and the sugar plantations. In 1890, the aggregate death rate of pneumonia among the white population in the registration area was 182.24 per hundred thousand, and among the blacks 278.97 per hundred thousand. To come down to modern times the following table shows the death rate in 1908 per hundred thousand population:

	White.	Black.
St. Louis	84.5	171.4
Boston	141.2	248.8
Chicago	121.5	242.0
Charleston, S. C.....	77.4	137.7
Nashville	90.2	327.7
Galveston	42.7	137.8

We have been told repeatedly by men high in the councils of the medical world that the death rate of pneumonia is rapidly increasing in this country. My personal investigation of this subject has brought me to a different conclusion and, claiming the prerogative of the man from Missouri, these writers have to show me conclusive proof of their assertions. For instance, Dr. Edward Wells of Chicago in the Journal of American Medical Association, for September 24, 1904, says that during the decade 1804-13 New York City had a mortality of 1.3 per

thousand from pneumonia, which rose to 2.5 in the terminal decade of the century; that in Philadelphia he notes an increase from 1.2 in 1861-70 to 2. in the decade 1893-02. Mr. Hutchcroft of the State Board of Health bears me out in the statement that prior to twenty-five or thirty years ago there were no reliable mortality statistics in the United States, with the exception of some statistics in Massachusetts and Connecticut. The rule that may hold good in the case of these two cities and others that Dr. Wells cites does not necessarily hold good for the entire country. But if we concede the correctness of these figures then we are forced to the conclusion that the current of mortality has reached the height of its devastation and is now receding, for the mortality statistics of the United States for nine years, 1900-8, shows that the death rate of pneumonia in New York averaged 1.79 per thousand, as against 2.5 which I have just quoted, and that the death rate in Philadelphia of 2 per thousand has fallen to 1.32 in the same period of time.

Again an editorial in the Journal of American Medical Association for April 14, 1900, commenting on the increase in death rate of pneumonia says that it was responsible for 13.48 per cent. of the total deaths in Chicago in 1899, which was in excess of the death rate for previous years. This is probably true, but statistics show that for the period 1900-1908 inclusive, pneumonia was responsible for a yearly average of 10.5 per cent. of the total deaths.

Lest you may think that I am going too far into the ancient history of this subject I will come down to modern times, and refer to Dr. Kober, chairman of the Committee on Social Betterment. In his report, which was published by the President's Home Commission in 1908, he says that the disease is unfortunately increasing in this country, and that the increase is doubtless influenced by the increased consumption of alcohol. He reproduces graphically a chart from the report of the Health Officer of the District of Columbia, showing that the deaths from pneumonia during 1906 numbered 503, and the average number of deaths annually for ten years was 497.2. In 1908, despite the increase in population the deaths had fallen to 490 from the same cause, a decline of 2.3 per cent.

In any investigation of this subject, there are two or three things of importance to be borne in mind. Early mortality statistics with one or two exceptions, are wholly unreliable. Again, the registration area of to-day, which includes seventeen states and seventy-five cities included eight states and eighty-three cities in non-registration states, or 31 per cent. of our population. Moreover, the registration area of 1890 was practically the New England states, and no less than twenty-

eight cities of over 100,000 population scattered over the breadth of this land. It is a well known fact that the death rate of large cities is higher than the death rate of rural communities, e. g. in 1890 the aggregate death rate of the cities in the registration states was 23.47 per thousand, and of the rural district, 15.65. The report for 1908 shows a marked improvement over 1890 since the rate of 23.47 has declined to 16.5, and the rural rate from 15.65 to 14. This decline has doubtless been brought about largely by improvement in the sanitary conditions of the cities, resulting in a lessened loss of life by consumption, to better quarantine regulations and the use of diphtheria antitoxin.

And, moreover, the apparent increase in pneumonia that these writers refer to was doubtless due to some extent at least, to better diagnoses of the underlying causes of death. In early days, the immediate cause of death of many children was put down as scarlet fever, measles, whooping cough, which today would be attributed to bronchopneumonia, complicating the disease. Likewise in adults, bronchopneumonia may be the immediate cause of death in disease of the heart or of the kidneys.

As to the fixed character of the death rate of pneumonia, the testimony of Caldwell is worthy of attention. He said in 1900, "For a period of forty years there was kept an accurate record of all cases of this disease that occurred in the Massachusetts General Hospital, but unfortunately these records teach us only one fact of practical importance, and that is, that however varied the treatment may have been the mortality of the disease was essentially the same."

Mr. Hutchcroft of the State Board of Health tells me that it can be foretold with a fair degree of accuracy how many deaths from pneumonia will occur in this state in a single year. According to the reports of this body covering a period from January 1, 1905 to September 30, 1906, pneumonia furnished 7.8 per cent. of the total deaths of the state. Of these deaths 61 per cent. were under five years of age or over seventy. A large proportion of these were probably of the bronchial type of pneumonia, for Holt says that under two years of age 75 per cent of all cases of pneumonia are bronchial in character. Mr. Hutchcroft has kindly furnished me a table bearing upon this point which is as yet unpublished. During the 27 months from October 1st, 1906 to December 31st, 1908, there were 4,254 deaths in this state from pneumonia. Of these 923 were of the bronchial type.

89	were	under	2	months.
280	over	2	months	and under 1 year.
213	from	1	year to	4 years.
23	"	5	years	" 9 "
17	"	10	"	" 19 "
18	"	20	"	" 29 "
13	"	30	"	" 39 "
13	"	40	"	" 49 "
23	"	50	"	" 59 "
56	"	60	"	" 69 "
88	"	70	"	" 79 "
73	"	80	"	" 89 "
7	"	90	and	over.

From this table it will be seen that 60 per cent. of all cases of broncho-pneumonia were in children under four years of age and 18 per cent. were in individuals seventy years of age and over. Extreme youth and old age seem to be elements favorable to the development of this type of the disease. A total of 923 deaths from broncho-pneumonia in twenty-seven months would give us an average of 408 deaths yearly or a death rate of 20.4 per hundred thousand population. In the registration area of the United States the death rate from broncho-pneumonia in 1908 was 37.2. It might be of interest to know that of the twenty-two largest cities in this state, Madison ranks eighteenth for 1908 in the size of its death rate from pneumonia. Green Bay comes first, 149.9 per hundred thousand, Madison eighteenth with 41.1 and Manitowoc twenty-second with 30.1.

I have gone over with considerable care all the literature at hand on this subject and I am satisfied that the death rate of this disease is a fairly fixed quantity, seldom exceeding 10 per cent. of the total deaths.

In point of fact for the past nine years the death rate of pneumonia like that of tuberculosis has been on the decline. The only diseases that present an indubitable tendency to increase in frequency are heart disease, cancer and diabetes.

In view of all these facts, I believe we are justified in our conclusion that the death rate of pneumonia in the United States is and has been approximately 10 per cent. of the total deaths.

A SURGICAL ASPECT OF MEDICAL EDUCATION.*

BY J. L. YATES, M. D.,

MILWAUKEE.

Were many conscientious people to take general educational problems as an avocation there would be less reason for reformers and no excuse for pessimists. This applies with particular force to medical education, as that necessitates direct interest in primary and secondary preparatory education, as well as improvement in the purely technical training with a consequent material professional advancement and its inevitably great beneficent effect upon the general welfare.

Such a view point may perhaps justify bringing this subject to your attention, with the hope that even an unripe personal opinion limited to one department, may in some way serve to stimulate more active interest in the general problems which confront our medical educators and to which we should lend every possible unselfish encouragement to make probable the earliest happy solution.

A definition of surgical education in terms of (1) raw material, medical students, (2) finished products, surgeons, and the (3) various scientific and clinical by-products, laboratory workers, practitioners, will be attempted as a direct method of approach to the subject to be considered.

I. MEDICAL STUDENTS.

The diversity of opinion now held as to the minimum preparatory requirements to be demanded of medical students for their greatest ultimate good indicates that this fundamentally important question has not as yet definitely been answered by the results of practical experience and can only be complicated by academic discussion as it is through rational experimentation alone that advances can be made in educational as in other lines of endeavor.

Pragmatically it may prove to be, in effect, the true post-graduate basis, certainly not more, or the so-called combined six year course, probably not less.

The fundamental consideration is to have the average of students at the top of its receptive speed yet sufficiently matured to make feasible the application of University methods of instruction as opposed to the too common school type now so prevalent. Students should be provided with every opportunity to learn, be guided to the realization of these opportunities and stimulated by inspiring examples to seek

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independent self development with its healthy self confidence. The sooner students comprehend that they cannot be graduated as finished products in any department, that they can only be taught methods and be inspired to go on to perfect themselves through the application of their individual powers of observation and selection the faster will the dogmatic, rule o'thumb and other mediaeval methods of instruction and practice continue to disappear. Even before this disappearance let us hope will vanish the fallacy that specialization in therapy indicates in any way specialization in basic preparation.

The entire active profession soon will be composed of Doctors of Medicine and this should imply more than name. Stated bluntly this should read that any Doctor of Medicine, practicing whatever specialty of therapeutic, ought to be capable of recognizing in a patient any ailment susceptible to effective treatment by any form of special therapeutics and if such treatment can better be provided by an available brother specialist there is moral obligation promptly to bring that patient in touch with that specialist without hope of any reward other than acting in the patient's interest or be open to the just accusation of stupidity or cupidity. For years to come there must even in larger centers be practitioners of internal (general) medicine and general surgery, and for very many years longer rural practitioners must be prepared to meet the emergencies of General Medicine (all inclusive) but the day is long passed when any one can maintain any considerable practice in even a few specialties without erring grievously in omission or commission through ignorance or lack of time and there can be no way of justifying these too often moral sacrifices to selfishness.

Medical students should be given every opportunity and encouragement at the most opportune period to learn how to learn broadly and receive the greatest encouragement to absorb and to foster ideals of attainment whether in science or practice, including proficiency in the Golden Rule. Diplomas should indicate first that the bearer is worthy of confidence and second that developmentally he is fit for competition.

II. SURGEONS.

If it be difficult to obtain widespread agreement upon the subjects of preparation and curricula for medical students it is impossible to reconcile the opinions of even a few individuals concerning the attributes of the finished surgeon. A clinician resorting mainly to mechanical therapy might answer as a description were it not worthless through being universally applicable, with sufficient mental reservation, to any individual.

As a possible solution why not select the foremost active exponent of the science and the art of surgery and use him as a basis for a definition?

This is comparatively easy as v. Mikulicz-Radecke, possibly his closest competitor—proclaimed the master, in Kocher.

What then is to be found in Kocher and how was his development influenced by his training?

Above all he is a gentleman in its broadest sense, student, investigator, accurate clinical observer, conscientious operator of wide experience whose writings upon almost the entire field of general surgery bear the unmistakable hall mark of well merited authority. Even a brief stay at his clinic reveals his broad altruistic attitude toward his work through the seemingly overcareful pre-operative observation and examination, the painstaking efforts to reach correct diagnosis which are efficiently controlled at operations that are invariably performed rigidly in keeping with the actual findings, never haphazard nor biased by faulty premises or a desire to impress his audience. He has two definite purposes, to do the best for the patient and to make that individual's conditions contribute directly, or through co-related investigations, to the sum of knowledge.

In the operating room he requires no internist, neurologist, nor pathologist to make his diagnoses, no physiologist to indicate the therapy, no anatomist to give landmarks, no statistician to bring chill comfort in unreliable figures nor moralist to preach the Golden Rule. He permits no press agent to keep his features before the public and blaze a trail to his consulting room, nor political machinery to land him in conspicuous office.

He has refused the highest honors the continent can offer, to remain where he can do his best work, which alone interests him; and eloquently it speaks to the world for him.

Well balanced, with the large point of view, he is loyal to the art but proud of the science of surgery and knowing or seeking to learn the *why* as well as the *because* of all things surgical and hence medical he is guided not by empiricism, intuition, divine inspiration, nor by explanations, extracted to suit conditions, from the profound pseudo-science of text-book accumulations. His is a knowledge derived from first hand experience after years of labor, his statements are based upon accurate observation not upon assumption. In short he is primarily scientific, secondarily clinical and lastly an operator.

America has produced a goodly number of more deft technicians of great transient vogue who have made more important contributions to the kaleidoscope of operative procedures, but few indeed who have

added materially to the underlying and more important fields of physiology and pathology wherein Kocher's name will be preserved when modern operative methods are obsolete, a fitting tribute to the breadth and depth of his attainments.

Born 1841 he is now at the threshold of retirement from his university career as Professor at Bern, a post he has held since 1872. Thoroughly trained in the schools of Zurich and Bern he was also a student in London and Paris, a pupil of Pasteur, Lister, Lucke, v. Langenbeck and Billroth.

Given ability, energy and sincerity there is small wonder that development under such influences has been so broadly productive. The lesson is obvious.

Accept then if only for the sake of argument that in broad interpretation a surgeon may be defined as one widely versed in medical sciences, a clinician intellectually and technically competent to operate but above all an independent constructive investigator upon the vast sea of ignorance, a sincere iconoclast in that mystic temple of tradition and superstition wherein the large family of Aesculapius is wont to worship, alas too often but the golden calf.

III. BY-PRODUCTS.

This designation may be ill chosen but at least it possesses the virtue of clearness and accuracy even if suggesting an unintentional criticism.

No laboratory doing more than hack work can progress without experimentation which usually means the most accurate and irreprouchable operative technique. Laboratory workers without broad clinical training and conceptions are tremendously handicapped which in part explains why so much of such great practical significance lies buried in scientific archives.

These pure investigators should be keenly alert to see and to be ready to develop the clinical significance of observations made incidentally to the study of problems in hand. Thus research workers could command the now too unresponsive interest and support of clinicians and the latter could with better grace take their problems to the laboratory.

Exclusive of surgeons the great army of practitioners may be divided into three groups; one that operates if even only under stress of urgent necessity, another that finds some operating incidental to the day's work, men in country practice, in the surgical specialties, and one that operates whenever possible but is unable or unwilling adequately to try to train themselves to become surgeons as above defined.

All of these men in addition to being aware of the means and

necessity of early diagnosis in cases requiring operative treatment should know *what not to do* and *why* and therefore how to avoid making bad matters worse, as for example in the spreading of infection by motion or the dissemination of **malign** tumors by avoidable traumatism including the unpardonable sins of rough handling in examination and as a general rule the excision of specimens for pre-operative microscopic diagnosis. All who feel themselves fitted or called upon for any reason to operate should know enough bacteriology to be clean, enough pathology to keep out of mischief and enough physiology to respect tissues in view of wound healing and subsequent function.

If the above assumptions of what surgical education should be expected to accomplish are approximately correct the next consideration is that accomplishment, perhaps ideal in manner but sufficiently practical to be possible.

First let it be most clearly understood that the best general training can be attained only in the highest type of schools. There should be no grading for rich or for poor, for brilliant or dull, for prepared or unprepared, for research men or clinicians, teachers or practitioners.

Methods and morals alone can be taught and that teaching never can be too thorough or too broad for any one in medicine wherein the survival of the fittest is as ever a stern reality and wherefrom the unfit can not too early be eliminated.

The surgical portion of a medical school curriculum must guarantee two things, first, that every student may be assured of an opportunity to get the best possible training in surgical pathology including diagnoses and in surgical physiology including the fundamentals of operative methods with those of the much neglected after treatment, and second, that students expecting to specialize in surgery should find, but not too easy of access, additional opportunity and encouragement to advance themselves not solely although particularly in laboratory methods of diagnoses and investigation. The least important if most alluring major operative training to be withheld as a goal to be attained by rigorous preparation.

No such plan can develop without an efficiently organized department, easily conceived but achieved with difficulty. Application of the principles that have brought success in all ventures should be equally efficacious here.

Under one head, a general surgeon, might advantageously be correlated the various surgical specialties, neurological, male and female genito-urinary departments, art, X-Ray and laboratory divisions and possibly extending to the surgical out-patient specialties. The main essential is that the head of the department by training and inclina-

tion be able to take a direct personal suggestive interest in the individual work of the entire section there to promote productive effort, else the teaching will suffer and thus to be able through this direct personal knowledge of the investigative work and teachings of each specialist to help the student co-ordinate what has been gleaned separately from each of these men, in its general relationship to the welfare of the entire organism as illustrated in the autopsy room, laboratories, clinics and at the bed-side. An unselfish head of such a department might be able to accomplish comparatively little in the way of personal contributions but the sum of the entire departmental contributions to the problems of surgery and surgical teaching could amply justify the sacrifice.

This digression was roughly to indicate a system that would make it virtually impossible for a student to say for example: "I never had a chance to use a cystoscope" or "I never knew ophthalmoscopy was so important" though it might be said "I never took the time to try" and which thus might develop methods, possibly utopian, which would offer opportunities and offer them so advantageously as to make learning irresistibly delightful at the time when the habits of life are being formed.

Such teaching should establish the dependence of true surgery upon all the medical sciences and its inseparable relationship to other forms of specialized therapy, and would dispel the false conception that the chief aim of surgical development should be operative technical skill and to instill the view point of the architect rather than that of the carpenter.

CHRONIC DIPHTHERIA.*

BY G. C. RUHLAND, M. D.,

MILWAUKEE.

From the earliest times of medical teaching, processes of disease have been classified as acute and chronic. This classification very naturally was based upon the duration of a given symptom complex by means of which a condition of disease was recognized. There is no particular fault to find with such a classification so long as it means to differentiate processes of disease by the length of continuation of an objective symptomatology.

*Read at the 64th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 23, 1910.

As a matter of fact, this primeval mode of classifying disease has well maintained itself even in modern times. While the study of pathology, and particularly bacteriology, has greatly altered our understandings of the nature, and especially of the causation, of disease, yet we continue to view and classify disease processes much in the same pristine fashion.

Now, while this practice is eminently convenient, it is certainly—like most convenient definitions—lacking equally eminently in scientific definiteness. Today we apply the terms of an acute or chronic process largely to disease conditions in which the etiological factor (bacterial or protozoic) is definitely known or from analogy may be at least inferred. All text books of medicine give a more or less comprehensive group of acute infectious diseases, and the idea that is conveyed by such a generic term is that the diseases thereafter mentioned all tend to run a more or less definite short course, with a likewise more or less definitely marked symptomatology. Now this element of time upon which this classification is based unfortunately is very uncertain. There is no standard which determines when the acute condition ceases and the chronic begins. While to be sure it is a valuable element in the physician's part of the treatment to assure a patient that he ought to recover within so many days, weeks or years, and may also be a source of comfort to a physician to know that no matter what, the case will usually get well anyway, yet it remains essentially a highly unsatisfactory way of dealing with disease if not the patient.

The acuteness of a disease measured in time certainly is a very unreliable factor, since it may be a matter of hours or many years in turn. With our present understanding of disease as a process of reaction of living tissue toward an irritant, we must readily conceive that the duration, as well as the intensity of reaction, i. e., symptomatology, naturally must vary according to the quantity and quality of the irritant as well as ability of the organism to react.

In the light of modern teaching with regard to the etiology of disease and the methods of defense of the living organism, it seems that we are compelled to give up the classification of disease based upon symptomatology, at least of the nature as heretofore practiced.

The question, What constitutes disease, or when is an individual diseased, must no longer be left entirely to an objective gross symptomatology. The question of disease must not be one of the presence or absence of marked subjective or objective symptoms, but rather the presence of a known specific disease-producing agent. The absence of symptoms is no proof for successful treatment in a case of lues in

the face of a positive Wassermann reaction; absence of symptoms of acute urethritis is no guarantee for the innocuousness of the roué's connubial embraces; four weeks of illness, with an uneventful "recovery" from typhoid, is no proof that this same individual may not infect many others for years thereafter.

I have written at some length on what must appear the general proposition of acute and chronic diseases, and you may fear that I may never reach my subject. I have done so advisedly, because the few data that I wish to submit briefly are essentially subservient to the general issue.

In the capacity of Bacteriologist of the Milwaukee Health Department, I have in the course of the past years had the opportunity to study a great wealth of bacteriological material particularly from diphtheria cases. It is the practice of the local Department to release cases under quarantine for diphtheria only upon two consecutive negative cultures. It has been my observation that cases not uncommonly would show positive cultures for four, six or eight weeks, and that in almost all these cases local after treatment, after disappearance of the membrane, was neglected. I have had the admission of physicians (and not a few either) that in their opinion after the administration of antitoxin and the disappearance of the membrane, the case needed no further care, barring, of course, conditions of paralysis.

In this instance, the thought that diphtheria is an acute infectious disease in which the course can be cut still shorter by the administration of antitoxin, and that the care for the case is ended with the disappearance of the visible symptoms, i. e., membrane, fever and prostration, seems uppermost. Truly the ideal preventive medicine can never be realized if the understanding and care of acute infectious diseases is based upon so myopic a view of the matter. It should be realized that the diphtheria organism is one of the most widely disseminated and most easily communicated organisms; that it shows a decided tendency towards adapting itself to its environment and maintaining itself in other words, that it tends to establish a chronic infection.

Chronic diphtheria may be conveniently considered under two groups:

I. Those in which the organism persists without causing any particular lesions and symptoms.

II. Those in which the organism persists, with both lesions and symptoms.

Cases under the first group are naturally most common. They undoubtedly include all the cases of so-called pseudo-diphtheria. As Goodman has shown, however, most of Hoffman's pseudo-diphtheria

bacilli are merely involution types of the true Klebs-Loeffler organism. As a very important point in this connection, it should be remembered that, as Sholly has proved, one-third of these organisms are virulent, naturally more frequently so in individuals who come in contact with fresh cases more often. This might explain some of the cases of double infection of scarlatina and diphtheria which at times occur in such an inexplicable way. The nasal mucous membrane, according to Cadiot et Mandoul, is particularly likely to become the resting place for prolonged diphtheria, and consequently should receive especial attention in the treatment. Here the process may be responsible for the development of rhinitis atrophica, as described by E. Neisser, or also, according to Neufeld, the cause for ulcers, which, simulating luetic or tubercular processes, may persist for months and years. The latter condition, while without fever, is said to be associated with marked prostration, headaches and anemia.

Another form of chronic diphtheria infection, which apparently is not so uncommon, although scarcely or very briefly touched upon in the text books, is presented in an infection of the trachea and bronchi. I have collected at the present time 38 cases in which the etiology seems fairly clear.

The following history is typical for most of them. Miss X—, a patient of Dr. S. T., of this city, was referred to me for sputum examination and blood count. The patient is a fairly well developed girl of 17 years. Hemoglobin 65; leucocytes 15,000; slight secondary anemia; bronchial cough; pulse 80 to 90; complains of weakness. Sputum examination negative for tuberculosis but contains a great many bacilli of the Klebs-Loeffler morphology. Bacterial culture identifies true Klebs-Loeffler bacilli. Nose and throat finding negative, but patient gives a history of a slight untreated sore throat about six months prior to her present visit. Bronchial cough, bacterial findings and other symptoms clear up after the administration of antitoxin.

The history of the other cases, mostly in children although adults are among the cases collected, is quite similar, and while I have not made a bacteriological identification beyond the morphological and staining characteristics, yet the therapeutic results seem to substantiate the etiological surmise. These cases apparently result most commonly in mild cases where antitoxin is not used and where no membrane formation suggested the nature of the trouble. As pointed out by Solis-Cohen, a rapid pulse with more or less prostration and pallor, secondary anemia, characterize the symptoms, and usually bring the cases, as in all those collected by me, under suspicion of tuberculosis.

Summarizing the points that I wish to make in presenting this paper, I would like to repeat:

I. The fallacy to depend upon symptoms for differentiating acute and chronic diseases.

II. The great importance of local after-treatment in all cases of diphtheria, both for the good of the patient as well as for epidemiological considerations.

A LIPOMATOUS GROWTH IN THE SUBMUCOUS TISSUE
OF THE ILEUM AND CECUM PRODUCING INVAGINA-
TION, ROTATION AND OBSTRUCTION OF
THE BOWEL.

BY A. H. LEVINGS, M. D.,

MILWAUKEE.

I am prompted to report the following case on account of the rarity of the pathological findings. History: Mrs. B., age 44 years, spare in figure, mother of five children, the youngest being 14 years. Had never been seriously ill until eight years ago, when she was taken with severe abdominal pain, which continued off and on for several weeks, confining her to bed. The cause of the pain was not determined and after three weeks it gradually disappeared and she remained well until two weeks ago, when pain of apparently the same character returned. The pain was now located near the umbilicus, but more especially on the right side: there were also at times increased peristalsis and eructations of gas. The abdomen was tympanitic and the bowels acted sluggishly, medicine often being required for this purpose. There was no vomiting and only one day did she have fever. Her appetite was disturbed and sleep difficult to obtain.

When I first saw her on December 27, 1909, she had been in bed for three weeks with more or less constant pain in the abdomen. Upon examination, a mass could be felt in the umbilical region and to the right. This mass was dull on percussion and this dullness seemed to extend to the liver. The tumor was not especially sensitive on pressure and could be moved in different directions and seemed elastic. Pelvic examination negative. The patient had never been jaundiced or suffered from a severe colic such as would produce nausea or vomiting. The further facts that the tumor could not be pushed up beneath the liver and the general character of the swelling coupled with a normal condition of the urine and occasional increase of peristalsis, led me to believe that there was a tumor of the cecum or ascending colon.

There had been no bloody stools and no marked increase of pain before the bowels moved.

The patient went the same day to St. Joseph's Hospital for operation. When she was placed on the operating table after anesthesia, the tumor was indistinctly felt in the right iliac region. Incision was made through the right rectus and the tumor pulled out of the abdo-



men. It seemed a tangled mass of intestines. The lower end of the cecum and ileum had rotated on their mesentery to the left one full turn. About six inches of the ileum was invaginated into the cecum. On reduction of the rotation and invagination there was seen a sausage like growth in the lower end of the ileum and in the first portion of the cecum. The ileum was perhaps twice its normal size, perfectly smooth on the outer surface, barring some teat-like projections and seemed to be filled with a soft, yellowish mass, which through the peritoneum looked like fat. There were some large glands in the mesentery. About ten inches of the ileum was involved and two or three inches of the

cecum. The rest of the intestinal tract was normal. The ileum was clamped off a couple of inches above the growth, divided and its proximal end invaginated and sutured. The cecum was clamped beyond the growth, divided and sutured. The mesentery was ligated and divided, the mass removed and a lateral anastomosis made between the ileum and the ascending colon. The patient made a good recovery.

On making a cross section of the ileum, Fig. 1—X—X it showed



macroscopically, an enormous growth of fat between the mucous and muscular layers of the intestine. This fat was in places one inch thick and extended into the mesentery. It also projected beneath the peritoneum in places in quite large lobes. Fig. 2—shows the interior of the ileum and cecum, the five X's represent their line of junction. The single arrow points to a lobe of fat in the cecum; the four arrows point to masses of fat larger than a man's thumb, which projected from one-half to three-fourths of an inch into the lumen of the ileum, causing almost complete obstruction.

A lipoma in the gastro-intestinal canal is a rare condition. Pathologists refer to intestinal lipomata but comparatively few cases have been recorded. Virchow encountered a submucous lipoma of the stomach as large as a walnut: Turner saw a fatty tumor the size of a large walnut, growing in the submucous tissue of the large intestine and projecting into the lumen of the bowel near the ileo-cecal valve:—Stubb reports the case of a lipoma situated 75 cm. from the ileo-cecal valve, in size and shape it was like three acorns, conjoined at the cups and had produced invagination. Stubbs reduced the invagination and excised the growth. Braun, Moynihan, Mayo Robson and Monserrat have met with cases. In the *Journal of Surgery, Gynecology & Obstetrics* for March, 1910, Dr. Max. W. Meyer of St. Louis, reports the case of a fatty tumor of the sigmoid, as large as a man's fist.

These tumors usually take origin from the submucous or subperitoneal tissues. In regard to the etiology chronic hyperemia or inflammation, whether due to injury, infection, or irritation is often the predisposing cause. I have met with two lipomata upon the surface of the body which grew in the inflammatory exudate, following an injury. Park says that the sub-serous lipoma in their pathological development have the general form and significance of the appendices epiploica. These appendices are localized pedunculated outgrowths of sub-serous fat which in well nourished people is continuous with the fat in the mesentery. In Dr. Meyer's case the growth on microscopical examination showed near the middle a marked round cell infiltration. The fatty tissue was situated beneath the peritoneum. Dr. Meyer thinks that these tumors are inflammatory in origin.

In my own case, Dr. G. C. Ruhland, Pathologist to St. Joseph's Hospital, reports as follows: "The specimens which you have submitted from Mrs. B. give the following findings: Sections which are taken through the intestine wall show an accumulation of fatty tissue which is confined to the submucosa. In no instance does this fatty tissue extend beyond this limit. The muscularis, while showing some slight atrophy in one of the specimens, shows no inflammatory invasion. The epithelium of the mucosa overlying the collection of fatty tissue appears practically normal. The sections taken from the mesenteric lymph nodes show the same to be practically normal excepting for the presence of some blood in the sub-capsular lymph sinuses in one part of the gland. Altogether, the condition must apparently be interpreted as one of lipoma."

In regard to the diagnosis it is quite probable that a positive diagnosis of lipoma within the intestinal canal is impossible without an incision. There are some symptoms, however, which may lead one

to make a probable diagnosis. The majority of cases occur in middle-aged persons. There is an absence of cachexia. The tumor, if it can be felt, is soft, elastic, freely movable and painless. Usually there will have been a history of several attacks of obstruction of the bowels. These attacks of obstruction are caused either by the growth of fat into the lumen of the bowel or are due to invagination or rotation.

Bland Sutton, Park and others speak of the frequency of invagination in this class of cases as well as the tendency to frequent attacks of obstruction. In regard to the treatment, excision with lateral or end-to-end anastomosis is the only method that offers any hope of cure.

THE TSETSE FLY AND SLEEPING SICKNESS: OTHER INSECT CARRIERS OF DISEASE.

BY ALFRED C. BURRILL.

LECTURER TO THE MILWAUKEE PUBLIC MUSEUM.

A story by Herodotus with which I will introduce the tsetse discussion is of the crocodile on the Nile. He tells us that there was a crocodile on the Nile in those days which was in the habit of climbing up on a sand bar to go to sleep, and after the manner of his kind, dropping his jaw and almost snoring, with his mouth open; and while in such indecorous attitude, a little bird comes along, goes into his mouth and cleans it of the blood-sucking leeches, etc. He said that not only did the crocodile open his mouth for the bird, but also when the bird stepped out, the crocodile would close it again. People could not quite swallow that for a good many centuries. They sent scientists in the later days to see about it; and some came back and said it was a lie, and some said it was true. That is a sad commentary on the scientists,—that they could not agree to seeing a thing as large as a bird walking into a crocodile's mouth. But the story is true. When the bird hops out the crocodile closes his mouth, to open it again when another bird comes near. It is remarkable that there should be such a friendship or relationship between two entirely different creatures, and for a long while we were not sure of how it came about. Of course such a close relationship must have begun long before the days of man, if we presume that two such different creatures should work in a sort of harmony. Here was the Plover bird, a sort of animated tooth-

*Read at the 64th Annual Meeting of the State Medical Society, Milwaukee, June 23, 1910.

brush for a cold-blooded crocodile. The mystery set before us was to seek what benefit the bird could give the crocodile and how the crocodile should ever become willing to receive it.

In recent times in the study of the sleeping sickness in Africa, we have observed a new relationship with this old story. This relationship has considerable interest because of our knowledge of the tsetse fly's ability to give man the sleeping sickness. Where did that



Trypanosoma gambiense, the cause of Sleeping Sickness (magnified 1,000 times). Three are here seen among the disc-like red blood corpuscles.

[Reproduced from a paper by Professor Minchin in *Parasitology*, by permission of the author and publisher.]

fly get its ability to stand the trypanosome germ without succumbing, for we know the fly does not suffer by the trypanosome?

The tsetse fly frequents the borders of marshy rivers, especially crocodile haunts. It is one of the blood-sucking flies, attracted to crocodiles especially because of their musky odor, much stronger when they are on the sand bars basking in the sun. Vast numbers of blood-sucking flies come about the crocodile, among them the tsetse fly, which is one of the creatures that draws blood from the saurian. The latter must make a regular fly-trap swarming with flies,—which would naturally be attractive to any insect-eating bird like this crocodile bird,

a little Plover like the European Ruff, with a bill slender as a dentist's delicate probe, just right to go picking food out from between the teeth of the crocodile.

The blood-sucking leech is on the roof of the crocodile's mouth, while the blood-loving fly flits about his body and is, no doubt, as dainty a morsel for this crocodile bird as the leech. From the bird's learning to eat blood-sucking flies on the back of the crocodile, it was an easy stage to the open mouth, there to find the blood-sucking leeches; and perhaps there was enough relief afforded the crocodile to make him open his mouth with a happy smile that would not come off until the bird finished his work of brushing the crocodile's teeth and cleaning out the roof of his mouth. So much for the older story and its relations.

Now it so happened that this tsetse fly has a pretty strenuous set of saws in his beak. When one alights on a crocodile he spreads his forelegs wide apart and plunges his fine set of little saws clear to the hilt through the crocodile's sealy skin, and as magnified, sucks blood corpuscles and with them some wigglers, protozoon parasites among the red corpuscles of the crocodile. Upon attacking another crocodile, these thirsty flies are sure to spill some of the parasites into the other fellow's blood. This transmits a hemogregarine parasite peculiar to the crocodile. Thus the tsetse fly, before attacking man, was spreading a crocodile disease among crocodiles.

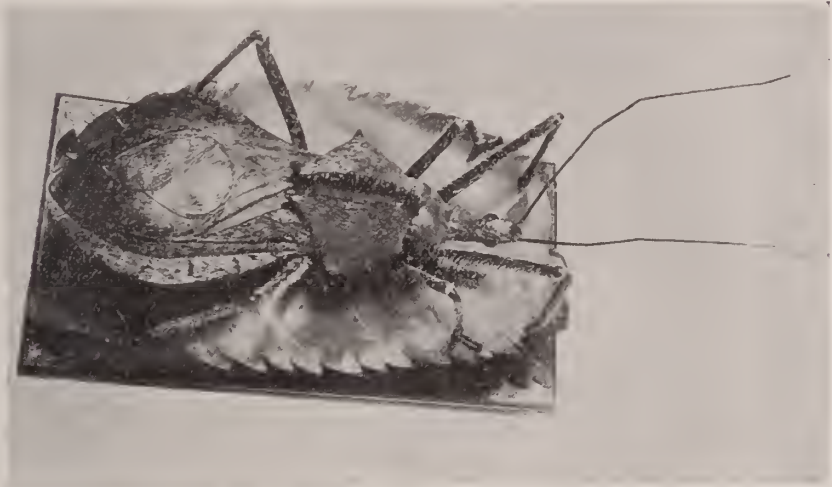
More lately still, the famous bacteriologist, Prof. Koeh, having discovered that the crocodile contains also trypanosome germs, established that in about 177 tsetse flies with full stomachs caught about Victoria Nyanza, not quite sixty-two per cent. contained crocodile and thirty-seven per cent. human blood.

Apparently then the crocodile, together with some other animals, has served as a laboratory in which the tsetse fly learned how to spread disease; and the tsetse must have decided it was a better proposition to go after the human race for a wider practice, as soon as he learned his profession of transmitting pure cultures of trypanosomes. That is what makes the study of the sleeping sickness a little complicated to-day.

Although the tsetse is the advance agent in this nefarious business of man-to-man canvass with an ever ready bill, the trypanosome is the germ we are most afraid of in the sleeping sickness. It is a germ which we may say in its action through years, is something like the syphilis germ, the *Treponema pallidum*; and it has been discovered that these two germs belong to the same family of flagellate protozoa, Oikomonadidae.

I know that Dr. Todd of Montreal has said that even if we are not successful in finding a better treatment for the sleeping sickness, yet we may see the way pointed out for a better treatment of syphilis. You will see, then, that the study of the cause and treatment of "sleeping sickness" has many international bearings, which will probably alleviate suffering throughout the human race.

My purpose this afternoon is not so much to suggest a cure as to sum up briefly the present status of the investigation. The tsetse fly was discovered about 1830 and then described, though that date may not be correct, as we zoologists are always finding somebody who did the work or made the discovery earlier than the one to whom credit



Wheel Bug, *Arius cristatus*, Linn. One of our many American relatives of the similar but deadly Brazilian Assassin Bug (*Conorrhinus Megistus* (?) Burm.), the carrier of Human Trypanosomiasis in Minas Geraes State, Brazil.

Photograph of the model (x14) in the Public Museum, Milwaukee, Wis. Magnification of the figure about 2.3 diameters.

is given. But it was not until 1903 that we were sure that the fly had any connection with the transmission of the sleeping sickness.

How can you tell a tsetse fly from any other kind of fly? This is the question every one who goes to Africa wants to know. (1) They are larger than house flies, more like horse flies, nearly half an inch long. (2) At rest their wings fold over each other, like the two blades of a pair of scissors. You will notice that the house fly has his wings at an angle when at rest, but the tsetse fly's wings come together like the blades of a pair of shears, while the proboscis sticks straight out in front—differing in that respect from horse flies, of which there are more than 100 different species in Africa—so if you can see a tsetse

fly at rest you can spot him at once. (3) From horse flies of similar size they are distinguished in flight by dark brown bands interrupted in the middle line. In the main species, of which this is a variety, (*Glossina palpalis*), the chief enemy of man, the body is almost black and at a little distance the general effect of the fly is black. Besides color they are, at close range, distinguished by the antennae which droop as in house flies; whereas in horse flies the feelers stick out in front like a pair of horns. It is interesting to note among the myriads of flies about the world that this most dangerous species has clearly distinctive points. In the house fly group the scientists have to count the arrangement of the hairs on the rear quarters of the body, to recognize the species; while the simple facts that the wings fold on the back like the blades of a pair of shears, that the antennae droop but the beak sticks out, and that there is a band interrupted in the middle line, make it easy to determine most of the eight species of tsetse fly in Africa.

(4) No tsetse fly lays eggs. House flies lay eggs; tsetses do not, but they lay maggots, one at a time. The house fly lays 120 eggs; the tsetse fly lays one maggot at a time, ten days apart, depositing them in a shady place near water, or not above ten feet high on trees. These little grubs find their way at once into the moist or loose dry ground, and there they lie in a pupa state for five or six weeks. Then they come out and are ready for business, to attack human beings or warm-blooded animals, and sometimes more or less cold-blooded animals like the crocodile or certain lizards. If it is dry weather, an abortion may take place in the mother fly; or the grub brought up inside of her may prematurely go through its next change, i. e., may pupate, and being nearly as large as the mothers' abdomen, will thus kill the mother and the pupating grub at the same time. So the tsetse fly has many obstacles to its propagation. The egg hatches in the mother's uterus where it is fed three or four days by a fluid from false teats. I do not know what else to call them; of course there is no homology with any teats in the higher orders of animals.

(5) The number of young of one mother may be seven or eight, so that not two dozen descendants probably occur in half a year. Under favorable conditions these stay seldom more than thirty yards from moist spots, unless following man or other animals.

How shall we combat the tsetse fly? (1) It is worse in the heat of the day. So, travelers should trek in the cool early morning or late in the afternoon. (2) It has been found that by clearing river banks and locating huts and centers of population half a mile back from rivers is a good plan. The river bank is the natural haunt of the

crocodile and the conditions of most tropical rivers favor the development of the tsetse fly. So, to clear the bank is a good plan, for the tsetse won't go more than thirty yards from water under normal conditions, being in that respect quite unlike most flies.

Another species *G. fusca*, has not proved as deadly to man. One variety of this fly, *G. morsitans* is famous for having banished cattle and horses from many great sections in central Africa. That is not the one most famous as the cause of sleeping sickness. You see that different species create different disorders; that different



Adult Bed-Bug, *Cimex lectularius*, Linn. Photographed from life by the late Prof. M. V. Slingerland, Ithaca, N. Y. Kindness of Entomological Dept. of the N. Y. State College of Agriculture at Cornell University.

species have different hosts. It is not known that the other five species cause death to man.

(3) At boat-landings, flies are driven out by making clearings fifty yards back from the water and 100 yards on each side, and planting sweet potatoes and lemon grass, two crops which are too low to shelter flies, as do the tall river grasses. The flies cannot get shade enough and the putting in of some low crop prevents the natural river grasses from sprouting in again.

How do we detect trypanosomes or trypanosomiasis? (1) Although the disease may incubate many weeks unnoticed in a healthy native usually swelling of neck glands occur, and if the swelling is

pricked it yields germs distinguishable on microscopical analysis. (2) a skin rash (a red rash) follows like syphilis in many cases, in whites but not in blacks. And right there is an interesting thing, that out of fourteen European cases five were women—a large per cent. when you remember that white men in Africa outnumber the women twenty to one, and five out of fourteen European cases were women. This fact immediately brought up in the colonies of great Britain a question of great concern with reference to lady travelers in the Central African region; and the observation has been made by a leading British physician that white women who travel in Central Africa, in such a region as Roosevelt has returned from, should dress in bloomers or trousers, or some such rig as can be tied tightly about the ankles, and with close-fitting wristlets to prevent the vicious flies from getting in under the heavy clothing to draw blood. Those simple suggestions are essential to safety. A mosquito veil was also advised.

(3) Flies must not be allowed to suck the blood of patients. Every physician understands why the carrying of disease to healthy persons is prevented in that way. Hence the detention camps in districts free from flies. Knowing that the fly will not go inland, they moved the whole population, as at Victoria Nyanza;—after losing 200,000 people out of 300,000,—they moved the remaining population out of the way, and the fly not following, they have been able to keep down any spread among the natives in the neighborhood of the detention camp; so no new cases have come up among the healthy natives.

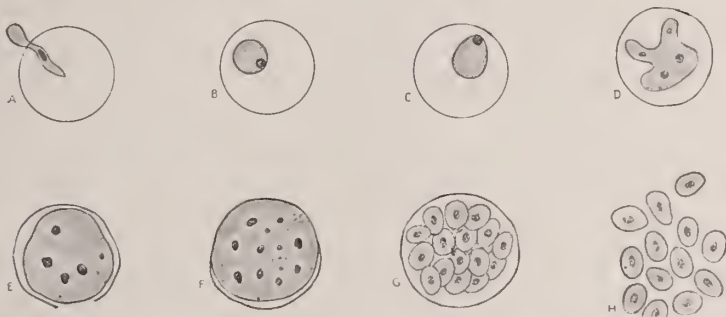
Extreme care must be taken that infected natives of one district do not get into another district where the fly may produce a greater epidemic through the introduction of a more virulent strain of Trypanosome. This problem of greater and of less virulent strains is known in the case of many kinds of germs.

(4) The trypanosome is distinguished under the microscope by the expansion of its flagellum into an undulating membrane running down the edge of the abdomen, and which may project behind as a second lash.

The Spirocheta pallidum which is the cause of syphilis, was discovered in 1905 by Dr. Schaudinn (Berlin) and it has been shown that a similar disease, relapsing fever, can be transmitted by one of the spider tribe, a zambesian tick. Now Schaudinn concludes that the disease of sleeping sickness is on the same order of active parasites, being produced by protozoan germs that are pretty closely related. Of course that does not mean that a future classification will not attempt to separate them. Dr. Todd, who was in the expedition that went to Africa in 1905, is of the opinion that venereal diseases are also caused

by protozoa of the trypanosome kind, and considers that we have a great outlook here, that if we can cure sleeping sickness we shall discover new methods for the cure of some of our other troubles in the world at large.

How shall we treat the sleeping sickness? It may last from a few months to a great many years—eight years duration is the longest record. The disease may seem to disappear and the patient to become healthy, but it will break out again, following again, roughly speaking, the course of venereal troubles we have in this country. I cannot discuss this question adequately from a doctor's standpoint, but from



The Malarial Parasite (Tertian) Asexual Cycle in the Human Blood. A. Malarial spore entering a blood corpuscle (schematic). B. C. Malarial parasite in the blood corpuscle. D. Enlarged—amoeboid parasite. E. F. G. Growth and division of the parasite. H. The malarial blood spores liberated by the bursting of the blood corpuscle. Magnification 1600 diameters. After Ruge. Courtesy of American Museum, New York City.

various reports, I gather these points. They say now there seems to be little hope of any more lasting results from atoxyl in combination with mercury, than from atoxyl alone. No other treatment has given much hope. In using atoxyl (mistakenly claimed to be non-poisonous) of course the arsenic may have a dangerous effect on the patient, causing defects of vision and quite frequently blindness, in about seven per cent of the cases; and yet, in spite of all the efforts that have been put forth, some seven European doctors having sacrificed their lives in battling the disease, over fifty per cent of the natives treated die. Investigators have been seeking all over the world for some nontoxic preparation of organic arsenic but in vain; they are trying some new combinations with organic arsenics now,—soamin and arsenophenylglycin have come in,—but it is too early to call them successful, on account of the after effects of some of these drugs. Compounds of antimony have not proven satisfactory.

On the average of all cases, nearly fifty per cent of deaths occur:

yet an instance is on record where two Indian Sepoys remained alive and well four years after an apparent cure, although blood examination still discloses the presence of the Trypanosomes.

Scientists are now looking for immunity in some form. If neither the fly nor the crocodile suffers from the Trypanosome, why should man? The partial failure of the great corps of eminent European pathologists in their onslaughts on the disease, has shaken the faith of the natives so that only preventive treatment seems available at present.

To sum up, the last report from Uganda where some of the best work has been done, is encouraging in that the number of cases have been reduced one-half, mostly by preventive measures such as removing villages and clearing river landings, with some fly-catching. It is discouraging, that while arsenic in some form almost always retards or controls the Flagellate for a time by driving it out of the peripheral circulation, it will return again,—no known method surely killing it without killing the patient. Herein is the great despair of sleeping sickness.

What I have said and shown to you with reference to what is happening in the Dark Continent in the fight against the tsetse fly, brings up the whole question of pathological entomology which has been making such rapid strides in the last few years that we scarcely know to whom the field belongs.

Dr. Herms, of the University of California, said a year ago: "There exists today rather a lack of responsibility. Whom shall we hold responsible for the study of disease-transmitting insects, the entomologist, the physician, the veterinarian or the bacteriologist?" He very properly calls for co-operation, and yet he says that none of them wants to move first in conditions of public epidemics. It is suggested with considerable force that the whole question should come under the authority of the department of public health, whether of city, state or country.

The number and extent of diseases transmissible through insects, on investigation, is found to be much greater than any one has hitherto imagined; and the subject is therefore attracting correspondingly greater attention than heretofore on the part of physicians, health officials, entomologists, pathologists, and bacteriologists.

Let me review medical entomology: and first I will consider certain insects whose attack may set up secondary inflammation or general sepsis of possibly a fatal type:

Hippelates (genus): We have a little genus of midges in the South which transmit "pink eye."



The larva of the Malaria Mosquito (*Anopheles maculipennis* Meigen). Photograph of the model (x75) in the American Museum, New York City. Magnification of the figure about 20 diameters.

Pediculidae (family): There are forty species of lice like the head louse in the United States, of which three occur on man,—the head louse, of course, the most famous one, all things considered. But that means that there is a field to investigate to determine what mischief the other thirty-seven are capable of doing. This and the following figures are from the entomologies of Comstock and of Howard, revised by those of later writers wherever available.

Reduviidae: Of assassin bugs or cone-noses there are 150 species, any one of them capable of setting up an inflammation that may end seriously. One is the "giant bed-bug" of the South and others are called "kissing bugs." But the latest data is just given to the world that one of these Cone-Noses (*Conorrhinus megistus*, Burm) of Brazil, transmits a trypanosomiasis to man and vertebrates which often proves fatal, a lingering disease like sleeping sickness.

Oestridae: Of bot-flies there are sixty species in the United States, of which only one or two are really famous, as *Dermatobia* which gets under the human skin.

Sarcophagidae: Of flesh flies, we have several hundred species in the United States, one of which (*Sarcophila*) lays its eggs in our nostrils (the disease called myiasis): blue-bottle and blow flies transmit decay germs; and the screw-worm fly also lays eggs in human nostrils. This interesting specimen is about the size of the house-fly and unfortunately very common in the middle west.

Acanthidae: The world famous bed-bugs have only twelve species in the U. S., and only one that we all know. But the other eleven may yet be proved capable of many crimes like his Nocturnal Lordship. A Washington authority has nearly sacrificed himself in trying to learn the life history of this interesting animal. A careful investigation shows that it is more than probable that bed-bug inoculation is an important factor in the spread of venereal diseases. Since the study of the transmission of disease through insects hardly developed before the great discovery of the *Spirochaeta (Treponema) pallidum* in 1905, the field is unlimited and the prospects alluring for taking up the roll of the bed-bug in the spread of all skin and blood diseases.

Pulicidae: I now call attention to the transmitters of more deadly diseases, as the rat-flea which plays the leading role in the transmission of the bubonic plague. Thirty species of fleas of this family are found in this country. Of course we do not yet know how many are capable of conveying terrible diseases to human beings; but doubtless most of these varieties, or all, may become dangerous under varying circumstances. The wonderful set of knives under the head of the flea suggests that he is armed to the teeth like a pirate of the Spanish main, and is much more dangerous.

Tabanidae: Horse-flies or gad-flies. There are over 200 species of horse-flies and gad-flies several of which are able, ready and willing to transmit anthrax or malignant pustule from cattle to man.

Culicidae: Then we have also another series of flies, the mosquitoes, of which three carry malaria in the United States while tropical forms carry yellow fever and filariasis. Permit me to review a few simple points of interest. The principle underlying the use of petroleum on water is to so scum the water surface that the little breathing-tube of the creature, when thrust up through the water to get air, will be closed and choke him by his drawing in a film of kerosene. All through the west and all through our suburbs, where they use rain-barrel water, some such treatment should be carried out every summer, unless we are going to see to it that all those receptacles are tightly covered.

It seems strange that we do not know much about the malarial mosquito in this state. In the great five-volume work on the mosquitoes of the world the distribution of the malarial mosquito is shown to the east, north and west of us; and yet there is no record from Wisconsin—an unfortunate thing indeed for us. But I was pleased to learn within a day, from one of your own members that at Madison in Dr. Marshall's laboratory they had bred many malarial mosquitoes under bell jars, but so far as I know there had been no published observation of the discovery of the malarial mosquito at large in Wisconsin.

It certainly does not speak well for the medical profession of Wisconsin that we know so little about the occurrence of a species which may carry a sudden epidemic of this disease at almost any time. And it is truly unfortunate that my institution, the Public Museum, has only a paltry half dozen specimens from the Minnesota boundary of Wisconsin, Minnesota being published already as definitely in the malarial belt. I should like to ask all of you, then, to help us out by sending in mosquito specimens at any time suspicion arises that *Anopheles* is in your neighborhood.* It should be a simple thing for any doctor to satisfy himself whether this mosquito exists in his neighborhood.

When the ordinary mosquito alights on a wall his body is parallel to the wall, and his two rear legs stick out behind. But the malarial

*Dr. L. O. Howard, U. S. Bur. Ent. Circ. No. 40 2d ser., p. 3 and Fig. 3. You cannot catch such delicate forms with your hands as well as to suddenly put a glass bottle over one thus getting it without mashing it, and mailing it to the Museum in a vial with cotton to prevent knocking about in transit.

mosquito, on alighting, tips his body at an angle and his rear feet do not project more than when walking naturally. The malarial mosquito is apt to go into your cellars and stay there over winter, and will come up into the warm room above when the cellar door is opened, and perchance start one or two winter cases of malaria for you. In New Jersey they have salt marshes and marshes inland which are comparable to the great marshes through our state. Those are dangerous because the wind does not get a chance to ripple the surface of the water. The wind rippling the surface of the water will kill wigglers even though no kerosene is used, as the wigglers are likely to be choked by little waves slopping down their breathing tubes. A reedy marsh is the kind of a place where mosquitoes are born, grow and thrive, by the million. If you have the lake shore filled in so that there are no obstructions to prevent rippling (as in Lake Michigan) you can be sure there are no mosquitoes breeding there, even though adults are continually blown thither by the wind. The New Jersey treatment for marshes is to drain them, making the richest of agricultural lands.

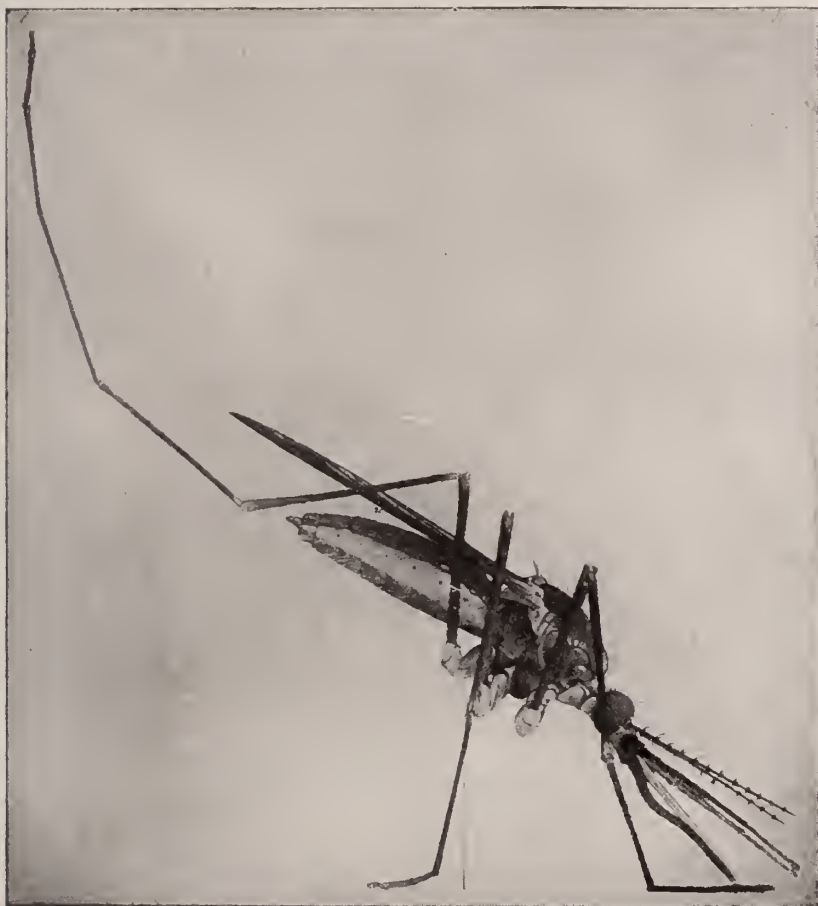
Ixodidae: Then we have the ticks of nearly 50 species in the United States. One, I have called the Zambesian Tick, spreads relapsing fever through the introduction of a trypanosome. We do not know how many other species are spreading germs, but there may be many guilty of like deeds in the United States.

Muscidae: But perhaps locally, we have had our attention called more to the common flies, the house-fly, than to any other insect class. We always knew he was a dirty fellow and a close relative of the filthy stable-fly which transmits various forms of trypanosomes (*Trypanosoma evansi*: causing surra of Javanese horses and cattle) and belongs to the same family as the tsetse-fly and those flies which give dengue, etc.

The house-fly is now notorious as the evil carrier of typhoid fever, of anthrax, of gangrene during the civil war: of Egyptian ophthalmia, where ignorant mothers hold their babes in the sunlight and do not drive away flies from feeding on their festering eyes; Asiatic cholera; yaws and pretty surely tuberculosis. I do not feel that it is actually demonstrated for tuberculosis. They may also carry plague, trachoma, septicemia, erysipelas, leprosy, smallpox, and three kinds of parasitic worms (*Taenia*, *Trichocephala*, and *Oxyuris*). To this, Dr. Howard adds summer complaint and cholera infantum.

You will notice in the recent literature that the men higher up in these studies have appealed to you doctors and the public to call the house-fly henceforth the typhoid fly. And I am sure you will pardon

my repetition of this idea through the rest of my talk, when you understand that I think it is a duty we owe the public to say Typhoid Fly, as a speedy way of impressing the people with the dangers involved. "House-fly" sounds too home-like, as if it had an inherent right to our homes, and it persistently acts that part, although the creature really merits a bad name.



Female *Anopheles* in Characteristic Stinging Posture. Photograph of the model (x75) in the American Museum, New York City. Magnification of figure about 10 diameters.

The typhoid fly is well worthy of further notice. It never bites. It is the stable fly with a beak that bites. People confuse the two because they look so much alike in color and size. You can be sure by the bite. A mere glance at the enlarged model shows the crooked, sucker-base proboscis of the Typhoid fly which can no more penetrate

our skin than a rubber cushion (i. e. it may have a slight amount of drawing action, especially when our skin is moist with perspiration). But we find fault with this fellow because he breeds most rapidly in horse manure or in privies of the country "out house" type, possibly also in garbage cans and barnyard cow manure. The house or Typhoid fly is a very hairy fellow and it is this hairiness which makes it possible for the fly to carry countless germs. So, from his dung or swill environment, the Typhoid fly brings a large fauna of germs of many, many kinds on these very hairy legs of his, and trails them into our milk pitchers and over our pies and lunch counters, and crawling over our faces when we are asleep, tickles us so that we have to wake up. And if instead of tickling us, he had only bitten us as the mosquitoes do, we would have slapped him right; but just because he tickled so, we let him go, being too inert to pursue his busy buzzy body. And the possible consequences,—wherever those dirty little feet pattered, they left a trail of disease germs,—if on food, perhaps of dysentery or other intestinal complaints, typhoid, etc. Is it then, too much to say that he seems to be the advance agent of death to more human beings than all the other insects in this country put together, even including the dangerous stings of the scorpion and tarantula?

The mother fly lays almost a gross of eggs in horse manure, where the little maggot revels a few days, pupates, and after a short rest from his strenuous labors, comes out an adult fly ready for business, all the story transpiring in ten to twelve days' time. As soon as the newly emerged fly feels his pulsing wings, he tries a stroll over the filth which was his home till his wings lift him above this plane of existence. These feet armed with a multitude of hairs, become clogged with the multitudes of bacteria and other germs swarming in the filth, so that the number of germs a fly may trail into the house and onto the food are legion.

In Connecticut at their Agricultural Experiment Station, they tested a fly from the laboratory where things were sweet and clean. It was a fly who had made himself thoroughly at home with the supplies about the place. The test which concluded his further travels showed him to be carrying 550 germs. But a similar fly, after paying his attentions to an enticing swill-pail, was caught red-handed with 6,600,000 germs on him as the result of that single call. 17 other flies averaged the same number. The average, however, of 414 flies from all walks of Typhoid-fly life was 1,222,570 germs apiece.

In the house or Typhoid fly, only ten days intervene from the egg to the adult; and this means that refuse like manure, etc., should be removed at least every week, for fear the next crop of flies will get

into the house. The model shows that the development stages are just as for other insects,—egg, grub or maggot, pupa or resting stage (not a cocoon by spinning), and adult.

From these facts we draw this lesson, then. Every person who does not know that garbage or horse manure should be disposed of within ten days must be held, in the near future, criminally negligent since he may be harboring a source of death to many unsuspecting persons in the community. Every physician, also, seems to me almost criminally negligent if he does not know of some simple way of checking flies from breeding in such filth,—one check, for example, is in mixing chloride of lime into manure, etc. Formerly, the Department of Agriculture through Dr. Howard, recommended kerosene, where there was no danger of conflagration, but the method was too costly in the large amount of oil needed to drench the pile. Now opinion is



THE MALARIAL MOSQUITO LARVA
ITS USUAL POSITION IS HORIZONTAL AND AT THE
SURFACE OF THE WATER.



THE COMMON WRIGGLER
ITS USUAL POSITION IS OBLIQUE, AND THE TIP OF THE
SIPHON ALONE REACHES THE WATER.

Characteristic Position of Larvae of Malaria and Common Mosquito.
Courtesy of American Museum, New York City.

swinging to the idea that light-tight chambers for manure will do. Note the word light-tight, not-air-tight or water-tight. If to this the chloride of lime treatment be added, little more will ever be needed to make fly prohibition perfect. Every community would do well to enact public health ordinances like those now in use in the District of Columbia.

Paint this common picture in your minds:—garbage on the sidewalk draining into the street with a sink drain and little children playing in the gutters. It is perfectly easy to transmit disease under such conditions in more ways than one.

Some interesting figures have been made as to the progeny of one female fly. Dr. Howard says a typhoid fly lays 120 eggs for one generation and our flies go through fully ten generations. The number of generations is much greater in the South. Now a bushel, it is estimated, will contain one million flies. Ten generations of progeny from one fly in one season will fill 195 billion bushels, or if we follow Dr. Felt's figure 190 quintillions of progeny from one female in a year, call it 195 trillion bushels.

(Moving pictures on the subject, showing the relation of filth to the typhoid-fly were then exhibited.)

I have now sketched in the chief classes of insects from whom we expect recurring troubles and diseases, and to a slight extent have indicated simple modes of treatment. Let us turn next to the larger aspects of the matter—to consider how epidemics and endemic diseases can be handled on a larger scale than ever before. We look with hope towards a speedy establishment at Washington of a national Bureau of Public Health, with a ranking member in the President's Cabinet, perhaps. We surely must take at least as much care of the physical health of our people as we do of our farmer's hogs, or cattle, or crops. Meantime, neighborhoods located in endemic disease belts must busy themselves with the more immediate and less costly measures for the control of such disease. Here in Wisconsin, I believe I am right in saying, even without the proof of a careful survey, that our most important disease-carrying insect problem is the control of the Typhoid fly from purely disease considerations, and next, perhaps, the mosquito or the black flies merely from the standpoint of public comfort. I presume we can not expect public support so speedily in the matter of public comfort as in that of stamping out disease. Nevertheless, taking the country by and large we can turn for illustration to the malarial campaign a crusade of greater extent than that against any flies other than the mosquito.

If some of you physicians feel at all helpless in efforts to arouse public interest in medical entomology locally, by all means take a cue from the methods in the war on malaria. We seem to have made more thorough progress in our world-wide campaigns against the mosquito than with other insects dangerous to man. Let me quote from the latest bulletin of our remarkably active Bureau of Entomology at Washington. Dr. Howard relates that at least two cities in the United States have enlisted the work of the public schools in prevailing on the public to take active steps to exterminate the mosquito:

"At Worcester (Mass.) the work was of the most interesting kind. Dr. William McKibben and Dr. C. F. Hodge started the crusade. Breeding places were mapped and photographed and public lectures were given. The school children of the several grades were interested and were organized into searching parties. Many breeding places were filled, and others were treated with kerosene. A strong point was made in Worcester, by those engaged in the crusade, by the prevalence of malaria in many places in the city. The relation between the mosquito-breeding places and the houses where there were malaria patients was effectively pointed out, and a map was prepared showing the exact distribution of malaria in the city, and photographs were made showing the character of the breeding places of the malarial mosquito. It is probable that the Worcester efforts to interest the school children were the first made in this direction, although the idea was carried out to a much greater extent later in San Antonio, Tex., under Doctor J. S. Laukford.

"In November, 1903, there were cases of yellow fever in San Antonio which caused several deaths, and an inexcusable interruption of commerce that cost hundreds of thousands of dollars. In the effort to allay the panic, the existence of yellow fever was denied, not only by persons having business interests in the city, but by many medical men as well. Very many adults not only denied the existence of the fever in the city, but denied the

relation between the mosquitoes and the fever. Perhaps the majority of the adults seemed too old to learn; and to the enlightened physicians it appeared that it was impossible to begin education at the wrong end of life.

"The Chairman of the sanitary committee of the school board (Dr. Lankford) grasped the happy idea that if the children were properly educated, sanitary matters in the future would be much better attended to. He suggested to the board that it would be valuable to educate all the school children of the city in prophylaxis and make sanitarians out of them all. The school board heartily approved of the proposition, and the campaign was at once begun to educate the children on the subject of "Insects as Disease Carriers". The best recent medical literature on the subject was procured and furnished to the teachers, and a circular letter was sent to them outlining a proposed course and offering a cash prize for the best model lesson on the subject. Teachers became deeply interested in the subject. A crude aquarium, with eggs and wigglers, was kept in every school room, where the pupils could watch them develop; and large magnifying glasses were furnished in order that they might study to better advantage. The children were encouraged to make drawings on the blackboard of mosquitoes in all stages of development; lessons were given and compositions were written on the subject. Competitive examinations were held, and groups of boys and girls were sent out with the teachers on searching expeditions to find the breeding places. Rivalry sprang up between the 10,000 public school children of the city in the matter of finding and reporting to the health office the greatest number of breeding places found and breeding places destroyed. Record was kept on the blackboards in the schools for information as to the progress of the competition and great enthusiasm was stirred up. In addition to these measures, a course of stereopticon lectures was arranged, grouping the pupils in audiences of about 1,000 from the high school down, and, in Doctor Lankford's words—

"It was an inspiring sight to watch these audiences of a thousand children, thoughtful, still as death, and staring with wide-open eyes at the wonders revealed by a microscope. It seemed to me that in bringing this great question of preventive medicine before the public school children we had hit upon a power for good that could scarcely be overestimated."

"The result of this work, it is pleasing to say, was a decided diminution in the matter of mosquitoes in San Antonio. There was some opposition among the people, but the movement on the whole was very popular. One result of this work was that while there had previously been from 50 to 60 deaths a year from malarial trouble, the mortality was reduced 75 per cent. the first year after this work was begun, and in the second year it was entirely eliminated from the mortality record of San Antonio.

"In organizing community work against mosquitoes, the school children hereafter must be counted upon as a most important factor. Almost every child is a born naturalist, and interest in such things comes to them more readily than anything else outside of the necessities of life. They are quick-witted, wonderfully quick-sighted, and as finders of breeding places they can not be approached except by adults of the most especial training. One of the first steps that a community should take is, therefore, the encouragement of the interest of the children in the public schools."

It is discouraging that no more communities are willing to take up the work at once, but the inertia of a great nation is always hard

to overcome, when it means for the majority attention to an entirely new field of knowledge. Let us see the bearing of the question on the



Stages of the Typhoid Fly, *Musca domestica*, Linn. 1. egg, 2. larva, 3. Puparium, 4. last joint of foot. Complete insect showing countless hairs which carry dust and germs. Photograph of the model (X350) in the Public Museum, Milwaukee, Wis. Magnification of the figure about 9 diameters.

progress of nations: In Major Ronald Ross's address on Malaria in Greece he speaks of the depopulation of the Lake Kopais region: "I cannot imagine Lake Kopais, in its present highly malarious con-

dition, to have been thickly peopled by a vigorous race; nor, on looking at those wonderful figured tombstones at Athens, can I imagine that the healthy and powerful people represented upon them could have ever passed through the anemic and splenomegalous infancy (to coin a word) caused by widespread malaria. Well, I venture only to suggest the hypothesis, and must leave it to scholars for confirmation or rejection. Of one thing I am confident, that causes such as malaria, dysentery, and intestinal entozoa must have modified history to a much greater extent than we conceive. Our historians and economists do not seem even to have considered the matter. It is true that they speak of epidemic diseases, but the endemic diseases are really those of the greatest importance. The whole life of Greece must suffer from this weight, which crushes its rural energies. Where the children suffer so much, how can the country create that fresh blood which keeps a nation young? But for a hamlet here and there, those famous valleys are deserted. I saw from a spur of Helikon the sun setting upon Parnassus, Apollo sinking, as he was wont to do, towards his own fane at Delphi, and pouring a flood of light over the great Kopaik Plain. But it seemed that he was the only inhabitant of it. There was nothing there. 'Who,' said a rich Greek to me, 'would think of going to live in such a place as that?' I doubt much whether it is the Turk who has done all this. I think it is very largely the malaria."

And Dr. Howard concludes this quotation with these far reaching thoughts: "In considering carefully this suggestive argument of Major Ross, does it not appear to indicate the tremendous influence that the prevalence of endemic disease must exert upon the progress of modern nations, and does it not bring the thought that those nations that are most advanced in sanitary science and preventive medicine will, other things being equal, assume the lead in the world's work? Who can estimate the influence of the sanitary laws of the Hebrew scriptures upon the extraordinary persistence of that race through centuries of European oppression—centuries full of plague years and of terrible mortality from preventable disease. And what more striking example can be advanced of the effect of an enlightened and scientifically careful attention to the most recent advances of preventive medicine upon the progress of nations than the mortality statistics of the Japanese armies in the recent Russo-Japanese war as compared with the corresponding statistics for the British army during the Boer war immediately preceding, or for the American Army during the Spanish war at a somewhat earlier date?

"The consideration of these elements of national progress has been neglected by historians, but they are nevertheless of deep-reaching importance and must attract immediate attention in this age of advanced civilization. The world has entered the historical age when national greatness and national decay will be based on physical rather than moral conditions, and it is vitally incumbent upon nations to use every possible effort and every possible means to check physical deterioration."

The application of these facts, gentlemen, to Wisconsin's betterment awaits a *leader*. Who shall it be?

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No. 8

EDITORIAL COMMENT.

THE 1911 MEETING.

The next meeting of the State Medical Society of Wisconsin will be held at Waukesha, Wednesday, Thursday and Friday, June 7, 8 and 9, 1911.

Write this in large letters on the tablets of your memory and make plans for your vacation accordingly. The present indications are that we shall have not only a good program but also a good time that will be long remembered.

MEDICAL LEGISLATION.

When proposed legislation bearing on public health questions or on the medical profession in any of its relationships is being considered by County Medical Societies, it will be well to remember the

existence of the Committee on Public Policy and Legislation of the State Medical Society. This Committee is at the service of the County Societies and by communicating with its members much vexatious delay and waste of effort may be avoided. If an individual County Society presents a bill to the Legislature that bill is almost certain to fail, however meritorious its character. It is only by united action that anything can be accomplished even under the most favorable conditions.

It is quite probable that this year an unusual amount of opposition to any wholesome medical legislation will develop under the fostering influences of that curious aggregation of birds of prey, the National League for Medical Freedom. Nowhere outside of a zoological garden is there a stranger mixture of species than in this organization. Their one bond of union is a genuine hatred of all that honest, upright medicine stands for.

In the face of organized opposition we must work harmoniously to accomplish anything and we must use every endeavor to make the issue clear. We are not striving for selfish ends but for the betterment of that portion of humanity in the midst of which we find ourselves. Let us keep that point constantly in view.

The Committee on Public Policy and Legislation of the State Medical Society is composed of Dr. A. W. Gray, Milwaukee; Dr. J. P. McMahon, Milwaukee; and Dr. F. F. Bowman, Madison.

CONSULTATION PRACTICE.

Section 2 of Article 3 of the Code of Medical Ethics provides that "Consultations should be promoted in difficult cases, as they contribute to confidence and more enlarged views of practice." To one familiar with medical and surgical practice in some of the Eastern states the lack of consultation practice in Wisconsin is noticeable. We believe this is to be regretted, and that it tends to lower the estimation of practitioners by the public. Every human life is important, and the responsibility of such a life is too great for any one physician to assume. Every case of a serious nature or of doubtful diagnosis should be considered entitled to the wisdom and judgment of two or more physicians or surgeons. Moreover, in these times of specialism team work is often desirable in order to attain the best results.

There are relations between the consultant and attending physician which merit careful consideration. Confidence in each other's ability and respect for each other are demanded. Any friction between them will be observed by the patient or the friends, or by both, to

the detriment of all concerned. The laity will measure their estimation of physicians by the degree of respect and confidence we show each other. Both the consultant and attending physician must adhere strictly to their respective functions. It is necessary for each to reason from the other's standpoint, but this is not easy for many, for "To put one's self in another's place is a very difficult gymnastic feat. Few can perform it who have not well trained minds and a delicate sense of justice." There is no reason for friction if each will strictly follow his own line. A full explanation of the situation should be made to the patient, nurse and friends, and this explanation should be made by the consultant, for experience teaches that such a course is far more effectual and satisfactory. Visits should always be made together, and every prescription should be submitted for the approval of both. The surgeon has no more right to prescribe for some condition not in his special line when called as a consultant with a physician than the physician has to change or apply the surgical dressings. When a surgeon is called in consultation by a physician the patient belongs to the latter, and the former has no right to usurp the functions of the latter. The same is also true when the surgeon calls a physician in consultation, the patient belongs to the former, unless formally turned over by one to the other, in which case a full explanation should be made to the patient, if he is in a condition to understand it, also to the nurse and friends of the patient who may be present.

A little care in regard to these details will save no end of trouble, establish confidence in the attendants by the patient and friends, render the work of the attendants pleasant when otherwise it would be the worst kind of drudgery, and what is most valuable of all furnish the patient with the best combined service he can receive.

One other thought in this connection: to what extent is a commission given to the attending physician by the consultant? This is a practice so reprehensible and degrading that it ought to furnish grounds for expulsion from all respectable medical organizations. No act will receive greater condemnation by the public when understood, for it converts a high professional service into the lowest form of a contemptible business.

The consultation fee should be paid at the time the service is rendered and will be in the majority of cases if the matter is called to the attention of the one who is to pay it. This should be done by the attending physician, for the laity are not supposed to know what the custom is in regard to such matters. If for any reason the fee is not received at this time a bill should be made out to the patient and rendered with the bill of the attending physician and collected

with the same. We have known many fees lost where the bill of the consultant was rendered independently of the account of the attending physician. This may be considered a minor matter, but it is of no less importance for that reason.

A SURGICAL ASPECT OF MEDICAL EDUCATION.

The attention of the members of the medical profession of the State of Wisconsin is particularly called to the article appearing in another portion of this issue, considering the subject of medical education from a point of view that is worthy of particular recommendation for one who seeks for improvement in the standing and reputation of the medical profession, through improvement in its fundamental basis: its system of medical teaching and medical acquirement.

The writer's classification in the treatment of his subject, is particularly worthy, in that through it, he inevitably leads the reader to the only conclusion that the present status of medical education permits, namely; that the teaching of this profession should be under the control, not of any organization formed for the advancement of the personal interests of its incorporators or stockholders, but that, as in older countries where medical education is the result of experience evolved from long years of selection of the best, and survival of the fittest, it should lie entirely under the control of such organizations as the great State Universities, under the direct control of a Board of Regents, whose personal welfare is in no wise modified by a longer or shorter list of paying matriculants, or upon the ambition of some particular man to make reputation, because of his position in, and professorship in the educating institution.

The recent report of a well known Eastern foundation upon the character and qualifications for education of the various medical schools owned by private corporations throughout the country, gives a revelation of existing conditions that may well disgust and astonish us. And it is our belief that the time has come when the great State of Wisconsin through its University, absolutely without affiliation with any existing medical school, should take up the work of medical education just as it has the work of the education for the Law and Engineering, and untrammelled by politics, religion or creed; unhampered by the self-interest of any particular individual, or for the purpose of advancing the interest of any particular corporation or schism, extend its already partially organized medical school to such an extent, that it may be able to give to any citizen of the State an opportunity for the most modern possible medical education, extending to each in-

dividual seeking to pursue this course of study the perfected opportunity for acquirement, whether the individual attempting to follow this course be rich or poor, and as in all other courses of University education untrammelled in its teaching by any idea of the ultimate sum of acquirement by any particular individual, but at least giving all an equal opportunity leaving the result to the individual capacity of the student. In no other way can we breed great men in medicine; and as matters stand to-day, in no other way can the physician educated within the borders of the State, find an Alma Mater to whose parentage he can turn with unquestioning pride.

CORRESPONDENCE.

ERYSIPELAS AND SCARLET FEVER.

Editor Wisconsin Medical Journal:

I would like to report the following for the purpose of discovering if others have had a similar experience. I was called a short time ago to attend a woman whom I found suffering from what seemed to be facial erysipelas. The upper portion of the face—nose, cheeks, and eyes—were much swollen. Patient had had a chill three days previous. Her temperature at the time was $102\frac{2}{3}^{\circ}$; pulse 120. Further investigation revealed the fact that four of her children were in the various stages of scarlet fever, one having been sick ten days.

Was the scarlet fever poison the cause of the mother's difficulty?

Very truly,

H. B. SEARS, M. D.

Beaver Dam, Wis.

NEWS ITEMS AND PERSONALS.

Dr. W. A. Jones, Oconomowoc, has been appointed post-master of that city.

Dr. R. C. Buchanan, Green Bay, who has been ill with diphtheria, has recovered.

Dr. G. E. Knauf has been re-elected county physician of the city of Sheboygan.

Dr. J. C. Sommers, Madison, who underwent an operation for appendicitis, is convalescing.

Dr. Herman Goetsch, Milwaukee is said to have committed suicide on December 22nd.

Dr. E. M. Farrell, Two Rivers, underwent an operation for gall-stones on November 30th.

Dr. E. T. Ridgeway, Red Granite left on November 17th for a trip to Southern Texas.

Dr. W. G. Malcolm, Barron, was painfully injured in a runaway accident, on November 18th.

Dr. W. H. Hurlbut, Elkhorn, County Physician at the poor farm for twenty-eight years, has resigned on account of ill health. Dr. Edward Kinne was appointed his successor.

Dr. George Furstman, Chicago, has been selected as special health officer for La Crosse, by the newly created Board of Health, which will make special war on tuberculosis and contagious diseases.

Dr. Jacolyn Manning, New York City, formerly of Eau Claire, has written for Hampton's Magazine—December issue—an article on spinal meningitis, entitled "The Children's Plague".

In response to an invitation from the Russell Sage Foundation, Wisconsin physicians have taken preliminary steps to organize a state society for the blind and a society for the prevention of blindness.

Dr. Warren B. Hill, Milwaukee, was elected president of the Emergency Hospital, on January 5th, by the Trustees, to succeed Dr. F. B. Golley. Dr. Geo. J. Jurss succeeds Dr. Ralph Elmergreen as Secretary.

The request of the Committee of Twenty-Five of the Medical Society of Milwaukee County, that Health Commissioner Kraft be removed from office and a more capable man appointed, was denied by Mayor Seidel.

Max Paruch, manager of a Polish daily at Milwaukee, who was charged with violating the state law by accepting objectionable advertising, pleaded guilty in District Court. Sentence was suspended. Paruch said he was unaware of the existence of the law.

The National Confederation of State Medical Examining and Licensing Boards will hold its Twenty-first Annual Meeting in Chicago, Ill., on Tuesday, February 28, 1911, at the Congress Hotel.

The subjects to be taken up at this meeting will be a consideration of the State Control of Medical Colleges; a report by a special committee on Clinical Instruction; a report on a proposed Materia Medica List by a special committee; the report on a paper presented at the St. Louis meeting by Mr. Abraham Flexner of The Carnegie Foundation for the Advancement of Teaching; and some special papers on such subjects as the Regulation of Medical Colleges, Necessity for Establishing a Rational Curriculum for the Medical Degree, and others, by men eminently qualified to prepare papers upon such subjects.

Removals. Dr. G. D. Whiteside, who has been located at Endeavor for the past year, has moved to Plover.

Dr. Winneman, Butternut to Merrill.

Dr. C. J. Skwor, Algoma to Milladore.

Dr. F. C. Wood, Westfield to Waupaca.

Dr. H. M. Lynch, West Bend to Allenton.

Dr. Fayette Baldwin, Rewey to Livingston.

Dr. Edward Quick, Appleton to Green Bay.

Dr. R. P. Potter, Auburndale to Marshfield.

Dr. P. H. Doughty, Spring Valley to Lowell.

Dr. Bartholomew Kenny has located at Cylon.

Dr. Richard Muenzner, Allenton to Milwaukee.

Dr. H. D. Murdock, Brodhead to Tulsa, Oklahoma.

Dr. F. M. Blair, Benton has retired from practice on account of ill health. He will be succeeded by Dr. P. W. Leitzell.

Dr. A. B. Jensen, Colby, has disposed of his practice to Drs. H. H. and A. M. Christofferson. Dr. Jensen intends taking a post-graduate course abroad.

Marriages. Dr. Carl C. Vogel, Elroy and Miss Delia M. Drohos, Milwaukee, December 24th.

Dr. Bjarne Ravn, Iola, and Miss Myrtle Froegner, Scandinavia, December 1st.

Dr. Carl Stevens, Marinette and Miss Hazel Arnold, Sharon, December 27th.

Dr. Richard Muenzner, Allenton and Miss Alice Beck, Milwaukee, December 7th.

Dr. Frank O. Brunckhorst, Hortonville, and Miss Phoebe Beach, Dundas, November 24th.

Dr. E. E. Nussle, Sr., Chippewa Falls, and Mrs. Florence M. Pottle, St. Paul, Minn., Dec. 7th.

Deaths. Dr. Baxter L. Bull, Racine, was found dead in his office on December 27th. Heart disease was the cause of his death. Dr. Bull was 68 years old.

Dr. L. C. Lambert, formerly of La Crosse, died on December 17th, at Chattanooga, Tenn., of pneumonia, aged 50 years. Dr. Lambert left Wisconsin for the south two years ago on account of ill health.

Dr. R. L. Cook, Sturgeon Bay, died on December 1st.

Richard Leonidas Cook was born November 28, 1832, at Wakefield, N. H. He served throughout the Civil War as Surgeon in the Eleventh Maine Infantry. In 1887 he came to Sturgeon Bay, where he has since resided.

Dr. H. J. McDonald, La Crosse, died on December 31st, of Apoplexy.

Horace J. McDonald was born in Mexico, Oswego County, New York, December 20, 1839. He came to Wisconsin with his parents when six years of age. The family located in Washington County and here the early boyhood of the doctor was spent. His early educational advantages were limited. In 1867 he was graduated from the medical department, University of Pennsylvania. Dr. McDonald served throughout the Civil War. He was a resident of La Crosse since 1883.

Dr. Clarke Gapen, Madison, died on December 17th, while asleep in a chair. Death was caused by heart and kidney disease. Dr. Gapen was 80 years old and was widely known throughout the state and in the middle west as an alienist and expert medico-legal counsel.

Before commencing practice at Madison, he was an interne at Cook County Hospital, Chicago, physician at the Wisconsin Hospital for the Insane at Mendota, Commissioner of Health at Omaha, Neb., and superintendent of the hospital for the insane at Kankakee, Ill.

THE AMERICAN PROCTOLOGIC SOCIETY'S PRIZE FOR THE BEST ORIGINAL ESSAY ON ANY DISEASE OF THE COLON BY A GRADUATE OF (NOT A FELLOW OF THE SOCIETY) OR A SENIOR STUDENT IN ANY MEDICAL COLLEGE OF THE UNITED STATES OR CANADA.

The American Proctologic Society announces through its committee that the cash sum of \$100 will be awarded, as soon as possible in 1911, to the author of the best original essay on any disease of the colon in competition for the above prize.

Essays must be submitted, to the Secretary of the committee, on or before May 10, 1911. The address of the Secretary is given below, to whom all communications should be addressed.

Each essay must be typewritten, designated by a motto or device, and without signature or any other indication of its authorship, and be accompanied by a separate sealed envelope, having on its outside only the motto or device contained on the essay, and within the name, the motto or device used on the essay, and, the address of the author. No envelope will be opened except that which accompanies the successful essay.

The committee will return the unsuccessful essays, if reclaimed by their writers within six months, provided return postage accompanies the application.

The committee reserves the right not to make an award if no essay submitted is considered worthy of the prize.

The competition is open to graduates of medicine (not fellows of the Society) and to members of the senior classes of all colleges in the United States or Canada.

The object of the prize and competition is to stimulate an increased interest in, and knowledge of Proctology.

The committee shall have full control of awarding the prize and the publication of the prize essay, and it shall be the property of the American Proctologic Society. It may be published in the Transactions of the Society and also as a separate issue if deemed expedient. The committee may increase its membership if deemed advisable.

DR. DWIGHT H. MURRAY, *Chairman*.

DR. SAMUEL T. EARLE.

DR. JEROME M. LYNCH.

DR. ALOIS B. GRAHAM.

DR. LEWIS H. ADLER, JR., *Secretary*.

1610 Arch St., Philadelphia, Pa.

THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORGANIZED 1841.

Officers 1910-1911.

BYRON M. CAPLES, Waukesha, President.

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|---|---|---|
| J. M. Dodd, Ashland,
1st Vice-President. | Wilson Cunningham, Platteville, 3rd Vice-President. | T. J. Redelings, Marinette,
2d Vice-President. |
| CHAS. S. SHELDON, Madison, Secretary. | S. S. HALL, Ripon, Treasurer. | |
| ROCK SLEYSER, Waupun, Assistant Secretary. | | |
| A. W. GRAY, Milwaukee, Chairman Program Committee. | | |
| G. E. SEAMAN, Milwaukee, Chairman Medical Defense Committee. | | |
| J. P. McMAHON, Milwaukee, Chairman, Committee on Public Policy and Legislation. | | |

Delegates to American Medical Association.

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|------------------------|-------------------------|---------------------------|
| L. F. Bennett, Beloit. | C. S. Sheldon, Madison. | A. H. Levings, Milwaukee. |
|------------------------|-------------------------|---------------------------|

Alternates.

- | | | |
|---------------------------|---------------------------------|-------------------------|
| F. S. Wiley, Fond du Lac. | Wilson Cunningham, Platteville. | R. G. Sayle, Milwaukee. |
|---------------------------|---------------------------------|-------------------------|

Councilors.

- | | | | |
|-------------------------------|-------------|---------------------------------|--------------|
| TERM EXPIRES 1911. | | TERM EXPIRES 1914. | |
| 1st Dist., H. B. Sears, - - | Beaver Dam | 7th Dist., Edward Evans, - | La Crosse |
| 2nd Dist., G. Windesheim, - - | Kenosha | 8th Dist., T. J. Redelings, - - | Marinette |
| TERM EXPIRES 1912. | | TERM EXPIRES 1915. | |
| 3rd Dist., F. T. Nye, - - | Beloit | 9th Dist., O. T. Hougen, - | Grand Rapids |
| 4th Dist., W. Cunningham, - - | Platteville | 10th Dist., R. U. Cairns, - - | River Falls |
| TERM EXPIRES 1913. | | TERM EXPIRES 1916. | |
| 5th Dist., J. V. Mears, - - | Fond du Lac | 11th Dist., J. M. Dodd, - | Ashland |
| 6th Dist., H. W. Abraham, - - | Appleton | 12th Dist., H. E. Dearholt, - | Milwaukee |

NEXT ANNUAL SESSION, WAUKESHA, JUNE 7, 8 and 9, 1911.

The Wisconsin Medical Journal, Official Publication.

SOCIETY PROCEEDINGS.

WAUKESHA COUNTY MEDICAL SOCIETY.

The Waukesha County Medical Society held its annual meeting at Oconomowoc, Dec. 5th. The following officers were elected: Dr. J. H. Voje, President; Dr. Noble, Vice-President; Dr. Davies, Secretary-Treasurer; Dr. H. A. Peters, Censor; Dr. M. R. Wilkinson, Delegate; Dr. D. A. Hadley, Alternate.

EAU CLAIRE COUNTY MEDICAL SOCIETY.

The regular monthly meeting of the Eau Claire County Medical Society met at the Public Library, Tuesday evening, Dec. 27th. Program:

Differential Diagnosis between Chicken Pox and Small Pox... Dr. E. S. Hayes

Vaccination Dr. F. Farr

Ruptured Bladder—result of automobile accident..... Dr. E. L. Mason

Annual election of officers resulted as follows: President, Dr. H. A. Fulton; Vice-President, Dr. A. L. Payne; Secretary and Treasurer, Dr. E. L.

Mason; Censor for three years; Dr. J. J. Selbach; Delegate, State Medical Society, Dr. E. S. Hayes; Alternate delegate, Dr. R. F. Werner.

E. L. MASON, M. D., *Secretary*.

WOOD COUNTY MEDICAL SOCIETY.

The Wood County Medical Society held its annual business meeting at Grand Rapids, Thursday evening, December 15th. We met at the Hotel Dixon for a 6 o'clock dinner, after which we adjourned to the directors' room of the new Wood County National Bank Building, where the meeting was called to order by the President, Dr. W. O. Blanchar, at 7:15 P. M.

The following officers were elected for the coming year: President, Dr. J. C. Hayward, Marshfield; Vice-president, Dr. J. A. Jackson, Rudolph; Secretary and Treasurer, Dr. J. B. Vedder, Marshfield; Censor, Dr. J. J. Looze, Grand Rapids; Delegate, Dr. V. A. Mason, Marshfield; Alternate, Dr. K. W. Doege, Marshfield.

The program for the meeting consisted of reports of interesting clinical cases by the following: O. T. Hougen, V. A. Mason, J. C. Hayward, W. M. Ruckle, J. A. Jackson, J. J. Looze, J. B. Vedder. The above program brought out some very interesting and instructive points.

The following were present: J. A. Jackson, Rudolph; K. W. Doege, J. B. Vedder, V. A. Mason and J. C. Hayward, Marshfield; R. C. Aylward, Port Edwards; Geo. Pomainville, Nekoosa; A. S. Ridgeman, O. T. Hougan, W. O. Blanchar, W. G. Merrill, J. J. Looze and W. M. Ruckle, Grand Rapids.

W. M. RUCKLE, M. D., *Secretary*.

KENOSHA COUNTY MEDICAL SOCIETY.

The regular November meeting of The Kenosha County Medical Society was held November 3d at the home of Dr. G. A. Pugh, J. R. Eastman presiding. Nineteen physicians were present. The literary program of the evening consisted of papers by Drs. G. A. Pugh and P. M. Jorgensen. After adjournment, a social session was held presided over by Mrs. G. A. Pugh, Mrs. C. H. Gephart and Mrs. H. A. Robinson.

At the annual meeting of the Kenosha County Medical Society held Dec. 1st, the following officers were elected: Dr. Wm. M. Fair, President; Dr. H. A. Robinson, Vice-President; Dr. J. H. Cleary, Secretary-Treasurer; Dr. J. T. Cort, Censor; Dr. J. R. Eastman, Delegate; Dr. C. H. Gephart, Alternate.

No other business of importance was transacted.

J. H. CLEARY, M. D., *Secretary*.

PIERCE COUNTY MEDICAL SOCIETY.

The regular quarterly meeting of the Pierce County Medical Society was held at Ellsworth, December 21, 1910.

PROGRAM.

Invocation, Rev. R. A. Atkins.

The Physician Himself, Dr. S. F. Rudolph.

Quacks and Quackery, Dr. E. R. Halliday.

The following officers were elected for 1911: President, E. R. Halliday, Ellsworth; Vice-President, A. E. Gendron, River Falls; Secretary-Treasurer, S. F. Rudolph, Ellsworth; Delegate, R. U. Cairns, River Falls; Alternate, G. M. Dill, Prescott; Censor, A. E. Gendron, River Falls.

Two new members were taken in; Drs. Martin Oyen, Ellsworth, and O. S. Fenley, River Falls. After the meeting we were royally entertained at the home of Dr. E. R. Halliday where Mrs. Halliday served a very fine spread. The meeting adjourned when the lights went out.

S. F. RUDOLPH, M. D., *Secretary*.

GRANT COUNTY MEDICAL SOCIETY.

The eighth annual meeting of the Grant County Medical Society was held at Boscobel, Tuesday, December 6th, with the following members present: Drs. L. G. Armstrong, L. H. Hayman, W. P. Hartford, Emil A. Hanneman, C. A. Armstrong, C. S. Hayman, J. C. Betz, F. S. Tuffley, J. E. Heraty, C. R. Pickering, G. G. Gobar, A. W. James and M. B. Glasier. Prof. C. H. Bunting and Dr. McAllister of Avoca, were guests of the Society. In the absence of both president and vice-president, the meeting was called to order by Dr. C. A. Armstrong.

The following papers were read and discussed by those present: Puerperal Septicemia, by Dr. W. P. Hartford; Infant Feeding, by Dr. J. C. Betz. We were fortunate in having with us Prof. C. H. Bunting of the Department of Pathology of the University of Wisconsin, who gave a most interesting and instructive address on the Interrelation of the Glands of Internal Secretion.

A unanimous vote of thanks extended to Prof. Bunting by the Society, was evidence of the appreciation of the members for this most excellent address.

Election of officers resulted in the following: President, Dr. C. R. Pickering; Vice-President, Dr. W. P. Hartford; Secretary-Treasurer, Dr. M. B. Glasier; Censors, Drs. J. C. Doolittle and C. S. Hayman; Delegate, Dr. C. A. Armstrong; Alternate, Dr. J. E. Heraty.

A fine banquet at the Central House and entertainment during the entire day was furnished by the Boscobel physicians, thus sustaining their previously earned reputation as royal entertainers.

The next meeting will be held at Lancaster.

M. B. GLASIER, M. D., *Secretary*.

CALUMET COUNTY MEDICAL SOCIETY.

The annual meeting of the Calumet County Medical Society was held at New Holstein, December 28, 1910. The minutes of the previous meeting and the annual report of the secretary-treasurer, were read and accepted. The following officers were elected for the ensuing year: President, Dr. F. P. Knauf, Kiel; Vice-President, Dr. Wm. A. Martens, New Holstein; Secretary-Treasurer, Dr. J. A. Schmidt, Brillion; Censor, Dr. C. G. Greengo, Chilton; Committee on Public Health and Legislation; Drs. H. E. Luehrs, I. N. McComb and C. L. R. McCollum.

The dues for the ensuing year were fixed at four dollars.

J. A. SCHMIDT, M. D., *Secretary*.

GREEN LAKE-WAUKESHA-ADAMS COUNTY MEDICAL SOCIETY.

The regular annual meeting was held at Berlin, December 20th. The doctors took lunch at the Hotel Whiting after which the meeting was called to order in the office of Dr. Walbridge by the president, Dr. Baldwin. The following physicians were present: Drs. Walbridge, Scott, Silverthorn, Kerner, DeVoe and Price of Berlin; Riordan, of Neshkora; and Baldwin and Buckland, of Green Lake.

Business Session: The minutes of the last meeting were read. The secretary-treasurer report showed a membership of 26 and a balance of \$14.33 in the treasury. A letter from Dr. T. E. Loope of Eureka was read and the secretary instructed to write Dr. Loope an appropriate reply expressing the sympathy of the organization for his illness and their best wishes for a speedy recovery. Dr. C. A. Kerner of Berlin was admitted to membership and Dr. C. A. DeVoe admitted on transfer from Fond du Lac County. The question of making a revision of fees was taken up and a long and profitable discussion followed. A committee was appointed to report at the next meeting. The following officers were elected for 1911: Dr. Baldwin, Green Lake, President; Dr. R. L. Williams, Pine River, Vice-President; Dr. R. H. Buckland, Green Lake, Secretary-Treasurer; Drs. Riordan and Silverthorn, Censors; Drs. Price, Baldwin and Buckland, Program Committee.

PROGRAM.

The Ehrlich Treatment of Syphilis, Dr. C. A. Kerner, Berlin.

Serum Therapeutics, Dr. F. R. Silverthorn, Berlin.

The February meeting will be held at Neshkora.

R. H. BUCKLAND, M. D., *Secretary.*

OUTAGAMIE COUNTY MEDICAL SOCIETY.

Meeting called to order at the Hotel La Salle, Kaukauna, at 2:30 P. M., January 3, 1911. Minutes of previous meeting read and approved. Clinical Material: Dr. Boyd presented a case of *Progressive Muscular Atrophy* and also one of probable *Cretinism*, one suggesting thyroid therapy, in a boy 8 years old who seemed to be as bright as the rest of his classmates, but presented a falling away of the muscular or adipose tissue of the face changing the expression. Dr. Dohearty presented a case of *Jaundice* cause unsettled. Dr. E. W. Quick, lately removed to Green Bay, read a paper on *Occlusion of the Common Duct*. Dr. Doyle read a paper on *Jaundice*. The papers were discussed jointly.

Application of Dr. E. G. Cary was referred to the board of censors, who reported favorably and on motion made and seconded Dr. Cary was declared elected to membership in the society.

Motion made and seconded that Dr. M. J. Sandborn be indorsed as the official X-Ray man to handle the X-Ray machine presented to St. Elizabeth Hospital to be under the control of the Outagamie County Medical Society. Motion was carried unanimously. A resolution was introduced as follows: Inasmuch as the donation of the X-Ray outfit at St. Elizabeth Hospital was made with the understanding that the County Society shall designate who is to be the doctor to have full charge of same, the secretary is hereby instructed to inform the Sister Superior that Dr. M. J. Sandborn is the choice of this

society until some future action. The secretary shall after notifying the Sister Superior, have her acknowledge the same by signing this notice. This resolution was adopted. A bill by the secretary of \$2.70 for postage was presented and allowed. The report of the investigating committee was laid over for another meeting.

About this time there was a quick call for supper and the society made a very sudden adjournment to the dining room where a very bounteous spread was partaken of. A rising vote of thanks was given to the Kaukauna constituents who had banqueted the boys so handsomely. A rising vote of thanks was extended to Mr. Herman Erb who had donated a splendid X-Ray machine to the St. Elizabeth Hospital for the use of the society. Eighteen were present. Dr. Rather was the guest of Dr. Marshall and the Society.

FRANK P. DOHEARTY, M. D., *Secretary.*

MANITOWOC COUNTY MEDICAL SOCIETY.

The quarterly meeting of the Manitowoc County Medical Society was held at Manitowoc, January 10, 1911. Roll call showed following members present: Drs. C. M. Gleason, W. G. Kemper, E. Gates, J. R. Currens, L. Falge, F. S. Luhman, J. E. Meany, A. M. Farrell, A. J. Shimek.

A paper on *The General Practitioner* was read by Dr. W. G. Kemper, which was generally discussed. A paper on *The Responsibilities of the General Practitioner in Cases of Tubercular and Other Lung Troubles*, was read by Dr. J. R. Currens of Two Rivers. Discussion opened by E. Gates.

Election of officers resulted as follows: President, J. R. Currens, Two Rivers; Vice-President, W. G. Kemper; Secretary-Treasurer, A. J. Shimek, Manitowoc; Delegate, E. Christensen; Alternate, F. S. Luhman, Censor, F. S. Luhman, Manitowoc.

Meeting then adjourned to the dining room.

A. J. SHIMEK, M. D., *Secretary.*

Parenchymatous Keratitis a Real Luetic Disease. I GERSHEIMER, J. (From the eyeclinic of Prof. E. Von Hippel in the University of Halle a. S., *Deutsche Med. Woch.* 1910, No. 20, p. 938). The third child, aged 14, of apparently healthy parents showed a triangular parenchymatous opacity of the cornea of the almost non-irritated right eye, nearly extending to the pupillary margin and intensely vascularized. There were no luetic stigmata, but Wassermann's reaction in the patient and the mother was positive. The diseased portion was excised in the healthy parts, the deeper layers cauterized, and the defect covered with conjunctiva. It healed smoothly; the process was arrested and the opacity cleared up, so that after two months only traces were visible. No antisypilitic treatment was given. The excised piece of the cornea contained a spirochete pallida. For several reasons one may suppose that the microorganisms remain, from fetal life, in the cornea and by still unknown causes suddenly exert an inflammatory action. G. ZIMMERMANN.

**THE ASSOCIATION OF
COUNTY SECRETARIES AND STATE OFFICERS
OF THE STATE MEDICAL SOCIETY OF WISCONSIN.**

T. J. REDELINGS, M. D., Marinette,
President.

W. F. ZEIRATH, M. D., Sheboygan,
Vice-President.

ROCK SLEYSER, M. D., Waupun, Secretary.

NEXT ANNUAL SESSION, WAUKESHA, 1911.

Under this heading will be published each month, papers, editorials, sermons, reports of meetings and all that relates to the County Medical Societies of the state. To it all are invited and asked to contribute, especially the County Secretary. It is yours—make good use of it, and may it be of help to every County Society. It will be edited by Rock Sleyser of Waupun, secretary of the new association, to whom all communications for this department, reports of meetings and news matter should be addressed.

JANUARY BOOSTER SERMON.

God will not ask from what college you are a graduate, what honorary degrees you have, what scientific discoveries you have made, what medals you have won! He will ask if you have been a Booster. He will ask if you have been constructive. He will ask if you have tried to make your work, your profession, your world better! The man who is a laggard is not nearer heaven than the man who tears down. It is as much your duty to boost and push, to do your part in making ours a united and respected profession, as it is to refrain from doing anything that would bring it in disrepute. The man who keeps his hands in his pockets while the other fellow does all the work for his county society, is a cheap imitation, a fraud and a candidate for the junk pile! He is too small to see beyond himself, too self-centered to wish to better any but the individual in whom he is most interested. From such as these may St. Boos-theimer protect us!

The Boosting for 1911 must be done in the next two months. If every one would help just a little to make the membership of his county society complete, how easy it would be! We want and need every desirable physieian in the state as a member. No county society is complete or is performing its function which has within its jurisdiction an eligible physieian who is not a member. Start the Crusade now—2000 for 1911!

County Secretaries—

Please send me your lists of eligible non-members now. I shall be glad indeed to help with any you may wish me to but frankly, it is harder to secure these lists than it is to get the applications after the lists are received. Do it now!

ROCK SLEYSER, Waupun.

THE RELATION OF THE COUNCILOR TO THE COUNTY SOCIETY.*

BY G. WINDESHEIM, M. D.,

KENOSHA.

I have no paper, and Dr. Sleyster is to blame for the fact that I have not prepared one. He wrote to me some time ago asking, "Will you give us a talk of about ten minutes on the relation of the councilor to the county society?" I did not know whether I would or not but later on he wrote again and said, "Answer me by return mail," and I said "Yes."—to get rid of him. Now, he did not say I should write a paper.

I would like to bring this matter before the Association: at the time of the reorganization, as it is called, in the medical profession, provision was made in the constitution and by-laws of each state society that adopted it for the duties of councilors. Section 2 of Chapter 7 of the By-laws reads as follows:

"Each councilor shall be organizer, peacemaker and censor for his district. He shall visit the counties in his district at least once a year for the purpose of organizing component societies where none exist; for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his work and of the condition of the profession of each county in his district at the annual session of the House of Delegates. The necessary traveling expenses incurred by such councilor in the line of the duties herein imposed may be allowed by the House of Delegates on a proper itemized statement, but this shall not be construed to include his expenses in attending the annual session of the Society."

These duties are further elaborated in the next paragraph, which states that the council shall "hear and decide all questions of discipline affecting the conduct of members of component societies on which an appeal is taken from the decision of an individual councilor." So apparently the individual councilor is supposed to be something of a justice of the peace in his district for the county societies, and also something of a scapegoat. When things do not go right, the secretary of the state society—and after this our head booster—will call upon the councilor and say, "What is the matter with your district, brother?" The duties of the councilor are practically two fold, one

*Address given at the Annual Meeting of the Association of County Secretaries and State Officers, Milwaukee, June 21, 1910.

duty, his duty to the state society, where he acts as trustee of the funds and of the property of the state society; the other duty, the duty to the county society. This relation to the county society has changed very much since the inception of this reorganization. Where some years ago it was necessary for the councilor to go from county to county to organize county societies and try to coax this man and that man to join the society of his county so that he might become a member of the state society and be eligible to membership in the American Medical Association; to-day this state of affairs is changed; almost all good men are now members of the state society, and as for those who are not it is sometimes questionable in my mind whether they are desirable. The relations of the councilor to the county society at the present time are almost the reverse of what they used to be. He is no more the peacemaker, the organizer and censor for his county society, but he should be now the go-between between the county society and the state society. I think it would be a very good plan if each county society would arrange a meeting once a year at which the councilor of the district should be present. At this meeting should be discussed such matters as would refer to the state society, questions that come up in the profession generally, relating to the state society and the American Medical Association. The councilor is supposed to have made a study of the constitution and by-laws and to be well posted on society work. He may be able to explain to the county societies many things that are perhaps misunderstood. I do not know how it is in other districts, but in my district I have had a few cases where the work of the councilor was efficient in saving, perhaps, the membership of a few men in the state society. One of my counties, owing to the efficiency of the county secretary, has made a gain of six during the last year. Another one of my counties, owing to the absence of the county secretary from the county at the present time, has lost two. Another one of my counties, in spite of the hard work of the secretary, has lost two, which were by personal work of the councilor again regained. One member, however, took offense at Dr. Sleyster's verbiage, and it will take perhaps a week or two before I can get him to set up the cigars and acknowledge that he was in the wrong.

Dr. Simmons has spoken about the idea of a meeting—you might call it a business meeting—of the county societies, wherein such matters are discussed, and I think it is the one idea in which the councilor in the future may become useful to the county societies. There are in the medical profession of Wisconsin a number of good physicians who used to be members of the State Medical Society and

members of the American Medical Association. At the time of the reorganization some parties outside of the state society took up the organization plan of the county societies. They organized their county societies and came into affiliation with the state society; when those older men came into the meeting of the state society they were not recognized. One of them told me that he went to a meeting of the American Medical Association and was going to register, and they told him that he was not a member. He asked, why, stating that he had been a member for the last 20 years. The reply was, "Well, but you are not now a member of your county society." They took offense because they were asked to join the county society in order to retain their membership in the State Society, they did not want to associate with their next door neighbors. They would gladly be members of the state society, and were anxious to be members of the American Medical Association, where they would meet the best men in the state and nation, but their next door neighbor was too little for them to associate with; they did not want him. I went to one of those men and said, "See, here, why do you take offense at that?" He said, "I don't care for the county society, I want to be a member of the state society." I said, "If you wanted to be a member of the state society, you knew that this reorganization plan was being talked about, and was being worked through, and it was your duty to start the organization of the county society yourself right at the beginning." He said, "Well, I have no use for the county society, I don't believe in reorganization." I said, "Well, if you do not believe in that, we cannot help you, the only thing you can do is to pay your dues to the county society and become a member of the American Medical Association if you like." He finally saw the error of his ways and did as I told him. But, as I said, those times are past, and at the present times the best men, the desirable men, are members of the state society, and as to the rest of them, there are very few that are desirable. There are some chronic kickers and you cannot do anything with them.

Whether the office of councilor at the present time is really necessary, except as trustees of the state society, is questionable, unless it can be so arranged that the county societies have one meeting in the year for general discussion of the wants of the profession in the state and in the nation, at which the councilor should be present to help in the discussion. And the one who is proposed to act as delegate to the next state society meeting should be present also and be instructed to bring those questions before the House of Delegates, and in that way

get a clear idea in the state society as to what the counties want, what the profession in general wants and desires, and have it acted on accordingly.

PRESIDENT: Dr. Windesheim's talk is now before you for discussion. The subject is the relation of the councilor to the county society. It might be interesting to hear the county secretary's view point of this relationship. I would be very glad to hear from any county secretary on the subject.

DR. J. H. CLEARY, Kenosha: I, for one, cannot quite agree with Dr. Windesheim that the councilor no longer has a position that is of any benefit to the society, because I myself have been in position where I learned to appreciate his efforts in securing to membership in my county society, at least during the last year, people that, for some reason or other had to be talked to by a man of more authority than the secretary, and I still think he has a useful position with relation to the county society, because there must be other instances of that kind throughout the state.

DR. SHELDON: I know that the county secretaries regard the office of councilor as especially important, because in the replies that I receive from letters which I write them about inefficiency on their part, they say, what they most need is a good live councilor in their districts to look after them. I get this sentiment so often repeated that I am satisfied that the county secretaries feel strongly in this matter. I am of the same opinion, that the councilor is one of the most important officers in the whole society. He should feel the same responsibility, and his duty is no less than that of any officer connected with the state society. He constitutes a most important link in this chain which binds this organization together, and it seems to me that the councilors do not magnify their offices in many instances as much as they might, or I should not hear as much complaint about them from the county secretaries.

DR. H. STALKER, of Kenosha: It occurred to me in the discussion of the question of having this matter brought up at an annual meeting of each county society, that it might be brought up at the meeting of the district society every year, where the councilor will be present at the meeting and this and matters relating to the District could be profitably discussed.

PRESIDENT: It may be there are some councilors who would like to unburden their hearts. If there is no further discussion, I would just like to say a word from the view point of a councilor. It has been my sincere conviction for a long time that we have not the right quality of men filling those offices. The speaker was an exception to that rule. There may be, however, those present who do not come under that caption, but it seems to me that the councilor should be a man of very proficient preliminary scientific qualification and of recognized professional attainment, both by study and by actual practice; that his personality should be of a peculiar character; he should be possessed of a peculiar diplomacy. In addition to these qualifications he should have the necessary resources so that he can afford the time. Now, if we cannot provide that class of men from the rank and file in the territory that we wish to cover, I have long since had the conviction that it would be eminently proper on the part of the state society to engage some individual

who has fitting qualities for this work, and send him throughout the state to do missionary work. This work can best be done by such an individual. It is very difficult for a councilor to cover his territory as frequently as is necessary and desirable from the standpoint of the greatest good to the greatest number in his particular territory. Men who have the qualifications for doing this work, who have the disposition, have done this work at a greater sacrifice to themselves than the rank and file of the profession know. When the councilor has covered his territory and has rounded up the fold, and is on his way home, patting himself on the back with the thought that he has got them all in, only a few short months elapse, and he is notified by the secretary that so many have dropped out, and the same thing has to be done over and over again. It is for that reason that I believe individuals should be selected for their special qualification, and by virtue of that qualification do this missionary work throughout the state. The councilor cannot do it as it should be done.

DR. W. F. ZEIRATH, Sheboygan: Mr. President, I want to shout out my approval of what you have just said. That is fine talk. If every state had a Dr. McCormick, as the American Medical Association has, we would just have one councilor all over the state, and he would do more good than all the others put together.

BOOK REVIEWS.

Volume 6 of the **Practical Medicine Series** of 1910. is concerned entirely with the subject of General Medicine. The volume is small and convenient and contains some 352 pages.

Under their respective headings are discussed infectious diseases; diseases of the mouth; of the esophagus; of the stomach; of the intestines; of the liver; of the pancreas; and of the peritoneum.

Among other infectious diseases we find a very good discussion of some important phases of typhoid fever, such as our more recent knowledge in regard to bacillus carriers and modes of infection, as well as an abstract of some newer ideas in regard to treatment.

Under diseases of the esophagus method of examination: severe spasms; tuberculosis; and malignant disease are treated. Some 80 pages are devoted to diseases of the stomach, and the discussion is conducted under the following general headings; physiology; general diagnosis; general therapeutics; functional diseases; and organic diseases.

To disease of the intestines are devoted about a like number of pages. Methods of diagnosis and treatment are discussed as well as a number of diseases and diseased conditions. Auto-intoxication receives considerable attention.

Under disease of the liver, consideration is given to functional diagnosis; cholelithiasis; jaundice; abscess; and cirrhosis. An important section on diagnosis appears under diseases of the pancreas.

The material of the book consists almost entirely of abstracts of important recent articles. In each case reference is given to the original article. This constitutes an important feature of the book.

We scarcely need to say that such reviews as this volume represents, are virtually a necessity to him who would keep abreast of the times.

J. D. M.

The Practice of Medicine. A Guide to the Nature, Discrimination and Management of Disease. By A. O. J. KELLY, M. D., Assistant Professor of Medicine, University of Pennsylvania; Professor of Medicine, University of Vermont. Octavo, 949 pages, illustrated. Cloth, \$4.75, net. Lea & Febiger, Publishers, Philadelphia and New York, 1910.

On account of the vast proportions of modern medicine, every practice of medicine which is to be restricted to one volume, must necessarily be brief and concise. The author has attempted to meet these requirements, and states in the preface that the book represents an effort to prepare for the student and junior practitioner a guide to the nature and management of disease that shall contain the essentials unadorned with great detail.

We find today a great many practices of medicine offered to the Medical Public, and one may well question the need for another. However the present work is the product of an experienced teacher and distinguished practitioner, and to a considerable extent reflects his own clinical experience, while the knowledge which he necessarily draws from others is at least well digested and well presented. As a teacher of much experience he appreciates the needs of students, and realizes that at least for them there is such a thing as too great riches.

Symptomatology, diagnosis and treatment have properly received the most attention. They are concisely and adequately treated. A keen appreciation is shown for what is most needful and useful.

As one would expect recent advances in medicine have received all possible recognition. The author's style is interesting and clear, and the printer has done his work well.

On the whole the book is a thoroughly satisfactory one, for both students and practitioners and can be warmly recommended.

The Conquest of Disease Through Animal Experimentation. By JAMES P. Warbasse, M. D. 176 pages, published by D. Appleton Co., New York and London, 1910.

In this little volume the author presents in plain language and very readable style the claims of experimental medicine, to a position of respectful recognition and appreciation before an intelligent and thinking public.

The service rendered in the study of the causes and prevention of disease, the importance of studying the effects of remedies upon the lower animals before applying them in the treatment of disease in the human subject, the necessity of vivisection in the development and perfection of certain surgical operations and many other allied topics are set forth in a manner certain to carry conviction. Not only is the importance and necessity of such study clearly set forth, but the author further shows, and satisfies the reader, that the work can be, and usually is, performed without anything resembling cruelty

or the infliction of any considerable degree of suffering on the part of the subject.

The subject matter of the book consists of facts well-known to physicians. It is a little volume that should be in the library of every medical man and passed around for reading among his intelligent lay friends.—H. R.

The Prevention of Sexual Diseases. By VICTOR G. VECKI, M. D. Cloth, price \$1.50, 132 pages. The Critic and Guide Co., New York. The very complex problem relating to sexual diseases in social life would be materially simplified if every parent and physician would read the small volume which the author has written. The essential facts are briefly stated but with proper emphasis and rare intelligence.—E. A. F.

The Sexual Disabilities of Man. By ARTHUR COOPER. Cloth, price \$2.00, 204 pages. Paul B. Hoeber, New York, 1910. Considering the great amount of mental distress that sexual disability in man causes him it is surprising that so little attention is paid to this subject by his physician.

The Author has produced a very readable book; one especially adapted to the needs of the physician in general practice.—E. A. F.

A Text-Book of Pharmacology and Therapeutics: or the Action of Drugs in Health and Disease. By ARTHUR C. CUSHNY, M. A., M. D., F. R. S., Professor of Pharmacology in the University of London; Examiner in the Universities of London, Manchester, Oxford and Leeds; formerly Professor of Materia Medica and Therapeutics in the University of Michigan. Octavo, 744 pages, with 61 engravings. Cloth, \$3.75, net. Lea & Febiger, Philadelphia and New York, 1910.

It is impossible to mention in detail in the course of a brief review the many excellencies of this work. Dr. Cushny in his preface speaks of the "abandonment of the nihilistic attitude towards therapeutics" and in the book we see the reason why. Pharmacology, or the science of drug action, is a positive science teaching that the real action of drugs is knowable and that the wide field of their usefulness is already carefully charted in many areas. While the intelligent use of drugs in the treatment of disease may still be looked upon somewhat as an art, it is not a black art to be learned only from witches and demons who appear to this generation in the guise of proprietary journals and detail men, but one which may be approached and mastered just as any other department of medicine, by study of the wealth of material which ages of clinical observation and decades of scientific investigation have placed before us.

The classification adopted in this work is one which has the great merit of simplicity, thus facilitating frequent reference, and also of suggestiveness by its grouping together of allied drugs.

The reader who is looking for a book filled with ready-made prescriptions will be disappointed, but to any physician or student who is searching for an illuminating work on this most important subject the book can be highly commended.

The Principles of Pathology. By J. GEORGE ADAMI, M. A., M. D., L. L. D., F. R. S. Volume 1. General Pathology. Second Edition revised and enlarged with 329 engravings and eighteen plates. Lea & Febiger, Philadelphia and New York, 1910.

It is impossible to review this excellent book adequately in a paragraph or two. The exhaustion of the first edition in so short a time shows that its merit has been rapidly recognized, and although in introducing this second edition the author laments his inability to keep abreast of the advances in medicine during the last two years, the reader can but wonder that he has been so well able to do it. Important sections dealing with fundamental problems have been rewritten and enlarged and new chapters added bringing the book thoroughly up to date. To the mind of the reviewer, however, the book is scarcely one to be put into the hands of the beginner in pathology. It would not be appreciated. But to the man, be he student or practicing physician, who has had his elementary course and who is interested in pathology and its many problems, there is no text book that can be more highly recommended. Such a man will find it as hard to lay down this book as the latest best seller in fiction.—C. H. B.

A Practical Treatise on the Diseases of the Skin. For the Use of Students and Practitioners. By J. NEVINS HYDE, A. M., M. D., Professor of Dermatology and Venereal Diseases in the University of Chicago, Medical Department (Rush Medical College). New (8th) edition, thoroughly revised and much enlarged. In one very handsome octavo volume of about 1137 pages, with 223 engravings and 58 full-page plates, in colors and monochrome. Cloth, \$5.00, net; leather, \$6.00, net. Lea & Febiger, Philadelphia and New York, 1909.

Among the text-books on dermatology published in the English language, Hyde's Treatise on Diseases of the Skin has always been accepted as a standard. One edition followed another and the high standard was always maintained. In the latest (8th) edition of this popular work Professor Hyde has again demonstrated his ability to present his subject in a manner at once attractive and forceful, introducing his masterful personality into every page, so that it is truly Hyde's Treatise. The author occupies a foremost position as a successful teacher of dermatology, which is well reflected in the lucid, easy, and effective style of his writing, so that the book, although exhaustive enough for the specialist, is of particular value to the student and practitioner.

The revision has been thorough—much has been discarded as no longer consistent with the progress of modern dermatology, and yet so much new material has been introduced that the volume is increased by 250 pages over the seventh edition. New articles have been written on about twenty affections of the skin, older articles appear in many instances in an entirely new dress, and in every way the book is representative of dermatology of the present day. Especially thorough is the chapter devoted to Diseases of the Nails. There is no better presentation of this neglected subject to be found anywhere. A chapter on Diseases of the Tropics exhibiting Cutaneous Lesions exhaustively considers the many affections grouped here, including gangosa, pellagra, lepra, and filariasis.

Diseases of the Mucous Membranes in proximity to the skin, occurring

in association with dermatoses, receive attention in a special chapter, and are considered in such detail as is proper for this important, but often neglected subject.

Treatment is considered in detail, and the latest therapeutic measures receive full discussion, especially the Roentgen rays, Finson light, and vaccine therapy. Many new and carefully selected illustrations have been added, some in colors, and materially enhance the value of the descriptive text. In this connection the publishers are to be commended for their success in the reproduction of paintings and photographs—a difficult problem in dermatology, and for the excellence of the typographical work. It is evident that every effort has been made to produce a book of the highest standard.

Professor Hyde's book is an ornament to American dermatological literature, and the author is entitled to the highest praise. It is safe to predict for Hyde's Treatise its continued acceptance as the standard work by all classes of readers interested in dermatology.—O. H. F.

Borderland Surgery. By GUSTAVUS M. BLECH, M. D., Professional Publishing Company, Philadelphia, 1910. \$1.50.

The publisher's note describes this as a "big-little book, and adequately, if this be interpreted as indicative of the magnitude of its littleness. It was written especially for the general practitioner, beginners and occasional operators, not for specialists, and "may be looked upon as an appeal for sane and rational surgery in the class of affections commonly designated as borderland diseases". It contains much that were better omitted, and omits almost as much that should have been stated. Indeed it is a jumble of inconsequential thoughts expressed in execrable English made additionally unattractive by numerous typographical errors all of which lends credence to the publishers' statement" . . . it has taken us just one year of almost constant solicitation to worm out of the busy author sufficient copy for the little monograph herewith presented."

No man who writes himself inexcessably ignorant of anatomy, physiology, pathology and operative methods should attempt to teach others, albeit negative examples are almost invaluable. For instance; (p. 116) in considering the ductless glands the presence and function of the parathyroids are not mentioned; on page 81 we learn that gastro-enterostomy places the stomach at rest; on page 100 the question of laparotomy in typhoid fever is finally decided, "operation for perforation during the acute stage of the disease is practically contra-indicated for the intestine is in no condition during the first four weeks of the disease to hold sutures." And on pp. 195 and 196 after classing extirpation of the Gasserian ganglion with forgotten sympathectomy because of its danger and failure to guarantee permanent relief, the author champions alcoholic injections. There appears this one sentence which makes any criticism the basest flattery. "As a hint to my readers, I suggest that before I undertake to inject alcohol into the Gasserian ganglion I practiced with the long needle for several hours on a skull."

Either party to the production of such a wretchedly unscientific and truly dangerous book is beyond the pale of serious consideration.

J. L. Y.

An Unusual Case of Paralysis of Accommodation after Diphtheria. WIEGMANN, E., Hildesheim. (Klin. Mon. für Aug. XLVIII, 1. April, 1910, p. 454). A healthy looking boy, aged 12, had a bilateral paresis of accommodation after severe diphtheria. It soon subsided on the left eye, but persisted over three years on the right eye, together with mydriasis. Excepting slight mydriasis a complete restitution was observed after four years.

Only one case of such long duration has been published by Mühsam. The combined paresis of accommodation and of the sphincter pupillae suggested a nuclear affection, perhaps a hemorrhage, as both nuclei are close together and are supplied by the same nutrient blood vessel. The diphtheria toxin may create various changes of the vascular walls which, as proven by postdiphtheric hemiplegias, may lead to extensive hemorrhages, causing paralysis of accommodation. Schirmer assumes, by exclusion, a peripheral neuritis, of the portion of the ciliary nerves between eyeball and ciliary ganglion. C. ZIMMERMANN.

An Epitome of Hygiene and Public Health. By GEORGE M. PRICE, M. D., formerly Inspector New York State Tenement Commission, Medical Sanitary Inspector, New York Department of Health. 12mo. 255 pages. Cloth, \$1.00, net. Lea & Febiger, Publishers, Philadelphia and New York. 1910. (*Lea's Series of Medical Epitomes*. Edited by VICTOR C. PEDERSEN, M. D., New York.)

The immensity of the subject and the volumes that have been written on single sub-divisions exceed the time and attention which the average reader can bestow, hence the value of an authoritative epitome like the present one. Dr. Price is already well known as the author of several works on the subject and as a sanitary expert for the City of New York during ten years. He is therefore fully qualified to know his subject in every aspect and to perform the always difficult task of condensation with good judgment. The reader mastering this small volume will be well fitted for examination and for putting his knowledge into practice.

The Practitioners' Visiting List for 1911. An invaluable pocket-sized book containing memoranda and data important for every physician, and ruled blanks for recording every detail of practice. The Weekly, Monthly and 30-Patient Perpetual contain 32 pages of data and 160 pages of classified blanks. The 60-Patient Perpetual consists of 256 pages of blanks alone. Each in one wallet-shaped book, bound in flexible leather, with flap and pocket, pencil with rubber, and calendar for two years. Price by mail, postpaid, to any address, \$1.25. Thumb-letter index, 25 cents extra. Descriptive circular showing the several styles sent on request. Lea & Febiger, Publishers, Philadelphia and New York.

The text portion of The Practitioners' Visiting List for 1911 has been thoroughly revised and brought up to date. It contains among other valuable information a scheme of dentition; tables of weights and measures and comparative scales; instructions for examining the urine; diagnostic table of eruptive fevers; incompatibles, poisons and antidotes; directions for effecting

artificial respiration; extensive table of doses; an alphabetical table of diseases and their remedies, and directions for ligation of arteries. The record portion contains ruled blanks of various kinds, adapted for noting all details of practice and professional business.

Introduction to the Knowledge of Disturbances of the Color Sense and Their Diagnosis. W. NAGEL, Prof., Rostock, 40 pp, with one figure in the text. Wiesbaden. J. F. Hermann, 1908, IM. \$0.25. Nagel's monograph will be heartily welcomed as it gives the essential theoretical and practical data necessary for a competent examination for anomalies of the color sense. After an introduction on the history of our knowledge of disturbances of the color sense and their immense practical importance in railway and naval service the elements of the doctrine of colors are discussed, as spectrum, hues of color, mixing of colors, and light and dark adaptations.

Under disturbances of the color sense a synopsis of the various forms is given with their characteristics, the color vision of the dichromates as the most important with greater detail and the color vision of anomalous trichomates. Then the special conditions of recognizing railway and ship signals and the behavior of the color blind and anomalous to them are set forth, followed by the diagnostics of disturbances of the color sense, a presentation of the general principles of such examinations and the necessary apparatus: Nagel's colored plates, his anomaloscope and color equation apparatus, etc., and a paragraph on acquired disturbances of color sense. The eminently useful work deserves the highest recommendation.

C. Z.

On Arsacetin (Ehrlich) and its Action on the Optic Nerve. HAMMES F., Trier. (*Deutsche Med. Woch.*, 1910, No. 6, p. 267). Sodium Arsacetin modified by the introduction of an acetyl group, has recently attracted attention as a substitute for atoxyl in the treatment of anemia and diseases caused by trypanosomas, spirochaetae and spirillae, on account of its lesser toxicity. Ehrlich, Neisser, Heymann and G. Klemperer especially emphasized that affections of the optic nerve were never observed after its use. Iverson (*Munch. Med. Woch.*, 1909, X. 35), however reported a case of relapsing fever, in which 0.7 arsacetin and 0.5, given a week later, caused permanent blindness by toxic retrobulbar neuritis of both eyes. Ruete published a case of atrophy of the optic nerve due to arsacetin. Eckard treated 134 cases of sleeping sickness with arsacetin, of which three became blind. The author reports in detail the clinical history of a man, aged 66, who received eight subcutaneous injections of 0.1 arsacetin on account of anemia. In about three weeks the patient was almost blind, most likely from toxic retrobulbar optic neuritis. The discs were pale and the blood-vessels very narrow. H. concludes that the new preparations of arsenic so far are not fit to displace the former modes of treatment with arsenic. The reported cases clearly demonstrate the fallacy of the relative non-toxicity of arsacetin. C. ZIMMERMANN.

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ORIGINAL ARTICLES.

ON ENLARGEMENTS OF THE LIVER.*

BY LOUIS M. WARFIELD, M. D.,

(FROM THE PATHOLOGICAL LABORATORY AND WARDS OF THE MILWAUKEE
COUNTY HOSPITAL.)

MILWAUKEE, WIS.

There are a number of conditions associated with increases in size and weight of the liver. Dr. W. Hale White, for example, mentions the following diseases in which the liver may be primarily or secondarily enlarged: Malignant disease (primary and secondary), chronic passive congestion, the active congestion of hot countries, malaria, yellow fever, leukemia, Hodgkin's disease, pernicious anemia, diabetes, fatty liver, hydatid and suppurating hydatid, tropical abscess, the single large abscess of those who have never been abroad, actinomycosis, tuberculous abscess, obstruction of the common bile duct, lardaceous disease, hypertrophic cirrhosis, congenital and acquired syphilis.

The liver is the largest gland in the body, the functions are more diverse than those of any other organ, it has excretory as well as secretory functions, it has a detoxicating action and is the gateway between the abdominal hollow viscera, the pancreas and spleen, and the systemic circulation. It has, moreover, a double capillary system, the portal capillaries and those of the hepatic artery.

The primary factor in many cases of enlargement of the liver is the increased blood supply. This is most evident in the cases of insufficiency of the tricuspid valve when the blood is thrown directly

*Read at the 64th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 23, 1910.

back upon the liver. In complete compensation there is no engorgement of the liver. However, when the process of engorgement is constant, changes take place, chiefly of a fibrous nature, which decrease the elasticity and assist in fixing the liver in an enlarged state. This increase must not be construed as cirrhosis. Cardiac cirrhosis is a misnomer, as the changes in the cardiac liver are not at all comparable to those which occur in true cirrhosis. The increase in connective tissue in the former is probably only an effort on the part of nature to replace potential empty spaces due to atrophy of liver cells, by the ever-present fibrous tissue.

In neoplasms the increase in size is due not only to the actual growth within the liver of tumors, but also to hypertrophy of the connective and elastic tissue and increase in blood. The same holds true for abscess and for cysts of various kinds. The amyloid liver owes its enlarged size to the amyloid material which is firm and unyielding and is deposited at first in the subendothelial layer of the capillaries of the middle zone of the lobules. Later the larger vessels are involved, the media of the vessels becomes amyloid and the connective tissue and liver cells themselves undergo the amyloid degeneration.

In the cirrhotic liver the enormous increase in connective and elastic tissue together with fat in the liver cells accounts for the great size. In the fatty liver and in the enlarged liver of acute parenchymatous degeneration, the individual cells are swollen and so give to the organ a universally and regularly increased size.

From our last six month's records ten cases have been selected which show some of the conditions which may cause enlargement of the liver. To these is added one case seen two years ago in private practice, on account of its comparative rarity in this country, and the rather unusual termination.

In this series are the following: Fatty cirrhotic liver, chronic passive congestion, portal (Laennec's) cirrhosis with large liver and with small liver, secondary carcinoma, and sarcoma, amyloid liver in congenital syphilis, portal cirrhosis in a child, cloudy swelling, amebic abscess of the liver.

CASE I. Enlarged liver, probably portal cirrhosis. E. R., a white boy of 8 years was admitted to the Milwaukee Co. Hospital on Feb. 2nd, 1910, complaining of lung trouble, and his entrance diagnosis was pulmonary and intestinal tuberculosis. He is the 6th of nine children, several of whom are undersized. Careful inquiries failed to elicit any indications of syphilis in the family. Up to 18 months before admission he was well, but never strong. He had pneumonia from which he never seems to have recovered completely, so the father says. The boy was slightly undersized and underweight.

The lungs, the heart, and the kidneys were apparently normal. The abdomen was markedly distended and over the chest and the abdomen were distended veins. Harrison's grooves were present and the thorax flared out somewhat below. A smooth, painless, much enlarged liver occupied the greater part of the abdomen on the right side and epigastrium. In the right mamillary line it measured 20.5 cm. At the level of the umbilicus the circumference of the abdomen was 60 cm., from ensiform to umbilicus 17.5 cm., from there to pubis 15 cm. No fluid was made out. There was no jaundice, no edema. There was a general glandular enlargement. The spleen was not enlarged. Blood count was: reds, 4,900,000; whites, 21,000; hemoglobin (Sahli), 85 per cent. There was no fever at any time, bowels were regular, and he slept and ate well. The cutaneous tuberculin test was negative.

The patient improved considerably. On February 18th the liver dulness was 13 cm. and no veins were seen on the abdomen. He gained weight and color, became bright and talkative. On February 21st the circumference of the abdomen was 58 cm. The liver was most deceptive. With the patient lying on his back, the dulness reached the costal border only, and superficial palpation failed to reveal the liver so that it was momentarily thought that the liver had become normal in size. Deep palpation showed that the liver had fallen away from the abdominal wall. This is a point which it is well to bear in mind as mistakes are readily made.

The patient was discharged March 22nd much improved but with a liver which was still quite large.

Was this diagnosis of portal cirrhosis in this case correct? It does not seem that it was a case of Hanot's hypertrophic cirrhosis, or as it is now called biliary cirrhosis. Although there was no history of any of the factors which are said to produce cirrhosis, yet in children we do see cases where some acute illness has seemed to be the etiological factor. We have every reason for believing that a chronic nephritis may develop insidiously. This case seems to have followed a severe infection (pneumonia) suggesting a bacterial origin. However, in the light of the most recent work (Opie), on cirrhosis experimentally produced, there must be more than the bacterial infection in order to produce the cirrhosis. This was not the liver of heart disease, not that of tuberculosis, probably not that of syphilis on account of the age of the boy, the lack of any history, and the fact that there were no other signs of syphilis anywhere. Abscess could be ruled out, cysts also, and malignancy was scarcely a possibility.

CASE II. Portal cirrhosis of liver, myocardial degeneration. Katie D. was admitted to the Milwaukee Co. Hospital on December 15th, 1909, complaining of pains in the muscles and joints. She is married, 45 years old, has done much hard work particularly washing and scrubbing. She has two half-grown children. Through an interpreter we learned that she had always been a well woman and had no

illness like the present one, but one year ago she had an attack of stomach trouble. She had been sick this time for five months. First she had nausea and vomiting, later her joints, knees and ankles swelled. For two months she had fever. There was no shortness of breath. There has been much pain in hands with inability to use them. For five months she has not walked. There was a questionable history of syphilis. She has had considerable vomiting almost every day and it was thought at times to be bloody. The patient was much emaciated and weak; could not walk and her hands were almost useless. No jaundice was noted. The lungs were normal. The heart dulness was increased, the sounds at apex somewhat muffled and there was a soft systolic murmur transmitted out to the mid-axilla and heard over the body of the heart. The second aortic was not accentuated. The heart action was irregular and intermittent. The pulse was soft and small. The liver was smooth, painless, the edge rather sharp. It reached to the umbilicus. The spleen was easily palpated, smooth and firm. There were no ascites and no edema. Over the chest were some dilated veins. The urine was of high specific gravity and contained albumin and casts. She improved under rest, diet, tonics, and potassium iodid, and on April 19, 1910, was able to walk out of the hospital.

CASE III. Amebic dysentery, amebic abscess of liver rupturing into, and discharging through the lung. Apparent healing of abscess. In December, 1907, Otto Q. came to my office in St. Louis, Mo., complaining of diarrhea and weakness. He was 30 years old, single, and had been in the Phillipine service from 1898 to 1900. While there he contracted dysentery. He was laid up on and off for a year, part of the time in the hospital in San Francisco, Cal. His father died in 1907 of tuberculosis of the lungs. His mother is living and well. Previous to his visit to me he had been losing weight and had a little cough. He was refused an increase of pension on account of supposed tuberculosis. On examination he was thin and was coughing and expectorating a small amount of muco-purulent material. He complained of occasional pain in the right side. He was sent to St. Luke's Hospital where an examination of the stools which were largely composed of mucus, showed enormous numbers of amebae coli. Careful examination revealed no signs of tuberculosis of the lungs. The sputum was negative and a cutaneous tuberculin test was negative. The heart was normal. There was distinct tenderness over the liver. The dulness reached 4 cm. below the costal border in the right mamillary line. In the back it encroached 3 cm. on the lung resonance. Within a week the dulness had increased upward in the back to 6 cm. There was slight fever, never more than 100.5 F., no chills, the leucocytes were 15,000. During this time rectal irrigations of copper sulphate were given. He improved greatly. Operation was urged but he refused and left the hospital. I saw him next on February 21, 1908. He had finally landed in St. Mary's Hospital where one night during a violent coughing spell he spat up about a teacupful of bloody, mucous material, and he had the sensation of something

breaking in his right side. For three weeks he expectorated about a cupful of this material daily which he said had a "liver smell" and in which he was told amebae were found. He was then having 7 to 8 stools daily. He did not know whether blood or mucus was present. He was aspirated between the 8th and 9th rib in the posterior axillary line but no pus was obtained. He complained, when I saw him, of very little pain in the side. There was no cough. He feels weak and has still considerable diarrhea. Examination of rectal contents removed with the tube showed many actively motile amebae. He was again sent to hospital, where under rest and rectal irrigations of copper sulphate he improved to the extent that he had one daily stool and no amebae were found following the administration of Epsom salts. Examination showed that the liver was not enlarged and only some adhesions posteriorly were found between the lung and the pleura. He was discharged April 11th. On December 15, 1908, he was having diarrhea and amebae were again found in the stools. The liver was of normal size. The patient has not been heard from since.

CASE IV. Clinical diagnosis: Cirrhosis of liver, chronic perihepatitis, chronic peritonitis, chronic nephritis, probably diffuse.

Anatomical diagnosis: Cirrhosis liver, atrophic; chronic adhesive pleurisy; chronic peritonitis with acute fibrinous peritonitis; chronic interstitial splenitis and perisplenitis; granular kidneys; ascites.

Julia L., a white Polish married woman, aged 60, was admitted to the Milwaukee County Hospital on April 2, 1910, complaining of swelling of the feet and abdomen. The family history is unimportant. She never remembers that she has been ill. Menstruation was normal, menopause ten years ago. She has had nine children, the youngest is 14 years old. There is no history of lues. She has never used spirits, beer, or tobacco. For the past four years she has worked outdoors on farms. She dates her present trouble six months ago when she began to feel weak. For two months she has been confined to bed. The abdomen has been very large and was tapped twice before she entered the hospital. She has never vomited, has had no pain in the abdomen, and has not noticed that her stools contained blood. On examination the patient is fairly well nourished, the skin has an icteric tint, there are dilated venules on the cheeks and a number of dilated superficial veins over the abdomen and chest. In the skin over the ensiform cartilage is a purplish spot about 8 cm. in diameter. This was due to a fall. The lungs and heart revealed nothing abnormal. The abdomen is enormously distended, the umbilicus protrudes slightly. By ballottement the liver was felt in the median line 8 cm. below the ensiform. The flanks bulged and fluid was diagnosed. The spleen was not palpable. The legs and feet are slightly edematous, numerous veins are seen. The skin is dry and scaly. Up to June 9th the patient had been tapped 6 times and 50 litres of a clear or very slightly cloudy yellow or greenish-yellow fluid aspirated. The specific gravity varied between 1010-1013, it contained considerable albumin, and the centrifuged specimen showed a few mononuclear

cells and a few large, swollen epithelial cells. On May 31st the circumference of the abdomen before tapping was 115 cm., ten cm. above the umbilicus. At the umbilicus it was 118 cm.

In spite of the large amount of fluid withdrawn the patient looked better and seemed brighter than when she entered the hospital. The appetite was good, and the bowels were regular. She was up and around all day. On June 7th she had a chill followed by fever. She was tapped on June the 8th and 9 litres of straw colored, slightly cloudy fluid was withdrawn. There were no definite signs in the lungs. She died June 10th.

The liver in situ was 5 cm. below the costal border in the mamillary line. It weighed only 1400 gms. however. It presented the typical picture of Laennec's cirrhosis. The spleen was hard, weighed 380 gms. The peritoneum was much thickened, the mesentery was thickened and somewhat shortened. Over the visceral layer was a slight fresh fibrinous exudate. This was not present on the parietal peritoneum except in the pelvis. It was everywhere much congested. The fibrinous exudate was found over the surfaces of the liver and spleen.

CASE V. Clinical diagnosis: Secondary carcinoma of liver, ascites, jaundice. Anatomical diagnosis: Portal cirrhosis of liver; chronic perihepatitis; and perisplenitis; hemorrhage into stomach and intestines; chronic interstitial pancreatitis; and interstitial nephritis (horseshoe-kidney); chronic passive congestion, edema of lungs; infarct right lung; bilateral hydrothorax; ascites; icterus.

Herman R., a German, 39 years old, a tailor, married, entered the Milwaukee County Hospital November 23, 1909, complaining of swollen feet and pain in the abdomen. He denied venereal infection. Several years ago he had rheumatism. For many years he has drunk 3 pints of beer daily and one whiskey in the morning. About two months before admission he noticed that his eyes were becoming yellow, later his body became yellow. His urine was dark heavy color. A few days before admission his feet began to swell and he felt himself growing weak. On examination he was distinctly jaundiced, seemed to have lost weight: there were dilated venules on the cheeks and over the abdomen. The lungs were normal. There was a soft systolic murmur at the apex. The abdomen was distended, contained considerable fluid. The liver extended from the 5th rib to 7 cm. below the costal border in the right mamillary line. It was painless, firm, the edge was hard and rounded, and there seemed to be nodules over the surface. The spleen was not felt. There were bile, albumin and casts in the urine. There was occult blood in the feces. Paracentesis drew off 2400 cc. of a clear, straw colored fluid responding to tests for a transudate. During the patient's sojourn in the ward he rapidly grew worse, became more emaciated and the color of the skin became a dark greenish yellow. He died December 14, 1909.

The liver weighed 2850 gms. was of a mottled greenish yellow and reddish brown color. The surface was typically "lob-nailed" some of

the projections being 1 cm. in diameter. There was contraction at the gall bladder notch. The capsule was thickened particularly over a depression running diagonally from the gall bladder notch to the upper right corner. The liver cut with difficulty and the cut surface presented the typical picture of portal cirrhosis. Microscopic sections confirmed the diagnosis. There was an enormous increase in connective tissue.

CASE VI. Clinical diagnosis: Fatty cirrhotic liver, ascites, icterus. Anatomical diagnosis: Carcinoma of neck of gall bladder, metastsases throughout liver; ascites; chronic fibrinous pleurisy and edema of lungs; chronic peri-splenitis and interstitial pancreatitis and diffuse nephritis; chronic prostatitis; icterus.

Andrew W., a native of Austria, aged 50, a laborer, was admitted to the Milwaukee County Hospital December 31, 1909, complaining of pain in the abdomen. When 14 years old he had "malaria." Eight years ago he was jaundiced for about two months. This cleared up completely. For the past four years he has drunk three pints of beer and two whiskies daily. Previously he only drank whiskey and has been a constant drinker since he was 21 years old. His present illness began about October 15th with pain in the abdomen after meals, constipation and nausea. He never vomited but had continued nausea. For past two months he has not had any appetite. He has noticed jaundice since the latter part of November. On examination he was a well built, fairly well nourished man with universal jaundice of a muddy-yellow color. The lungs and heart were normal. The abdomen was prominent, the liver could easily be felt, reaching 10 cm. below the costal border in the right mamillary line. It felt hard and smooth with a rounded edge and could be felt beneath the left costal border. No definite nodules were felt on the surface. The spleen was palpable, firm, not tender. The stools were clay colored, contained no occult blood. The urine contained albumin, casts, and bile pigments. On December 12th the jaundice was increasing and fluid was found in the abdomen. He was growing much weaker. He was obstinately constipated. On December 16th he passed by rectum a large quantity of blackish fluid material. The abdomen was becoming more distended. The jaundice had a greenish tinge. He grew rapidly worse and died on December 17th.

The gall bladder was of normal size, bile could be pressed into the duodenum. Towards the neck it had a firm feeling. The walls were thickened, towards the base the mucous membrane was congested. Occupying the neck and first part of the cystic duct was a tumor which was firm, nodular, completely surrounded the neck and on the inner surface was somewhat cauliflower-like. The liver weighed 3750 gms., was deformed and riddled with cancerous deposits, the largest of which extended almost through the liver. The liver tissue was greenish and firm. Microscopically the tumor was an adenocarcinoma. The tumors in the liver showed the usual structure of secondary adenocarcinoma.

CASE VII. Clinical diagnosis: Sarcoma of liver and retroperitoneal glands and kidney secondary to sarcoma of testicle. Anatomical diagnosis: Sarcoma (secondary) of left kidney, retroperitoneal glands, liver, lungs; mitral insufficiency and stenosis; passive congestion right kidney; chronic perisplenitis; localized chronic adhesive peritonitis; laparotomy scar; absence left testicle.

Wm. F., a white man, aged 34, a laborer, was admitted to the Milwaukee County Hospital January 15, 1910, complaining of vomiting after meals, pain in the stomach loss of appetite and weakness. He has always been well, is not a drinker, does not smoke, denies syphilis but had gonorrhoea twelve years ago. His work has been mostly on a farm. In March, 1909, he noticed that his left testicle was becoming swollen and grew gradually larger until November when it was about the size of his fist. The tumor was not painful but there was a dragging sensation on the left side. The testicle was removed in November but in October he noticed a swelling low down in the left side. It was not painful and not movable. This mass gradually became larger, growing towards the navel. On November 25th he was operated on at the Milwaukee Hospital. He was told that the tumor was too large to remove. During the past 3 months he has lost 75 pounds. Quite recently he has lost all desire for food, he has constant pain in the abdomen, and he has become jaundiced.

He was greatly emaciated and jaundiced. There was dulness in both backs below the ninth spine. A systolic murmur was heard at the lower angle of the left scapula. The abdomen was prominent and irregular bosses were seen in the epigastric region. A recent scar of operation, about 14 cm. long extended over the most prominent part of the abdomen to the left of the median line. A large mass was felt and seen occupying the left flank and extending across the upper part of the abdomen. This was continuous with the liver dulness. The edge of the liver was seen and felt 10 cm. below the costal border in the right mamillary line. The liver was full of large nodules and the edge was irregular. The mass was in general firm with here and there a doughy feeling. There was a scar on the left side of the scrotum and the left testicle was absent. There was general moderate glandular enlargement. Nothing could be done for him. He gradually sank and died on January 24th.

The liver weighed 3600 gms. and was full of fairly firm and softened carcinomatous nodules of all sizes some of which projected 3-4 cm. above the surface. It was adherent to a large doughy mass extending to the pubis and occupying the whole left side. The kidney was lost in this mass. From the left inguinal ring a nodular cord the size of one's thumb led directly into the lower end of this mass.

Microscopically the tumor was a sarcoma of the large round celled type and showed evidences of rapid growth. There was a marked tendency to softening in the centres of even the small nodules.

CASE VIII. Clinical diagnosis: Aortic and mitral regurgitation; chronic passive congestion of liver; edema lungs. Anatomical diagnosis: Hypertrophy and dilation of heart; chronic endocarditis, aortic valves; fibrous myocarditis; bilateral hydrothorax; chronic passive congestion of lungs, spleen, and liver, stomach and intestines; ascites; cyanotic induration of kidneys; diffuse arteriosclerosis; syphilitic sclerosis of the arch of the aorta.

Chas. K., a cooper, aged 40, white, was admitted to the Milwaukee County Hospital February 18, 1910, complaining of heart trouble. About twenty years ago he had syphilis and gonorrhoea and gonorrhoeal arthritis. He has never been seriously ill except for an attack of articular rheumatism in May, 1909. For the past two years he has drunk considerable whiskey and for the past two months he has drunk very heavily. In September, 1909, he began to have shortness of breath and palpitation of the heart after exertion. This increased and he developed the usual symptoms of broken compensation. On admission he had the signs of uncompensated aortic and mitral insufficiency and regurgitation. He became worse several days after entrance, showing a peculiar intolerance for digitalis. The liver, which on admission was noted as being at the costal border, rapidly increased in size to 10 cm. below the ribs. He died February 23rd.

The liver weighed 1800 gms, it was not so large as during life, reaching only 5 cm. below the ribs. It presented the typical nutmeg appearance. The organ was firm and was rather hard to cut. Microscopically there was marked passive congestion, atrophy of the parenchyma and some increase in the supporting connective tissue.

CASE IX. Clinical diagnosis: Fatty cirrhotic liver; alcoholic gastritis; cholemia. Anatomical diagnosis: Cirrhosis and fatty infiltration of liver; chronic ulcerative tuberculosis of lungs with cavity; brown atrophy of heart muscle; chronic diffuse nephritis; chronic pachymeningitis; internal hydrocephalus; arteriosclerosis; syphilitic aortitis.

Archie M., a tailor, white, aged 63, Irish, was admitted to the Milwaukee County Hospital December 7, 1909, complaining of stomach trouble and diarrhoea. He had been a heavy drinker of whiskey and for some time has had morning nausea which would be relieved by a glass or two of whiskey. He had smallpox at 31 years; gonorrhoea and syphilis at 27. He was treated one month for his syphilis. For the past two weeks he has had vomiting and profuse diarrhoea, the stools being greenish and containing mucus.

On examination he was fairly well nourished, the skin was harsh and dry. There were signs of infiltration in the upper left lung. The chest was said to be free from rales. The heart seemed normal. The liver was considerably enlarged. Dulness began at the fifth rib in the mamillary line and extended 8 cm. below the costal margin. The surface was smooth, the edge firm and not particularly sharp. The spleen was not enlarged. The urine contained albumin and finely and coarsely granular casts with a few hyaline casts. From the time

he entered hospital he was noisy and delirious. The diarrhea was persistent until a few days before death. He was never jaundiced. He died January 12th.

The liver weighed 2350 gms. and the right lobe was longer and thicker in proportion to the left lobe. It was smooth, hard and when cut was greasy and somewhat friable. The spleen weighed only 50 gms. and the pulp was dark and exceedingly soft.

CASE X. Clinical diagnosis: Congenital syphilis; amyloid liver and kidneys; ascites; right sided pleural effusion. Anatomical diagnosis: Empyema right side; atelectasis right lung and fibrinous pleurisy; amyloid liver and spleen; chronic perihepatitis and perisplenitis; chronic adhesive peritonitis; fibrous myocarditis; chronic interstitial pancreatitis; small amyloid kidneys; ascites.

Evelyn B., an unmarried white girl, 25 years old, was admitted to the Milwaukee County Hospital September 7, 1909, complaining of inability to walk. The diagnosis was tuberculous osteomyelitis and she had been operated on several times at both ankle joints. There were ulcers and old scars on both ankles. The lower legs were deformed, the shins knobby. She was undersized and childish. Only three times had she menstruated when 17 years old. For twenty years she had sores on the feet and legs. Although no definite history of syphilis could be obtained from the father (the mother was dead) the suspicion amounted to certainty. Up to 5 years of age she was well. She then had scarlet fever and since then has never been well. There was a history of sores developing on the shins which lasted for years, were curetted and finally healed under potassium iodide. She also had some eye trouble at seven years which was said to have been syphilitic. She has used crutches since she was 17 years old.

On admission the patient was deaf, the teeth were small and the front ones were decayed. The lungs and heart were normal. The abdomen was distended. The liver was smooth, firm, rounded edge, and extended to the umbilicus in the median line, and well up under the left costal border. The costal angle was wide and the ribs flared outwards. No note was made of fluid in the abdomen at that time. There were nodules, scars, and ulcers over both deformed tibiae and ankle joints. The urine contained a little albumin, 1010-1014 sp. gr., and waxy casts were found. No note was made of the first appearance of ascites. She was tapped seven or eight times and from 4500-6000 cc. of clear straw colored fluid withdrawn. In March she complained of pain in the right side. In April fluid was diagnosed on that side. She then had some dyspnea, had slight fever in the afternoon for a week or more. It was our intention to tap the chest but before we could accomplish it she suddenly had a coughing spell one night and died on April 17th.

The liver weighed 2720 gms. It was most irregular in shape, coarsely lobulated, and the left lobe formed by far the larger part of the organ. It was hard, cut with difficulty and cut section gives the amyloid reaction with iodine. Coarse bands of fibrous tissue

were everywhere present radiating in all directions. It resembled the so-called botyroid liver. Microscopically there was much amyloid material, and an enormous increase in the connective tissue. The liver cells were atrophied and many newly formed bile ducts were seen.

CASE XI. Clinical diagnosis: Lobar pneumonia probably tuberculous; fibrinous pericarditis; parenchymatous degeneration of liver and kidneys. Anatomical diagnosis: Acute tuberculous lobar pneumonia, gray hepatization right lung with small tubercles scattered through both lungs; acute fibrinous pleurisy, edema left lung; fibrinopurulent pericarditis with adhesions; acute dilatation of stomach; parenchymatous degeneration of liver and kidneys; cysts and tubercles in kidneys; anemia of spleen.

Wm. A., a white man, a mason, aged 29, was admitted to the Milwaukee County Hospital on March 6, 1910, complaining of pain in the side, headache, fever, and cough. His mother died of pulmonary tuberculosis. He has never been ill and his habits were good. His present illness began two weeks before admission when he caught cold from exposure. The following day he felt badly and began to cough. Later pain on breathing became severe, he spat up brownish looking phlegm. On examination involvement of the upper right lobe was diagnosed and a generalized bronchitis over the rest of the lungs. The heart on admission was normal, the liver slightly enlarged. He was very ill with high fever, rapid pulse and respiration. About one week after admission he developed a pericardial friction rub. There was later increase in the area of cardiac dulness. The liver became much enlarged. The leucocytes were increased, and pneumococci were found in the sputum, no tubercle bacilli. The urine contained albumin and casts. He died on March 15, 1910.

The liver in situ reached 8 cm. below the costal border and weighed 2350 gms. It was smooth and both macroscopically and microscopically presented the picture of "cloudy swelling."

A critical analysis of these cases brings out some instructive points. We have commented on Case I. Case III had a rather unusual termination. While it is not uncommon for a large tropical abscess of the liver to discharge through the lung (57 per cent of Cyr's cases, and 59 per cent of Thierfelder's), it is not common for it to heal spontaneously although a number of such instances are on record. The unusual feature is that in this case there was apparently only one large abscess. As a rule there are one or two rather large abscesses and several smaller ones.

In Case II we probably have a fatty cirrhotic liver which may owe its size to some extent to the passive congestion caused by the inability of the weak, irregular heart to maintain the circulation. She had a large, hard spleen. It is usually stated that in cirrhosis of the liver the spleen is enlarged and firm, as the same conditions which

act on the liver to produce cirrhosis, to some extent act on the spleen, and any interference with the circulation of the liver is felt in the splenic vein. One must not always expect an enlarged spleen. Our Case IX with a large fatty, cirrhotic liver had a spleen weighing only 50 gms. This diagnosis was confirmed at autopsy. This case also had curious mental symptoms. It is probable that in some part they were due to the absorption of substances which should have been detoxicated in the liver and also possibly to the unknown substance or substances which produce cholemia. The symptoms somewhat resembled those of delirium tremens.

Cases V and VI were most instructive. Both were in a ward at the same time. Both had been heavy drinkers. Both were jaundiced and had large, smooth livers which were hard and had rounded edges. In one (V) were marked emaciation, a jaundice which from dark yellow became almost olive green, and no enlargement of the spleen. The other (VI) was not so emaciated, had an easily palpable, hard spleen, and the jaundice was of a muddy color rather than a bright yellow. Both were at the age when either cirrhosis or carcinoma is not uncommon. Both developed ascites. Case V on account of the symptoms and signs was thought to have most probably a malignant growth with secondary deposits in the liver. Case VI was thought to have a fatty cirrhotic liver. Autopsy reversed the diagnosis. As a rule the jaundice in malignant disease becomes of a greenish tinge and the spleen is not affected. The jaundice of cirrhosis is not so apt to be greenish and the spleen is not infrequently enlarged and palpable.

A further point of importance is brought out in the ascites of Case V. Ascites in true cirrhosis is usually a terminal event. Not often do cases live to be tapped twice. The average time between the enlargement of the abdomen and death is eight weeks (W. Hale White). In both of our cases death occurred within three weeks from the time ascites was noticed. Cases which are diagnosed cirrhosis on account of the atrophied or enlarged liver, which are repeatedly tapped are said to be not cirrhosis in the strict sense, but are cases of chronic peritonitis with chronic perihepatitis, where the perihepatitis is secondary to the peritonitis. White, Rolleston and others insist on this point. Case IV of this series had an apparently enlarged liver, had ascites, had the general appearance of a person with a cirrhotic liver and she had been tapped six times, from 4000-11000 cc. of fluid withdrawn every time. The fluid accumulated with great rapidity. Up to June 7th she was up and around and seemed to be feeling comfortable. She had a good appetite. She

then had a terminal infection, died, and autopsy revealed a typical atrophic cirrhotic liver with acute peritonitis. That there was old chronic peritonitis is certainly true and it is probable that this accounted for much of the ascites. I did not think that this was a case of uncomplicated cirrhosis and the autopsy showed that it was not. The granular kidneys were probably responsible for the slow peritonitic inflammation. Such is commonly seen. We have had a number of such cases which came to autopsy. One patient had slight jaundice. White states that when there is jaundice the case is one of cirrhosis whatever else may be found. The livers of cases of chronic peritonitis are rarely, if ever, the seat of any marked increase in connective tissue. Some are covered with a thick, buttery exudate which resembles soft icing and to which has been given the name "Zuckergussleber" by the Germans. This thick exudate may peel off leaving an apparently normal capsule beneath. Such cases belong to the group of polyserositis or polyorrhomenitis, in a typical case of which not only the peritoneal covering of the liver as well as the lining of the peritoneal cavity is the seat of a chronic thickening, but the pleurae and pericardium are also thickened and the layers are adherent. In severe cases the inflammation extends also to the mediastinal tissues.

Case VIII demonstrates the common observation that the liver suffers rapid fluctuations in size due to the amount of blood which it contains. Variations in size from day to day are particularly noticed in cases of uncompensated heart lesions where the tricuspid valve is insufficient to close the orifice. Briefly there are three varieties of liver seen in uncompensated cardiac cases; (1) the actively congested liver, (2) the chronically passively congested liver, and (3) the latter liver in later stages in which atrophy of the cells occurs and their place is taken by connective tissue, the so-called cardiac cirrhosis, which, we may remark in passing, has nothing whatever in common with true cirrhosis. The liver is a large, elastic organ capable of containing at ventricular pressure its own volume of blood. It may be compared to a sponge and may be said to act physiologically as a safety valve to the heart. If the congestion has not been prolonged, the liver, due to its elasticity—the liver containing considerable elastic tissue—and to the pressure exerted by the abdominal organs, returns to its normal size as soon as the circulation is re-established. This accounts for the rapid increase in size in acute cases of uncompensated heart disease and the equally rapid return to normal when compensation is established. In our case the symptoms of uncom-

pensated heart disease had been present for several months, but just before death they became very acute. There were ascites and hydrothorax showing the inability of the liver to act further as the safety valve, and the man had pain and marked oppression over the liver. That the liver still retained much of its elasticity was shown by the decreased size at autopsy.

Secondary sarcomata of the liver present, as a rule, no difficulty in diagnosis, as the primary tumor is usually known (or suspected) and the enormous increase in size of the organ together with the tumors on the surface, which as in our case could be seen beneath the skin, establish the diagnosis. The only difficulty would arise as to whether in some cases the new growths are carcinomata or sarcomata.

The enlarged liver of cloudy swelling, and in infants the cloudy, fatty liver, is only a part of a general disease due to some acute bacterial or protozoan infection. The question of diagnosis does not figure largely in such cases.

The large syphilitic liver (X) may be difficult to diagnose from the large cirrhotic liver. In syphilis there is the history, the irregularities both of the surface and edge, the relatively large size of the left lobe and the recurring ascites. Syphilis and cirrhosis may be found in the same liver.

Much difficulty may arise in the diagnosis between cancer and syphilis of the liver. Where there has been found a primary tumor this should not occur. Both lead to deposits of tumors in the liver. In the tertiary stage of acquired syphilis the gummata often contract, the liver is nodular and the coarse bands of fibrous tissue isolate islands of healthy liver tissue which may project above the surface and be easily palpable. They can not be differentiated from the tumors of malignant disease. As a rule the liver in neoplasm is larger than that in syphilis, but when there is associated lardaceous disease the difficulty is much increased for the liver may be enormous, as in our case. An enlarged gall bladder and jaundice speak for neoplasm. Ascites only occurs in syphilis with associated chronic peritonitis, it is usually a sign of cancer. Pain and tenderness are more common in cancer. In congenital syphilis the confusion is not so likely to arise as the condition is always met with in children or young people before the age of twenty years. Our case was of the latter group. There was ascites of a marked degree but no jaundice, and no pain over the liver.

EXTRAUTERINE PREGNANCY—ITS SYMPTOMS AND DIAGNOSIS.*

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My reason for presenting the above named subject is because it is a condition which intimately concerns both the physician and the surgeon. Is it not the physician who first sees these cases and with the diagnosis made correctly and early does it not redound to the success of all concerned. That many cases of rupture of extrauterine pregnancy have occurred in which no correct diagnosis has been made and from which the patient has either died or been confined to her bed a long time without determining the true condition I think you will agree with me. There is an old saying that "a disease known is half cured" which has no greater worth than when applied to extrauterine pregnancy. An accurate word picture that will lead to its clinical recognition has not been produced. That there are many variations and not always typical manifestations, all who have met with extrauterine cases in their experience will agree. Some one has stated that more diagnoses in extrauterine pregnancy have been made after opening the abdomen than before. It is not my purpose to present this subject in its entirety as this would consume much more time than we have at our disposal and too much presumption upon my part upon your good nature. I shall therefore limit myself to extrauterine pregnancy during the first three months, and but to the symptoms and diagnosis.

It is claimed by some writers that extrauterine pregnancy occurs more frequently than formerly but this according to Williams, is due to a greater proficiency in diagnosis and also abdomens are now opened more frequently for the recognition of many conditions which previously escaped detection. Finally the increase may be due to a more widespread infection with gonorrhoea.

Extrauterine pregnancy may occur as a result of any factor which retards or prevents the migration of the ovum in its passage from the ovary to the uterus and may therefore occur as either ovarian or tubal pregnancy. Dr. Joseph Price has aptly stated that "Those implanted in the outer half of the tube belong to the surgeon, those in the inner half to the undertaker."

Among the factors which may give rise to this condition the following may be enumerated: (1) An absence or diminution of the

*Read before the Outagamie County Medical Society, September, 1910.

cial wave, as by congenital hypoplasia or puerperal hyperinvolution and also infections of the tube due especially to gonorrhoea. (2) Absence or diminution of peristalsis. (3) Tortuosity of the tube. (4) Constrictions, kinkings and narrowing of the lumen. (5) Blind pockets. (6) Transmigration of the ovum. (7) Tumors in the wall of the tube and polypi in the lumen of the tube.

The ovum fertilized and arrested in its passage from the ovary to the uterus assumes a malignant aspect towards its host—a condition which Werth has quaintly expressed by stating that “the ovum, in making its bed, digs its own grave.” The trophoblast or fetal cells act in a malignant manner toward the maternal tissues so that the ovum imbedding itself at the expense of the maternal tissues and then corroding its way out of this bed at the further expense of the surrounding sac, may many times open up blood vessels so that hemorrhage and death of the host may ensue. Hemorrhage may likewise partially or completely separate the ovum from its attachment resulting in death of the ovum even at an early date. An ovum implanted near the abdominal end of the tube is more likely to rupture into the tube lumen where it may continue for a while, when it may be aborted into the abdominal cavity. The tube may rupture upon its peritoneal side, or into the broad ligament. Adhesions and inflammatory conditions may limit the amount of hemorrhage. The fetus before the third month in cases of intra-abdominal rupture is usually absorbed, but pregnancy may continue as it is dependent upon the amount of damage done to the placenta.

The absolutely positive signs of extrauterine pregnancy are not present until the fifth month. The diagnosis is therefore based upon certain symptoms and signs. According to Williams in his textbook the signs and symptoms are usually classified into three groups: positive, probable and presumptive. The positive signs cannot usually be detected until after the fourth month and hence do not concern us here. The probable signs can be appreciated at a much earlier period, and are (1) changes in the shape and consistency of the body of the uterus, (2) Changes in the cervix, (3) Detection of intermittent uterine contractions, (4) Increase in the size of the abdomen and uterus.

The presumptive, with very few exceptions, are subjective and may be experienced at varying periods. They are (1) Cessation of the menses, (2) Changes in the breasts, (3) Morning sickness, (4) Disturbances in urination, (5) Abnormal cravings, (6) Mental disturbances, (7) Chadwick's sign or dark bluish or purplish congested appearance of the anterior vaginal wall.

It is also stated by Williams that the symptoms of uninterrupted extrauterine pregnancy are not characteristic for patient, and physicians are usually unaware of its existence until rupture or tubal abortion occurs. The symptoms arising may be so slight that the patient does not deem it necessary to consult the physician. In other instances patient may think herself pregnant and has the usual subjective symptoms. Instances have been recorded of the ignorance of a pregnant condition and rupture occurred before missing the menstrual period. Some recent writers lay little stress to the suppression of menstruation in this condition for the reason that it is not of regular occurrence. Hemorrhage is not always a constant factor for it may occur in other conditions—viz., endometritis, ovarian cyst, etc.

Sudden severe lancinating pain in either ovarian region followed by some evidence of external hemorrhage, and which is followed by marked faintness or shock upon the part of the patient is very suggestive of extrauterine pregnancy. A condition of collapse may immediately follow. Subnormal temperature may be present. These symptoms are indicative of free hemorrhage into the peritoneal cavity. The hemorrhage may be profuse and the patient bleed to death within herself. These cases demand prompt relief. Upon the other hand the primary hemorrhage may not be severe and the patient gradually recovers only to have it recur at a later period. In those cases when the symptoms of collapse are not so marked it is quite probable that a tubal abortion has occurred with trickling of blood into the peritoneal cavity through the tube. The patient usually recovers and a pelvic examination made after a few days may reveal a fluctuating pelvic tumor, a pelvic hemocele. Further hemorrhage may recur in the hemocele which may lead to its rupture or suppuration may ensue. It has been stated by some writers both in this country and abroad that the diagnosis of unruptured extrauterine pregnancy cannot be made. In many cases the symptoms may be so slight that the patient does not feel warranted in consulting her physician.

Up to this present writing I have met with but one case of unruptured extrauterine pregnancy. Case II, Mrs. H., age 27. Two years previously left ovariectomy for cystic ovary. Pelvic inflammatory condition with numerous adhesions. Uterus freed and fixed anteriorly. (Gonorrhoeal infection). Two years later, metrorrhagia, nausea, discomfort lower pelvic region. Decidual cast, triangular, without chorionic villi passed. Bimanual examination reveals enlarged right tube. Dr. W., who saw case in consultation with me, concurred in

diagnosis of extrauterine pregnancy. Rupture of tube occurred while upon her way to the hospital. Severe lancinating pain and collapse. Patient was operated upon with confirmation of diagnosis. Recovery. My diagnosis of such a condition was based upon the following conditions: (1) A careful history in which the possibilities of an extrauterine have been kept in mind—this would of course include the fact that the patient was of childbearing age, with perhaps a history of sterility, or possibly previous pelvic disease and also some symptoms of early pregnancy. There may have been sterility or a long interval between last pregnancy. (2) Examination 1. Finding a unilateral tubal tumor which is soft and doughy—the uterus may be slightly enlarged and softened; 2. Presence of external hemorrhage; 3. decidual cast without chorionic villi. Error may arise in mistaking a sacculated condition of a pregnant uterus for a pregnancy of the tube. In this connection it may be well to state that death has occurred in the attempt to replace a prolapsed pregnant tube in Douglas pouch where it has been mistaken for a retroflexed pregnant uterus.

The diagnosis of ruptured extrauterine pregnancy is not always so difficult to make. The diagnosis should be based upon a carefully taken history, the possibilities of an extrauterine pregnancy being kept in mind, including the fact that the patient was of childbearing age, with perhaps a history of sterility, or possibly previous pelvic disease. There may have been a long interval between last pregnancy. A previous tubal pregnancy may be followed by another, that is repeated tubal pregnancy, as in the following case XV.

CASE XV. Mrs. S., Brillion, Wis., age 30. Two years previously operated upon for right extrauterine pregnancy with rupture. Now history of amenorrhea, external hemorrhage shreds and partial decidual cast. Sudden acute lancinating pain and collapse. Very anemic. Temperature 100. Examination 4 days later, external evidences of small rupture from previous operation. Bimanual examination showed boggy mass in left pelvis. Operation. Many clots removed. Left tube removed. Hernial repair. Condition good. 6 hours later acute maniacal tendencies. Temperature 108 degrees. Death.

The course of pregnancy may be modified or apparently interrupted. There may be more pelvic distress, more or less pain in either ovarian region, more nausea, the patient feeling that everything is not as it should be before the rupture occurs. The presence of a decidual cast or shreds, the sudden onset of severe lancinating pain in one or other ovarian region followed by marked faintness on the part of the patient who then becomes extremely pallid and

then passes into a condition of collapse is distinctly suggestive of a ruptured tube with free abdominal bleeding. External bleeding is usually present. The amount of faintness or collapse which the patient shows is not always a constant factor. The temperature is usually subnormal or may be slightly elevated. The above taken together with a continuation of flow after a supposed abortion or curetage, the presence of shock or collapse with anemia, presence of a decidual cast without chorionic villi, and then upon examination finding a boggy pelvic mass, the diagnosis of ruptured extrauterine pregnancy is to be made with but little reservation. Patients, under these circumstances may die within a short time unless relieved quickly by surgical intervention. We must bear in mind that where the primary hemorrhage is not severe and where the patients apparently gradually recover recurrence at a later period may take place with dire results.

CASE X. Mrs. C., Athens, Wis., age 22. Seen April 19, 1908. Three or four weeks previously complained of distress in lower pelvic region. Some anemia. Externally hemorrhage, with presence of shreds. Nausea. Examination revealed boggy mass in pelvis. Extrauterine pregnancy with rupture was diagnosed and immediate operation advised. Upon patient's request was to wait until next morning when patient's brother-in-law, who was a physician, could be present. Meantime message sent home for special nurse and dressings. Family were told to send immediately for doctor in case of severe pain and collapse. About 6 o'clock while seated at table at hotel a messenger came stating patient was dying. We hastened to her home and found her in a condition of pronounced collapse and partially unconscious—she was profoundly anemic. Preparations for immediate laparotomy were made. She was placed upon the kitchen table and the operation proceeded under very unfavorable conditions regarding asepsis for our supply of sterilized dressings was limited. Her condition was indeed grave and excepting for but a few drops of anesthetic, the family physician stating "she was dying," the operation was completed with no anesthesia. Her convalescence and recovery were uneventful. One and one-half years later she gave birth to a large healthy boy baby.

In making a diagnosis of ruptured extrauterine pregnancy we must differentiate from abortion, pelvic infection, retrodisplaced pregnant uterus, torsion of the pedicle of an ovarian cyst or fibroid or omentum; appendicitis, ovarian growths or tubal enlargements in early pregnancy, ureteral calculus.

Abortion—Sudden severe pain followed by moderate external hemorrhage may be met with in abortion or pelvic inflammation. The shock and anemia are greater in extrauterine than is suggested by the evidence of external hemorrhage. Decidual tissue without chor-

ionic villi may be present in extrauterine pregnancy. The pain in abortion is usually spasmodic. The ovum may be present. In every case of incomplete abortion a pelvic examination under an anesthetic should be made to disclose absence or presence of complicating conditions of ovaries and tubes. The temperature in a threatened abortion is normal or above.

Pelvic inflammation—History of infection, onset not sudden, pain becomes gradually more severe and is not lancinating, evidence of circumscribed peritonitis, temperature elevated—no collapse.

Retrodisplaced pregnant uterus—uterus may simulate the feel of a ruptured extrauterine mass but the mass is continuous with the cervix. It is more central and symmetrical. Only accompanied with hemorrhage when abortion is threatening. The pelvic distress is of gradual onset. Bowel movements may be difficult to obtain. May get retention of urine in cases of incarceration. No sudden severe pain or collapse.

Torsion of the pedicle of an ovarian cyst or fibroid or omentum. Sudden collapse and evidence of hemorrhage are usually wanting. Temperature usually above normal. Extrauterine pregnancy however may complicate the condition of torsion of the pedicle of an ovarian cyst.

CASE X. Mrs. B., age 40, ten years since last pregnancy. Seen April 22, 1909. Became ill 4 days previously with pain in right lower pelvis. Missed one period. Evidence of external bleeding with shreds. Temperature 102 degrees. Examination revealed large mass posterior and to right of uterus. Diagnosis cyst right ovary or fibroid with twisted pedicle. Operation advised and accepted. Ovarian cyst of right ovary with twisted pedicle and right tubal pregnancy—unruptured. Recovery.

Appendicitis—Greatest point of tenderness is usually over McBurney's point while in pregnancy the tenderness is usually elicited by bimanual examination. The collapse in appendicitis is not so marked as in that of extrauterine pregnancy. Rise of temperature may be marked in appendicitis. No presence of anemia or evidence of external hemorrhage in appendicitis. The presence of a leucocytosis. A circumscribed hematoma of right pelvis and iliac region which becomes infected may be mistaken for an appendiceal abscess.

CASE VIII. Mrs. B., age 28, married 7 years, no children. Three weeks previously pain right iliac and pelvic region, onset not acute. Nausea and vomiting. No hemorrhage externally. Mass developed over region of appendix. Temperature 103. Sweats and chills. Examination revealed what appeared to be a typical appendiceal abscess. At operation small opening made over external aspect of swelling to provide drainage. Upon opening cavity escape of blood

and pus. Median incision then made and right tube, fetus and placenta removed. Through and through drainage instituted. This was a case of secondary infection. Recovery.

Ovarian growths or tubal enlargements in early uterine pregnancy is always to be thought of. Ureteral calculus in the pelvic portion of the ureter. History of renal colic previously, no evidence of external hemorrhage no anemia. No sudden collapse.

The probable diagnosis of an extrauterine pregnancy should then be based upon a carefully taken history and upon vaginal examination. The history revealing a period of amenorrhea, or sterility, or a long interval since last pregnancy. A history of previous pelvic inflammatory trouble, presence of uterine bleeding, with the discharge of detritus in which no trace of an ovum can be found, and then upon examination finding an enlarged uterus and a tubal tumor which corresponds to the supposed time of pregnancy. If with this history a patient suddenly becomes faint, pallid, passes into a collapsed condition, the diagnosis of ruptured tubal pregnancy or a tubal abortion with free abdominal bleeding is very probable. With a subnormal temperature, marked collapse and the presence of a boggy mass in the abdomen, the diagnosis is then certain.

Thus far my experience has been limited to 16 cases. Truly a small number compared to the number of other operators, yet sufficiently large so that one is justified in formulating and expressing an opinion. My position, like that in appendicitis, is to operate and at once in every case of extrauterine pregnancy. No one can tell even with reasonable certainty as to the recurrence of further hemorrhage. Immediate operation will save most of these patients while the expectant treatment will result in many deaths from further hemorrhage. There is never a moment when the patient is not risking her life from hemorrhage. The expectant treatment in most cases necessitates a later operation for hemocele or other complications and this is done when results are not so good as at the beginning. A long convalescence in which the patient is confined to bed is the result. It is true that all cases will not die from hemorrhage but to the present time we have no definite means for determining which ones will prove fatal. Extrauterine pregnancy is distinctly a surgical condition and for the following reasons: before rupture we have an active destructive growth which is not selective in its action towards the maternal tissues; after rupture there is hemorrhage with the bleeding vessels to be ligated and foreign material which may become septic to be removed from the peritoneal cavity. Most fatal cases of extrauterine pregnancy die from hemorrhage.

The question resolves itself not into operation or no operation but into immediate or delayed operation. Some operators assert that no one should operate during the acute anemia and shock from hemorrhage. This to me does not seem rational. We may and do amputate later in crushing injuries of the extremities after the reaction from shock but this delay is only advised when the vessels are under control. In intra-abdominal bleeding the shock is due to blood loss and as stated above we have no definite means of determining its cessation. Statistics show that the percentage of recoveries where operation has been done is many times greater than where the expectant plan has been pursued.

Schauta collected 123 cases operated upon with a mortality of 5.7 per cent and 121 cases treated palliatively with a mortality of 86 to 89 per cent. Martin gives a mortality of 63.1 per cent out of 265 cases treated palliatively and a mortality of 23.7 per cent of 575 cases treated surgically. Parry reported 174 cases of rupture in which none recovered. Chogan gives 84.4 per cent recoveries in his reported cases. Newell, 81.4 per cent recoveries in a series of 69 cases. Jacobs in a series of 615 cases a mortality of 16.6 per cent treated surgically. I could quote at some length the statistics of other operators but this is unnecessary as the evidence of all is in favor of immediate operation.

Finally I believe immediate operation has no more risks than the later one and certainly no more than any other abdominal operation.

ECTOPIC GESTATION.*

BY W. E. FAIRFIELD, M. D.,

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In the organization and perfection of Nature's great scheme, the fallibility of medical men seems to have been taken into account, for we find that in nearly all instances where the doctor must determine the nature of the malady which afflicts his patient, there is given him time for the careful weighing of the symptomatology as well as for study of the physical conditions attending the case. And while prompt and conclusive diagnoses are always to be sought, still in the majority of ailments, delay for a reasonable period has not

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served to greatly increase the death rate. Thus, while it is desirable that the diagnosis of a diphtheritic infection should be promptly made, it is not a crime to ask for microscopic confirmation of suspicions founded upon throat or nasal conditions.

In typhoid we may suspect the true state of affairs from the first, and yet we do not often make a positive diagnosis until blood tests have given confirmatory evidence to fortify what was previously nothing more than a reasonable suspicion. And because of this lack of haste we, as a body, are inclined to honor the man who is cautious in arriving at conclusions rather than to laud him who, at haphazard, grounds a diagnosis upon such a frail foundation as a barnyard, an open well and a fever. In this position the medical profession is entirely correct. It should demand a knowledge that is above the suspicion of error, particularly of those who would pose as authorities, and who rush into print and by dogmatic statements, which later are proven unsound, lead the younger men in our ranks into fields bordering upon agnosticism concerning the usefulness of drugs and treatment.

Our memories are very short when we approach these questions, and I may be forgiven for emphasizing my statement by calling attention to a couple of notable examples of our race after the illusions of men who made positive assertions with great and persuasive eloquence.

Take the treatment of typhoid by the so-called Woodbury method. Many honest men would be made to blush could they recall their former professions of faith in its efficacy, for all thinking men in our profession are now convinced that we cannot abort typhoid by any system of internal medication. We concede that there are many forms of enteric fever which disappear upon clearing out the intestinal tract, but typhoid is not amenable to any specific, and yet we know that the proceedings of medical societies of ten years ago are burdened with the vaporings of this misconception.

Again, in diphtheria, we had a hundred specifics before the coming of the serum, and the wonderful cures then reported must now be attributed to errors in diagnosis—since these same specifics have proven of no avail in the presence of a genuine epidemic.

I make these digressions only to emphasize my belief in the necessity for clear-cut and well grounded diagnoses, and I wish to impress the fact that our errors are not only visited upon the particular patient we are treating, but are apt to exert an influence away beyond the present circumstance, as did the Woodbury for typhoid, and the ante-serum specifics for diphtheria. Nothing re-

tards the coming of the true specific so much as the periodic announcement of the false one, for the announcement of a false specific entails the labor and experimental research necessary to disprove the claims that have been made for it. In the condition I bring to your notice, mistaken diagnosis is the rule, and I believe it is so because minor symptoms have been emphasized and the major and characteristic ones have been slighted or omitted altogether.

In my student days I was taught that such a thing as ectopic pregnancy could occur, but my mental attitude was that of security in the belief that an ectopic gestation was beyond the range of probability and that when I did encounter one, I should have time to study the condition leisurely and carefully and thus to arrive at the correct conclusion—if not at once, then during the next week—or haply the next month. If you have never had the impression that you may meet a case of extrauterine pregnancy where the demands will be such as to force you to immediate and radical action, abandon it now. I venture the assertion that no member of this society with a well established practice, has been without such cases, whether they have been recognized or not, and I say this without the slightest desire to disparage your diagnostic ability, knowing as I do, that it is of a high order.

Too many women have been said to have a diseased ovary or tube—a sudden onset of pelvic inflammation—a ruptured cyst, or a pelvic peritonitis, whose condition had, behind it all, a ruptured tubal pregnancy or a tubal abortion. Many women die from what has been designated “heart failure”—from “syncope” and other vaguely defined conditions whose abdomens, had they been opened, would have been found flooded with their life blood. True, a diseased tube is almost always present. This is the one misleading factor that towers over all others in the diagnosis of ectopic pregnancy. It is a “lighting up of the old trouble” you say when pain, distress and discomfort mark this region as the location of disease, and so the case is allowed to go on and on until the coming of the deluge. My first axiom then is this :

The existence of a diseased tube in the case of a woman who has had sexual intercourse should in itself be a warning to the physician of the possibility of ectopic pregnancy—for in such a tube the descent of the ovum is very prone to be arrested by the diseased condition of the mucosa, or by other causes operative by reason of the deviation from the normal.

Several times in my experience in surgical work I have had

occasion to operate upon women for tubal pregnancy where I had previously detected a diseased tube. Indeed, one of the determining factors in my search for the presence of an ectopic gestation is a history of the presence or absence of previous lesions in these organs. Given a history of disease,—a point is scored in favor of tubal gestation, and on the other hand, when I can elicit no such history, I demand stronger confirmatory evidence for the establishment of my suspicions upon a foundation that may claim to be reasonably defensible.

No symptoms present themselves which may be called entirely conclusive. The careful surgeon or physician must grasp the whole perspective and not at any time be led away from the clinical picture by one or more pronounced symptoms or by the absence of one he has considered essential. For instance,—*Signs of pregnancy* are usually considered a necessary accompaniment of this condition, and yet it is entirely possible that there be no such signs in the presence of an ectopic gestation. The woman may tell you that she has menstruated regularly, that her breasts have not enlarged, that there has been no nausea,—that she is quite convinced from the precautions she has taken that there is no pregnancy, and yet rupture of the tube and death of the patient will prove the fallacy of her honest statement. Martin reports that in 43 per cent of ectopic gestations there are no deviations from normal menstruation sufficient to excite suspicion. In many cases, however, there is deviation from the customary course, and one should carefully inquire into the previous history to learn whether there is not a change in the character of the flow. To simply take the word of a woman that she has menstruated regularly is to invite error. By close inquiry it will often be found that the menstrual discharge is shreddy in character, and that the time of flow has been lengthened and accompanied by more or less pain and discomfort referable to the tube affected, or to the bladder, or even to the rectum. However, as before stated, there may be no symptoms which would in the slightest manner warn the woman or her attendant until an internal hemorrhage supervenes and the phenomena attending such an occurrence clears up the diagnosis of a condition hitherto unexplainable. These internal hemorrhages give rise to such characteristic signs, and the condition itself calls for such prompt interference, that we would do well to study every symptom carefully and impress the clinical picture upon our minds so indelibly that in the presence of it, we may act with the celerity and precision demanded by the gravity of the situation. A hemorr-

lage into the abdominal cavity, whether from a ruptured tube, or a tubal abortion, is usually signalized by the onset of a sudden sharp pain, and which, the patient will tell you, is different from any pain she has before experienced. If the hemorrhage becomes arrested, the pain will soon stop, at least to the extent of losing its sharp, cutting character, and it may be replaced by a dull, sickening pain, which gradually lessens, as the free blood becomes absorbed. Recurrence of the hemorrhage will be marked by recurrence of the sharp pain in most instances, and this will be accompanied by other characteristic signs hereafter to be described.

In *abortio tubi*, the pain is less marked and all of the characteristic symptoms of ruptured tubal pregnancy are likely to be less pronounced. Here we have not an abrupt rupture of the peritoneal coats, with a sudden gush of blood into the abdomen, but a separation of the circulatory connection with a slow and gradual trickling of the blood into the abdomen. Indeed, absorption may occur almost as rapidly as does the flow, and upon opening the abdomen of such a patient a surprisingly small quantity of blood may be found free in the cavity. I believe writers have given too much prominence to the symptom of fluctuation in the pouch of Douglas as a determining factor in the diagnosis of ruptured tubal gestation. Ordinarily one should be able to detect blood or other fluid in this manner, but in acute hemorrhages into this cavity, where any attempt is made to examine a woman by palpation, one would have to be possessed of more than ordinary *sang froid* to persist in it to the point of clearing up the question because of the great pain that will be occasioned by the necessary manipulation. In fleshy women the search for fluctuation is most unsatisfactory. Dullness upon percussion has been emphasized by some, but it is surely of little value, for when dullness is present, death is not far behind, so great has been the loss of blood.

In the rupture of a tubal gestation, the symptoms are influenced by the location of the rupture, whether it is into the peritoneal cavity direct, or into the broad ligament. In one of my cases rupture was into the broad ligament and the pain was particularly agonizing, due, I believe, to the stripping off and tension upon the peritoneum. Here the hemorrhage is confined, and being extra peritoneal, absorption is not so apt to take place, though absorption of the peritoneum covering the hematoma quickly occurs, making it possible for the fetus to enter the abdomen. In such cases we have a plausible explanation of the continued growth of the fetus in the abdomen, and implantation of the placenta in the broad ligament. The presence

of a tumor in the tubal region is a symptom that would be expected to be of value in the diagnosis, but unfortunately it is rarely possible to palpate such a growth before the pregnancy has reached a stage where such palpation would be very apt to produce rupture. In other words—if I were able to palpate freely a tumor of the tube without rupturing it, I would incline to the opinion that the tumor was not a pregnancy at all. I know that there are exceptions to this statement, but it is sufficient to note the fact that a tumor in the tubal region is not to be sought for as a necessity in the making of a diagnosis. Given a tumor in a tube that can be palpated and a discharge of decidual detritus, a diagnosis can be positively made, but the absence of both decidua and palpable tumor does not shut out the possibility of an ectopic pregnancy.

A constant symptom of rupture into the abdominal cavity is collapse. This is more or less severe according to the amount of blood lost. Faintness and pallor are also quite constant symptoms, though in a full blooded, strong woman, they may not come on until enormous loss of blood has occurred. Subnormal temperature will appear in the early hours of a hemorrhage, and this will be followed by a rise above normal when the hemorrhage has ceased and the blood is being absorbed. Thirst is almost always present, and the patient is uneasy and restless, sighing in her respiration, and feeling a sense of impending calamity which gives place, as hemorrhage proceeds, to absolute indifference. Both rectal and vesical tenesmus are often present, and rarely are both absent. Both are extremely important symptoms of ruptured extra uterine pregnancy.

Another symptom, which appears to have been omitted, or if mentioned at all, to have carried little emphasis, is vomiting. This comes on as soon as the blood begins to pour into the abdominal cavity. It much resembles the vomiting which occurs in acute gangrenous appendicitis. It is an accompaniment of the cutting pain and in my own cases, has been present whenever there has been a marked loss of blood.

In tubal abortion the symptoms are not so accentuated, the pain is less intense, the collapse comes on very gradually and the rectal and vesical tenesmus do not follow so soon after the onset of the hemorrhage.

Both in ruptured tubal pregnancy and in tubal abortions, nature attempts to effect a cure by the arrest of hemorrhage and later the absorption of the accession. The absorption may become complete and only a few adhesions remain to account for the presence of the lesion, or a lithopedion may be formed, and this is more apt to occur where

the death of the foetus has been delayed until it has reached a stage of fairly complete development, or the detritus may be reduced to adipocere, and lastly, it may become infected, in which event it will be attended by the usual symptoms of suppuration in that region. Rupture into the broad ligament usually results in a hematoma, which may or may not be absorbed. As to abdominal pregnancy, many writers deny that it ever occurs primarily, but that it is always the result of an implantation from elsewhere. When it does occur, it may go on to term when the problem will be one of laparotomy. The removal of the placenta is usually attended by much hemorrhage.

TREATMENT.

Every suspected case of extra uterine pregnancy should be explored. No other way has been offered to determine the grave question at issue. In the presence of a good technique, exploration is safe, and a tumor in the adnexa, if it has been mistaken for a tubal pregnancy, can receive surgical attention without fear of the disturbance of a normal pregnancy should one exist.

In the hands of the careless or inexperienced, nearly every woman is curetted in the hope that she will be relieved, and this curettement, by leading to violent contractions of the muscle coats or from the direct violence applied, often leads to simultaneous rupture. It is needless to say that curettement is worse than useless.

It is curious to note the changes in opinion of the medical writers concerning the frequency of the occurrence of this condition. Tait was the first to operate and this was done in 1883. Henning in 1876 stated that the trouble was so uncommon that even the directors of large clinics were not apt to see a case. Noble at the present writing, states that 4 per cent of all laparotomies upon women will show this condition to be present. This is not wonderful when we consider that all pregnancies are first of all extra uterine, and that any obstructive condition may arrest the ovum in its course to the uterus. It is fair to presume that more than the proven 4 per cent occur and that death of the fetus and the absorption of the pregnancy conceal the real nature of what was supposed to be a passing indisposition, and while we may differ as to the frequency of its occurrence we must be a unit in the contemplation of its possibility, and in the exercise of intelligent and watchful professional care, to the end that so grave a condition may have applied to it the proper remedy.

I have purposely said nothing concerning the diagnosis of unruptured tubal pregnancy, for I believe that a woman is tolerably

safe in the hands of the practitioner who is quick to recognize one that has ruptured, and symptoms which may appear previous to rupture will not be apt to escape him. It is true that in my limited experience I have operated upon several unruptured cases (I have the pleasure of submitting three such specimens), but I am free to confess to you that I found these specimens in cases where I had suspicions strong enough to warrant exploration, and that in no case did I make the dogmatic statement previous to operation, that an ectopic gestation existed. I have found that when the true facts are explained to the patient she is usually quite ready to submit to a measure honestly intended to protect her life. The operation itself rarely offers great difficulties, except in cases where no previous preparation of the patient is possible. With a distended intestine and the patient bloodless, operation is a dangerous procedure and yet it should not be avoided, for it offers the only possible chance the patient can have. I have made it a rule to operate if my patient is breathing and until I can see a reason for changing that course I shall abide by it. Elevation of the feet, ice to the abdomen, ergot internally and all other makeshifts are unscientific, dangerous and useless. The case is surgical and the sooner that fact is recognized the better for the patient and the attendant. General anesthesia is to be desired though it is possible to secure the bleeding point by cocainizing the abdominal wall, making a quick incision and clamping the tube to the point of including the artery. It is a grave mistake to attempt to clean out the abdomen before clamping the vessels in cases where the woman is greatly exsanguinated. As soon as the usual central incision is completed, the fingers of one hand guide the hemostatic clamp to the offending vessel, and when the clamp has been tightened the work can proceed without further loss of blood. The subcutaneous injection of saline solution may be commenced with the anesthetic and where there has been great loss of blood, it should certainly follow the clamping of the vessels. It should never be injected into the rectum during or preceding the operation because of the distension it occasions, and the consequent added difficulty from impairment of the operative field of vision. Transfusion should be practiced in desperate cases. When a tube has ruptured I make it a rule to remove the offending organ, turning in the divided end beneath a purse string suture. The clots are carefully removed, the abdomen delicately mopped out with moist gauze sponges and closed without drainage. I am aware of the fact that vaginal operation for this condition is advocated by some surgeons. Personally I be-

lieve it is to be condemned for the reason that the field is not exposed, and when it is open for us to choose, that route should be selected through which we can more surely give our patient complete and permanent relief.

THE CLINICAL SIGNIFICANCE OF HIGH BLOOD PRESSURE, ITS CAUSES AND TREATMENT.*

BY P. MCKITTRICK, M. D.,

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The clinical significance of high blood pressure is gradually being impressed upon the scientific worker in the field of medicine. Years elapsed after Harvey discovered the circulation of the blood before the fact became known that the blood exerted pressure upon the tubes through which it passed.

Our recent studies have convinced us that the blood pressure in the normal individual should remain within certain bounds, and that when it becomes unusually high and continues so for a long period of time, certain definite anatomical changes take place in the circulatory apparatus, which, in a large measure, incapacitates the individual for the performance of his usual duties, and very frequently shortens his life.

The estimation of the blood pressure with a reliable instrument, while perhaps not so important in the diagnosing and treatment of disease, as a record of the changes in body temperature, should on no account be omitted. We may have learned, as our forefathers in the practice of medicine did, to distinguish between the hard and the soft pulse by the sense of touch, but if we compare the impressions gained in this way with the results obtained by instruments of precision, we will be surprised to learn how often we have been mistaken.

Many of the drugs which are being used in our every day practice, drugs which have a certain definite physiological action, belong either to the class of vaso-dilators or vaso-constrictors, and it is important to the surgeon as well as to the physician that the blood pressure should be taken into consideration when they are prescribed. To give a vaso-dilator when nature is making a desperate effort to

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keep up the blood pressure in order to save the patient would be disastrous, and to give a vaso-constrictor when the heart is already severely taxed to perform its functions would not be good practice. In order to get a clear conception of the subject of blood pressure, it is necessary to thoroughly understand the mechanics of the circulatory system.

The heart, as the center of circulation, forces blood into the arteries intermittently, but on account of the pressure exerted upon the blood stream by the arterial walls, as well as the narrowing of the vessels themselves as they approach the distal portions of the body, the blood is distributed to the tissues through the capillaries in a continuous stream.

Blood pressure in any individual is dependent upon four factors: (1) The energy of the heart; (2) The peripheral resistance; (3) The elasticity of the blood vessels; (4) The volume of the circulating blood.

The heart, being the original source of energy as manifested in the circulation, blood pressure necessarily depends in the first instance upon the force of the ventricular systole; this being true, any cause which operates to increase the force with which the heart expels blood into the great vessels, other conditions remaining the same, raises arterial tension, and conversely, any thing which diminishes such force, lowers blood pressure.

When arterial pressure is raised in the normal animal, the pulse rate is slowed, and when the pressure is lowered, the pulse rate becomes more rapid.

As to the effect which a change in the peripheral resistance has upon blood pressure we have learned that when we narrow the outlet of a distensible tube, as for instance attaching a nozzle to a length of fire hose, the pressure within the tube is increased. The narrowing of the blood vessels as they approach the distal portions of the body has a similar effect.

The blood vessels, with the exception of those that supply the brain, are composed to a great extent of muscular fibre, and therefore capable of contraction and relaxation. They are under the control of two sets of nerves; the vaso-constrictors and vaso-dilators, the centers of which are located in the medulla oblongata, and many of the causes which operate to change the calibre and tone of the arteries act through the nervous system. The tone of the vessel depends upon the balance which exists between these two opposing sets of nerves.

The abdominal vessels, innervated by the splanchnic nerve, have by far the greatest effect upon the general blood pressure. This is partly on account of their size, being, when dilated, able to contain nearly all of the blood in the body; and partly on account of the fact that the splanchnics are more readily influenced by reflexes from any sensory nerve. The statement that a person may be bled into his own body is, to a certain sense, true. This is exactly the condition that occurs in some cases of surgical shock, when the blood pressure becomes dangerously low, and the patient breaks out in a clammy perspiration. I am satisfied that much harm has been done in those cases by resorting to the use of strychnine to stimulate a heart that is in every respect normal, lacking only sufficient blood upon which to exert its force. Crile has shown that atropine by constricting the blood vessels and driving the blood back into the general circulation is the remedy that is indicated, and the one from which we should expect, and do get results.

The elasticity of the arteries enables the heart to do its work with greater ease. During systole a large part of the energy of the heart is made potential, used to move the blood during diastole, thus converting an intermittent into a continuous stream.

The volume of the circulating blood has only a subordinate and temporary influence upon blood pressure. A patient may have a severe hemorrhage which naturally results in lowering the blood pressure, but on account of the ability of the arteries to contract and adjust themselves, to the lessened amount of circulating medium, the blood pressure soon becomes normal again. The ability of the blood vessels to dilate in response to the proper stimulus also permits us to introduce into the circulation an amount of fluid equal to the volume of the blood, without materially raising blood pressure.

Let us now see what practical application can be made of those facts in the diagnosis and treatment of disease.

It has been shown experimentally, that when there is deficient oxygenation of the blood, such as occurs in asphyxia, the respiratory centers are stimulated and the pulse is at first slowed. A marked rise in blood pressure takes place and is maintained until shortly before death. A knowledge of this fact should enable us to estimate with a greater degree of certainty, the degree of stenosis which exists in certain laryngeal troubles, such as, for instance, laryngeal diphtheria.

The highest blood pressure recorded in man has occurred in anemia of the brain. If the cerebral circulation is impaired by compression of the brain, symptoms are produced identical with those

which occur in asphyxia. (1) Loss of consciousness, (2) Respiratory spasm, (3) Slow heart and rise of blood pressure, (4) Fall of blood pressure, rapid pulse and death. On account of the anatomical construction of the cerebral blood vessels, the amount of blood circulating in the brain is fairly constant and therefore compression from any cause such as a blood clot, which might be present following an injury to the head or a fracture of the skull, causes a local anemia. The symptoms which result are due to the anemia and not to the pressure. The efforts of nature to overcome the intracranial pressure and re-establish circulation raises the blood pressure. If the intracranial pressure be too long maintained, the nerve centers become exhausted and paralysis and death results. During acute cerebral compression a rise in blood pressure is absolutely essential to life, and any drug or other therapeutic agent which would lower blood pressure in a case of injury to the head in which the symptoms indicated the presence of a clot, would only hasten the death of the patient. Surgical interference and the removal of the clot would be the rational treatment. In every case of serious injury to the head where we have even the suspicion of a fracture and the presence of a clot, we should estimate the blood pressure.

If it is found to be normal, we can be reasonably sure that the patient is not suffering from compression of the brain, and acute cerebral anemia.

A few months ago I saw a patient, in consultation with Dr. Mason, who had been thrown from a buggy, striking upon her head. She was unconscious when picked up, and many of the symptoms present were strongly suggestive of fracture of the skull. Upon estimating the blood pressure and finding it normal we felt reasonably sure that she was not suffering from compression of the brain and advised expectant treatment. The fact that she made a prompt and complete recovery would indicate that our conclusions were correctly drawn.

Whenever we have a continuous and lasting increase in peripheral resistance, the blood pressure is raised, and the heart is called upon to exert additional force to overcome the resistance. The result is that in every case there eventually occurs a hypertrophy of the left ventricle. The two conditions which we most frequently meet, in which an increase in peripheral resistance is present, are arterio-sclerosis and chronic interstitial nephritis. It is well to remember, however, that in many cases of arterio-sclerosis, the blood pressure is normal, and we do not get a hypertrophied heart, with a

ringing aortic second sound. In those cases the aorta above the diaphragm and the splanchnic vessels are fairly normal, the sclerosis being local and not general.

In perhaps no disease do we find hypertension so constantly present as in chronic interstitial nephritis. Bright, many years ago, recognized the coincidence of hypertrophy of the heart with high blood pressure in nearly all cases, but he was unable to determine the cause, and even at the present time considerable difference of opinion exists. Some of our best observers believe that toxins circulating in the blood cause vaso-motor spasm, resulting in constriction of the arteries. These toxins are supposed to be biochemical in nature and formed largely in the intestinal canal. Others again take the view that hypertension in cases of chronic nephritis is a compensatory process, which becomes necessary to supply a partially disabled kidney with additional blood. It is a significant fact that chronic interstitial nephritis is frequently found in those who lead an active business or professional life, and I am therefore inclined to believe that nerve strain is an important etiological factor. As chronic interstitial nephritis is a disease of the kidneys, arteries and heart, we should, in every case of hypertension, with hypertrophy of the heart, make repeated urinary examinations in order to detect if possible, the presence of albumen and casts. Even in the absence of positive urinary findings we cannot always be sure that nephritis does not exist. Many of our leading life insurance companies recognize this fact and refuse to issue a policy to men in middle life with hypertension, even though a urinalysis discloses nothing abnormal.

Hypertension eventually results disastrously to the heart. At first it meets the demand for extra labor thrown upon it by becoming larger and stronger, but eventually the heart muscle becomes exhausted and we have dilatation and broken compensation. For a time, a temporary disturbance of compensation which may follow over-exertion, will pass away under rest and proper therapeutic management, and with the exercise of extreme care a patient may manage to get along in comparative comfort, but later on there appear those symptoms indicating progressive heart failure which eventually causes death.

The distensibility of the arterial wall diminishes with increasing tension and the capillaries will remain permanently dilated. If in addition to this change, degenerative changes have taken place, any sudden increase in tension is apt to cause a rupture of the artery. This is what occurs in apoplexy, a cause of death quite frequently in nephritis.

In the treatment of hypertension, we cannot expect to get the best results unless the case comes under observation before irreparable damage has been done to the kidneys and circulatory system. If we accept the view which seems to be the most probable one, that high blood pressure, in a large percentage of cases, is the result of toxemia, the first indication would naturally be de-toxication. This can be accomplished, in a large measure, by regulating the diet and stimulating the various excretory organs by hygienic and medical treatment. As many of those who are thus afflicted are active business and professional men in middle life who do not take a sufficient amount of exercise, and who are given to over-indulgence at the table, we should impress upon them the fact that the quantity of food taken is equally important with the quality. As a rule meat should be limited but not entirely dispensed with. A certain amount of protein is necessary and it is more easily obtained from meat than from the carbo-hydrates. As little salt as possible should be used as it is hard to eliminate and has a tendency to cause vaso-motor spasm. The diet should be so regulated that the corpulent will lose in weight by limiting the amount of food intake, and the spare individual with hypertension increase in weight. Over-indulgence at the table should on no account be permitted, and particular care should be taken to guard against intestinal fermentation with the formation of an excessive amount of gas in the intestinal canal. A sudden rise in blood pressure resulting in a stroke of apoplexy frequently occurs following a hearty meal.

Tobacco, which has the effect of raising blood pressure should be used with great moderation. When symptoms indicative of broken compensation make their appearance the amount of fluids taken should be reduced to a minimum. Graduated and regular exercise is beneficial, but over-exertion either mental or physical should be carefully guarded against. In many cases it is advisable to prescribe a long vacation for the active business man, in order that he may be relieved from the worry and nervous strain connected with his business. Hot baths or hot air baths taken at regular intervals tend to relieve vascular spasm as well as eliminate toxins. The bowels should be kept active by the use of salines each morning before breakfast or by the giving of 10 grs. of blue mass at bed time, followed by a saline in the morning. Even when the blood pressure is not materially reduced by this treatment, many of the unpleasant symptoms will disappear and the patient will have a subjective sensation of improvement.

In the use of drugs, we should proceed with considerable caution, as not every case of hypertension needs reduction. In many cases the symptoms will be aggravated instead of relieved when vaso-dilators are given. This is particularly true in the hypertension that occurs in cases of nephritis. It is also well to remember that after the arteries have become hardened, drugs have very little effect in lowering blood pressure. If we accept the view held by Janeway and others that hypertension in cases of chronic interstitial nephritis is a compensatory process, it would seem unscientific to interfere with it. However, if the pressure becomes abnormally high and uremia threatens, it should be promptly relieved. The cases suitable for drug treatment, are, as a rule, those in which a careful chemical and microscopical examination of the urine fails to disclose any disease of the kidney. In cases of valvular heart trouble with high pressure the relief of the vascular spasm lessens the amount of labor which the heart is called upon to perform and therefore contributes, in a measure, to postpone the day when compensation will be disturbed. In some cases of broken compensation with hypertension the nitrites can be given in conjunction with digitalis with good effect.

In giving vaso-dilators we should commence with small doses and increase until we get the desired effect. For prompt action in cases of angina pectoris the ideal remedy is amyl nitrite. If this is not at hand nitro-glycerine in doses of 1/100 or 1/50 gr. hypodermically answers well. The nitrites as a rule act promptly, but their effect soon passes off. For continued use the nitrite of sodium in doses of from 1/2 to 3 grs. is highly recommended by Elliott, West and others. My own personal experience with the remedy has been very satisfactory. Even when no great impression is made upon the blood pressure the cardiac dyspnea and the cerebral symptoms will disappear. Morphine by relieving vascular spasm is very useful in doses of 1/8 or 1/4 gr. hypodermically, especially in those cases in which hypertension occurs in valvular heart disease. It should not be placed in the hands of the patient for evident reasons.

Potassium iodide, given in small doses for a long period of time, is valuable in cases of arterio-sclerosis on account of its alterative action. Mild cases of hypertension frequently respond to the use of sweet spirits of nitre.

Every case of hypertension should be carefully studied to detect if possible the causes which are operating to produce the condition. The removal of the cause will frequently suffice to restore the patient

to a normal condition without the necessity of instituting active treatment. The proper management of any case is a matter of individual judgment on the part of the physician, as no cut and dried method can be adopted which will fit every case.

THE NURSING MOTHER FROM THE BABY'S STAND- POINT.*

BY A. W. MYERS, M. D.,
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In considering the newborn child we must frequently remind ourselves that we are not dealing with a completed organism but with one which has merely progressed to a stage when separate existence is possible under favorable conditions. After birth development goes forward smoothly and continuously in the various systems as the child's organs adjust themselves to the new conditions and tasks which confront them. But there is one change which takes place immediately after birth which is without a parallel in the whole after life of the child. During the first few hours the intestinal tract which has contained until this time only the sterile meconium is invaded by bacteria, entering from the surrounding air, and in from twelve to twenty-four hours these are carried by the aid of the peristaltic movements throughout the whole length of the digestive tract, so that infection of the entire contents of the intestine is effected. This bacterial invasion can in no way be prevented and there is no need of taking measures to delay it. As it is inevitable the sooner the bacteria become domesticated the better it is for the child. But as the bacterial flora depends largely upon the nature of the nutritive substances found in the gastro-intestinal tract it is of the utmost importance to avoid giving anything which might favor fermentation or in any way lead to a disturbance of the normal process of invasion.

How easy it is to cause a disturbance by the use of improper food at this period is strikingly indicated by an interesting observation made upon calves by Jensen which is quoted by Czerny and Keller in "Des Kindes Ernährung": "A feeding of boiled milk to calves as the first meal will in most cases call forth a severe and

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sometimes even hemorrhagic diarrhea, which as a rule ends in death and presents the same picture both pathologically and bacteriologically as the typical acute dysentery of calves. This observation was first made at several farms where there had been no severe diarrheal troubles until with the introduction of tuberculin testing the custom arose of feeding the calves from birth on boiled milk. Between 80 and 90 per cent of the calves thus fed died. Later it was observed that it was only on the first day after birth that the calves were so sensitive to the boiled milk; if they received only colostrum on the first day they were able to tolerate the boiled milk on the second day without difficulty. These observations were confirmed by numerous feeding experiments. This great sensitiveness, or better, this slight resistance to the colon bacillus is lost in the course of a few days."

Escherich has shown that the first bacterial forms demonstrated in the intestinal contents of infants vary with the nature of the air bacteria in the room in which the child lies, but by the end of the first or the beginning of the second day of life a fairly typical bacterial picture is presented in which the bacillus lactis aerogenes predominates in the upper portion and the bacillus coli communis in the lower portion of the gut. Czerny and Keller maintain that even the addition of sugar to the sterile water which may be given during the first two days is not without danger, and they assert that if any substance is to be added at this time it should be only a small quantity of saccharin.

This leads us to a consideration of the fact that from the baby's point of view the normal delay in the establishment of the milk secretion is in every way desirable as it permits the bacterial invasion to proceed in an undisturbed manner and allows the intestinal tract to lose its sensitiveness to its new inhabitants before the introduction of any considerable quantity of food gives an opportunity for fermentative changes. And in those cases in which it is known from the beginning that artificial nourishment is to be used, as in cases of maternal death or maternal tuberculosis, the considerations mentioned above point to the necessity for withholding milk mixtures and giving only water for the first thirty-six or forty-eight hours.

In institutions for the care of young infants when one inquires into the histories of the methods of feeding employed during the early weeks of life one frequently encounters the statement that the mothers did not nurse their babes because "the doctor said if it could not be kept up for more than a few weeks it was not worth while to nurse it at all." Now I want to protest with all the

emphasis at my command against the giving of any such advice by members of the medical profession. It is exactly at this period that maternal nursing is of the greatest importance to the future welfare of the child. The work of breaking down the complex fat or proteid molecules of the artificial food, their reduction to the simpler bodies or "building-stones" of which the Germans speak, and their reconstruction into the fats and proteids of the human tissues is a work for which the digestive tract of the new born infant is poorly prepared. By thrusting this work upon it before it is sufficiently developed an injury is frequently inflicted upon the gastro-intestinal tract which may appear only in the form of delayed progress at first but which may manifest itself later in the form of an atrophy or marasmus of a most intractable character. At birth the digestive system is developed only to the point of successfully handling human milk which requires a much less profound reconstruction to transform it into the infant's tissues. The process of development is rapid, however, and even if the breast feeding has to be discontinued at the end of two, three, or four weeks, the infant is far better prepared to handle an artificial food than it is at birth. This question arises chiefly in connection with illegitimate children but it is not uncommon to encounter cases in which the father has died or has deserted his family before the birth of the child, leaving the mother to support the family. In cases of this character, whether the child is legitimate or illegitimate, it would be far wiser and more truly economical to provide means whereby the mother may perform her duty to the child for a period of at least four or six weeks, rather than to attempt to deal with the infant alone after it has started on its long and frequently expensive way through chronic indigestion to death from marasmus.

What Oliver Wendell Holmes wrote many years ago about feeding babies is true today: "We are willing to give Liebig's artificial milk when we cannot do better, but we watch the child anxiously whose wet nurse is a chemist's pipkin. A pair of substantial mammary glands has the advantage over the two hemispheres of the most learned professor's brain, in the art of compounding a nutritious fluid for infants." There are times, however, when the co-operation of the hemispheres of the physician's brain with the substantial mammary glands produces a result far superior to their unaided efforts.

Looked at from the baby's view-point a mother's chief function is to provide a sufficient supply of milk, nourishing in character and

yet easy to digest. Sentiment does not enter into his character at this stage and the mother's likes and dislikes in the way of diet have to be subordinated to his digestive comfort. And this matter of comfort in digestion is peculiar to the individual baby. What is perfectly tolerated by one infant may cause distress in another child of the same parents, or in the child next door. I have sometimes been told by physicians that what the mother eats makes no difference to the baby at the breast and in some cases this seems to be almost true. But as far as my experience goes, cases of this character are the exception and in the great majority of instances the comfort and well-being of the child are intimately connected with the choice of the mother's diet and the manner of her life. Of course there are mothers who have no milk at all, and there are others whose mammary glands become exhausted after a short period of activity, and there doubtless are some whose milk cannot be made to agree with the digestive powers of their offspring, but when the diet and the hygiene of the mother can be controlled it seems to me this last class becomes so small as to be almost negligible.

There are three classes of errors into which nursing mothers frequently fall which I wish to mention briefly: First among these is that of too frequent nursing. In most of the text-books it is stated that during the first few weeks of life the baby should be nursed every two hours during the day with one longer period of rest of four or five hours during the night. This has come to be considered what might be called a standard nursing interval during the first two months or even for a longer time. In addition it is usually said in the text-books that the baby should be established in regular nursing habits as soon as possible by taking it up at the time fixed for the next feeding whether it is awake and hungry or not. It seems to me that both of these plans are more honored in the breach than the observance. Under ordinary circumstances a three hour interval between feedings during these early weeks makes life much more comfortable for both mother and child and the baby's gain in weight will be quite as rapid as when more frequent nursings are employed.

As to the question of awakening the child at regular intervals for feeding each individual case must be decided on its merits, but it seems to me that the results of letting the child sleep as long as it wants to have been so satisfactory that I should hesitate to change. There are some children who show a tendency to turn night into day by sleeping for long periods during the day and waking frequently at night. In cases of this type it is well to rouse the child regularly

for its feedings during the day in order to try to secure the longer period of sleep during the night, but in ordinary cases there seems to be an unusual freedom from digestive disturbances when the child is allowed to sleep as long as it will, and even when the number of nursings is reduced to four or five in the twenty-four hours the gain in weight is normal.

A second source of trouble frequently encountered is the over-feeding which nursing mothers commonly indulge in, in an effort to make the milk richer and more abundant. The following case illustrates so well the train of events typical of this condition that its recital will save time: Baby X, 5 weeks of age, was the first child of young and healthy parents. The mother had an abundant supply of milk and the baby was gaining in weight but was very constipated. The child had had a great deal of colic almost from birth and rarely slept more than half or three-quarters of an hour at a time. As the baby usually began to cry a short time after nursing and tried to swallow his fists, he was supposed to be hungry and was nursed every two hours while the mother began drinking milk or cocoa between meals in order to increase the richness of her milk. On account of the baby's restlessness the household was in constant commotion and the mother had no chance for undisturbed sleep at night or to go out for exercise during the day. The mother's milk was found to be unusually rich. Here you see a vicious circle had been established, each link aggravating the disturbance caused by its neighbor.

All that was needed to restore peace and comfort was to break into the circle by giving the mother one night's good rest, substitute water for the milk and cocoa which had been taken between meals, provide for regular daily exercise, lengthen the interval between nursings to three hours, and provide for the temporary relief of the constipation which speedily corrected itself.

Another phase of this same error is seen when an excess of fluids is taken by the mother during the first few days of lactation before the milk secretion is thoroughly established, and before the child is nursing vigorously enough to empty the breasts. Under these conditions varying degrees of engorgement are encountered, sometimes amounting only to temporary discomfort, at other times resulting in inflammatory processes leading to mammary abscess formation.

The third frequent error from the baby's standpoint is the lack of care on the part of the mother in the selection of her own food,

especially shown in the too early or too abundant use of fruits and vegetables. It is a mistake to assume that errors of this character will always make themselves manifest in the form of colic. They usually do but not invariably. Sometimes the baby may suffer no discomfort but the character of the stools will be abnormal or their number may be increased. In a case seen not long ago a baby of six weeks had always been breast fed and the mother had been on a carefully limited diet on account of an eclamptic attack following parturition. The baby developed a severe diarrhea with fifteen to eighteen stools daily, all of them containing mucus and some of them blood, which speedily reduced the child to an alarming condition. On questioning the mother it was found that she had been taking a little orange juice or some apple sauce almost every day at the time the baby's digestive trouble began. When these were discontinued the diarrheal disturbance gradually ceased although the gastro-intestinal tract had been so profoundly disordered that the return to normal was rather slow. I know of no particular in which the digestive systems of infants show greater differences than in respect to their tolerance of fruit and vegetables in the mother's diet. No general rule can be laid down, each case must be studied individually. And in the study of the individual case from this point of view the chemical analysis of the milk gives no information whatever. The clinical picture and the results of adding or withholding different articles of food in the mother's diet are the only dependable guides to a solution of this problem. The mucus membranes in time undergo a process of habituation or hardening so that substances which at first produced a severe reaction eventually cause little or no discomfort. For this reason articles of diet which might cause great distress at three weeks may be perfectly safe when the baby is three months old.

Of course this does not exhaust the list of the mistakes babies discover in the conduct of their mothers but it includes a very large proportion of them and while these considerations may seem elementary to some they are so frequently responsible for causing a divorce between the baby and the breast on the ground of incompatibility of temperament that it seemed permissible to bring them up for discussion today.

Discussion.

DR. G. WINDESHEIM, Kenosha: I do not know that I have ever heard a paper which interested me more than this one, for the simple reason that it states a fact which I had long ago recognized as being true, that the text-

book rules for feeding infants every two hours are wrong in the majority of cases.

There are women having an abundance of milk who try to get their babies fat by feeding them often. They like to have fat babies.

Then there are some women who have plenty of milk but the milk is of poor quality. I know of one woman in my town who has had nine children. Of the nine three are dead. Those are the ones that she persisted in nursing. The others were raised on cows milk—or other artificial food or modified cow's milk, and they all grew up strong and healthy.

I have made it a rule to tell my young mothers (and old mothers too, for that matter) to nurse their babies at regular hours, four hours apart; I tell them that six o'clock in the morning, 10 o'clock in the morning, two o'clock in the afternoon, six o'clock in the evening and twelve o'clock, midnight, providing the baby is awake at the time, would be the right hours to nurse the baby. If the baby wakes up crying between those hours it is a sign of having an abundance of food in its stomach which it cannot digest and which causes pain. Then the indication is for a little warm water to help dissolve the casein that has been formed in the stomach.

Time and again I have been called to cases where the baby has been crying and has had colic. I will cite one case, that of a young mother who had a babe, and I told her just the hours when to nurse the baby and how to nurse it. The grandmothers on both sides, and the friends and relatives of this young woman said, you are starving your baby; you must feed it oftener. Finally she listened to their advice and fed the child oftener. I was called one day when the child had convulsions. By the time I got there the convulsion was over with, and the child was sleeping again. I asked her, "How often have you nursed the baby?" "Well doctor I will tell you the fact, I nurse it every time it cries, mother said it is starving and that is why it cries." I asked her when she had nursed it last and she replied, "I think between 12 and 1 o'clock this afternoon," and this was then 5 o'clock. She said "It is a long time. Shortly after I nursed it, it had convulsion, then went to sleep and has been asleep ever since." I took the babe on my knee, rolled it a little and up came a lot of curdled milk, that had been in the stomach for four hours! Now I do not believe that a baby's stomach can digest milk in less than three hours. In fact, I have often demonstrated that some of the milk that the baby takes, be it ever so little, will remain in the stomach at least three hours. Why then should the child be nursed every two hours? I cannot see any reason for it. In all cases that have come under my observation, where babies have been nursed at regular hours, at intervals of four hours apart, the results have proven satisfactory. If the babe oversleeps and wakes up at 11 instead of the regular hour, 10 A. M., let it be nursed at 11, but let the next hour be again 2 o'clock, providing the babe is awake. Where these rules of feeding are followed the child does not suffer from colic; The babe wakes up at regular times for its feeding and the habit of awaiting and expecting the proper meal time period is readily and quickly established.

These are good children; they do not cry; they have no colic; there is no broken rest for the child or mother for the first three months. At the end of three months the child will not wake up at midnight to take its

midnight meal but will sleep from six o'clock in the evening until six o'clock the next morning. That has been my experience.

We all know that the danger of overfeeding by the breast is greater than the danger of overfeeding by artificial food. As soon as the babe cries, the mother is only too apt to take it to her breast for soothing sustenance. With what result? There is curdled milk in the stomach, curds and gas in the intestines; and instead of giving water to help dissolve the curds and aid in digesting and relieve the pain that way, the over anxious mother gives her child more milk, more curds, more gas, more pain and more trouble.

CLINICAL DEPARTMENT.

CASE OF ECTOPIC PREGNANCY CAUSING OBSTRUCTION OF THE BOWELS.

BY C. A. EVANS, M. D.,

MILWAUKEE, WIS.

The following case is of interest because of its rarity. I have not been able to find a report of a similar case, although a more extended search might reveal such, and on inquiry I have not found any one who has had such a case.

Mrs. K., age 40, a strong well developed German woman, has always been in previous good health. Has had six children—youngest age nine. Past menstrual history good and has not missed a period since the usual time after the birth of her last child. No history of pelvic trouble. No history of injury. Last menstruation was on May 8 to 11 inclusive. When she missed her next period she concluded she was pregnant and had no trouble until about August 16, 1910, when she had a severe pain in her lower abdomen and said that she nearly fainted. From this time on until about September 7th she had periodic colicky pains in her lower abdomen which at times were so severe as to confine her to her bed for part of a day although between times she would do the hardest of work. During this time she says that she began to get "very constipated" and felt as though there was "something growing around her rectum." About September 7th she had a sudden very severe pain in the abdomen and fainted. The same day she commenced to flow and continued until the time of the operation. The pain now became constant with acute exacerbations and on September 9th she had a very severe pain with a "fainting spell." During all this time she was becoming more and more constipated and on September 10th she says her physician gave her three compound cathartic pills. Having no result, on the morning of September 11th she took over two ounces of Castor Oil and later "some tea." All this gave no result either as to bowel

movement or gas. On September 12th she began to vomit and the pain increased. This kept up until operation. On the evening of September 14th she passed some membrane by vagina. At noon of September 15th she was seen by Dr. N. Hollenbeck for the first time. Enemata giving no result at all she was at once removed to the hospital and we operated without delay. On arrival her temperature was 100.8. Pulse 132. Abdomen distended. Vomitus had so called "fecal odor." On examination the uterus was found enlarged and anterior. Cervix was soft and patulous. An indefinite fixed mass could be felt in the recto-vaginal pouch seeming to involve the rectum.

At operation the intestines were greatly distended and the abdominal cavity contained considerable dark blood and numerous clots. There was no bright blood. The right tube and ovary were in fairly good condition. The left broad ligament was folded back on itself and the pregnant tube was prolapsed into the recto-vaginal pouch, towards the medial line. This mass together with coagula completely filled this space, pushing the uterus forward against the pubes. The fetus was seen lying free just to the right and above the mass. The broad ligament was first clamped and the mass then lifted out of the pelvis with great difficulty because of its attachments, especially to the rectum. Considerable inflammatory material which could not be separated was left attached to the rectum and this oozed freely for a time. The abdomen was closed without drainage and recovery was prompt and complete. The bowels moved freely and copiously during the next 24 hours.

The gestation was in the ampullar part of the tube and rupture had taken place through the non-placental part of the wall, the placenta and membranes remaining in the tube. The fetus measured 15 cm. and the heart continued to beat for some time after removal. The cord measured 14 cm.

It is difficult to explain the obstruction in this case other than by direct pressure on the rectum by the mass wedged in the recto-vaginal space and by a possible kinking of the rectum at one of its lateral curvatures.

Another interesting feature in the case is that the fetus was alive although free in the abdominal cavity, attached to the placenta by its cord and not surrounded by its amnion. This can be explained by the fact that rupture took place in the non-placental part of the wall and so the placenta was not injured and nutrition was kept up. That the placenta was not involved in the rupture also explains why the hemorrhage was not more severe. As it was the hemorrhage had not been as severe as one would expect but the history of the case tends to show that the fetus had been extruded gradually, plugging the opening as it came and so stopping the hemorrhage.

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FEBRUARY, 1911.

No. 9

EDITORIAL COMMENT.

WILL YOU WRITE A PAPER?

The Program Committee for the next annual meeting at Waukesha, June 7 to 9, asks for papers especially from members outside of Milwaukee. Send notice of your desire to present a paper, immediately, with title if possible, to A. W. Gray, 514 Goldsmith Bldg., Milwaukee.

The remark has sometimes been heard in the past that Milwaukee has been too liberally represented on the programs. If so this has been because enough members in the state at large have not volunteered to bring up their proportion. So send in notice of your intention and get onto the program. Don't delay.

At the same time there is, of course, no desire to slight Milwaukee members. Volunteers are wanted from Milwaukee also.

There is no probability that the committee will be deluged by requests for places on the program, still it is necessary to reserve the right to choose, since the number of papers that can be accepted is limited.

OPTOMETRY LEGISLATION.

The following letter in the Pennsylvania Medical Journal for December 1910 is signed by a number of the leading ophthalmologists of that state, and is such a plain statement of facts that it should be read by all:

"To the Members of the Medical Profession:

Your attention is respectfully called to the following facts:

That the practice of medicine and surgery, both general and special, should be in the hands of those who have been graduated from reputable medical colleges and have been licensed by the State Medical Examining Boards is evident. Therefore, it is eminently proper and urgently important that the efforts of those who have not received a medical education to obtain legal recognition of their treatment of diseases and affections of the human body, in whole or in part, should be opposed.

The eye is an integral portion of the body, and is subject not only to diseases peculiar to itself, but frequently participates in, and gives evidence of, affections of the cerebrospinal, cardiovascular, respiratory, renal and digestive systems, as well as of those of the genital organs, the liver, accessory organs of nutrition or ductless glands, accessory nasal sinuses, blood, etc.

Anyone who is unacquainted with this relationship and its effects evidently is unfitted to examine an eye for the purpose of correcting its defects, no matter whether this correction requires optical, surgical or medicinal therapeutics. He who is medically untrained is liable to fail to recognize, on the one hand, for example, glaucoma, or on the other, an albuminuric retinitis. In the first instance he endangers the patient's eye-sight, in the second his life.

It therefore follows that a proper understanding of ocular therapeutics and of the adaptation of lenses for ocular disorders requires the skill of one who is medically trained in the best sense of that term.

The measurement of errors of refraction, anomalies of accommodation and of ocular motility, with or without the use of drugs, is not a simple mechanical procedure, but represents one of the most important therapeutic measures in the practice of medicine, and must not be lightly undertaken by any one who is unformed in the matter we have described.

In our opinion it is the province of the optician to manufacture prescribed lenses and to attend to their mounting and suitable mechanical adjustment. It is not, in our opinion, the province of the optician, nor that of any other person unprepared by medical education, to attempt to diagnose diseases of, or to prescribe lenses for, the human eye.

We request your earnest attention to this vital subject, and ask your aid in uniting the profession of medicine in wholesome opposition to the efforts of

"refracting opticians" (so-called "optometrists"), "lens specialists," jewelers and all others who claim to be able to examine eyes scientifically and to prescribe glasses, to gain legal recognition of a practice which is beyond their province."

THE STUDY OF INSANITY.

In the 14th Biennial report of the Wisconsin State Hospital for the Insane at Mendota, the superintendant, Dr. Charles Gorst, makes the following recommendation to the State Board of Control which will interest every practitioner in the State:

"No branch of medicine or science is more in a condition of evolution at the present time than the proper treatment and care of the insane. Superintendents and medical staffs, medical colleges and medical men everywhere are realizing more and more the necessity of technical training for men who are to diagnose, classify, treat and care for mental diseases.

Ever since assuming the management of this institution, we have felt that something more should be done to improve its methods in a scientific way. * * * * * We earnestly recommend to your Honorable Body for your thoughtful consideration:—

To establish a laboratory in Science Hall at the University, where there is now sufficient room, in connection with the Medical Department for research work in mental disease:

To place in charge of the laboratory a neuropathologist whose opinion is unquestioned and who shall deliver a course of lectures each semester to the medical students in the University and to the members of the medical staffs of the institutions who may attend these lectures, who shall visit the state institutions at frequent intervals for the purpose of instructing the medical staffs in the methods of diagnosis, classification and treatment of mental disease and who shall exercise general supervision over the local work done by one of the physicians in the laboratory and morgue of each state hospital. All interesting specimens would be sent to the Laboratory at the State University.

We feel and many of the physicians consulted concerning this proposition have said that if the above recommendations were put into execution, Wisconsin would lead in progressive work for the insane."

The annual cost of the care of the insane in Wisconsin is counted in hundreds of thousands of dollars. Would it not be wise to try to cut off some of this expense at its very root? And how can this be done more effectively than by encouraging a careful study of insanity and the causes leading to its development, while at the same time

training a generation of medical men to reorganize and to properly care for these conditions in their incipiency?

The importance of early recognition is emphasized in another paragraph of Dr. Gorst's report:

"Statistics show that a much larger per cent of mental troubles recover if treatment is obtained in the early stages of development. Statistics also show that it costs the state on an average, two thousand dollars to care for a patient who becomes a dependent. If these statements be true, should not the state be anxious both from a humanitarian and a financial standpoint to provide for its less fortunate citizens the same opportunity for treatment and recovery in the early stages of mental diseases, that the private sanitariums offer to the rich?"

This whole problem belongs to the people of the state, not to the medical profession, but in this, as in so many other matters, the need of action manifests itself to us before it is appreciated by the general public. Let us do all in our power to aid in carrying out this excellent suggestion.

AGAIN THE INSANITY EXPERT.

This time it is a case of bank-wrecking in New York. The wrecker was placed under arrest and when brought into court, entered a plea of "insanity" in defense. His advocate was William Travers Jerome. Mr. Jerome presented experts on insanity to the number of eight, ready to testify to the insanity of the defendant, but after five had been heard the court declined to hear further testimony of this kind and the case was given to the jury.

The immediate question at issue was the ability or inability of the defendant to "plead" that is, to instruct his lawyer as to his grounds of defense, the theory of the law being that an insane man is incompetent to understand the merits of his defense. Five experts testified that the defendant was insane and therefore unable to plead "guilty or not guilty." No expert appeared on the other side, yet the judge and jury determined the matter for themselves and ordered the trial to proceed, their "non-expert" opinion being that the defendant was sane enough to put in his plea of guilty or not guilty. They were, doubtless, influenced in this view, as is natural for the laity, by the fact that he had, up to the time when his embezzlement was discovered, conducted very complicated business in such a way that no suspicion of his sanity was entertained by his associates.

This case is still pending and our intention in citing it is only to comment briefly on the view prevailing in the community about expert evidence in general, illustrated by the action of Judge and jury in this case, where expert evidence was seemingly set at naught.

The one fact we deem important in this connection is this: That all persons who offer so-called expert evidence in Court, being persons engaged by one or the other party to any given suit at law, and presumably in the pay of such party; will suffer from a suspicion of being biased in their testimony. Human nature being what it is, the disinterestedness of such testimony is open to suspicion and this is doubly true of "expert" testimony which relates to opinions rather than facts, is highly technical in its nature and is often an expensive commodity. The doubt as to the impartiality of the evidence may be and no doubt often is, unjust, but discrimination in regard to these matters on the part of the public is impossible. The rough and ready view taken is, that personal interest does more or less warp the opinions of all mankind.

The only possible remedy for this state of affairs is to surround the testimony of experts with conditions that will place it above suspicion by having expert testimony which is called for by the Court, given solely for the enlightenment of the court and compensated by the court rather than called for, supplied or paid for by either of the two parties engaged in the suit.

More than twenty years ago the writer was one of a committee appointed by the Chicago Medical Society in an effort to secure legislation on expert testimony. A bill was formulated by the committee which provided that the Judges of Cook County should prepare a list of qualified medical men from which list experts could be chosen by the judges; said experts to act solely at the instance of the court and for the guidance of the court in determining questions of insanity, personal injury, etc. The theory was that witnesses brought into the case in this manner, possessing certain necessary qualifications and selected by the court would be above suspicion of any personal interest.

Of course regulation of expert evidence as proposed above would not interfere with the constitutional right of both parties to call in witnesses of their own, but the court and the jury may reasonably be considered in a better position for arriving at the truth where impartial testimony is presented, than where all evidence is subject to suspicion of being influenced by personal interest.

From year to year with increasing frequency proposals, like the

above have been brought up in the various states for changing the law on expert testimony. Michigan and Rhode Island have statutes regulating medical expert testimony and within the past year similar laws have been formulated and introduced in Maine, New York and Missouri, though failing of passage; and it may reasonably be expected that a better system will in the end be established and that the public will be eventually relieved of the spectacle of a "cloud of expert witnesses," or rather two opposing clouds, each in a sense acting in the interest of one or the other of the two contending forces and more or less flatly contradicting each other and intensifying the general "cloudiness" of the situation.

The question of compensation of expert witnesses is one which needs careful consideration. It is not likely that courts can or will authorize the lavish scale of expenditure for expert testimony which in the past has often prevailed on both sides. Compensation on a somewhat more moderate basis would doubtless be established by courts. Witnesses summoned by the court solely on its own behalf might have to be content with more of honor and less of compensation.

One thing is true, no one can be compelled to act as expert witness, and physicians would under such a law have their choice of appearing under conditions satisfactory to their sense of honor and justice or not appearing at all.

We are acquainted with physicians who refuse to appear as experts under present conditions and who decline to assume the care of patients who have present or prospective "damage" claims pending in court; for one thing, they do not wish to take the chances of being placed in a false position in a battle of expert testimony; for another they recognize that in cases of this kind, treatment is seriously interfered with and recovery retarded or prevented by the disturbing and nerve-racking effect of "the laws delays."

NEWS ITEMS AND PERSONALS.

Dr. T. F. Shinnick, Watertown, is seriously ill.

Dr. J. R. Bryant, Wausau, is suffering from septicemia, the result of an infected finger.

Preliminary steps have been taken to establish a General Hospital at Sturgeon Bay.

Dr. H. R. Adams, Marinette, was knocked unconscious in a fall on an icy sidewalk, on February 1st.

Milwaukee will establish a free dental dispensary for school children. A room at the city hall is being prepared for that purpose.

Dr. Joseph Ludwig, of Wausau, has been chosen asylum physician for Marathon County, to fill the vacancy caused by the death of Dr. H. L. Rosenberry.

Dr. Selena Severson, Madison, who suffered a severe injury more than a year ago, is now able to walk without any support and is in good general health.

Dr. G. E. Newell, Burlington, met with a serious accident on January 23rd. In making a turn in the road his buggy struck a large stone, throwing the doctor out and fracturing his hip.

Madison is planning to build a modern fire-proof hospital to cost \$100,000, \$75,000 of this sum to be appropriated by the Sisters of St. Mary, the remainder to be raised by subscription in the city.

Dr. H. P. Rhode, Green Bay, has been appointed by President Taft, as a member of the pension board for the Green Bay District to succeed Dr. B. C. Brett, who is now surgeon at the Wisconsin Veteran's Home, Waupaca.

Dr. W. S. Whyte, Watertown, was elected president of the State Board of Health, at its annual meeting at Madison, and Dr. C. A. Harper was again named its secretary. The Board declared for the abolishment of the drinking cup in all public buildings and will enforce the order.

A warrant was issued on February 2nd for the arrest of Rev. J. P. A. Nordin, Superintendent of the Nordin Institute for Dependent and Deformed Children, Milwaukee, charging him with practicing medicine without a license. Dr. J. M. Beffel, secretary of the State Board of Medical Examiners is the complainant.

A bill, providing state aid to counties constructing tuberculosis sanatoriums, will soon be introduced in the Assembly. The measure will provide that where a board of supervisors votes to construct a county tuberculosis sanatorium, the state shall appropriate one half of cost of erecting the buildings and shall pay one-half of the cost of maintaining charity patients.

Deaths. Dr. Clarence Slightam, formerly of Eau Claire, died recently at Juneau, Alaska, aged 34 years. He was born in Madison and was a graduate of the College of Physicians and Surgeons, Chicago.

Dr. Frank G. Sherwood, a resident of Superior in the early 90's, died at his home in Ithaca, N. Y. Dr. Sherwood had been ill two months with pneumonia.

Dr. F. W. Rohr, aged 53, a former well known physician of Kenosha, died at his home in Chicago, January 26th, of pneumonia. At the time of his death he was director in charge of the Alexian Brothers' Hospital.

Dr. Frederick A. S. Kragelund, Racine, died on January 9th, aged 51 years. He was born in Europe but spent nearly his entire life in America. He located in Racine nearly 20 years ago.

Dr. Kragelund was ill about two years.

Dr. H. L. Rosenberry, Wausau, died suddenly on January 11th. The cause of death was apoplexy.

Harvey Lyman Rosenberry was born in River Styx, Medina County, Ohio, September 12, 1856. After completing his preliminary education, he taught school in Kalamazoo County, Michigan. During vacation periods he attended the Michigan State Agricultural College at Lansing, Michigan, and graduated from that institution in 1880. Later he took up the study of medicine at the Sterling Medical College in Columbus, Ohio, and was graduated in 1882.

He first practiced medicine at Malaga, Ohio. In 1891 he located at Menominee, Michigan, where he practiced until 1894, and then removed to Wausau.

Dr. Rosenberry was a member of the Wausau County, State Medical and Ninth Councilor Districts Medical Associations being president of the latter.

Dr. B. O. Reynolds, the oldest practicing physician in Wisconsin, an honorary member of the State Medical Society, and a member of the Military Order of the Loyal Legion, died at his home in Lake Geneva, on January 19, aged 87 years. Dr. Reynolds suffered a stroke of paralysis in 1904, and a second stroke finally caused his death.

Benoni O. Reynolds was born in Sempronius Township, Cayuga County, N. Y., July 26, 1824. At the age of 13 he was bound out to learn a trade, and for a time worked in a cooper shop, but not liking the work he ran away and began life for himself. He taught school for two years and then studied medicine at Rush Medical College, Chicago, and graduated in 1851. Ten years later he was graduated from the Ophthalmic College, of New York.

After successful practice in Huntsville, Ohio, he came to Wisconsin and began the practice of medicine in or near Racine in 1848. In 1854 he located in Elkhorn and has made his home in Walworth County ever since.

Soon after the breaking out of the Civil War, in December, 1861, Dr. Reynolds was commissioned surgeon of the Third Wisconsin Cavalry, and served with distinction in that capacity until February, 1865.

He served in both the senate and assembly and for nine years was a member of the State Board of Health, being first appointed by Gov. Rusk.

Removals. Dr. H. B. B. Poppe, Needah to Wautoma.

Dr. W. W. Mercer, Mendota to Pcoria, Ill.

Dr. Frank E. Stevens, Kenosha to Bristol.

Dr. G. R. Fugina, Ashland to Fountain City.

Dr. A. B. Rosenberry, Arbor Vitae to Wausau.

Dr. G. A. Steele, Sherwood to Apple River, Ill.

Dr. Charles Stanton, Duck Creek to Blunt, South Dakota.

THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORGANIZED 1841.

Officers 1910-1911.

BYRON M. CAPLES, Waukesha, President.

J. M. Dodd, Ashland, 1st Vice-President. T. J. Redelings, Marinette, 2d Vice-President.

Wilson Cunningham, Platteville, 3rd Vice-President.

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J. P. McMAHON, Milwaukee, Chairman, Committee on Public Policy and Legislation.

Delegates to American Medical Association.

L. F. Bennett, Eloit. C. S. Sheldon, Madison. A. H. Levings, Milwaukee.

Alternates.

F. S. Wiley, Fond du Lac. Wilson Cunningham, Platteville. R. G. Sayle, Milwaukee.

Councilors.

TERM EXPIRES 1911.		TERM EXPIRES 1914.	
1st Dist., H. B. Sears, - - Beaver Dam	7th Dist., Edward Evans, - - La Crosse	2nd Dist., G. Windesheim, - - Kenosha	8th Dist., T. J. Redelings, - - Marinette
TERM EXPIRES 1912.		TERM EXPIRES 1915.	
3rd Dist., F. T. Nye, - - Beloit	9th Dist., O. T. Hougen, - - Grand Rapids	4th Dist., W. Cunningham, - - Platteville	10th Dist., R. U. Cairns, - - River Falls
TERM EXPIRES 1913.		TERM EXPIRES 1916.	
5th Dist., J. V. Mears, - - Fond du Lac	11th Dist., J. M. Dodd, - - Ashland	6th Dist., H. W. Abraham, - - Appleton	12th Dist., H. E. Dearholt, - - Milwaukee

NEXT ANNUAL SESSION, WAUKESHA, JUNE 7, 8 and 9, 1911.

The Wisconsin Medical Journal, Official Publication.

SOCIETY PROCEEDINGS.

JUNEAU COUNTY MEDICAL SOCIETY.

The Eighth Annual meeting of the Juneau County Medical Society was held at Camp Douglas, Tuesday, December 27, 1910, with an afternoon and evening session. Supper was taken at the Smalley House. The attendance was good.

The meeting was called to order at 4 P. M. in the Hall, the president, Dr. Thos. Gilluly presiding. The following interesting papers were read: *Acute Tuberculosis*, Dr. Thos. Gilluly, *The Mother and Child*, Dr. T. S. Lawler. *Nephritis, Acute and Chronic*. Dr. E. H. Townsend. *Diagnostic Difficulties*, Dr. Edward Evans, *La Crosse*. The four papers constituted a most interesting program, and each writer covered each subject in a most thorough manner. Dr. Evans' papers was a very interesting one and the doctor touched upon each and every difficult and diagnostic phase of his subject. He laid especial stress upon making careful and thorough examinations in all cases. A vote of thanks was extended Dr. Evans for his most interesting address.

Dr. Brand Storms of Mauston was admitted into membership of the Society. The doctor recently purchased the practice of Drs. J. B. and W. M. Edwards who have moved to Milwaukee. On motion it was decided to hold the next annual meeting at Camp Douglas, first Tuesday in December, 1911.

Following officers were elected: President, Dr. E. H. Townsend, New Lisbon; Vice-president, Dr. Chas. O. Cron, Camp Douglas; Secretary-Treasurer, Dr. A. T. Gregory, Elroy; Delegate, Dr. C. C. Vogel, Elroy; Alternate, Dr. W. B. Parke, Camp Douglas; Censors, Dr. C. A. Vogel, Elroy, and Dr. T. S. Lawler, Lyndon Station.

On motion the Society adjourned subject to call of president and secretary.

A. T. GREGORY, M. D., *Secretary*.

LA CROSSE COUNTY MEDICAL SOCIETY.

The Annual Meeting of the La Crosse County Medical Society was held at The La Crosse Club, Dec 8, 1910. No other business being before the house the election of our new officers was at once proceeded with. The election resulted as follows:

Dr. C. H. Marquardt, President; Dr. M. W. Dvorak, Secretary and Treasurer; Dr. G. J. Egan, Vice-president; Dr. T. H. Miller, Delegate; Dr. G. J. Egan, Alternate.

The evening was then spent in a social time.

The first regular meeting of the La Crosse County Medical Society was held at The La Crosse Club, Jan. 5, 1911. This meeting being the President's night, Dr. Marquardt favored us with an address on *The Recent Progress in Medical Practice as Influenced by The Reorganization of Medical Societies*.

On motion of Dr. E. Evans the paper was ordered sent to the State Journal for publication. Dr. Marquardt spoke as follows:

Members of the La Crosse County Medical Society:

Allow me to express my appreciation for the honor conferred in electing me President of your society for the ensuing year. Twenty-nine years of continuous practice in this city has enabled me to thoroughly familiarize myself with the advance and change that has come over our profession, not only locally but throughout this whole country. I may say, as you well know, that the advance in medicine during these last 30 years has never been equaled by any previous period. In consequence the Doctor's rise among the professions of the world has been steadily upwards, so that to-day he ranks higher in society than he ever did.

We, like many other cities of this country, had a county medical society before the time when the American Medical Association conceived the plan of sending a man throughout the length and breadth of this land, to organize and reorganize county medical societies, but we had never before felt the benefits of these associations, until they were pointed out to us by this great man, whom we remember as Dr. McCormack. The spirit prevailing in county medical societies to-day is very different from what it was before this new movement was inaugurated, and is much to our credit as well as to Dr. McCormack's. Thirty years ago or more, it was no uncommon thing for one doctor to criticize the faults of his fellow practitioner. In fact doctors were

often asked what they thought of this or that brother practitioner, and as most men have some failing or other, it happened that these shortcomings were frequently enumerated, with the result that there was but little good to be seen in any one of them. Doctors have learned to speak well of each other, largely through the efforts of Dr. McCormack, who as you remember, insisted that physicians in every community must get together for mutual acquaintance and improvement to give to their community the benefits that medicine affords. This was good advice to indifferent or quarreling doctors and has put many a one on a higher plane of efficiency as well as materially increasing his assets. Sociability, too, has had a good start in our medical society, and I would be ungrateful to my predecessor if I did not recall his efforts of the past year to the many social evenings that he and the Secretary arranged for us.

A few years ago we read much about the country doctor, incidentally about his hard life; when every visit he made was to patients more grateful and more willing to remunerate him for his services, than those of his city brother. Charity was on high tide in the profession, when all at once a new phase sprung up in the cities to assist a few lagging brothers by creating lodge practice, which caused much noise at the time, but which, for two good reasons, has ceased. This sort of practice demanded that the physician give his services for much less than their worth, which did not appeal to the doctor, while on the other hand the patients did not enjoy cheap service very long, because in the end it became very dear.

The latest innovation in the practice of medicine is one not likely to die out so soon; it is of recent origin and promises, if not speedily brought to light, to work infinite harm in more than one way. I refer to the giving and taking of commissions by one set of doctors, who cannot do certain kinds of work, which has to be referred to others, who either have more skill or who are otherwise in better position to perform the needed services. What entitles a man to charge for that which he is unable to do? or why shall another divide his fee because he can do it? The surgeon in the city does not gain his living by making calls; he can not be near enough to all patients that require his services, but has to be in the city where patients can be brought and where hospital facilities are at hand so that he may carry on his operation successfully. Is he not entitled to his whole fee? On the other hand, the doctor who refers his patient either for operation or consultation, has in many cases already earned a large fee for his attendance. This fee he is not willing to divide with anyone as far as I know—nor do I say he should. When on the other hand he is able to make a diagnosis in a recent case that demands immediate operation, he is entitled, not only to charge for mileage as is ordinarily done, but also for his diagnostic skill. The ability to make a correct diagnosis ought to have and has such a value as the man making it puts upon it, just the same as the surgeon values his services. The patient when given to understand this, knows exactly whom he pays and for what he pays. Should the patient desire the presence of the attending physician, either at the operation or afterwards, he should be made to understand what the charges for such services will be, and that doctors cannot spend their time as friends but must always be paid for this sort of service. Under all circumstances the consultant's or surgeon's fee must always be kept separate from that of the

attending physician if the dignity of the profession is to stand. The interest in a patient, referred for any reason, does not cease because of this necessity. The attending physician continues as long as he is the family doctor, if such he has been, notwithstanding the necessity of having had to call other aid. This interest is not only professional but also human and is not to be sold to the highest bidder.

With these short remarks, I wish you all a Happy New Year and I hope, with your aid to enter upon a successful New Year for the La Crosse County Medical Society.

On invitation of Dr. Marquardt a Dutch lunch was then indulged in by the members.

The second regular meeting of the La Crosse County Medical Society was held at The La Crosse Club, Feb. 2. The minutes of the previous meeting were read and approved. An application of Dr. Furstman was read and he was elected a member of this society. The Secretary then broached the subject of financing our monthly lunches. A motion was made and seconded that each member be assessed \$1.00 to meet this expense.

Dr. Furstman, our Health Commissioner, then favored us with a paper on health work, and insisted on the necessity of co-operation of the medical man and the layman in this work. The paper was read to a joint meeting of the medical society and members of the School Board, Board of Trade, School Principals, Humane Society, Clergymen, and a few interested citizens.

Then we adjourned to the dining room where a lunch was served and the subject thoroughly discussed.

The meeting was a successful one and evidently some good will result in the better understanding of our efforts to diminish the spread of contagious diseases in the city.

M. W. DVORAK, M. D., *Secretary.*

THE MEDICAL SOCIETY OF MILWAUKEE COUNTY.

Milwaukee, December 9, 1910.

The annual Meeting was held in the rooms of the Milwaukee Athletic Club and was preceded by a dinner.

Dr. W. A. Evans of Chicago addressed the Society on *Water Supply of Lake Michigan and its Relation to Sewage.*

The following resolution with its amendments was adopted:

Whereas, the Hon. Mayor Emil Seidel has seen fit to appoint as Commissioner of Health of the City of Milwaukee, one F. A. Kraft, M. D., who, in the opinion of the Medical Society of Milwaukee County, does not possess the necessary qualifications for such an important position, and

Whereas, the Medical Society of Milwaukee County is the local unit of the State Medical Society of Wisconsin and the American Medical Association, and therefore represents the medical profession in good standing of the City of Milwaukee, *be it therefore*

Resolved, that the Medical Society of Milwaukee County again voices its displeasure with the appointment of F. A. Kraft, M. D., as Commissioner of Health of the City of Milwaukee, for the reason that a medical man being

selected for the position, such medical man should possess the highest qualifications for the position, particularly training in a recognized medical school or schools and practical experience in the field of sanitation.

He should be a man who by virtue of his professional career has gained for himself the respect and good will of his professional brethren, who are to a greater or lesser degree under his jurisdiction.

Resolved, that the Medical Society of Milwaukee County endorses the absolute stand of the American Public Health Association, that positions in connection with public health work be entirely divorced from politics.

Resolved, that the Chair appoint a Committee of twenty-five physicians for the purpose of transmitting these resolutions to the Hon. Mayor Emil Seidel and for the purpose of further conferring with him as to the advisability of reconsidering the appointment.

1. Amendment. That this committee be made a permanent committee.

2. Amendment. This Committee to investigate the entire record of Dr. Kraft and report to the Society.

The following officers were elected: President, Dr. Arthur J. Patek; Vice-president, Dr. D. J. Hayes; Secretary, Dr. Daniel Hopkinson; Treasurer, Dr. Jos. Kahn; Censor, Dr. A. W. Myers.

104 members present.

DANIEL HOPKINSON, *Secretary*.

The meeting of January 13, 1911, called to order at 8:30 P. M., Dr. A. J. Patek in the chair. Reading of the minutes of the last meeting, approved. Bills allowed and ordered paid. Drs. Geo. R. Randall, A. J. Brah, R. O. Friedrich and M. L. Henderson elected to membership. Drs. W. M. Edwards and J. B. Edwards received as members from Juneau County.

Communication was read by secretary, regarding the graduation of Dr. Kraft from the Barnes University Medical Department.

Dr. R. G. Sayle, chairman of the committee of 25 was unable to make a complete report, as the Committee had not as yet received a reply from Mayor E. Seidel.

The following resolutions presented by Dr. L. F. Jermain were adopted: *Whereas*, It appears that the City of Milwaukee is contemplating the purchase of property for a maternity hospital: and *Whereas*, The remodeling of the property in question into a modern hospital is a practical impossibility, no matter how big a sum be expended, it being well known that the building is wholly unsuited for the purpose intended and incapable of being adapted to the needs of a sanitary institution; and *Whereas*, The equipment of the city for the care of confinement cases is adequate for all demands now made (there being now three maternity hospitals and several general hospitals, none of which refuse worthy patients who apply for care); be it *Resolved*, That this society express itself as opposed to the purchase of the so-called Schandein home for the purpose mentioned.

Whereas, The children of this city who are suffering from contagious diseases other than smallpox are at present housed in an institution wholly unfit for this purpose, a building entirely inadequate for the city's needs and incapable of the proper segregation of patients, thus exposing them to diseases other than those for which they are sent for treatment; and *Whereas*, Attention has been called to this condition so often that present allusion to it can

be viewed only in the light of a recognition of a disgraceful condition for an enlightened community; therefore be it *Resolved*, That it is the sense of this society that a positive emergency exists at the present time, and that the first active step for the betterment and safety of this community lies in the recognition of the urgent need of building an isolation hospital at once upon a suitable site.

Amendment: This resolution be put in the hands of the Committee on Municipal Affairs.

87 members were present.

The program committee made a report giving an outline of the work for the coming year.

Dr. L. G. Nolte presented a paper entitled "*Symptoms of Fracture of Neck of Femur Versus those of dislocation of Head of Femur.*"

Discussion by Dr. C. H. Lemon.

DANIEL HOPKINSON, M. D., *Secretary.*

WAUKESHA COUNTY MEDICAL SOCIETY.

The first regular meeting of the Waukesha Medical Society since the organization of the County Medical Society was held Thursday evening, January 19th, at the Waukesha Springs Sanitarium, there being thirteen physicians present.

Officers were elected as follows: President, Dr. B. M. Caples; Vice-president, Dr. R. E. Davies; Secretary and Treasurer, Dr. Sara T. Elliott.

A lengthy discussion was had as to the feasibility of erecting a hospital in Waukesha. The president appointed Dr. Margaret Caldwell a committee of one to confer with the hospital committee from the Women's clubs, and Drs. R. E. Davies, W. T. Murphy, and G. E. Peterson a committee to confer with other committees appointed by organizations interested in the establishment of such hospital.

On Feb. 16th, the society will meet with Dr. Caldwell at which time Dr. F. W. Aplin will present a paper on *The Construction and Management of Hospitals.*

SARA T. ELLIOTT, M. D., *Secretary.*

BOOK REVIEWS.

Anatomy, Descriptive and Applied. By HENRY GRAY, F. R. S., late lecturer on Anatomy at St. George's Hospital, London. New (18th) edition, thoroughly revised, by Edward Anthony Spitzka, M. D., Professor of Anatomy in the Jefferson Medical College of Philadelphia. Imperial octavo, 1496 pages, with 1208 large and elaborate engravings. Price, with illustrations in colors, cloth, \$6.00 net; leather, \$7.00 net. Lea and Febiger, publishers, Philadelphia and New York, 1910.

To him who remembers Gray's Anatomy as an important factor in his

student days, the announcement of a new (18th) edition will bring feelings in which joy and pain are strangely mixed. To the writer nothing recalls more vividly his first steps toward the shrine of Aesculapius than a glance at these pages, nothing brings back to mind more clearly that first fine enthusiasm, nothing causes to stand out more plainly the vast amount of forgetting that has been going on since those days.

It is a pleasure to meet our old friend in a new dress, for the book has been entirely reset in new type. The revision has been a thorough one and the changes are all in the direction of clearness and completeness. Many new illustrations have been added, some by the present editor's own hand, others borrowed from the writings of the leading anatomists of the day, the result being an unrivalled graphicness.

The short sections on embryology and histology preceding the descriptions of the different systems are compact but lucid and the illustrations accompanying them are extremely well chosen.

The section on the "Nerve System" has been entirely rewritten and too much can hardly be said for the gain in clearness both in the text and in the illustrations.

It is a real pleasure to see that the pre-eminence which this work achieved with its first appearance is in no danger of being lost through time's changes. In this new edition it has more than kept abreast of the progress of the world.

The Practical Medicine Series under the general Editorial Charge of Gustav P. Head, M. D., and Charles L. Mix, A. M., M. D., Year Book Publishers, 40 Dearborn Street, Chicago.

Volume V. **Obstetrics**, edited by Joseph B. DeLee, A. M., M. D., and Herbert M. Stowe, M. D. Price, \$1.25.

Volume VII. **Pediatrics and Orthopedic Surgery**, edited by Isaac A. Abt, M. D. and John Ridlon, A. M., M. D. Price, \$1.25.

Volume VIII. **Therapeutics, Preventive Medicine and Climatology**, edited by George F. Butler, Ph. G., M. D., Henry B. Favill, A. B., M. D., and Norman Bridge, A. M., M. D. Price, \$1.50.

Volume IX. **Skin and Venereal Diseases and Miscellaneous Topics**, edited by W. L. Baum, M. D., and Harold N. Moyer, M. D. Price, \$1.25.

Volume X. **Nervous and Mental Diseases**, edited by Hugh T. Patrick, M. D., and Peter Bassoe, M. D. Price, \$1.25. Price of the series of ten volumes, \$10.00.

By means of this excellent series of books it is possible for the general practitioner to keep in touch with medical progress in all its directions, an undertaking which the growth of medical literature has rendered an impossibility without such an aid. The judicious editorship of the entire series and of the individual volumes eliminates most of the superficial and unsound in current medical literature and presents the articles of real value in a form full enough for satisfactory use.

For the busy general practitioner who desires to keep moving with the current of progress this series will prove most helpful.

An Anatomical and Surgical Study of Fractures of the Elbow. By ASTLEY P. C. ASHHURST, M. D., of the Medical Department, University of Pennsylvania. Imperial octavo, 163 pages, with 150 illustrations. Cloth, \$2.75, net. Lea & Febiger, Philadelphia and New York, 1910.

To the author of this excellent monograph was awarded the 1910 Samuel D. Gross prize of the Philadelphia Academy of Surgery, a prize "awarded every 5 years to the writer of the best original essay, illustrative of some subject in surgical pathology or practical surgery."

In the introduction the author quotes a number of prominent surgical writers nearly all of whom express a decidedly pessimistic view as to the final results in the fractures under consideration, but embodies his own conclusions with the statement that "with common sense surgical treatment, intelligently applied, the prognosis of any and all fractures of the lower end of the humerus is much less gloomy than it has heretofore been considered, and that in the vast majority of cases the ultimate results will be perfectly satisfactory."

The author first presents a very clear exposition of the anatomy and mechanics of the elbow joint and a review of the development of the lower epiphysis of the humerus, all illumined by means of skiagraphs, photographs and drawings. The interesting observation is recorded, that in girls, even before puberty, the "carrying angle" is more pronounced than in boys, "anticipating the greater breadth of the pelvis in adult life."

The discussion of the process of ossification of the different centers which eventually, at the age of 13 to 15 years, make up the bony structure of the adult elbow, is illustrated by skiagraphs showing the joint at different stages of development from the 1st to the 15th year. These illustrations will prove a valuable aid to those engaged in X-ray work.

The author's classification is simple and fully born out by the skiagraphs presented. He considers intercondylar fractures (T- or Y-shaped) very rare, having found only one among his 56 cases of fractures of the lower end of the humerus. According to his observation the cases reported as "intercondylar" have been in reality nearly all "supra or diacondylar."

The importance of the exhaustive study of each case before treatment is begun is emphasized in the following words: "The bad results seen arise almost exclusively from failure to recognize the injury, and hence to institute proper treatment, when the case is first seen." Then follow detailed and clear directions for examination, by inspection, palpation and interpretation of skiagraph, every paragraph bristling with helpful suggestions. The following rule cannot be too often reiterated: "Every primary examination should include tests for paralysis or anesthesia from injury of the nerves around the elbow, especially the ulnar and median distribution for sensation, and the radial (musculo-spiral) for motion."

As to frequency, the supracondylar fracture stands first. (37.5 per cent.) All occurred in children under 11 years of age.

Discussing the tendency to displacement of the lower fragment, the author says, "Only when the forearm is acutely flexed on the lower fragment (which can be controlled only through the medium of the forearm) will the muscles (attached to the epithrochlea and epicondyle) cease to be tense and to flex the lower fragment on the forearm." Again; "When the elbow is hyperflexed, the point of insertion of the triceps is carried anterior to the longitudinal axis

of the humerus, so that the action of this muscle on the lower fragment is no longer in a plane posterior to that of the humerus, but tends to crowd the lower fragment directly into the place where it should be." These two propositions afford the key to the philosophy of the treatment which the author recommends in practically all cases of fractures of the lower end of the humerus except in the rare instances of intercondylar fractures extending into the joint, viz., correction of mal-position and retention by hyperflexion. The latter is defined in these words. "Forearm flexed upon arm as far as it will go without causing arrest of the radial pulse."

Concerning "early passive motion," so universally though erroneously insisted upon, this author says: "If the surgeon is confident that he has reduced a fracture of the lower end of the humerus, a fact which can be proved by the use of the X-ray, there is no reason why he should torture his patients by enforcing passive motion. Many is the elbow on which at their (the authors' chiefs in hospital service) direction I have enforced violent passive movement and unwittingly aroused more osteogenetic and inflammatory processes around the elbow than were present before; and I never saw an elbow which did not stiffen up under this treatment." In the author's present series his aim has been "to reduce the fracture at the earliest possible moment, to ascertain by means of the X-rays that reduction was complete, to maintain the fragments in accurate opposition until consolidation occurred, and then to leave the elbows alone, for function to be restored by active movement by the patient himself."

In intercondylar fracture (very rare) the author suggests an anterior angular splint with weight extension below the elbow, though gunstock deformity is likely to result with this treatment.

A careful perusal of this little volume will well repay any one at all interested in the subject. It presents the author's own conclusions based upon experimentation, the author's extensive experience and accurately recorded observations in his last 56 cases of fractures of the lower end of the humerus. Every part of the subject is treated in a comprehensive and lucid manner, and it is especially satisfying to see the matter of treatment reduced to simplicity itself by so competent an authority.

H. REINEKING.

THE WISCONSIN MEDICAL JOURNAL

MARCH, 1911.

ORIGINAL ARTICLES.

RABIES IN WISCONSIN.

BY MAZŮČEK P. RAVENEL, M. D.,

PROFESSOR OF BACTERIOLOGY; DIRECTOR STATE HYGIENIC LABORATORY; DIRECTOR
PASTEUR INSTITUTE.

AND

BERNARD W. HAMMER,

BACTERIOLOGIST, STATE HYGIENIC LABORATORY.

UNIVERSITY OF WISCONSIN.

(From the State Hygienic Laboratory.)

There seems to be a very wide spread misapprehension in the minds of physicians in general as to the existence of rabies in the United States. Perhaps this is chiefly due to the fact that it is a rare disease and the average physician does not see many cases of it during a life time. In spite of the bulletins which have been written from time to time showing the number of cases in the United States, this ignorance as to its prevalence is still widespread.*

The registration area of the United States from which statistics were gathered by the Bureau of Census comprises 15 states, the District of Columbia, and 78 cities, containing an estimated population in 1906 of 40,996,317. The deaths occurring from rabies during

*Rabies and Its Increasing Prevalence, Geo. H. Hart, V. M. D.
Bureau of Animal Industry, Circular 129, 1908.

Prevalence of Rabies in the United States, John W. Kerr and Arthur M. Stimson. Public Health & Marine Hospital Service, Washington, 1909.

Bulletin No. 65, Hygienic Laboratory, Washington, A. M. Stimson.

this period were: 1900, 33; 1901, 41; 1902, 45; 1903, 43; 1904, 38; 1905, 44; 1906, 85; 1907, 75.

Statistics collected by the Public Health and Marine Hospital Service show that in 1908 there were 111 deaths in man from rabies, and rabid animals were reported from 534 localities in the United States. Deaths in man occurred in 30 states and territories. In 10 states of the Union there were no reports of rabies in animals.

The investigation by this Bureau brought out very strikingly the general distribution of the disease throughout the eastern portion of the country and its almost complete absence from the extreme western part, especially the Rocky Mountains and the Pacific coast regions. The report, however, shows without question that rabies is widespread in the United States. Under our present laws, or rather lack of laws, there is little doubt that the disease will continue to spread.

In Wisconsin no systematic examinations were made until the fall of 1907. During that year rabies became very prevalent in the neighborhood of Beloit and quite a number of heads of animals were sent to the University for examination, many of which proved positive. The spread of the disease in the State took a general direction to the north-east and successively rabid animals were reported from Janesville, Milton Junction, Watertown, Oshkosh, Green Bay and Marinette. Some scattering cases occurred in other parts of the State, but the majority of rabid animals came from this eastern district.

Just what is the explanation of this peculiar spread of the disease in this north-easterly direction cannot be told, but the fact remains. For more than a year scarcely an animal for diagnosis has come from the southern part of the State and most of them have been from the district between Oshkosh and Marinette. Recently several cases have come from the neighborhood of Madison, and Grant County.

In 1908 rabies was added to the number of diseases which are examined free of charge by the State Hygienic Laboratory. This fact was widely advertised to physicians and veterinarians. Although we know perfectly well that nothing like the total number of animals dying of rabies have been sent to the laboratory for examination, our records nevertheless indicate tolerably well the general spread of the disease in the State.

The need of a Pasteur Institute for the preventive treatment of the disease impressed itself on the men in the laboratory and on Dr. C. A. Harper, the Secretary of the State Board of Health. The Legislature of 1909 was asked for \$3,500 with which to found a Pasteur

Institute, the object being to give free treatment to residents of the State of Wisconsin. The request was refused. However, the demand in the State seemed so urgent that Dr. Harper and Dr. Ravenel determined to begin the treatment at once. Consequently in November, 1909, announcement was made that the Pasteur preventive inoculation would be given at the State Hygienic Laboratory at the University of Wisconsin. We were enabled to do this only through the assistance of



the Hygienic Laboratory of the Public Health and Marine Hospital Service at Washington. In April, 1908, the prophylactic treatment of rabies was begun by this Service, and soon after announcement was made that the virus would be sent out to Boards of Health. The Pasteur Institute of the University of Wisconsin has received the virus from the Hygienic Laboratory in Washington. At this laboratory the virus is ground, prepared for injection, and the injection

made. The care of the patients while under treatment, and the administration of the vaccine has been intrusted to Dr. F. F. Bowman, who has been employed for this purpose.

The demand for the treatment has exceeded our highest estimate. The first patient began treatment on November 14, 1909. Up to the present time 126 patients have been treated. The accompanying map shows the localities from which these patients have come. During the same period 173 examinations of suspected animals have been made, and 96 of these have proved positive. The map shows also the localities from which these animals have been sent.

All of the cases treated have been successful with one exception. This case occurred in a little Indian girl of the Oneida Reservation. She was terribly bitten on the face and under the lower jaw, lacerated wounds being inflicted which penetrated to the bone. The treatment was begun with grave misgivings, and on the tenth day of treatment and the fourteenth day after being bitten the child developed symptoms of rabies and died within thirty hours. She had previous to the convulsions shown some symptoms for perhaps two or three days but these were not recognized as the disease.

In considering the value of the Pasteur Treatment it is necessary to divide the cases treated into different heads.

In the first class come those cases in which the heads of the animal inflicting the bite were examined at the State Hygienic Laboratory and a positive diagnosis of rabies made. Of our cases eighty-nine came under this head. To these should be added six cases in which the head of the dog was examined at other laboratories with positive findings. In two other cases the head of the dog was not examined, but one of the patients died while under treatment at the Hygienic Laboratory. We have, therefore, a total of 97 patients bitten by dogs known positively to be rabid. Of these one died after ten injections, and fourteen days after having been bitten. This result cannot be considered as a failure of the Pasteur Treatment. The period of incubation was one of the shortest on record and the treatment was just half completed, consequently it had not been possible to establish any immunity by the treatment. As stated above, the character of the injury with its extensive and deep lacerations, and its location, made the case a very bad one. The other patient bitten by this same dog who was not so severely lacerated was successfully treated. In five cases the patients were from a family in which a child had died of hydrophobia. All of them had assisted in caring for this child during its illness, and all had gotten saliva

from the child on their hands. It has been repeatedly proven that the saliva of persons suffering with the disease contains the virus. These cases are rightly classed as positively exposed.

In the second class, in which the animals inflicting the injury were not examined, but in which there was a history indicating rabies almost positively, we have twenty-one cases, all of which were successful.

Finally, we have three cases in which the history was entirely negative and no examination of the dog was made either by a veterinarian during life or at the laboratory. These cases were treated against our advice. In regard to this point it may be said that occasionally patients are received whose terror is so great that nothing can be done to appease them except to give the preventive treatment. As the treatment is almost invariably harmless, very few ill effects having been reported, it seems justifiable to give these cases the treatment, although it is done against our wish and advice.

Among those treated we have had several cases of pregnancy, and children with mumps, measles and influenza. In no case has any ill effect followed the treatment. We have had no abscess formation and very slight irritation of the skin.

SUMMARY.

Bitten by dogs known to be rabid.....	97
In contact with human rabies.....	5
Bitten by dogs with history of rabies.....	21
No evidence of rabies.....	3
<hr/>	
Total.....	126

ETIOLOGY OF THE DISEASE.

The cause of rabies remains unknown. It has been recognized for many years, however, that the virus was localized in the central nervous system and in the large nerves. It is found in the saliva and occasionally in some of the other secretions such as that of the pancreas and in the milk. It is never found in the blood or the organs. It is spread always through the bite of some animal, although theoretically may be spread from man to man.

In 1903 Negri discovered in the Purkinje cells of the brain certain inclusions which stain deeply with eosin and which he believed to be the germs of rabies. Many investigations have followed the

announcement of Negri. At the present day the nature of the Negri body, as it is called, is still unknown, although the majority of observers believe that it is at least closely connected with the cause of rabies. It is universally acknowledged that the presence of Negri bodies in the brain of an animal or man is a certain diagnostic sign of rabies. No one has succeeded in obtaining cultures and the exact nature of the virus is unknown. Williams and many others believe that it is a protozoan, a belief which Calkins follows, but no definite proof of this has yet been given.

The laboratory diagnosis of rabies consists now in the search for these Negri bodies. The brain is removed, laid open and small portions of the horn of ammon taken out. The most rapid method, which is always tried, consists in placing a small portion of the horn cut transversely on a glass slide. A second slide is placed on top of this and the portion of the brain matter pressed out between the two, drawing one across the other in the direction of their long axis. The smear obtained is stained and examined for the Negri bodies. When positive, the examination need proceed no further, but if we fail in this process, blocks are fixed, imbedded in paraffin, and sections cut. By the former procedure a diagnosis is often times made within thirty minutes. The latter requires twenty-four hours for its completion.

This paper is intended mainly to demonstrate to the physicians of Wisconsin the extent of rabies in the State. We would, however, like to lay stress upon a few points which come under our observation every day.

First:—If a person is bitten by a dog supposed to be mad the very worst possible thing which can be done is to destroy the dog, yet the majority of heads which are sent to the laboratory are from animals which have been killed. We consider ourselves lucky indeed if the killing has been done by shooting through the heart or by chloroform. Often times the head reaches us frightfully lacerated and mangled and it is impossible to distinguish the portions of the brain. As it is necessary for us to obtain the horn of ammon for our examination this laceration of the brain seriously interferes with our work and frequently makes a definite diagnosis impossible. Rabies is a disease of short duration. By tying up a dog which bites a person a positive diagnosis can be made by a veterinarian almost invariably within two or three days. Furthermore, it has not yet been experimentally determined at what period of the disease the bodies of Negri are developed in the brain. In cases which are killed early in the

disease we may fail to find them. Therefore, under such circumstances a negative finding cannot be considered as meaning that the animal is free from rabies. We are not infrequently put in this position. When an animal is allowed to die of the disease a very small percentage of cases fail to show the Negri bodies, which are generally easily demonstrated. This enables us to make a positive statement in regard to the ease and the necessity of taking the Pasteur treatment.

Second:—Heads of animals sent for examination must be packed in ice, but not frozen. We frequently receive heads which are putrid and swarming with maggots. Full directions were printed in the Bulletin of the State Board of Health, and sent to every physician in the State whose address was in Polk's Register.

Third:—It has been experimentally proven that prompt and thorough cauterization of a bite entirely removes the danger of hydrophobia. As these wounds are apt to be lacerated, it is frequently impossible to be sure that a thorough cauterization has been done. Nevertheless attempts should be made. The wound should be thoroughly washed and bleeding encouraged, after which fuming nitric acid should be freely applied. Perhaps the next best application is a solution of iodine. This is preferably applied as a watery solution and seems to have some particular power to destroy the rabie virus. In the cases which come to us we find great variety of chemicals in use ranging from carbolic acid to dilute alcohol and borie acid.

The period of incubation in rabies is seldom less than forty days, and the average period is in excess of this, according to some authors. Therefore, there is generally no great hurry to begin the treatment. In severe bites about the face and hands or where large nerve trunks are involved treatment should be begun as soon as possible. The usual treatment requires twenty-one days. Therefore, if treatment is begun within a week or ten days after the injury as a rule it is time enough. We advise whenever possible to have the treatment begun within one week.

On account of the failure in the last Legislature to pass the bill making provision for this work, it has been necessary to make a charge which approximately covers the actual expenses to the laboratory, namely \$25. As soon as possible it is the intention of the Board of Health and the laboratory to give this treatment to all citizens of Wisconsin free, but at the present time it is necessary to make the small charge mentioned.

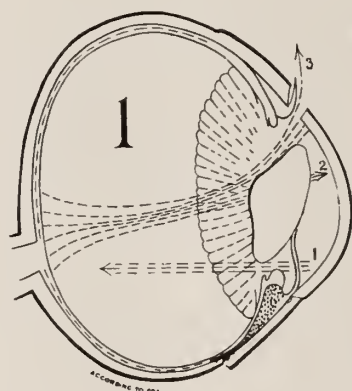
SOME OBSERVATIONS ON THE SMITH OPERATION OR EXTRACTION OF CATARACT IN THE CAPSULE.*

G. I. HOGUE, M. D.,

PROFESSOR OF OPHTHALMOLOGY, MARQUETTE UNIVERSITY.

(MILWAUKEE MEDICAL COLLEGE.)

It has been the dream of ophthalmic surgeons, since the days of Daviel to remove the cataract in the capsule. Daviel refers to this subject in his original paper written in 1745. Many attempts have been made to remove the lens entire but all prior to the work of the Pagensteckers, has been relegated to a position hardly even historical.



The Pagenstecher operation, published in September, 1865, at the Heidelberg Ophthalmological Congress was performed by the introduction of a spoon, the mouth of which was about the diameter of the lens, into the vitreous behind the lens, and lifting out of the lens into the spoon. Such an operation would cause almost universal escape of vitreous and enormously increase the number of cases which would become septic.

Mulrony was the first to extract the lens in its capsule by external manipulation of the globe as a routine method. He made a lower section without iridectomy. The speculum was retained in position. The seop or strabismus hook was applied at the upper

*Read at the 64th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 24, 1910.

border of the cornea until the edge of the lens presented itself in the wound when counter pressure was applied by a curette below the incision, and when the lens was nearly half out of the wound by pressing on the globe with the thumb on the orbicularis muscle. There is much greater liability in this operation of escape of vitreous than with an upper section operation.

The discovery by Col. Smith was quite accidental. In his first 3,000 cases performed in the orthodox manner, he observed in a number of cases of nervous patients that the lens in its capsule was shot out with some vitreous, with no complications whatever and with good results. Col. Smith has performed in the past twenty years 23,000 cataract operations and 20,000 of these were delivered in the capsule. Col. Smith claims no priority to this operation and considers the claims of all operators before him, especially Pagenstecker and Mulrony but the instruments and technic of this operation are essentially his own.

The Smith operation may be termed, "the complete cataract operation," as compared with the old or incomplete.

For the past five years I have taken a great interest in the Smith operation. I have witnessed a large number of "modified Smith operations" under my former chief, Dr. H. V. Wurdemann and I performed accidentally a few extractions of the cataract in the capsule when by involuntary delivery of the lens, due to reflex closure of the lids or rupture of the zonula. I will here give you the observations on the work of Dr. Greene rather than the history of the limited number of "simon-pure" Smith operations which I have performed. For my own experience is too inadequate to even attempt any conclusions.

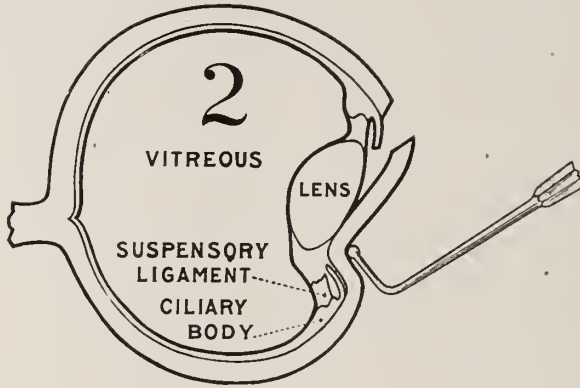
Dr. Greene has performed nearly 2,000 cataract operations, over 600 of these by the Smith method and he is today performing more cataract operations than any other man in America. Dr. Greene has just returned from Jullundur, India, where he performed 400 operations under the personal direction of Col. Smith.

Dayton has become the Mecca for the ophthalmic surgeons of America and Dr. Greene is a real stimulus to any one that is interested in this work. Greene is of the opinion that the Smith operation is still in its infancy.

Col. Smith believes that this operation is the best operation for all cataracts. Personally I believe that the operation should be limited to the experienced operator. Its strong indication is in the

immature type of cataract where we have no alternative measures practically.

This operation is not indicated in juvenile cases. The juvenile and congenital are invariably difficult and practically impossible by this method or by the orthodox operation. It cannot be performed on traumatic cataracts. The Smith operation is used by Dr. Callan of New York in dislocated lenses with good results.



The hypermature cataract is more difficult to express in the capsule owing to the milky cortex being forced by the pressure to occupy one end of the capsular bag and the small disc-like nucleus will float to the other end and there is here danger of loss of vitreous. Such danger however is equally shared in the old operation.

The Smith operation is a less safe method in mature cataracts than the old operation for one who has not had careful training in its technique.

The expression of the lens depends on the intra-ocular pressure to tilt the lens forward. Note the direction of the force and currents in figure according to Fox. Therefore it is difficult to deliver the lens in eyes with low tension or liquid vitreous.

Take the blood pressure in every case, for if the pressure is too high we are apt to have a hemorrhage during the operation and secondary hemorrhage following the operation.

Preparation for the operation: The sterilization of accessories by steam heat and sterilization of instruments by boiling except the knife which is carefully wrapped and then placed in carbolic acid and later transferred to boric acid.

The personal asepsis of the surgeon and his assistant, paying

particular attention to the mouth guards. A piece of sterile gauze can be suspended from the spectacle frame and tied back of the neck.

The preparation of the patient, includes shampoo, nasal douche and face washed with green soap. A pad of bichloride, one to two thousand, is left on all night for trial bandage and inspected in the morning for discharge. The temporal lashes on the upper lid are cut close with scissors. Always make sure that there is no lacrimal disease before you attempt the operation. The eye lids are to be gently raised and the whole sac to be irrigated with a boric acid solution just before the operation.

Local anesthesia is to be used in every case and 4 per cent cocaine with 1 to 1,000 adrenalin is to be dropped in the eye four times in ten minutes. The solution is to be thoroughly sterilized before being used. No atropine is used either before or after the operation owing to the infrequency of iritis.

The steps of the operation are those laid down by Col. Smith and exemplified by Dr. Greene who has had personal instructions from Col. Smith.

The technic of this operation cannot be learned from books but must be seen to be appreciated.

A trained and able assistant is very essential in order to obtain the best results and the hook elevator in his hand controls the orbicularis palpebrarum and prevents the squeezing out of both lens and vitreous.

The patient naturally looks upward when lying down and this position is maintained during the operation and in turn accounts for the fewer number of cases of vitreous escape.

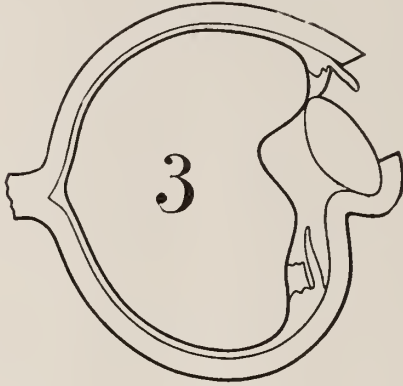
No instruments, save the knife, are to be introduced into the eye in this operation. The Savage instrument for breaking the zonula after being introduced into the eye is not advocated by Dr. Greene or Col. Smith.

The conjunctival forceps used at the lower corneal-sclero margin, should be held with just sufficient force to steady the globe. Undue pressure causes escape of vitreous.

The incision must be one-half or nearly one-half the circumference of the cornea. The average cornea measures $11\frac{1}{2}$ m.m. in diameter and the lens about 9 m.m. in diameter.

The operator is to use the right hand, when he is right handed on either eye, in order to give the patient the benefit of his best hand. The incision is a sclero-corneal one with the speculum in position and the counter puncture is made in the opposite sclero-

corneal junction. The incision should be large and most of the failures are due to non-observance of this rule. If it is found that the incision is too small it may be enlarged with a pair of straight scissors.



Be careful not to touch the capsule in making the incision or performing the iridectomy, for the mistake will prevent the complete removal of the cataract in the capsule. The cataract knife is to be held lightly in the fingers and after it has been inserted into the eye and the counter puncture made depress the hand in the completion of the incision, there being no sawing movement.

The distinguishing feature of the new model cataract knife, as used by Dr. Greene is its straight cutting edge from heel to point, the taper to the point being entirely to the back. The back is also sharp for two millimeters from the point. The advantages of this shaped knife are two,—first, if passed into the anterior chamber at an angle of 20 degrees above the horizontal plane (the patient lying on the back), the iris can hardly fall over the edge or be picked up on the point; second, the length of the blade enables one just when the point appears in making the counter puncture to drop the hand from the globe outward and push the knife home to the heel. Such a section will be smooth, every plane will be parallel to every other plane, because there is no drawing motion, hence no “stair steps,” and prompt closing of the wound is the rule. For the large section required in intracapsular operations the large knife is desirable.

The clean right-angled corneal cut, free from ridges and grooves insures speedy union by perfect coaptation of the wound. epithelium

to epithelium, elastic layer to elastic layer and corneal stroma to corneal stroma. A conjunctival flap is always in the way.

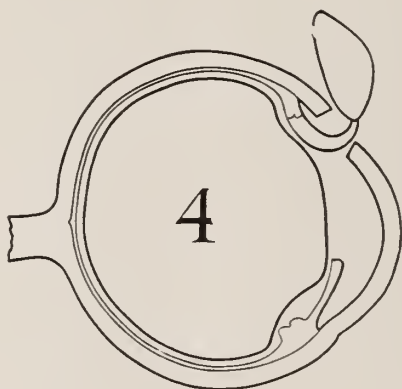
The iridectomy is now done in every case and is small. Formerly the iridectomy was dispensed with and when Col. Smith decided upon an iridectomy he made a liberal one but Dr. Greene demonstrated that a small iridectomy was quite sufficient for all purposes in the performance of the operation. Seize the iris at its crest with a narrow grip and cut, holding the scissors at right angle to the incision. Be careful and not touch the capsule. Avoiding all drag on the iris and thereby minimize the only pain the patient usually complains of. Replace the iris after the lens has been delivered by means of the Knapp iris repositor, modified by Greene, as the use of this instrument will not necessitate the patient looking down.

The speculum must now be removed and it is now that the assistant plays such an important role. The assistant draws down the lower eye lid, using a piece of gauze under the thumb. With the other hand he lifts upward and outward the upper lid, using a large size, so called strabismus hook, held between his thumb, first and middle fingers. The ring and little finger of the same hand pushes back the brow and controls the orbicularis muscle.

Col. Smith in delivering an immature cataract lays his hook on the cornea and sclera below with the point directed up toward the pupil, the point to go two or three millimeters above the sclero-corneal junction. The instrument is then given a quarter turn with the fingers so that the point shall bear on the edge of the lens when pressure is made directly backward toward the optic nerve. If the lens is not dislocated by this pressure the instrument is returned to its primary position and pressure can be made in the same direction but with a larger bearing surface than that of the flat curved portion of the hook, so to speak.

Now suppose he was going to deliver a hypermature, intumescent or any cataract with a small nucleus, he would place the hook in about the same position, but instead of pressing backward toward the optic nerve and the instrument lying flat, he will twist or turn the hook between his fingers until the hook portion stands perpendicular to the cornea, and then give it a further twist or turn, until the point gets under the ciliary body. This, of course, requires some pressure, but as the point catches you will know it and must hold your advantage, then make steady pressure, not backward as in the former case, but make your pressure or pull directly downward toward the patient's feet. This is the way to turn the lens over, and will work,

as a rule if the nucleus is not too large or the whole lens sclerosed. Intumescent lenses are the easiest to deliver in this way because having a small nucleus and mushy cortex, they will mold or take on the hour-glass form. In either method of delivery, as soon as the lens moves well out of its bed, and inclines to fall forward, Smith is careful to fold the cornea under it. This is easily done and he is careful at this point to keep the lens well back against the posterior lip of the incision to prevent vitreous escape. He is also careful at this point to only use the concavity of the hook in drawing the remainder of the lens out through the incision, the point being held well up



where it will do no harm to the capsule. If skillfully done, this manipulation generally dislocates the lens, but it is a refinement of the usual steps of the operation, and not to be recommended to beginners. A better way when the lens does not dislocate out of its bed from pressure with the point of the hook, is to make gentle pressure beside its point with one end of the spatula which should always be held in the left hand; the moment the edge of the lens becomes well engaged in the incision, and shows a tendency to fall backward, all pressure with the spatula should cease, and the delivery of the lens should be effected by folding the cornea under it with the point of the hook, always remembering to keep the lens crowded back against the posterior lip of the incision and endeavor not to touch the capsule with the point of the hook. The simile at this stage of the delivery is not unlike a paraphymosis. At other times the spatula will serve its usual purpose to hold the lens up in the incision so as

to hold on to what has been gained, if for any reason pressure with the hook has to be shifted.

The cornea should be kept moist with a warm boric acid solution.

The pressure with the hook is to be made on the lower margin of the lens. Steady pressure must be made backward toward the optic nerve with the hook. Pressure should not be excessive, but steady and equal, not so much pressure as manipulation being responsible for the delivery of the lens. No compressing or rubbing over the center of the cornea is a very important point to remember. 66 per cent. of the cataracts are delivered in a straight manner. These cases are usually sclerosed cataracts which cannot be molded and do not turn. 33 per cent. turn over and are called by Col. Smith "tumblers." This variety is the large and soft cataract, the intumescent of Fuchs.

If there is hemorrhage in the anterior chamber it may be removed by gentle manipulation of the spatula.

If there is a prolapse of vitreous it should be cut off with a pair of scissors and not allowed to remain in the wound as this prevents coaptation of the wound.

Both eyes are to be bandaged for eight days and not disturbed during this period unless there is some indication such as pain. I am of the opinion that this period is too long, four days seems to me to be long enough to keep the patient in total darkness.

Glasses are to be fitted in six weeks.

For a satisfactory disposal of the capsule and contents the Smith operation is the operation par excellence.

There is less danger of iritis, iridocyclitis and sepsis in the Smith operation and the reason of this is according to Smith that the liquefying debris of lens matter in the aqueous chamber and lens capsule in the wound is most frequently the cause of these conditions. The lens capsule in the wound and debris of lens matter in aqueous chamber also interferes with the healing of the wound. No secondary operation is necessary. Post operative complications are rare.

There are very few cases of striated keratitis resulting now, due to the elimination of the massage on the cornea in the expression of the lens. In order to prevent striated keratitis use only the bulbous end of the hook and simply make pressure upon the lower part of the lens. By straight pressure, manipulating the hook properly and keeping away from the center of the cornea, also delivering the lens quickly will prevent, to a great extent, striated keratitis. The haze of

the substantia propria is due to the disturbances of the anterior epithelium. It is a mild form of keratitis due to friction by the end of strabismus hook. The exterior layers of the cornea seem to stand almost any amount of insult but this does not apply to Descemet's membrane. It is surprising to note how much pressure the cornea will stand. I have seen a number of cases where it seemed to pucker yet no keratitis followed in its wake.



There is a marked irritative redness after the operation which persists for some time, a decided scleral and faint ciliary injection and vascular engorgement which persists longer and is due to traumatism involving the cornea, iris and possibly the ciliary body.

There is no pain as a rule. I took occasion to question a great many patients in Dr. Green's clinic and not one complained of any pain after the operation.

If the wound is tardy in healing, touch the wound with silver nitrate solution grains 5 to the ounce.

I examined thirty cases in every stage of healing in Dr. Greene's clinics at St. Elizabeth's Hospital and Soldier's Home and in a number of these cases 6/6 vision was noted when the patient wore glasses.

I saw a number of remarkable cases, but I thinking the most interesting was an operation performed upon an old lady with a resulting normal vision. The opposite eye had been operated upon in the orthodox manner a few years previously by a prominent surgeon in the East and the best vision obtained was but 6/24. These tests were made after the refractive error was corrected.

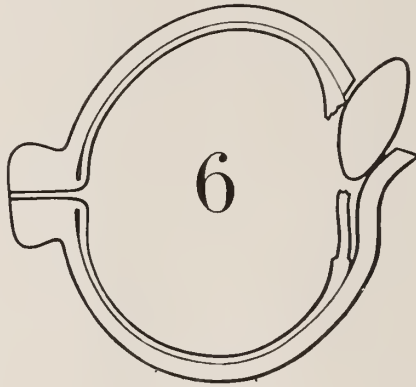
Elschnig considers the loss of vitreous as extremely dangerous on account of the vitreous opacities and detachment of the retina.

Dr. Casey Wood examined 47 cases in Dayton, and did not see a single case of detached retina or glaucoma. Capt. Lister, I. M. S., reports on 576 Smith operations in which there was a suppuration in two cases and loss of eyes. Escape of vitreous in 29 but with no damage. He claims that the vitreous escape decreases with the experience of operator. The astigmatism resulting from the Smith operation varied from plus .75 to plus 1.00. In 61 cases with the escape of vitreous the vision was as follows: 6/3 in four, 6/4 in ten, 6/5 in nine, 6/6 in thirty-three and 6/9 in five cases. In eight eyes out of 98 examined there was disease of the fundus discovered but in no case was there detachment of the retina, the condition so generally feared as liable to occur after escape of vitreous. The danger from the loss of vitreous is over estimated. Wetzel and Beer long ago stated that they had not seen any harm resulting from a loss of one-third of the vitreous by volume. Smith and Greene have stated the same from their experience. Dr. Jannieson, of Belfast, Ireland, a pupil of Col. Smith's reports only 35 cases in which vitreous escaped in 680 operations and states with proper assistance and the knowledge of behavior of lenses, according to their physical quality, the escape of vitreous need not be higher than in the capsule laceration operation. Elschmig reports 69 cases with a loss of vitreous in 17 per cent. of the cases. There is less danger with the loss of vitreous if the patient looks upward and the absence of speculum during the expression lessens the danger of prolapse of vitreous. Smith prefers loss of vitreous to the retention of the capsule. The combined operation in the hands of the best operators in this and other countries in 1032 operations according to Ring furnished a loss of vitreous in 7.3 per cent. Iritis in 13.15 per cent. and discission was required in 26.61 per cent. According to Smith's statistics in 1906, in 2216 operations he only had 6.8 per cent. of loss of vitreous, and .3 per cent. of iritis in 2494 cases when the lens came away whole but when opened or ruptured in delivery and had to be left behind, iritis was observed in 5 per cent. of the cases.

Dr. L. Webster Fox, of Philadelphia, in a personal interview, informed me that he firmly believed in the regeneration of the vitreous and in a letter of recent date he informs me that he has ten cases upon which he has made several tappings and he has found that the vitreous which was very cloudy cleared up nicely. He is very much pleased with the results and will keep on making punctures in cases of blind eyes with the hope that he may give exact data on this subject.

There is some danger of the wound opening upon movement; for example, I noted one case in which the wound opened after the patient had taken a piece of dry bread. The cosmetic effect is not so good.

Dr. Greene is now trying a preliminary iridectomy and he thinks the pupil will be nearer the key hole shape with this method.

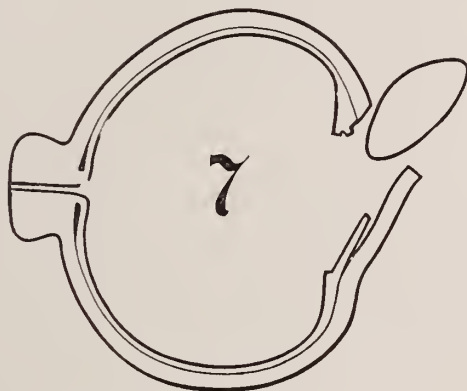


For the removal of immature cataracts, this operation opens up a wide and wonderful field, for the Smith operation is singularly adapted to unripe cataracts. As Vail states, "there doubtlessly exists in the world today, ten times as many immature as compared with mature cataracts." Immaturity is always a contra-indication for the extraction of the cataract with the old method according to Fox and other writers. The big class of immature cataracts varying from clear glass to ground glass in appearance and these usually mean the leaving behind of cortex when the old method is used in the expression of the lens. The indication for the removal of immature cataracts is when the vision is $\frac{22}{200}$. Smith in his paper on immature cataracts makes this bold statement, "the mental depression (among immature cases who are told to wait for months until their cataracts become ripe) is allied to the prospects of confinement in a dark cell without labor,—a form of judicial punishment admissible in no civilized country." An example that I might quote is that of a prominent Cincinnati physician who had an immature cataract in both eyes and he was unable to attend to his work on account of the lessened vision. He consulted many ophthalmologists who informed him that they could not operate until the cataract matured.

The process of ripening was extremely slow and therefore he went to Dr. Greene to be operated upon and the doctor removed an immature cataract and gave him better than normal vision (20/15 with a plus 14 D. lens).

I believe that we should give our patients the benefit of our experience and that we should not hesitate to advise him to have an immature cataract removed, providing it interferes materially with his vision or causes him great anxiety.

It is the purpose of the author of this paper to awaken and stimulate interest in this new operation which sooner or later we will be compelled to perform or else lose our patients. Every operator should approach the Smith operation with the keen realization of



its difficulties and obstacles and master the technic of this operation by experiments on live dog's eyes, or rabbit's eyes which are more like the human eye.

Vail of Cincinnati, a pupil of Smith's believes it is the operation of the future among the best surgeons of the world, regardless of where their activities lie.

Guthrie aptly says that surgery is the art of assisting nature and the Smith operation is a long step toward the ideal operation. The objections to this operation have been extensive but this is not based upon actual experience. The American ophthalmic surgeon, I feel will give this operation a fair trial and Col. Smith believes that the operation is not perfected. The last word is yet to be spoken on this subject.

Great interest has been manifested by the medical profession throughout the country in this practically new operation.

I have witnessed Dr. Greene perform fourteen Smith operations and I am very much impressed with the possibilities of this operation, particularly in immature cataracts. When we note how slowly some of the cataracts mature and to what extent our patients worry and are incapacitated by this long delay, we can with all modesty proclaim this new operation as one of the greatest operations that has been performed since the days of Daviel.

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Discussion.

DR. NELSON M. BLACK, Milwaukee: There is not the least question of doubt that removal of the opaque lens without rupture of its enveloping capsule is the ideal operation for cataract; however, there are so many factors about its performance that are practically prohibitive to the average man doing eye work, that it is questionable whether it will ever become a safe

operation for general use. Take for instance in a large clinic where many cataractous eyes and extractions are of daily occurrence, the ophthalmic surgeon in charge has the opportunity of becoming thoroughly familiar with all the varieties of cataracts and will be able to determine what class of opaque lenses are best suited for intra capsular extraction, and, acquire through experience a highly developed technique; on the other hand the man who sees six to ten cataractous eyes during a year is not a capable judge of what lenses should be subjected to the Smith operation, and it will be impossible with such a number of cases for him to perfect himself in the nice details of the technique, which are so essential to the accomplishment of removing the lens within its capsule.

Such being the case, I am inclined to think that it will be an operation which the better class of American ophthalmic surgeons of large experience will resort to only in selected cases. As a matter of fact I am hardly in the position to discuss Dr. Hogue's paper, as I have never seen the operation performed precisely in the manner it is done by Major Smith. I have seen several cases after the operation has been performed by those instructed by Smith—the result in practically every instance was perfect. Again I have seen a number of eyes which had been operated upon by experienced operators who had never seen the Smith technique, but had attempted to follow the directions as laid down in descriptions of the operation, and, many of the results were deplorable.

Three years ago I attempted the operation on five consecutive eyes in three individuals after having carefully studied the originator's own description. Three of the operations resulted perfectly. Of the other two eyes—in one there was a marked incarceration of the iris which was forced up into the section of escaping vitreous and could not be replaced, resulting in a practically occluded pupil requiring a second operation with a poor cosmetic result, although resulting vision was fair. In the last eye the capsule ruptured allowing the nucleus to escape together with the capsule into the anterior chamber, necessitating delivery with a scoop resulting in a loss of vitreous, the capsule remaining causing severe iritis and increased intraocular tension. These accidents may occur in the regular method of extraction, but there is much less liability.

It seems almost imperative that one becomes familiar with the different procedures of the operation from a pupil of Major Smith before attempting it.

In the clinic at the Soldiers' Home I have a large number of immature cataracts, which according to the authorities are best adapted for the intra-capsular extraction. They are in the same class of patients that Dr. Green has performed the majority of his operations upon. As soon as I can accept Dr. Greene's kind invitation to visit him at the National Soldier's Home at Dayton and become familiar with the technique, I hope to be able to report the results in a series of cases.

Dr. Hogue made one statement which he seemed to contradict later on in his paper i. e. that the knife was the only instrument introduced into the eye, he then states that after the section is made an iridectomy is performed and after the extraction of the lens the iris is returned to its proper position by means of the Knapp iris repositor. These procedures require the entrance into the eye of two other instruments the iris forceps and the iris repositor.

Relative to having the eyes bandaged for eight days to which Dr. Hogue

objects, Dr. Fisher of the Chicago Eye, Ear and Nose Hospital, was the only one who followed out the instructions of keeping the eyes bandaged for eight days. All the rest of the men for whom these cases were operated, opened the eyes in from 24 to 48 hours after the performance of the operation, and the results in every case except the three which Dr. Green did for Dr. Fisher, were not good. There was more or less irritation, iritis and congestion of the eyes which did not occur in the cases which were left bandaged for eight days.

To sum up—1. The Smith operation seems an ideal method for carefully selected cases in the hands of an experienced operator.

2. Is not adapted for mature or hypermature senile cataracts, the traumatic or the congenital variety or those with fluid vitreous.

3. Is not an operation for one who has not had or cannot have an opportunity of observing a large number of cataractous eyes and has not had considerable operative experience.

4. The operation must be witnessed a number of times in order to learn the necessary details.

5. An able and well trained assistant is a necessary adjunct.

RECONSTRUCTION OF THE BILE DUCTS.*

BY A. S. SULLIVAN, M. D.,

MADISON, WIS.

A careful search through the literature bearing upon the surgery of the biliary tract, made several months ago, and a similar one of a more recent date, fails to disclose a method for the construction of an intra-abdominal sinus for biliary drainage. Although great advances have been made in the surgery of this region, it is the writer's belief that the surgery of the bile ducts themselves, is still in its infancy. The purpose of this paper, is to bring before you a method for the partial or total reconstruction of the common duct, or its tributaries. The method as originally conceived and carried out experimentally, with and without cholecystectomy, was somewhat as follows:

The procedure depends on the use of a rubber tube, at one end of which a rubber sponge, or an ordinary surgical sponge is securely attached. The tube should be approximately the size of the common bile duct, and the diameter of the sponge should not be greater than one-half the diameter of the duodenal lumen. The length of the tube depends on the length of the biliary passage to be reconstructed.

*Read at the 64th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 23, 1910.

The common bile duct is exposed, ligated and cut across just above the ligature. Two plain catgut No. 1 sutures are introduced in the opposite edges of the gaping duct, and in the rubber tube, in such a manner that when the sutures are tied down, the knots will be on opposite surfaces of the duct, and the tube drawn within the lumen of the duct a distance of approximately 1 cm. The tube is then applied to the anterior surface of the duodenum, and at approximately every inch is sutured to the duodenal wall with fine catgut. At a point about opposite the ampulla of Vater, an incision is made in the duodenum, just large enough to allow the insertion of the sponge and attached tube into the lumen of the intestine. The sponge is shoved down inside the intestine, and the opening in the duodenum is sufficiently repaired so that the cut edges snugly encircle the tube. At this point—where the tube penetrates the intestinal wall—a No. 1 plain catgut suture is inserted, taking a good bite of the duodenum, and a small bite of the tube, so as not to encroach on the lumen of the tube. This suture does two things—it prevents the peristaltic pull on the sponge from tearing the two duct sutures free, and it minimizes biliary colic, as has been demonstrated in dogs. The duodenal walls are then sutured over the tube so that for about 3 cm. before the tube penetrates into the intestine, it runs in a canal made by overlapped duodenum. The great omentum is then drawn up, and a suitable area selected with which to cover the exposed portion of the tube. This area is traumatized by lightly drawing a dry sponge over it a few times, and similar friction is applied to the duodenum and gastro-hepatic omentum on either side of the tube. The omentum is then placed so as to cover the tube and extend beyond it a centimeter or two in all directions, and is held in position by several fine catgut sutures.

The first dog operated on after this method, much to the surprise of my associates in the Surgical Research Laboratory of Columbia University, prospered, and as the days passed with no signs of peritonitis or acholia, our interest grew in the procedure. A couple of weeks after the first operation, the dog's abdomen was again opened, and the end of the tube grasped through a small incision in the duodenum. The ease with which the tube slipped out, suggested that the peristaltic action of the intestine could well supplant the second operative procedure. Consequently, the second dog operated on had a tube with a rubber sponge tipped end inserted. Very fine plain catgut was used throughout with the result that the tube and sponge were passed 60 hours later. In animals subsequently operated

on, a small gauze sponge was substituted for the rubber sponge previously used, and it was found to work entirely satisfactorily.

In the last two operations, the sponge which was inserted was compressed as much as possible, by taking several turns of No. 3 plain catgut around it. My experience has been that catgut in the lumen of the dog's duodenum is disintegrated about three times as rapidly as that placed in the body tissues. So by using the heavier gut, with which to compress the sponge, one very greatly diminishes the peristaltic tug on the tube for a few days after the operation, until finally the sponge breaks its bonds, expands, and is then ready to do active work at approximately the same time that the catgut holding the tube in the duct, is absorbed. The advantage of having the tube undisturbed the first few days is obvious.

Looking at this procedure from a surgical standpoint, it appears to be a dangerous proposition, but upon analyzing the constituent steps in this work, it is at once apparent that the operation is merely a combination of more or less accepted technical details. The drainage of the hepatic duct by rubber tube set forth by Abbe is recognized. Witzel's method of gastrostomy is roughly similar to my method of implanting the tube in the duodenum. Kehr has successfully used gastric wall to bridge over a deficiency in the wall of the common duct; and the use of omental grafts to cover such apertures is a fairly common proceeding.

Upon leaving the Laboratory, over a year ago, I unfortunately killed all the animals (save one), on which this work was done, for the specimens, and consequently the test of time was much too short. However, they were alive, well, and in the best of spirits, delivered bile in normal amounts and without a symptom of leakage or peritonitis for four months.

Until a short time ago, I was quite proud of the only animal now living, which was operated upon after this technique. About 16 months ago, I removed this animal's entire common duct after doing a cholecystectomy, and inserted into the hepaticus a tube without sponge tipped end, with the idea of keeping the tube there permanently. The tube was securely sutured to the surrounding tissues with unabsorbable material, and was allowed to project into the duodenum about two inches. The dog's convalescence was short and uneventful, as it was in all the others, and as the months passed by, I was greatly pleased in the belief that the tube would remain in situ until disintegrated. When forced to operate on this animal two months ago, for a strangulated umbilical hernia, my surprise can

well be imagined when I found that the tube had passed, and an entire absence of adhesions, save those artificially produced, permitted the new formed bile passage to be easily seen and demonstrated. This proves conclusively that it is by no means necessary to attach a bulbous object to the end of the tube in order to have the peristaltic action of the bowel remove the tube. My only reason for giving a resume of the use of the sponge tipped tube in the early work, was to bring before you an idea which may be made use of, that is, the surgical use of the peristaltic action of the bowel.

Several men of world wide repute believe that this method of bile duct reconstruction can be utilized in the human, and it is the opinion of a number, that it is a means of cure in the so-called permanent biliary fistula. Whether permanent tubage be necessary or not, is still a matter of conflicting opinion among the masters of biliary surgery. They agree that whether or not it be required, is of little consequence. In the use of this technique upon the human, I should like to emphasize certain necessary steps. 1) It is essential that the tube be placed within the duct, and not in the reverse order. 2) The duodenal wall must be folded over the tube for a distance of 3 cm. before it plunges into the lumen of the intestine. 3) The restraining stitch which temporarily prevents traction on the upper portion of the tube, should be put in. 4) The tissues forming the walls of the tube must be lightly traumatized. 5) Silk or linen sutures should be used to hold the tube in place. 6) No sponge or other bulbous object should be attached to the tube. 7) The tube should not project into the duodenum more than one inch.

Although for some months past a number of American surgeons have expressed their faith in the practical application of this work, and have signified their intention of making use of it in permanent biliary fistula, but one case requiring such work, has come to these men, so far. This case was operated upon and reported in the last number of the *Annals of Surgery* by Dr. George E. Brewer, senior surgeon to Roosevelt Hospital, New York City. He has kindly given me permission to report the case at this meeting. As most of you no doubt have read this account, I can best give a brief summary of the case by quotations from Dr. Brewer's letters.

"The case of hepatico-duodenal anastomosis, was operated upon originally for acute gangrenous cholecystitis, with profound sepsis. There was extensive sloughing of all the tissues, including the common duct, resulting in a permanent biliary fistula." Dr. Brewer several weeks after the fistulous tract had healed, "introduced a rubber tube

into the hepaticus, and held it there with a purse string suture, passed the other end into the duodenum, and held that by a purse string suture. He then wrapped the omentum about it, extending well onto the duodenum, and up to the transverse fissure of the liver. Smooth healing of the wound followed, with not a drop of leakage, and normal flow of bile into the intestine was evident. The symptoms were completely relieved, and the man gained in weight. The patient did well for a month, and then began to have attacks of intermittent jaundice. The last occurred about the time Dr. Brewer read his paper before the American Surgical Association, on May 5th. From that time on, the patient steadily grew worse, and on May 30th had apparent biliary obstruction. At that time Dr. Brewer wrote me that he was "tremendously enthusiastic about the result in the beginning, but that of late he had begun to feel that the fistula was closing" and consequently expected to operate upon him again and correct the difficulty. I at once wrote Dr. Brewer and suggested that the results might have been better had he made a duodenal gutter for the tube to lie in, just before it entered the gut lumen. You will recall that he simply punctured the duodenum, passed the end of the tube inside the gut, and held it there with purse string suture. His reply was as follows:

"You will be interested to know that I operated upon my patient again last week. I am sorry I did not receive your letter before, although I do not imagine I could have done any differently. My intention was to do exactly as you suggest, and make a gutter in the wall of the duodenum, but the adhesions were so dense, and when the duodenum was exposed, so little peritoncum was left upon it that I thought it wiser to practically repeat my former operation, using a larger rubber tube. As he was deeply jaundiced at the time, we have had considerable trouble with capillary oozing both from the bowel, stomach and the wound. At present he seems to be doing well, and there has been practically no leakage of bile; his stomach is irritable, and he has difficulty in retaining food. As it is now seven days since, and he has no sign of peritonitis, I think he will pull through."

I would like to call your attention to the fact that the adhesions found at the time of this second operation, prevented Dr. Brewer from using the technique already described, and I feel that failure to make the duodenal gutter, greatly handicaps the success of the work. Further than this, the first tube inserted, was never found by x-ray, nor in the stools, and so the length of time the tube was

in situ can hardly be guessed at. A few days ago Dr. Brewer wrote me as follows: "I am sorry to be obliged to tell you, that my patient died as the result of his second operation. His condition was pretty bad at the time, from cholemia, and he oozed blood for about 10 days, which greatly weakened him. At the end of this time, the hemorrhage ceased, and he began to take nourishment, but bile never flowed freely into the intestine. Why, I cannot imagine, because the duct was coupled up to the duodenum by a large tube through which the bile flowed during the operation. His temperature kept almost to the normal, and there was no peritonitis. They would not permit an autopsy."

The most striking thing to me in the convalescence after this work experimentally and as borne out by Professor Brewer's experience, is that there is absolutely no biliary leakage and no peritonitis. It is but natural to think that there would be leakage at the point where the tube enters the duodenum, at which place there must be some peristaltic back pressure. However, such is not the case.

In closing, I should like to impress upon you, the simplicity of this operative procedure. My faith in it is still unshaken, and I trust that this method of bile duct reconstruction will be of service to you gentlemen in the relief of biliary fistulae, which otherwise may prove fatal until some better method of treatment is devised.

VALUE OF BLOOD CULTURES IN PUERPERAL FEVERS.*

BY JOSEPH S. EVANS, M. D.,
MADISON, WIS.

Febrile disturbance during the puerperium is always a source of anxiety to the physician and since the etiology is so varied its true significance is usually most obscure. The importance of definitely determining the presence or absence of a serious pyogenic bacterial blood infection; of a sapremia or of a coincidental infection e. g. typhoid fever, acute tuberculosis, etc., is self evident, not only from the standpoint of rational therapeutics but from the standpoint of prognosis. To make such a differentiation by clinical observations alone is never certain, and usually necessitates so great a delay that

*Read at the 64th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 23rd, 1910.

the newer methods of treatment are rendered useless. On the other hand to employ such treatment as specific anti-bacterial sera without first determining that the patient suffers from a bacteriemia is not only irrational but unjustifiable, especially so since recent investigations have shown a certain percentage of people, small it is true, to be peculiarly sensitized to foreign sera.

Since clinical observations, therefore, are insufficient we are compelled to turn to the laboratory for assistance, and here to employ that method of diagnostic precision, which by experience not only gives definitely positive but reasonably certain negative results.

The first fear of the obstetrician is, that through the parturient tract a general blood infection has occurred and it should be his endeavor to determine this as quickly as possible. Unfortunately, however, the presence of an intrauterine infection is of as little value in diagnosing septicemia as its absence is in excluding it, since it has been the experience of the writer that not only do severe pyogenic bacteriemias exist in puerperal women with sterile uterine contents, but what is well known to every practitioner that virulent infections of the uterus in many instances remain local.

The former contention was admirably supported by the findings in five of the septicemic cases under observation. All of these cases suffered with a virulent streptococcal blood infection but in each the intra-uterine contents were sterile, as shown by careful intra-uterine cultures. In one of the cases multiple abscesses of the myometrium were found though the endometrium was healthy. In another case the pelvic lymphatics were the seat of infection without a definite localized lesion being found. Apparently infection took place through the endometrium without producing localized infection. A third case was apparently due to auto infection from a chronic latent bacteriemia following acute infectious arthritis during pregnancy, by this I mean it was secondary to an arthritis which occurred during pregnancy and which had subsided two months before delivery. A fourth case was undoubtedly due to infection through the tonsil since the same type of organism was isolated both from a crypt in the tonsil and from the blood. In the fifth case the portal of entrance was undiscovered. Therefore, the intra-uterine culture method as a diagnostic aid gives only confirmatory evidence of local infection and is of no value in diagnosing general infections.

I do not wish, however, to underestimate the value of the intra-uterine cultures as an aid in solving some of the problems in regard to the nature of puerperal fevers, since the presence of organisms

in the uterine contents, provided the proper technic is employed in obtaining them, is absolute evidence of intra-uterine infection, for Nicholson and the writer contrary to the conclusions of many observers found that the uterine lochia was sterile in 100 per cent. of normal cases throughout the puerperium.

The study of the corpuscular elements of the blood and their morphology while of confirmatory importance in differentiating between true puerperal infections and intercurrent diseases, and probably of some value in the prognosis of puerperal sepsis in no way assists in the differential diagnosis of septicemia, bacteriemia and sapremia or toxemia. Since this differentiation is undoubtedly of first importance, it appears logical that the first steps in considering a case of puerperal fever is to determine the presence or absence of a blood infection by culturing the blood itself. The value of this method of diagnosis depends, however, upon the results obtained in a sufficiently large number of cases. A positive culture, of course, is direct evidence which cannot be controverted, but, to the writers mind, it is more important to determine the value of the negative culture.

In the series of febrile cases (90 in number) which I have had the opportunity of studying during the past six years, positive cultures were obtained at the first attempt in 94 per cent. of the cases of bacteriemia (52 in number); the three failures being rectified by subsequent cultures. Thereby having blood cultures positive in 100 per cent. of these cases. In eight cases blood cultures showed the presence of the bacillus typhosus as the infecting agent, thereby immediately clearing up the differential diagnosis and permitting the transference of these cases to the medical ward. Negative cultures were obtained in 30 cases. In all of these definite causes for the febrile disturbance were discovered either as the result of the clinical manifestations; by intra-uterine and vaginal cultures; by blood examinations; or by surgical interference. Twelve were due to stitch abscesses following primary repair of the perineum, four to membranous vaginitis, two to salpingitis, two to abscesses in the broad ligament, six to endometritis, one to malarial infection, two to scarlet fever and one to abscess of breast.

From these results one is justified in concluding that if puerperal septicemia exists it is definitely determined by blood culture and that negative finding may reasonably be looked upon as indicating absence of blood infection.

It must be borne in mind, however, that what proves of value in

the hands of one observer too often fails in those of another for laboratory technique has not yet reached that stage of perfection when the personal equation ceases to be a disturbing element. Careful workers have expressed their doubt as to the value of this method of diagnosis, because of their failure to obtain results in accordance with their clinical observations. These failures can only be explained by improper laboratory technique, for the difficulties which prevail in the blood culture work of such diseases as typhoid fever, pneumonia, etc., do not exist in the streptococcic infections, which organism the author found was the causal agent in 100 per cent. of the cases in this series. In infections which run a definite course with termination by lysis or crisis, as typhoid and pneumonia, the percentage of positive blood cultures varies in the different stages; in streptococcic infections the stage of the disease apparently makes no difference, since positive cultures were obtained as early as the second day after the onset of symptoms and as late as the fortieth day.

The relation of blood cultural findings to the prognosis of septicemia has been the source of much investigation during the past few years. Schottmueller first remarked upon the fact that in all virulent cases of infection having a fatal termination a form of streptococcus pyogenes with the peculiar property of producing a solution of the hemoglobin in the culture media could be isolated. This he termed the streptococcus pyogenes hemolytica and considered it to be a distinct type with especial virulence. Other investigators have also observed this peculiarity of the organisms isolated from fatal cases and some have gone so far as to state that its presence either in the lochia or the blood demands an unfavorable prognosis.

On the other hand they found that in those cases in which a non-hemolytic type of organism was found, the patient usually recovered from a mild infection. It was the concensus of opinion that fatal cases must be primarily infected with the hemolytic type of organism and that a favorable prognosis was warranted when the infecting agent was not of this type.

To base so distinct a clinical division upon the cultural characteristics of an organism is to the writer's mind unwarranted, and the results obtained in this series seems to confirm that opinion.

Of the 52 cases of septicemia, 20 gave cultures of the hemolytic type. Of these 12 (or 60 per cent.) terminated fatally, anti-streptococcic serum having been used in all of them. 32 gave cultures of the streptococcus of the non-hemolytic type and of these 12 (or 37 per cent.) were fatal. All of these 32 cases were cultured early in

the course of the infection, and at a time when the patient's general condition was good, there being no evidence of marked blood destruction.

All of the fatal cases of the latter series, however, showed evidence of marked blood destruction later in the course of the disease and in four of them second cultures were made. At this time the streptococcus which earlier had been non-hemolytic exhibited a hemolytic property. The other eight cases were not cultured for clinical reasons, but the experience in the four cases led the writer to the conclusion that the termination of a case depends not only on the primary virulence of the infecting agent but upon the resistance of the individual, and that while the hemolytic property of an organism is an indication of its virulence, yet an apparently non-virulent strain, when judged from this standpoint alone may later become virulent because of the non-resistant host. This leads to the conclusion that in all cases of streptococcic bacteriemias no matter what the cultural characteristics may be, an unfavorable prognosis should be given.

The percentage of fatal terminations in this series is undoubtedly affected by the fact that anti-streptococcic serum was administered in each case. What the value of such serum may be the writer feels unable at this time to give a definite opinion. In the first nine cases in which it was administered the results were so startling as to cause a belief that the treatment was specific. The serum used at this time was obtained from one horse at a single bleeding and I am inclined to think possessed a high bactericidal value. Later cases, however, were disappointing and we were forced to the conclusion that the variability in results were due to the impossibility of standardizing with any degree of accuracy an anti-bacterial serum in the manner employed with an antitoxic serum. Notwithstanding the uncertainty of our knowledge of the production and manner of action of such sera I believe it to be our duty to employ them whenever we have definite evidence that a bacteremia exists, but I strongly condemn their indiscriminate use until such a determination has been made.

In briefly presenting the subject to you it has been my purpose to show the importance of an early differentiation of the causes of fever during the puerperium not only because it should always be our endeavor to be precise in diagnosis, but because prompt therapeutics in many cases promises favorable results. I have not spoken to you of the technique of blood cultures, because while simple in many regards it requires a certain amount of laboratory equipment

and careful training in laboratory methods. It is my hope, however, that sufficient interest in this phase of work may be stimulated among the younger men of the profession in order that each community may in the future have a laboratory worker ready to aid the older and more experienced clinician, and at the same time to stimulate the older men to a full appreciation of the value of such laboratory aids to diagnosis and thereby create a demand for such service.

Discussion.

DR. J. P. McMAHON, Milwaukee: The society has been placed under obligations to Dr. Evans for his able presentation of "The Value of Blood Culture in Puerperal Fevers". So far as I know, this is the first time that the subject of Blood Culture has been discussed before this body. We hope that when the paper appears in the Journal it will be carefully read by all who have to do with puerperal cases because of the indications and contra-indications for scientific treatment which have been made possible only by his investigations. When one considers the variety of bacteria that may be found in the vagina, in the cervix, in the uterus and in the lochia with and without an elevation of temperature, he realizes the unreliability of the findings in specimens from these sources. Except in a differentiation of diphtheria it is but natural that the investigator should turn to the blood and even there he may not stop with the cellular findings because the cellular elements react to low grade non-*puerperal* infections and to toxemias. Hence, the value of employing blood culture in establishing a diagnosis of the presence or absence of constitutional infection (bacteriemia) is manifest. Even though examinations of specimens from the utero-genital canal were reliable the securing of the specimen is not devoid of danger because of the readiness with which the canal may become infected at this time. Then again the investigations of Dr. Evans show that it is possible for a patient to be the subject of a bacteriemia accompanied by serious constitutional symptoms with negative findings in specimens taken from the parturient canal, notably from the uterus. Furthermore, as we all know, virulent septic infections of the uterus frequently remain local.

In support of blood culture in puerperal fevers, we would emphasize that it is reliable in determining the presence or absence of bacteriemia, and in determining the particular bacterium present in a given case (*Streptococcus*—90 per cent in serious puerperal infections); that it makes possible an early differential diagnosis between bacteriemia and sapremia (2-5 days); and that it enables us to determine the presence of a coincident infection, particularly typhoid. Its value from the research, the therapeutic and the patient's viewpoint is the prime importance, for the knowledge of the bacterium present must necessarily determine the particular serum to be administered. And no less important is its early administration, if it is to be used at all.

The most important use of blood culture in puerperal fevers and the one upon which I desire to place the greatest emphasis, is its value in determining an early differential diagnosis between sapremia and septicemia or bacteriemia, because the treatments are diametrically opposed.

In sapremia it is active and then only after an absolutely positive differentiation has been made.

In septicemia or bacteriemia active treatment should be of a conservative nature in all cases. Anti-streptococcus serum, if the presence of the streptococcus has been demonstrated, should be administered early, if at all. Enforced feeding of easily assimilable foods should be prescribed. Local treatment should be entirely expectant, save NaCl. solution per rectum. Do not employ vaginal or intrauterine douches. Purging with salines is an attack upon the resistive fluids of the body. And whatever you do, do not curette a patient with a local or constitutional septic infection.

The obstacle in the way of employing blood culture is that it requires a trained laboratory man to secure the specimen, to make the culture, and to interpret the findings.

In conclusion, it is to be hoped that the doctor's desires may be realized to the end that a sufficient interest in this phase of work may be stimulated among the younger men of the profession; that each community may in the future have a laboratory man capable of doing blood culture and allied work; and that thereby the older and experienced clinicians may be enabled to reach earlier and more accurate diagnosis, which in turn will create a demand for such special services.

ON THE DEVELOPMENT AND VALUE OF THE BLOOD CULTURE IN TYPHOID FEVER.*

BY G. C. RUHLAND, M. D.,

MILWAUKEE.

Attempts at demonstrating the *B. typhosus* in the blood of typhoid fever patients were made comparatively shortly after the discovery of this organism in 1880 by Eberth. However, these early examinations remained sporadic and were not very successful. The case of Frankel¹, who in 1885 reported the recovery of the typhoid bacillus once among seven cases, practically stands as the first and only reliable record. Altogether, this method of examination was not considered very favorably, and aside from the Widal agglutination test, bacteriological determination confined itself largely to an examination of the excreta. Even as recently as ten years ago, Scholz and Krause² have gone on record declaring a bacteriological examination of the blood in typhoid for diagnostic purposes wholly unsuited and futile.

This unfavorable attitude of the earlier investigators is, of course, directly attributable to their methods of study and technique. The immediate microscopic examination of a blood smear taken from the finger tip is certainly not a very promising undertaking. While

*Read before the Milwaukee Medical Society, November 22, 1910.

both Meisel³ and more recently Poeppelmann⁴ claim to have succeeded by this method, their statement must surely be taken *cum grano salis*, particularly as such competent observers as Seitz⁵, Merckel and Goldschmidt⁶, and only lately C. Frankel⁷, were unable to meet with similar good luck.

As a matter of fact, the direct method was soon abandoned for a culture process in which a given quantity of blood was either smeared upon gelatin or agar or mixed with the liquified media in culture plates. The surface smear method is still used where a numerical determination of the typhoid bacilli in a given volume of blood is desired. Such a determination is, of course, entirely relative and of no particular value. However, the solid media did not prove an unqualified success. Substitution of liquid media, e. g., bouillon and peptone water, showed some advantage, yet the results remained more or less indifferent, comparatively few isolated cases being reported. The factors that stood in the way of greater and more uniform success were only gradually recognized and the difficulties one by one solved.

It seemed reasonable that by taking larger quantities of blood, the chances for finding the specific organism would be proportionately greater. While this is undoubtedly true, yet Kuehnau⁸, who in 1897 reported the first larger series of typhoid blood cultures, had positive findings only in 27 per cent. of his cases, even though he had used from 10 to 20 c.c. of blood.

These contradictory results were cleared with the development of a better understanding of the pathology in typhoid fever, which showed that while the circulating blood contains a great many bacteria, particularly in the first week of the disease, the defensive properties in the blood serum (agglutinins and bacteriolysins) are increasingly active in destroying these bacteria and are quite capable of exerting this property even outside of the body, so that where a large quantity of blood is taken without proper solution, the very bulk of it defeats its purpose.

In proof of this, the results of Castellani⁹ might be quoted, who, by highly diluting the blood he used for his cultures, succeeded in 85 per cent. of his cases, although only 10 to 40 drops of blood were used. Even smaller quantities than this have been used successfully. Baumann and Rimpau¹⁰ succeeded in isolating a typhoid culture from a blood clot submitted for a Widal test, in which the amount approximated only 0.1 c.c. of blood.

Another important point in the technique of typhoid blood

cultures was the use of ox gall to prevent the blood from coagulating. It was Conradi¹¹ who first made use of this property of bile for blood cultures, adding to it 2 per cent. of peptones and 10 per cent. of glycerin, the latter for the purpose of retarding the growth of saprophytes. Sodium oxalate and hirudin have been similarly used. Ox gall, however, remains at present by far the preferred media, glucose being added at times for the more ready detection of *B. Coli*.

The best results at present are obtained where from 2 to 5 c.c. or more blood are inoculated into 20 to 50 c.c. of Conradi's ox gall media, or in a dilution of 1:10.

As to the value of the blood culture method, there cannot be any diversity of opinion. The following table must be convincing to anyone:

Lemierre ¹² , in 23 cases.....	100%
Perquis ¹³ , in 40 cases.....	95%
Rolly ¹⁴ , in 50 casés.....	88%
Hewlett ¹⁵ , in 40 cases.....	87%
Rosenberger ¹⁶ , in 535 cases.....	80%
Coleman and Buxton ¹⁷ , in 1605 cases.....	75%
Cole ¹⁸ , in 15 cases.....	73%

While these statistics furnish overwhelming evidence that the typhoid bacilli are present in the blood of typhoid fever patients and can be readily recovered, the more important fact which has been established and which should be emphasized is this—that the blood culture method is distinctly a diagnostic means of greatest importance. Everyone knows that the diagnosis of typhus abdominalis from a purely clinical point of view is practically impossible during the first week of the disease. It is, however, just at this time that the typhoid bacilli are most numerous in the circulating blood, and culture methods prove most often successful. This is well brought out in the following statistics of W. Coleman¹⁹, which give the percentage of positive findings in the successive weeks of the disease:

First week, 224 cases.....	Positive 200 or 89%
Second week, 484 cases.....	Positive 353 or 73%
Third week, 268 cases.....	Positive 178 or 60%
Fourth week, 103 cases.....	Positive 15 or 26%

In my own records, I have placed the percentage of positive findings by blood culture along with the percentages of positive Widal. It will be seen that while the bacterial findings decrease with the progress of the disease, the agglutinins, indicated by the Widal reaction, rapidly increase.

	B. C.	Widal.
First week, 10 cases.....	8 or 80%	0—0%
Second week, 28 cases.....	18 or 64%	25 or 89%
Third week, 10 cases.....	4 or 40%	9 or 90%
Fourth week, no case.		
Fifth week, no case.		
Sixth week, 1 case.....	Positive	Positive (Relapse)

The absence of cases in the fourth and fifth week of the disease from my statistics is due to the fact that no opportunity offered itself for an examination at this period.

It is evident then that the blood culture furnishes the only ideal method for an early diagnosis, while the Widal is merely corroborative in nature. The fact that the operation in obtaining the blood for blood culture is absolutely trifling and inconsiderable should make this method a matter of routine for the profession in dealing with cases suspicious of typhoid.

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Optic Neuritis in Luetic Infants. Contribution to the Prognosis and Symptomatology of Hereditary Lues in Infants. HEINE, LUDWIG. (From the Children's Hospital of Dr. H. Neumann, Berlin. Jahrbuch der Kinderheilkunde 72, Heft 3, Sept. 1, 1910, p. 328). Several publications from Dr. Neumann's polyclinic (by Japha, Deutsche Medizinische Wochenschrift, 1905,

p. 281, Badt, Archiv für Kinderheilkunde 42, p. 35, Spiro, *ibidem*, p. 26, Oberwarth, Jahrbuch der Kinderheilkunde 66), emphasized the frequency of optic neuritis in luetic infants. Literature took little notice of it, although Hutchinson (Ophth. Hosp. Reports 1866, p. 307), communicated, as early as 1866, that in the few cases in which he saw a primary neuritic atrophy in the children he always found a syphilitic anamnesis. Hirschberg (Deutsche Medizinische Wochenschrift, 1906), Fehr (Centralblatt für Augenheilkunde, 1901), and Sauvinau described the repeated occurrence of primary optic neuritis, while Sidler-Huguenin, in his elaborate paper (Beitraege zur Augenheilkunde, 1901) considers an affection of the optic nerve in hereditary lues rare.

For a number of years it has been customary in the clinic of Dr. Neumann, at the instance of Japha, to examine the eyeground of the majority of the children specifically diseased, or suspected of lues.

Out of the 100 cases reported in this article the fundus was examined in 69 infants, 55 of whom had optic neuritis. To these come 36 luetic infants observed in later years, 31 of whom had optic neuritis. Altogether in 86 out of 105 infants, i. e. 81.9 per cent, optic neuritis was found. No other symptom showed the same frequency. Swelling of the spleen and coryza, the most frequent affections after optic neuritis, were observed only in 75.4 per cent respectively 73 per cent of the cases. The diagnosis was made by the ophthalmologists Dr. Spiro and Dr. Salomon. In 79 out of Heine's 86 cases both eyes were diseased, in 7 one, viz. the left in 6, the right in one. In 9 cases slight atrophy of the optic nerve was encountered, in 3 the inflammation was complicated by intense congestion. In 7 children also chorioretinitic foci were observed, in one out of 105 infants a severe chorioretinitis without essential participation of the optic nerve. The other parts of the eye were rarely affected: in 3 cases opacities of the vitreous, in one iritis, in one iritis and keratitis.

Although optic neuritis *per se* has not unconditionally a specific significance, in infants only a syphilitic etiology is to be thought of, if a meningal or cerebral disease of other nature can be excluded. The diagnostic importance of optic neuritis becomes of special value by the early appearance of this symptom: The youngest child, in which it was observed, was 13 days old. 13 infants were younger than 12 months. In several doubtful cases the ophthalmoscopic examination determined the diagnosis of hereditary lues, the optic neuritis deciding the specific nature of other suspicious symptoms. Frequently optic neuritis preceded the other pathological signs, as illustrated by clinical histories.

The prognosis of optic neuritis seems to be favorable in sufficient mercurial treatment, as also emphasized by Hirschberg. But as there was rarely an opportunity for re-examinations, decisive statements on the course of optic neuritis cannot be made. 6 out of 9 children re-examined within the first years, were very much improved or cured. In one a partial atrophy was found.

Definite relations of optic neuritis to complications from the nervous system could not be ascertained.—C. Z.

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EDITORIAL COMMENT.

THE WAUKESHA MEETING.

Do not forget the dates of the 65th Annual Meeting. Not much more than two months will elapse between the time when this meets your eye and the day of the meeting. Make your plans accordingly! It will be a great meeting unless all signs fail, and that can never happen at Waukesha!

THE YOUNG BILL.

The anti-tuberculosis crusade in Wisconsin has reached a point where further successful progress is impossible without the aid of the government. This aid is provided, in a large measure, by the Young

bill, 693A., which gives to counties the authority to erect and maintain sanatoria for tuberculosis patients. State aid is provided by a yearly appropriation of \$20,000 to be paid at the rate of \$3 per patient per week. These county institutions are intended for advanced cases.

It is useless for those fighting the white plague to talk of the safe care of consumptives when there is no place in the state to which advanced cases may be sent for such care.

It is almost useless to maintain a sanatorium for incipient cases at Wales when the carelessness and ignorance of thousands of advanced cases throughout the state are breeding new cases faster than Wales can care for them.

It is useless to talk to consumptives of necessary food and living conditions when 83 per cent. of 1,100 cases studied are unable, financially, to provide such conditions, and ninety per cent. are unable to pay all or a part of their expenses in an institution if there were one.

No one knows better than the physician the menace of the advanced case of tuberculosis. He is a constant source of infection to family, friends and neighborhood. Wisconsin investigations show he is unable, because of carelessness, ignorance, poverty and physical weakness, to be otherwise.

The treatment of tuberculosis must be social rather than individual. This bill is of vital importance and should receive the earnest support of the medical profession.

CHOICE OF AN ANESTHETIC FOR TUBERCULOUS PATIENTS.

A recent experience of death from acute pulmonary edema in a young tuberculous man, to whom ether had been administered for tonsillectomy and the marked decline of a young lady, also mildly tuberculous, operated on the same day, give point to a paragraph by H. R. M. Landis in Hare's new work on "Modern Treatment." For the benefit of surgeons and particularly of laryngologists it has been copied verbatim:

"In the northern section of the United States ether has by common consent become the anesthetic of choice, and, so far as immediate accidents are concerned, it is undoubtedly one of the safest agents for producing general anesthesia. It is not, however, a safe anesthetic to employ in a case suffering from tuberculosis. This applies not only to those who have demonstrable pulmonary disease,

but also those with tuberculosis in other parts of the body. Experience has shown that many of the cases of surgical tuberculosis have in addition a pulmonary lesion which may be incited into activity by the inhalation of ether.

"It is now a matter of common observation that a trifling and inactive lesion is often turned into an active one, with a rapid extension of the tuberculous process, in those who have inhaled ether. Surgeons, as a rule, have failed to appreciate the danger of ether in this class of cases, and continue to administer it routinely. To some extent this is due to the fact that with the operative recovery the patient passes out of sight and the evil effect of the ether, which appears later, is not seen.

"In a recent paper Joseph Walsh has called attention to the dangers of ether in tuberculous patients. He urges that chloroform or nitrous oxide gas be employed.

"H. Warren Buckler, who has had a wide experience as an anæsthetist, always uses nitrous oxide gas and oxygen in these cases. In his opinion this is the safest of all methods, both for non-tuberculous and tuberculous patients; in the latter he has never seen the slightest ill-effect produced on the tuberculous process by nitrous oxide gas.

"Spinal anesthesia has also been employed in operations about the rectum, such as fistula-in-ano. Those who employ this method assert that it is most satisfactory and safe. Most surgeons, however, are opposed to it.

"It cannot be too strongly insisted upon that any case with a frank pulmonary tuberculosis or one in which a lesion is suspected should not be given ether. If the operation cannot be performed under local anesthesia, chloroform or nitrous oxide gas, preferably the latter, should be employed."

THE OPTOMETRY BILL.

The optometry bill introduced into the Senate by Senator Bodensstab of Milwaukee should be earnestly opposed by all who have the welfare of the public at heart.

It provides for the establishment of a new and separate State Board which would of necessity from the manner of its formation be a political board. If it happened to fall into the hands of the best men in this line of work they might try honestly to uplift themselves but there is no way of knowing that it would continue in good hands.

The bill expressly exempts from its provisions the itinerant opticians who are particularly in need of regulation.

No educational requirements are mentioned; the whole matter of establishing the standards is left to the proposed board. In fact no other course was open to the supporters of this bill, for of the educational institutions pretending to give courses in optometry, with the exception of Columbia University, New York, the less said the better.

The most dangerous feature of this whole bill is the tacit assumption that the examination of the eye and the "determination of errors of refraction, anomalies of accommodation, etc.," is a mere mechanical matter which can be undertaken after a comparatively short and limited course of instruction.

A chiropodist or a barber might be able to carry on his work after a correspondence school course of two months. But to attempt to diagnose and treat the abnormalities of the eye after such training is absurd.

At present, without a state board of their own and without a legal basis for any extravagant claims, these men are business men selling glasses. Everybody knows who and what they are and no one is deceived. But should they become by the magic of legislative enactment, transsubstantiated into "*Optometrists*," members of a new and wonderful profession, clothed with the authority of a state license, the situation would be very different and false pretense and imposition would be fostered.

Some of these men are even now prescribing medicines. What they would attempt if they were erected into a learned profession may be left to the imagination.

Write your Senator now!

SPLITTING FEES.

In the practice of medicine training and ability are necessary, but no less important is probity. The dividing line between the true physician and the quack lies exactly at this point, between honesty and dishonesty, between honor and dishonor. The quack may have ability, he may have had good training, but honesty is not in him, and honor is a word he does not understand.

On another page of this issue of the *Journal* are two letters which are worth reading. Dr. Dodd has expressed himself clearly and emphatically but he has written more in sorrow than in anger. And perhaps in this instance this spirit is justified. It seems incredible that a physician who understood the true meaning of his words could write such a letter as the first.

These letters show the line of cleavage between the true and the false, between the man who can look his patient squarely in the eyes, and the hypocrite who is prostituting a noble calling and preying upon his trusting patients.

We cannot blind ourselves to the fact that such practices exist but we can at least refuse to participate in these disgraceful bargains.

IN MEMORIAM.

The following resolutions were adopted by the Faculty of the Wisconsin College of Physicians and Surgeons.

Whereas, it has pleased the Almighty to take from our midst Dr. Uranus Owen Bracken Wingate, one of the founders of the Wisconsin College of Physicians and Surgeons and School of Dentistry, and a trustee for twelve years, an honored professor in the college for seventeen years and a most clear, lucid and faithful teacher, and

Whereas, Dr. Wingate was always an earnest and consistent advocate of higher medical education to the end that students of medicine and dentistry might be better fitted for their future life work, and

Whereas, Dr. Wingate was a most loyal friend of this institution never swerving for a moment in his allegiance thereto, therefore be it

Resolved, that we deeply mourn his loss as a friend, a physician and as a teacher,—that we greatly miss his wise counsel and his cheerful encouragement, and that we extend to his wife our heartfelt sympathy in this her hour of deepest sorrow.

Be it further resolved that a copy of these Resolutions be spread upon the records of the College and a copy presented to Mrs. Wingate.

A. H. LEVINGS.

HENRY BLANK.

H. REINEKING,

L. BOORSE.

Committee for the Faculty.

CORRESPONDENCE.

The following letters explain themselves.

Feb. 21, 1911.

Dr. J. M. Dodd, Ashland, Wis.

DEAR DOCTOR:—Would be pleased to hear from you regarding a proposition for operative work.

Heretofore the surgeon to whom I have given the case has allowed me half of the fee and also allow me to make all the arrangements with the patients. I would be pleased to hear your opinion on this deal.

I have several cases that I think that I'll be able to pull for an operation before long. One case of gall stones for \$120.00, appendicitis case for \$80 or \$90, falling of the womb for \$100.00. These are the prices I have made the patients and can do them for that amount but how do these prices compare to your regular rates, taking into consideration the finances of the patient. Would you also give me a little information regarding the hospital prices, as per ward, p'v't room. etc.?

Have been taking my patients to St. Paul, but that is too far providing I can do as well at home.

Hoping to hear from you at your earliest convenience.

Fraternally,

DEAR DOCTOR:—Your letter of the 21st ult. was duly received and contents noted.

It is the first communication of its kind I have ever received. The commission business has not so far gained a foothold in this section of the country, I do not know to what extent this evil exists in other sections, but I hope not to any considerable extent.

It has always been my policy to protect the general practitioner in every way in my power. My fees have always been such as to leave something for the other doctor, as I know he often has difficulty in getting his pay when the case goes to the surgeon. There is after treatment to be considered and the doctor sending the case is entitled, if he is *right*, to have the patient returned to him.

I do not believe the attending physician should barter his patient to the surgeon. It is his duty to have the work done by a competent surgeon regardless of the fee. He is of course entitled to compensation for his work in sending or accompanying his patient to the hospital and for any other services he may perform but to enter into any deal on a commission basis smacks a good deal of quackery and when the medical profession degenerates into a state where this is the order of things, I prefer to change my occupation.

It is your duty as a physician to have your surgery done as near home as possible, providing it can be done as well and if you are conscientious in this you will find it will pay better in the long run than by endeavoring to sell your patient to the surgeon who, if he will resort to this method to get business, is not a safe man.

Should you care to inspect our hospital and our work, you are welcome any time, after which you can decide for yourself whether or not you want to entrust your patients to our hands, but we neither buy nor sell patients.

I hope you can see this matter in its true light and that your mission as a physician will have a higher significance to you.

Faternally,
J. M. DODD.

NEWS ITEMS AND PERSONALS.

Dr. T. F. Shinnick, Watertown, who has been ill, is convalescent.

Dr. L. H. Pelton, Waupaca, was injured in a runaway accident, on February 19th. Two ribs were broken.

Dr. R. A. Schlag, Prairie du Sac, met with an accident which necessitated the removal of his left eye. While on a train a live cinder flew into the eye.

John Papka, Milwaukee, a saloon keeper, was fined \$50 on March 3rd. He set a sprained ankle receiving \$3 for his services. He is alleged to have done considerable "bone setting."

Dr. John B. Murphy of Chicago, President of the American Medical Association, gave a special clinic at the New York Post-Graduate Medical School, January 6th, on Bone and Joint Surgery.

Dr. Gilbert E. Seaman, Milwaukee, was on February 20th, appointed by Gov. McGovern as a member of the Board of Regents of the University of Wisconsin, to succeed Magnus Swenson, resigned.

Dr. John B. Spaulding, Health Commissioner of Kenosha, is threatened with blindness, as a result of being burned by formaldehyde. While fumigating a house he slipped and fell, spilling the contents of a gallon bottle of undiluted formaldehyde over his face.

Up to date operating room equipment. "The operation was performed at _____ hospital, Friday morning by Dr. _____ assisted by Drs. _____. Six other surgeons, six nurses, and two newspaper men were also present."—Milwaukee Sentinel, 2-25-11.

Dr. Jacolyn V. Manning, of Brooklyn, N. Y., formerly of Eau Claire, read a paper on "A Brief Review of the Epidemic of Poliomyelitis in Wisconsin and its Apparent Relation to the Present Pandemic," before the Medical Society of the County of Kings, Section on Pediatrics, on February 24th.

Unjust suspicion of intelligence. An osteopathic sanitarium in Wisconsin advertises itself as follows:

"This institution was established to supply a public demand for a place where one could go without the stigma of mentality and receive treatment for those conditions requiring physical correction."

The **Riverside Sanitarium**, Milwaukee, will soon erect a new \$30,000 brick and stone addition to their present grounds, at the corner of Prospect and Edgewood Avenues. The building will be three stories high, and of the Elizabethan style of architecture. The new building will contain about thirty-



two bedrooms many with private bath, open fire places and en suite, besides parlors, reception rooms, kitchenettes, elevator service, etc.

An especial feature of the building will be a Solarium, which will extend along the south side of the building on each story.

Removals. Dr. R. C. Pynn, Lake Mills to Delavan.

Dr. C. J. Wallace, Superior to New Duluth.

Dr. John F. Brown, Waupun to Janesville.

Dr. Oscar Houck, Wautoma to La Crosse.

Dr. O. L. Hansen, Argyle to Chicago.

Dr. J. A. Vogel, Lomira to Necedah.

Dr. W. G. Law, Mellen to Glidden.

Dr. H. E. Bedley, Rio to Downing.

Modern hospital in largest hotel in the world. A unique feature to be offered by the new McAlpin Hotel, now in course of construction on the southwest corner of 34th Street and Broadway, New York City, is a fully equipped miniature hospital. It is to be arranged so as to be able to comfortably accommodate twelve patients at one time. Expert surgeons, physicians and trained nurses will be in attendance so that surgical operations of any character can be skillfully handled at a few moments notice.

This practical and extraordinary addition to hotel accommodations is to be situated on the 23rd floor of this largest hotel in the world so that a patient can enjoy the same quiet and comfort as though being treated in the most tranquil locality in spite of the fact that the McAlpin is centrally located.

Deaths. Dr. Thomas Tomelty, Big Bend, died at his home on February 16, of pneumonia.

Dr. Tomelty was born in Muskego in 1865. He attended the district school and later the St. Francis School. He lived in Minnesota four years,

later going to Fargo, N. D., and then to Washington. Returning to Wisconsin he went to Whitewater, where he entered the State Normal School. In 1899 he was graduated from Rush Medical College. He began the practice of his profession at St. Martin's, but after a year removed to Big Bend, where he practiced for ten years.

Dr. Tomelty was a member of the County, State and American Medical Associations.

Dr. U. O. B. Wingate, Milwaukee, died on February 18th, of pneumonia.

Uranus Owen Brackett Wingate was born on a farm near Rochester, N. H., on September 4, 1848. He attended the public schools of his native village, and later was a student at Lebanon Academy, Lebanon, Me. At the age of 16 he entered the Union Army and served in Sherman's Army to the end of the war.

Returning from the war, Dr. Wingate entered Harvard Medical School, and later became a student at Dartmouth Medical College, from which institution he was graduated in 1874. After practicing his profession at Wellesley, Mass., until 1876, he came to Milwaukee, where he has since resided.

Dr. Wingate was a former Health Commissioner of Milwaukee. He was an expert in nervous and metal diseases.

He was a member of the County, State and American Medical Associations.

Dr. William W. Mayo, father of Drs. Wm. J. and Charles H. Mayo, died at his home in Rochester, Minn., on March 6th, aged 92 years.

Death was due to a general decline.

BOOK REVIEWS.

Metastatic Ophthalmia following a Furuncle of the Neck. AUGSTEIN, K., Bromberg. (*Klinische Monatsblätter für Augenheilkunde*, XLVIII, I, p. 631). The right eye of an otherwise healthy man, aged 24, who for two weeks had a furuncle at the right side of neck, suddenly became painful and inflamed under chills and rise of temperature V . was reduced to $5/15$, exophthalmos and chemosis developed, the lower half of Descemet's membrane was covered with fine fibrinous deposits, in the vitreous were flocculent opacities, the border of the disc indistinct, retinal veins engorged, retina opaque, visual field contracted. After two days $V=0$, eyeball more protruded and the pain exerceiating. About two weeks later the exophthalmic. hard and blind, eyeball was incised by a vertical and horizontal section but no pus came, only blood in which no bacteria were found. A month later the cornea and lens were clear, iris atrophic and adherent, greyish yellow exudations covered the retina. The eyeball grew smaller.

Undoubtedly staphylococci or streptococci immigrated from the furuncle into the blood. were retained by the narrow capillaries of the retina and produced the metastatic ophthalmia. This seems to be extremely rare. According to Axenfeld there are only two publications on metastasis after furuncles, which, however, are not exempt from criticism.

That an injection of antistreptococccic serum in A's case was not successful is conceivable as furuncles, in the predominant majority, contain only staphylococci. Nor was the injection of diphtheria serum, which has been recommended in infections of the uveal tract, of avail, as A. had observed before in similar cases. C. ZIMMERMANN.

A Treatise on Diseases of the Eye. By JOHN E. WEEKS, M. D., Professor of Ophthalmology in the University and Bellevue Hospital Medical College, New York. In one octavo volume of 944 pages, with 528 illustrations and 25 full-page plates. Cloth, \$6.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1910.

This excellent book is designed primarily for the use of the undergraduate in medicine in order that he may obtain a sufficiently trustworthy book knowledge of Ophthalmology; and secondarily, as a modern work of which even the specialist may make use when too busy to search for himself among the current periodicals and books.

Dr. Weeks presents a very comprehensive view of his subject from these two standpoints, beginning with the embryology and anatomy of the eye, and closing with its clinical aspect. He devotes little space to theory, enlarging upon each of his topics in as practical and as direct a manner as is possible. Exceptionally valuable are those chapters dealing with the relation of diseases of the throat, the nose, and the accessory sinuses to the eye, and with ocular conditions connected with general disease. Those upon operations and special remedies contain much that is interesting because, although new, it has been found to be practical, and here a sub-topic dealing with accidents during operation will be found invaluable by many young practitioners.

The treatise closes with a chapter teaching the approved methods of preparing specimens for diagnosis in the search for microorganisms wherein are tables (modified from Axenfeld) giving descriptions and some of the culture characteristics of the pathogenic microorganisms of the eye.

Upward of 500 engravings elucidate the text together with 25 colored full-page plates, many of which are reproductions of familiar illustrations from other works. The book is well made and is distinctly a credit to both the author and publisher.

G. E. SEAMAN.

The Principles of Public Health. By THOMAS D. TUTTLE, M. D. Illustrated, cloth, 186 pages. Mailing price 60 cents.

Primer of Hygiene. By RITCHIE & CALDWELL. Illustrated, cloth, 184 pages. Mailing price 48 cents. World Book Co., Yonkers-on-Hudson, N. Y.

Both of these booklets, published by the World Book Co., Yonkers, N. Y., represent in an admirable way the essentials of hygiene and public health. Attractively gotten up and written in a clear and easily understood language, they seem excellently fitted to fulfill their purpose as text books in schools, and for those who are looking for a brief yet reliable exposition of the elements of these important subjects.

THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORGANIZED 1841.

Officers 1910-1911.

- BYRON M. CAPLES, Waukesha, President.
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|---|---|---|
| J. M. Dodd, Ashland,
1st Vice-President. | Wilson Cunningham, Platteville, 3rd Vice-President. | T. J. Redelings, Marinette.
2d Vice-President. |
| CHAS. S. SHELDON, Madison, Secretary. | | S. S. HALL, Ripon, Treasurer. |
| ROCK SLEYSER, Waupun, Assistant Secretary. | | |
- A. W. GRAY, Milwaukee, Chairman Program Committee.
 G. E. SEAMAN, Milwaukee, Chairman Medical Defense Committee.
 J. P. McMAHON, Milwaukee, Chairman, Committee on Public Policy and Legislation.

Delegates to American Medical Association.

- | | | |
|------------------------|-------------------------|---------------------------|
| L. F. Bennett, Beloit. | C. S. Sheldon, Madison. | A. H. Levings, Milwaukee. |
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Alternates.

- | | | |
|---------------------------|---------------------------------|-------------------------|
| F. S. Wiley, Fond du Lac. | Wilson Cunningham, Platteville. | R. G. Sayle, Milwaukee. |
|---------------------------|---------------------------------|-------------------------|

Councilors.

- | | | | |
|---------------------------------|-------------|-----------------------------------|--------------|
| TERM EXPIRES 1911. | | TERM EXPIRES 1914. | |
| 1st Dist., H. B. Sears, - - - | Beaver Dam | 7th Dist., Edward Evans, - - - | La Crosse |
| 2nd Dist., G. Windesheim, - - - | Kenosha | 8th Dist., T. J. Redelings, - - - | Marinette |
| TERM EXPIRES 1912. | | TERM EXPIRES 1915. | |
| 3rd Dist., F. T. Nye, - - - | Beloit | 9th Dist., O. T. Hougen, - - - | Grand Rapids |
| 4th Dist., W. Cunningham, - - - | Platteville | 10th Dist., R. U. Cairns, - - - | River Falls |
| TERM EXPIRES 1913. | | TERM EXPIRES 1916. | |
| 5th Dist., J. V. Mears, - - - | Fond du Lac | 11th Dist., J. M. Dodd, - - - | Ashland |
| 6th Dist., H. W. Abraham, - - - | Appleton | 12th Dist., H. E. Dearholt, - - - | Milwaukee |

NEXT ANNUAL SESSION, WAUKESHA, JUNE 7, 8 and 9, 1911.

The Wisconsin Medical Journal, Official Publication.

SOCIETY PROCEEDINGS.

BROWN COUNTY MEDICAL SOCIETY.

The annual meeting of the Brown County Medical Society was held at the office of Dr. A. W. Slaughter, Green Bay, on January 27th.

The following officers were elected: Dr. R. C. Buehnan, President; Dr. F. Moreaux, Vice-President; Dr. T. J. Oliver, Secretary-Treasurer; Dr. Gregory, Censor.

A banquet was served after the business session. A paper prepared by Dr. Carter on "Chemical Analysis and Microscopy of the Stomach Contents" was read by Dr. E. I. Levitas.

CALUMET COUNTY MEDICAL SOCIETY.

Dr. J. A. Schmidt, secretary of the Calumet County Medical Society, announces the following 1911 program of the Society:

March 30th—Forest Junction, Wis., at 8:00 p. m. Nephritis: Dr. C.

F. Lawler, Discussion led by Dr. Wm. A. Martins of New Ho'stein. Paper: Dr. W. C. F. Witte of Milwaukee; Recent advancement in treatment of fractures.

June 1st.—Brillion, Wis., at 1 p. m. Quarantine: Dr. I. N. McComb. Discussion led by Dr. C. G. Greengo. General Discussion.

July—Annual Automobile Run.

September—2nd day of County Fair, at 10:00 a. m. Influence of Adenoids and Large Tonsils upon Development: Dr. E. L. Bolton. Treatment, Technique, Anesthetic, Result: Dr. N. J. Knauf.

Dec. 6th—New Holstein, Wis., at 4:30 p. m. Annual election of officers. Puerperal Sepsis, Etiology, Diagnosis, Treatment: Dr. E. H. Luehrs.

CRAWFORD COUNTY MEDICAL SOCIETY.

The Crawford County Medical Society held its annual meeting at the Woodman Hall in Wauzeka, Jan. 18th. Drs. present: Lunsford, Gays Mills; Taylor, Mt. Sterling; Peterson, Soldiers Grove; Dillman, Stenben; Willard, Prairie du Chien; Perrin, Wauzeka. Owing to the busy season but one paper was prepared, that by Dr. N. A. Peterson. After discussion of the paper which was participated in by all present they proceeded to the election of officers, result, Dr. A. E. Dillman, President; Dr. C. C. Lunsford, Vice-President; Dr. A. J. McDowell, Secretary-Treasurer; Dr. N. A. Peterson, Censor and Dr. W. T. Pinkerton, Alternate delegate to state society. Dr. Haugen of Soldiers Grove was elected to membership. It was decided to hold three meetings in 1911, the next at Gays Mills in April. A most excellent supper served in the new dining hall by landlord Turk closed the meeting, and the Doctors dispersed to their various homes with the feeling that they had been well paid for the little time spent.

FOND DU LAC-WINNEBAGO COUNTY MEDICAL SOCIETY.

A joint meeting of the Winnebago and Fond du Lac County Medical Societies was held at the New Erving in Fond du Lac, Wednesday, March 8th, at 7 P. M.

After the banquet was served, Dr. G. P. McDougall, president of the Fond du Lac County Society, called the meeting to order, and said that the usual business routine would be dispensed with and the program be presented at once. Dr. F. G. Connell of Oshkosh read a paper on the *Early Diagnosis of Cancer with report of experiments to date*. Dr. L. A. Bishop of Fond du Lac then read a paper on *Incipient Tuberculosis*, following which was a general discussion. The meeting then adjourned.

F. A. READ, M. D., *Secretary.*

FOX RIVER VALLEY MEDICAL SOCIETY.

Dr. H. W. Abraham of Appleton was elected president of the Fox River Valley Medical Society during the annual meeting held in Green Bay, Feb. 27, and Appleton was selected as the place for holding the 25th annual meeting next year.

Dr. W. Weber Kelly of Green Bay was re-elected secretary and treasurer of the society, and Dr. J. C. Phillips of Menominee was chosen first vice-president, and Dr. F. Gregory Connell of Oshkosh second vice-president.

A resolution to hold a single meeting a year was voted down by the society, and the physicians will gather three times a year. The question of the next meeting place was left to the discretion of the officers.

A banquet was served at the Elks' club that marked the close of the meeting of the society. A vaudeville performance was given in connection with the banquet.

A program was given in the afternoon and papers were read by three physicians. Dr. H. M. Richter of Chicago spoke on *Pyloric Stenosis in Infants*, Dr. John R. Minalan talked on *Observations in the Use of 606*, and Dr. Combs of Oshkosh spoke on *Traumatic Rupture of the Spleen*.

GREEN LAKE-WAUSHARA-ADAMS COUNTY MEDICAL SOCIETY.

A regular meeting of the Green Lake-Waushara-Adams County Medical Society was held at Neshkoro, February 15th, at 1 P. M. The physicians met and had lunch together at the Hotel Callaghan. The medical session was held in the parlor. The meeting was called to order by the president, Dr. G. H. Baldwin. The following were present: Dr. O. T. Hougen, Councilor Ninth District, Grand Rapids; Drs. Scott, Prince and Kerner, Berlin; Drs. Racek and Froelich, Princeton; Dr. Riordan, Neshkoro; Drs. Baldwin and Buckland, Green Lake.

Dr. Riordan presented an interesting clinical case—a girl of 11 with a chronic swelling of the calf of the left leg, with a history of an injury to the leg several years before. A diagnosis of chronic periostitis was agreed upon.

The committee on revision of fees reported that progress was being made and that they would be prepared to report at the next meeting.

PROGRAM.

Treatment of Gonorrhoeal Rheumatism by Antigonococcic Serum, Dr. J. H. Froelich, Princeton. *Arterio Sclerosis*, Dr. B. E. Scott, Berlin. *Report of a Case of Cesarean Section*, Dr. O. T. Hougen, Grand Rapids.

Dr. Hougen also spoke in regard to the advantages of membership in the county societies. He said that the state secretary counted the Ninth District the most prosperous in point of membership, attendance upon the regular meetings, and in scientific advancement of any in the state.

The discussion of the papers was lively, but necessarily brief as the doctors had to leave on the 3:15 train.

It was moved and carried that we extend a vote of thanks to Dr. Hougen and that we invite him to our annual picnic.

The meeting adjourned and the doctors were treated by the hostess to ice cream and cocoa before taking the train.

R. H. BUCKLAND, M. D., *Secretary*.

JEFFERSON COUNTY MEDICAL SOCIETY.

At the annual meeting of the Jefferson County Medical Society, held at Watertown, January 16th, 1911, the following papers were read by invitation: *Treatment of Peritonitis*, by Dr. John L. Yates, Milwaukee; *Traumatic Neuritis*, by Dr. Arthur Rogers, of the Oconomowoc Health Resort.

The following officers were elected: President, Dr. James Cox; Vice-President, Dr. J. L. Bennett; Secretary and Treasurer, Dr. Carl R. Feld; Censor, Dr. W. A. Engsborg.

A resolution requesting His Excellency, the Governor, to reappoint Dr. Wm. A. Whyte as a member of the State Board of Health was unanimously adopted.

The local members of the Society tendered a banquet to the members of the Society at the home of Dr. Wm. A. Whyte, at the close of the meeting.

CARL R. FELD, M. D., *Secretary*.

LANGLADE COUNTY MEDICAL SOCIETY.

The Langlade County Medical Society met in the City Hall Saturday evening, January 28. The meeting was called to order by the President, Dr. M. J. Donohue. After the reading of the minutes of the previous meeting and other preliminary work Dr. G. H. Williamson read a very interesting and instructive paper on the Cancer Problem. The subject was well discussed, each member present taking an active part.

Interesting clinical cases were then taken up and experiences given which brought out many new thoughts and could not help but be for the betterment of the society.

Dr. O. G. Wolfrum joined our society and took an active part in the discussions. Election of officers resulted as follows: President, Dr. M. J. Donohue; Vice-President, Dr. Geo. H. Williamson; Secretary and Treasurer, Dr. J. C. Wright; Censor, Dr. I. D. Steffen. Dr. J. C. Wright was chosen as the delegate to represent the Langlade County Medical Society at the State Medical Society to be held at Waukesha in June. These medical gatherings surely are interesting and very instructive and have a tendency to weld the medical fraternity more closely, not only for their good but the good of the general public. After the meeting a very fine banquet was served at Cafe Grand. The night Chef Harvey Finch did himself proud and proved to the medical fraternity that he has now struck his gait. The chicken served was as tender as real spring chicken and would do credit to the Waldorf-Astoria. The proprietors of the Cafe Grand won their way to the physicians favor through a very vulnerable source,—their palates. This meeting was a success and enthusiasm was manifest and it is the desire of the officers to encourage a continued interest in the next meeting to be held the last Saturday evening in March.

J. C. WRIGHT, M. D., *Secretary*.

MANITOWOC COUNTY MEDICAL SOCIETY.

At the annual meeting of the Manitowoc County Medical Society, held on January 11th, at Manitowoc, the following officers were elected for the ensuing year:

President, Dr. J. R. Currens, Two Rivers; Vice-President, Dr. W. G. Kemper, Manitowoc; Secretary-treasurer, Dr. A. J. Shimek, Manitowoc; Censor, Dr. F. S. Luhman, Manitowoc.

MARATHON COUNTY MEDICAL SOCIETY.

The monthly meeting of the Marathon County Medical Society, held at the home of Dr. Emile Roy, Feb. 21st, was a most pleasant affair. A very elegant dinner was served, covers being laid for twenty, and the tables being very beautifully decorated with carnations and smilax.

Dr. Karl Doege of Marshfield, read a very interesting paper on "The Comparative Pathology of Cancer." Dr. V. A. Mason of Marshfield read an equally interesting paper on "Disease of the Prostate Gland." Dr. R. W. Jones spoke of the "Use of Serums in Diseases," and Dr. Roy told of two recent cases of "Hypernephroma," exhibiting the result of one of the operations.

Discussions, in which nearly all present took part, followed each paper and address. The use of anti-toxin in diphtheria, which was the principal subject of Dr. Jones' talk brought out a general discussion and it was the unanimous opinion that anti-toxin was the best known treatment for diphtheria, and that the more quickly it was used the better results were obtained. One physician quoted statistics from one of the large cities, where a clinical history of cases had been carefully kept, and which showed that where anti-toxin was administered within twenty-four hours after the disease started, the complete recoveries were from 88 to 92 per cent.; where it was not used until forty-eight hours had passed, the recoveries were from 80 to 90 per cent.; that the longer the time that elapsed between the beginning of the disease and the use of anti-toxin the more danger there was, not only of diphtheria but of paralysis following the disease, caused by the diphtheritic poison being carried to the muscles of the heart. It was stated that before anti-toxin was used in diphtheria, the deaths were from 40 to 50 per cent., and since it has come into general use, the deaths are but from 15 to 20 per cent.

The advisability of making public the facts as to antitoxin and other matters of that nature, was agreed upon, and local newspaper men, who were present as guests, expressed themselves as being in full accord with the idea.

Before adjournment, a vote of thanks was tendered Drs. Doege and Mason for their excellent papers, and to Dr. and Mrs. Roy for their splendid hospitality, and to which Dr. Roy made a happy response.

THE MEDICAL SOCIETY OF MILWAUKEE COUNTY.

The meeting of Feb. 10, was called to order at 8:30 P. M., the President, Dr. A. J. Patek in the chair. Minutes of the last meeting were read and approved. The following Committees as appointed by the President were announced: Committee on Legislation: Drs. J. P. McMahan, S. G. Higgins, and A. J. Burgess. Committee on Municipal and County Affairs: Drs. P. F. Rogers, C. H. Stoddard, C. A. Evans, H. J. Gramling and A. M. Bodden. Committee on Revision of By-Laws and Constitution: Drs. G. W. Moorehouse, Joseph Kahn, L. F. Jermain, G. E. Seaman and H. Reineking. Dr. J. P. McMahan made report as chairman of Committee on Legislation. Dr. T. L. Harrington as chairman of a committee to fix a salary for the office of Secretary, suggested a salary of \$75.00 a year. Motion was made that the report be accepted and a salary of \$75.00 a year be paid to this office. A communication from Dr. C. A. Baer was read regarding the National Bureau of Health. The Mann bill now before Congress was explained by Dr. H. B. Favill.

The following were elected to membership: Drs. W. B. Weidemann, J. H. Rohr, G. W. Neilson, R. F. Teschan and F. A. Stratton. A resolution was introduced by Dr. T. L. Harrington to the effect that the secretary be instructed to take clippings from the newspapers of all articles of a medical nature in which the names of members of the society appear, and make a scrap book of these clippings. Motion was made by Dr. G. E. Seaman duly seconded and carried that this resolution be laid on the table for one month.

Dr. J. L. Yates introduced a resolution recommending the substitution of the Illinois Law for registration of nurses, for the bill now before the Legislature. This resolution was referred to the committee on Legislation.

Dr. L. F. Jermain reported a case of Friedrich's Ataxia.

Dr. Henry B. Favill of Chicago addressed the society on *The Inside and Outside of Medical Organization*.

Dr. G. E. Seaman introduced a resolution endorsing the prospective plan of the city government to take over and combine the various city organizations and institutions for the study and treatment of tuberculosis under one general head, and place them under the city's control. This resolution was adopted.

86 members were present.

D. HOPKINSON, M. D., *Secretary*.

NINTH COUNCILOR DISTRICT MEDICAL SOCIETY.

A meeting of the Ninth Councilor District Medical Society was held at Marshfield on January 24th, with a large attendance.

The visiting doctors arrived during the afternoon and the first event on the program was an excellent supper served at the Hotel Blodgett. In the evening the party adjourned to the city hall where the following program was given:

How far do the Principles and Practice of Medicine assist in the treatment of Surgical Diseases, G. L. B. Rounseville, Milladore.

Eczema, James Richmond, Loyal.

Report of two cases, G. A. Frost, Chippewa Falls.

Obstetrical Reminiscences, L. H. Pelton, Waupaca.

Report of a case, Merle Casey.

Chronic Bronchial Asthma and its successful treatment, F. A. Southwick, Stevens Point.

Report of a case, G. E. Dusenbury, Amherst.

Diagnosis of Diphtheria, J. D. Lindores, Stevens Point.

Plastic Surgery of the Ovaries, R. W. Jones, Wausau.

The evening closed with a smoker at the Elks club rooms, and the visitors were enthusiastic in praise of the hospitable treatment they received.

OUTAGAMIE COUNTY MEDICAL SOCIETY.

Seldom, if ever, has the Outagamie County Medical Society had an annual meeting which equaled that of March 7th. It was a day of feasting, as well as an educational one.

In the morning Dr. W. E. Schroeder, professor of surgery at the Northwestern Medical College, conducted a clinic at the St. Elizabeth's Hospital,

while in the afternoon he delivered a paper on "Tubercular Glands on the Neck." Prof. Ravenel, of the medical department of the University of Wisconsin, spoke on "Communicable Diseases."

At noon Dr. V. F. Marshall entertained the doctors at dinner in the French room of the Sherman House in honor of Dr. Schroeder, while at night the society held its annual banquet at the Hotel Ritger.

The following officers were elected: President, Dr. Victor F. Marshall; Vice-President, Dr. J. J. Laird, of Black Creek; Secretary-Treasurer, Dr. F. P. Dohearty; Censor, Dr. C. G. Maes, of Kimberly.

ROCK COUNTY MEDICAL SOCIETY.

The Rock County Medical Society held a smoker Feb. 28th at the city hall. The affair was well attended by the doctors of the county and every one spent an interesting evening. The lecture given by Dr. I. S. Koll of Chicago was received with great attention by all present. The subject is a vitally interesting one and one of much moment to the public in general. The following is the program:

"Smoker" cafeteria supper, 7:00 p. m.

"The Cystoscope as a Diagnostic and Therapeutic Measure in Diseases of the Genito-Urinary Organs," Dr. I. S. Koll, Chicago.

"Success and How to Obtain It," Dr. J. F. Pember.

SHEBOYGAN COUNTY MEDICAL SOCIETY.

The annual meeting of the Sheboygan County Medical Society was held at Plymouth, Friday evening, Feb. 17th. Preceding the meeting ten members of the society were served with dinner at the Hotel Laack. After dinner the meeting was called to order by President pro temp Dr. O. B. Bock.

The following officers were elected for the ensuing year: President, Dr. Edward Felter of Plymouth; Vice-President, Dr. G. H. Stannard of Sheboygan; Secretary-Treasurer, Dr. W. F. Zierath of Sheboygan; Delegate, Dr. C. W. Nutt of Plymouth; Alternate, Dr. H. F. Deicher of Plymouth; Censor, Dr. O. B. Bock of Sheboygan.

After the election of officers Drs. Felter and Nutt presented a joint paper on the subject of *Dispensing*. Following the reading of the paper the subject was generally discussed. The applications of five physicians for membership in the society were received and referred to the Board of Censors.

There was a total of thirteen present, ten members and three visitors. Considering the very inclement weather and a very busy period for the profession in the county the attendance was as much as could be expected.

W. F. ZIERATH, M. D., *Secretary*.

SUPERIOR CLINICAL AND SOCIAL CLUB.

A new medical society, the Superior Clinical and Social Club, has been organized by a number of local physicians for professional and social purposes.

The new society, which is separate and distinct from the Douglas County

Medical Society, meets once a month. At the last meeting held at Dr. Adams' office papers were read by W. C. Lounsbury and Dr. Chas. McComb of Duluth. Mr. Lounsbury's paper was on "The Purification of Water by the Hypochlorite of Lime Treatment." Dr. McComb told of his personal experiences in a ten days' fast. The doctor advocated fasting as an effective means of ridding the body of many ailments.

At the next meeting Dr. L. A. Potter will read a paper on "The Use of Tuberculin for the Treatment of Tubercular Cases."

WALWORTH COUNTY MEDICAL SOCIETY.

The Walworth County Medical Society held its Annual meeting at the County Court House in Elkhorn on January 24th.

The program was timely and the papers good. Dr. Matters' paper on *Sore Throat* was excellent as was the paper on *Coughs* by Dr. Kinnie. Dr. Rugh reported two case of *Ectopic Pregnancy* recently operated upon and gave a good talk on that subject. Dr. B. J. Bills reported an interesting case of *Infantile Paralysis* that was just going into the paralytic stage and Dr. Leeson reported another case that terminated fatally a few weeks previous. The program proved very interesting and a good attendance showed their interest in the work.

Dr. E. E. Leeson of Sharon applied for membership and was taken in to the Society.

The following officers were elected for the ensuing year: President, Dr. Ralph E. Rugh, of Lake Geneva; Vice-President, Dr. Walter Rittenhouse, Lake Geneva; Secretary-Treasurer, Dr. M. V. Dewire, Sharon; Delegate, Dr. Wm. E. White of Lyons; Alternate, to be selected by the secretary; Censors, Dr. J. C. Reynolds elected to succeed himself.

The death of Dr. Benoni O. Reynolds of Lake Geneva, one of the oldest practitioners in the county and a charter member of the County Society was reported. The next meeting is to be held at Whitewater some time in the month of May. Dr. Windesheim of Kenosha, Councilor for this district was present at this meeting.

M. V. DEWIRE, M. D. *Secretary.*

THE ASSOCIATION OF
COUNTY SECRETARIES AND STATE OFFICERS
OF THE STATE MEDICAL SOCIETY OF WISCONSIN.

T. J. REDELINGS, M. D., Marinette,
President.

W. F. ZEIRATH, M. D., Sheboygan,
Vice-President.

ROCK SLEYSER, M. D., Waupun, Secretary.

NEXT ANNUAL SESSION, WAUKESHA, 1911.

Under this heading will be published each month, papers, editorials, sermons, reports of meetings and all that relates to the County Medical Societies of the state. To it all are invited and asked to contribute, especially the County Secretary. It is yours—make good use of it, and may it be of help to every County Society. It will be edited by Rock Sleyster of Waupun, secretary of the new association, to whom all communications for this department, reports of meetings and news matter should be addressed.

THE YEAR'S PROGRAM OF THE COUNTY SOCIETY, AND
HOW WE CAN PROMOTE GREATER SCIENTIFIC
INTEREST.*

BY. H. W. ABRAHAM, M. D.,

APPLETON, WIS.

The scientific program of a Medical Society is not the most important function of that body. Perfect organization; which includes the best of good-fellowship, is the primal object. If it were not for this organization, this harmonious working together, we would still be in the dark ages of medicine.

To be successful, both scientifically and financially, it is as necessary for us to systematize and organize as the great merchant and corporation. If we could make all our energies count as they do in the workings of a great business enterprise, we would be far more advanced in our scientific attainments. If one-half the puzzling

*Read at the Annual Meeting of The Association of County Secretaries and State Officers, Milwaukee, June 21st, 1910.

and interesting cases that we meet with could be accurately reported to our colleagues, it would materially broaden the horizon of medical practice, give us a greater confidence in what we know, and stimulate us to clear up the unknown. The scientific program of a Medical Society should be the post graduate school of the profession. Every man should have some favorite line of study each year and give to his colleagues the results of his studies. These may be systematized clinical experiences; study and review of the literature along some particular line of thought, or original investigation. If we have a hobby that in our enthusiasm has carried us beyond good reason, we shall be soon brought back to a normal line of thought by the criticism of our fellows. If in our endeavor we have added to the knowledge of the subject, or brought out more clearly the important phases of a study, we may enjoy the approbation and esteem of our fellow students.

It is always a problem for the officers or program committee, to arrange a program for the year. It should be the subject of considerable inquiry on the part of the committee. Every one has a special interest in some particular subject which he can probably make very interesting, because of his enthusiasm. Hunt out a number of such individuals each year. Give them plenty of time to prepare, and have them understand that they are to bring out the practical side of the subject. As a general rule a paper should not take up a subject in the order of the text book. It has the tang of the school teacher about it and we are prone to lose interest, because the thought is there that we can find it in the text book, and then to treat all phases of a disease is too big a subject to treat in a paper. If our papers could be made to emphasize the advances made, by comparing the old with the new methods, and contrasting the advantages and disadvantages of each, it would stimulate greater interest and discussion.

Every year's program might have a paper on the newer methods of diagnosis brought out during the year; another on the advances in therapeutics; another on new surgical methods, and many other subjects would suggest themselves. The purely scientific side should not be forgotten. Great progress is made every year in medical chemistry and physiology. The practical results of this mass of work should be brought before the society, it would not only give us much information that we neglected to keep in touch with, but it would be an incentive to follow it up in our reading.

If several men in the society were designated to keep in touch

with the advances in these subjects, and give to the society a resumé of their reading, it would materially increase the scientific interest. The objection will probably be made that these things can all be found in the periodicals, and there better and more fully presented than would be possible in any paper. That is true, but how many men take these periodicals, and of those that do how many read them carefully. A great many would become more interested in the more scientific aspects of medicine, if these could be thoroughly discussed, clarified, and the practical applications brought out.

Cases, where post mortem has shown a mistake in diagnosis, should be carefully written up from the history sheets, bringing out especially the clinical symptoms and signs that lead to the diagnosis. Such papers make a rich field for discussion and their practical value cannot be overestimated. The classical cases of disease are found mostly in the text books; the cases that we come in contact with fall mostly under the exceptions, and the exceptions are as varied as the combinations in chess. It is this protean form of disease, this complex manifestation of similar lesions, that gives a charm to the study, and requires brains for the mastery of it.

Another topic that should at intervals have a place on our programs is that of medical ethics. We all want to be strictly ethical, but do not always succeed because our standard is not the same as that of others, or we have done something first and considered afterwards, to our regret. If such questions could be brought before the members of the society for discussion we would know better what was expected of us, and what we could expect of our colleagues. It would be a declaration of our intentions and would make us feel the necessity of living up to it. There is a grain of goodness in all of us, let us develop it more fully on the improved soil of good organization.

It would not be amiss to have a paper once a year, to bring before each county society, the work that has been done by the A. M. A. The organization is the largest of its kind in the world and we should be familiar with the extensive work it is doing. Its committees on Pharmacology, Legislation, and Education are doing work that should be familiar to every physician. The least we could do to help in this great work would be to give this organization our hearty support, and to cry down any unjust criticism of its work.

To make the scientific program interesting, personal effort on the part of the officers, especially the secretary is necessary. After the men have been given their subjects, they should frequently be

reminded of their obligations. This would stimulate them to begin work early. If different members of the society would now and then inform them that they expected to increase their knowledge materially by being present when the paper was read, some extra hours would be spent on the composition.

To sum up a program is interesting when the papers are:

1. Brief.
2. When they stimulate discussion.
3. When they arouse interest for further reading.
4. When they give the results of original work.
5. When stating clearly the advances made in our science.
6. When they show originality in arrangement and composition.

Discussion.

DR. W. F. ZEIRATH, of Sheboygan: There is just one point I want to deal with in Dr. Abraham's paper, and that is his suggestion with regard to the literature. We have something—I do not know that it is original, but it is very successful,—every month. We assign some member to look over the literature for the preceding month, and report to the physicians as to advances made in medicine, and the discoveries, and he looks over the literature pretty well, and if there is anything of exceptional interest he gives a very brief outline. And it is surprising to see the result. You know that most medical men do not have time to read all the literature. A good many of them do not read any. But in bringing out these points, having one man look over the literature and hitting the high places, it is surprising to see the men come around afterwards and say, "Doctor, where did you read that, I want to look that up." They send for these papers, or borrow them from some other man that has read them, and they read the particular article, and it is surprising the amount of really scientific knowledge that is attained by such procedure.

DR. C. S. SHELDON, Madison: It seems to me this is a very important subject, the preparation of our scientific work for the year, and I would like to hear from the different secretaries in regard to their experience. As one of the secretaries, I think the best way is to get up the whole year's program in advance. If the secretary is a man of resource and versatility and has sufficient breadth and knowledge of the needs of the society, he should be officially responsible for the whole literary and scientific program. Otherwise there should be a program committee composed of the very best men in the society for that purpose. You say it is such a bother to get up the program for a meeting. So it is, an awful bother, if you get up each program separately, but it does not take much more time, if you go at it properly, to get up a program for 12 meetings, or as many as you are going to have, than it does to get a program up for one. But think over your subjects carefully, and select the right men to write them, and those who will discuss them. Then have your program printed on a piece of good substantial cardboard, and see to it that every doctor in the society puts it up in a conspicuous place in his office, so that he shall know where the meetings are going to be, and when. In addition,

a few days before each meeting, send to the members a postal, with a full program of the meeting, with anything else you can think of to increase the attendance.

DR. W. M. RUCKLE, Grand Rapids: In Wood county we have followed out almost identically the plan suggested by Dr. Sheldon for several years. We had a program committee every year and got the program out and had it very nicely printed and sent to the different doctors, and we had from three to four papers for every meeting. I regret to say that at a great many meetings when the time came around the doctor who was supposed to present that paper failed to show up, or forgot to write his paper, or forgot to bring it, or something. We had several meetings where we had probably one paper, some two; it was very much the exception where we had the full program. This past year the program committee got together, and we decided to adopt the plan suggested, I think by the American Medical Association, the post graduate course.

DR. SHELDON: Dr. Blackburn's plan.

DR. RUCKLE: Yes. We are not following out the weekly program, because we haven't a great number of doctors in any one locality that can get together, but we are following out the number as near as we can. We only have six meetings during the year, so we pick out the subjects we want. Two or three weeks in advance of the date for the meeting I send a notice to every doctor in the society reminding him of the subjects for the next meeting, and about two days before the meeting I send a postal to each member, urging him to be present. Quite often when we had the papers discussed, the man who wrote the paper and possibly two or three others would discuss the paper. Under this new plan—I will just quote our last meeting—we had 14 members present at that time, and every man discussed some phase of the subject, something I never saw before.

DR. G. F. ADAMS, Kenosha: I think that Kenosha County can beat you all. We have the best county society in the state, and we are all boosters. We all belonged even before Dr. Sleyster started to boost. We are the original nest of boosters. We have our program made at the beginning of the year by a regular program committee, and if we have 40 members in our society we have 40 times 12 programs printed.

The day before each regular monthly meeting every physician in the county receives a copy of this program, and he knows whether he is on the program for the next meeting the following day; if he is on the next month he is reminded of it right then and there. In addition to the regular outline of the years' work, there is a space to announce where the meeting is to be held; we have a regular place of meeting. Now for the social side. Frequently we invite the society to our homes, and in this particular program that I have in hand, the last meeting, the president of the society entertained us all. In addition to that there is a list of the officers and at the end some general information that always apply. Now, if any of you can beat that, I would like to hear from you.

DR. A. J. SHIMEK, Manitowoc: I wish to say that Manitowoc county has followed out practically the same plan for the past year, and found that it succeeds very well; but we have to send out those programs about a day—one day is better than two days—before every meeting, and besides the programs we have to send out notices; and I wish to say that besides that I call up

every man in the city of Manitowoc by telephone about one hour before the meeting, and there is one member that I call up about 5 minutes before the meeting; it is difficult to get him there, sometimes he does not come. We find our trouble is with the country doctors. We have a very small attendance of country doctors, that is, the men who are out 10, 12 or 14 miles from the city. The members from Two Rivers and Manitowoc attend quite regularly all the meetings. We have tried evening meetings and tried afternoon meetings, and it is pretty hard to get out much more than a quorum, although we have, out of 25 members, an average of 12 members; I think we have 15 and 16 members at some meetings. If some one would suggest a way of getting the country doctors down to the meetings, I would like to hear from him.

DR. GEORGE H. SIMMONS, Chicago: One of the mistakes being made by too many societies is that members are asked to present papers without designating the subject. There may be one, two or three of these, and one or all, or none, of the papers may be presented. Sometimes if the subject, or subjects, selected by the author is an interesting one it will bring out discussion, otherwise not. In any event, the interest will have to develop in the meeting and not before.

The better way is to outline the course for the year, or for several meetings, to cover a general subject, the course to be progressive. This is the plan of the Post Graduate course, sent out by the Committee representing the American Medical Association. With this plan all become more or less interested, and if some one or two should be absent, it does not interfere very much with the program. . . *This program (Kenosha County Medical Society) is ideal.* Here they have outlined a year's work. At one meeting they discuss the principles underlying fractures, fractures of the long bone, the healing of fractures and special fractures. The subject is a practical one, and probably all present had something to say. The program for this particular day is dependent on what has been gone over at previous meetings and on what is to follow. Thus interest is kept up.

It is entirely different with societies that depend on voluntary papers on any subject that the individual may select. In this case the members come together with only a vague idea, if any at all, as to the nature of the papers to be read, even though the titles are given. The success or failure of the meeting depends on the one, two or three who read papers, whereas with the other plan all are interested.

DR. J. A. SCHMIDT, Brillion: I want to say that the Kenosha County Society is not the originator of this plan. The Calumet Society, although up there in the woods, still claim to be on the map. Dr. Sheldon can tell you so. We have had a plan similar to this for several years, and have found it to work splendidly. We get out programs for the full year, the first of each year. About one-half dozen or more are sent to each individual Doctor. About one week before each meeting we notify each member by card, and then a day or two before each meeting notify them again by card or telephone. By this method our attendance has been very good. In fact we have been pronounced the "Banner Society" of the state last year in point of membership and attendance. I think where we make the mistake is getting too many subjects on for one meeting. Have just one subject or paper and have that thoroughly discussed, and you do better work than if you have too many

papers. If any time is left this should be devoted to the social feature of our meetings. We have all country practitioners out there, none living in any large city, and we drive all the way from 15 to 20 or even 30 miles to meetings, and we have had a good attendance and good meetings.

DR. ROCK SLEYSER, Waupun: I want to call your attention to an idea I received last month from Dr. Coffman of Scotland, Pa., on the programs they are using out there. Over one-half of the county societies are publishing either a monthly or quarterly bulletin in the shape of a folder. They have it printed at the beginning of the year, one page bearing the title, the back page having the names of the officers, and the inside is left blank. Then at each meeting they have the inside of the paper printed with the program of the meeting, and any local news of interest, or any particular matter they wish to call attention to. I think it is an excellent idea.

DR. T. J. REDELINGS, Marinette: I want to state for my section that Marinette and Menominee County have printed a program similar to the one described for a number of years. Our program is made out at the beginning of the year. The program committee consists of the president and secretary of the two societies. We hold joint meetings, Marinette and Florence county and Menominee County; we hold meetings alternately, one month in our city, and the alternating month in Menominee, and our plan has been to make up a program of correlated subjects, or a symposium of an individual subject, and it has very materially increased the scientific interest in our work, and we have had some very excellent papers. Our attendance is usually about 60 per cent of our membership, and when you take into consideration that our country members do not come in, it means that our local members attend very regularly. We adopted the plan outlined by the gentleman who spoke of sending first the program, then a postal card, and then our good and faithful secretary and president use the telephone. Men seem to have to be coerced to attend a medical meeting, but the most of these men, after the meeting is over, express a reasonable degree of satisfaction at having come out. We have a good time, and not infrequently we are entertained at the home of one of the members. The innovation during the past year was the public meeting. We gave a public meeting in Menominee and one in Marinette, and these meetings were largely attended. The subject matter under discussion was open to the general attendance for discussion, our clergymen, our school teachers and our superintendents and principals of schools took part in the discussion, and enlivened the meetings to such an extent that they are historic events in our community. I would recommend to any county which has not adopted that method, to plan for such a meeting during the coming year. I was not able, however, to secure that kind of work in the outlying counties. I have, however, this to say in defense of a county that has only 8 or 9 physicians; it is awfully hard for men who are scattered in the four corners of a county to get together and do as good work as is done in a county where the men are congregated in bunches of 15 or 20, as in the larger city.

DR. A. T. GREGORY, of Elroy: I wish to make a few remarks, but will be brief. The preparing of programs is a very difficult matter, as I have found it to be. In Juneau County it is left entirely with the President and Secretary to get up these programs. We have tried all kinds and forms. We have found that the best men in the country, that is, those supposed to be the best

posted men, are the ones that it is hard to get on the program. Hard to get them to write a paper. They say, "Oh, I cannot, I couldn't write a paper." After each one of us had prepared three or four papers for these meetings, we thought we had used up all available material of interest, and did not feel like writing more papers. The secretary thought that he had done his share in getting up the programs. We have had some very good and interesting meetings, and have had many good scientific papers, as the worthy president of the State Medical Society can vouch for as he was present at one of their meetings. I am under the impression if we would take certain subjects and discuss them, and not have any set papers, it would create more interest and we would get much better results. Just outline the topics for discussion viz: fractures, dislocations, etc., followed by general discussion. I think this a much better plan than having set papers. The program we generally get up is in the form of one of these little folders. The name of the society, the date, and place of meeting, is on the first page, outside cover, the name of officers of society on the fourth page, outside cover, and the inside space is for the program proper. There are only seventeen members in good standing in Juneau County at the present time, and it is rather a difficult matter to get them all out at these meetings, and if you put some of them on the program, it is still more difficult, and some are bound to stay away from these meetings, and if you call them up by phone five minutes before train time, they will say, "Oh, yes, I will be there," but yet they miss their train. This county is rather scattered and there is only one convenient railroad center in the county, and this is at Camp Douglas. We conceived the idea the past two years to have our meetings held at this place, as the most convenient for all members to attend. We held our last meeting at this place in the evening as all members can reach here on all roads at about four P. M., and return on all roads at midnight, thus making fine railroad connections.

DR. CARL R. FELD, Watertown: The experience just given by the gentleman has been our experience in Jefferson county. Our set programs were more or less failures. I try to ascertain what subjects members are especially interested in, and I endeavor to get them on the program, to report their cases; with the result that all interesting cases that they had in their practice were reported and thoroughly discussed, not by men appointed to discuss them, but by every man present. At the conclusion of every meeting we felt that, "This is the best meeting we ever had." We think the best is to let members do just as they please. Whenever they have anything to report, to report it. We send postal cards a few days before the meeting with the program on. We always have three or four papers at a session; never have any dorth of papers or subjects, and they are all thoroughly discussed; we do not pay much attention to a set program; if you assign a certain subject to a member, experience has been, he will say, "I don't care much about that subject, I don't know anything about it." He either does not come at all, or if he does, will not contribute anything. But if you try to find out what cases members have had, and what success with any line of treatment they have had, they will have papers which will be discussed from all view points.

PRESIDENT: I am very sure a man who speaks from a sincere heart speaks more eloquently, and if you can get him out to talk on a subject that he is deeply interested in you can get better results.

DR. W. L. HERNER, Oshkosh: I have been waiting for some of the doctors to speak of the same thing I have to contend with in Winnebago county, and perhaps it will be of value to some of you some day if you have the same thing to contend with, and that is, that the county society of Winnebago County seems to be a secondary society. Of course I am very new in the field, and I have been trying to hear somebody else speak of the same thing. We have there the Oshkosh Medical Club, which has first place absolutely in that county, and it is limited to 30 members, and of course the majority of the Winnebago County members belong to the city of Oshkosh, and this Oshkosh Medical Society is limited to 30, which makes it in a way exclusive, and it is intended to be exclusive, I believe, perhaps to keep up the spirit to a certain extent; and we have meetings every two weeks, with three papers a night, with a program made out for a year ahead. It has markedly interfered with the county meetings right along, because with a meeting with practically a majority of the county present every other week, and then to ring in a county meeting between that time makes it very difficult for the secretary, because you cannot get the members out, and especially you cannot get them to write papers. So during the past year Winnebago county was sadly neglected in meetings. I took the office last January, and since that time have been able to hold three meetings, which I think is very good considering what we have had before and I have had some very good papers. Within the past year the Neenah and Menasha members we depended on, got disgusted with the Oshkosh society, and formed another Neenah and Menasha society, and they have their meetings up there, I don't know how often, but between the two societies it practically throws the county practitioners out of all the benefits that may be derived. So on Dr. Sleyster's suggestion I brought it up and tried to do away with the Oshkosh Medical Club and Neenah and Menasha club, and make the county society the first society of that district, but failed absolutely. So if at any time anybody suggests having another society instead of the county society, if you want your county society a success, it would be very good to oppose it strongly.

PRESIDENT: That is purely a local condition, and I am sorry to hear it.

DR. W. F. ZIERATH, Sheboygan: Just one word more. There is one interesting feature of county society meetings that has not been spoken of here, and that is clinical cases. I have read the reports from the Kenosha County Medical Society, and I can endorse the gentleman's remarks. I think he has got the best county society in the state, but I do not see how he does it. Our yearly programs are not a success. We simply cannot get the men to write papers, and when they are supposed to read the papers they are not present, and we have hit upon this plan, of assigning a topic four weeks ahead of the meeting. I will assign the topic to a man, and go around and find out what he wishes to talk about, and after we have reached an agreement, I keep after him all the time, asking, "Have you got that paper written?" he gets tired of it after a while and prepares the paper. I telephone in the morning or afternoon, and ask him if he is going to be in town, and 5 minutes before the meeting I call him up, and usually get him there, and have the paper. Sometimes when we have not the time to have a paper we assign a topic. At one of the meetings I assigned as a topic "My Three Favorite Prescriptions". It brought out a very prolific discussion, and we learned more therapeutics than we had in

a long time. The next thing is the review of the literature of which I have spoken. There is usually on the program a clinical case. Some man will bring up a case, and you will be surprised to see the people that are willing to come up. When we are short of cases we get the city physician to bring up an interesting case. People are not averse to appearing before county medical societies; they are glad to go there; they know that their case is going to be discussed, and they feel that the doctor is going to learn something about their case that is going to benefit them, and it is not difficult to get clinical cases. If any of you have not tried to get clinical cases before your county meetings, let me advise you to do it. It will interest them, and it will stir up and increase membership.

Another thing, don't always talk about scientific things and cases that pertain to the medical profession. Occasionally throw in a meeting that is not directly concerned with scientific things. Lately I sent out a program assigning as a topic "The Physician and the Automobile", and I assigned each man a topic in a humorous sort of way; I assigned "Tire Troubles" and "Carburettor Troubles". A physician spilled his machine in a neighbor's lot, and I had him discuss how to round corners without breaking his neck, and things like that. We had the biggest meeting of the year on that subject. That is my point: get out the men, get them to mix together and have a good time. (Applause.)

PRESIDENT: I most heartily endorse any method that will bring out your men, and I am very sure that nothing enlivens a medical meeting more than the prospects of encountering clinical material. Is there further discussion? If not, I will ask Dr. Abraham to close the discussion.

DR. ABRAHAM: I am very glad the subject has brought out considerable discussion. I knew it would without any effort on my part, and I did not touch all the aspects that presented themselves to my mind. I was necessarily brief in order to give plenty of time for discussion. I mainly emphasized the point of the scientific paper rather than to get out men to the meetings. But the point that I wished to emphasize more than anything else was to have the meeting as live as possible, by presenting new material, new questions, new methods. We are all familiar with the old ones; we can find them in the text books, and these are so often presented and in such a routine manner that we sometimes go to sleep, because we know we can look it up. But if we have a new topic brought out in a clear way, so everybody can understand, it will necessarily promote discussion. Locally I can say for our society of Outagamie that it has carried on that method of having a program by the year for some time, and it has been a great success; we scarcely failed on any paper. We passed a resolution some time ago that every paper should be written and should be in the hands of the secretary at least 24 hours before the meeting, so that if that member should get a call unexpectedly the paper would be presented just the same as though he were there, probably not as efficiently. I feel pleasure in having called out some discussion and also some ideas that the paper did not touch upon.

ABSTRACTS.

Does cutting of the optic nerve elicit perception of light? HESS, C., Würzburg (*Archiv. für Augenheilkunde*, 67, p. 53), tested this in several cases with healthy optic nerves. The enucleation was done after injection of anesthetics into the surroundings of the optic nerve. The patients who before cutting the optic nerve were asked to observe whether at the moment of the section they perceived light, all denied this.

H., however, was not satisfied with this, as the objection might be raised that the lack of perception of light might have been due to the injected anesthetics. This objection did not exist in an intelligent patient, aged 41, whose ganglion Gasserii had been extirpated on account of neuralgia of the 5th nerve. By repeated attacks of neuroparalytic Keratitis he was so annoyed that he wished the enucleation of the eye which still saw fingers at 3 m. The enucleation could be done without anesthetic. Cutting of the optic nerve was perfectly painless and the patient most decidedly asserted that he had not the slightest perception of light. H. considers this case as a proof that cutting of the healthy optic nerve does not, as frequently assumed, elicit perception of light.—C. Z.

Transient Cortical Amaurosis by Commotion of the Brain. HIRSCH, CAMILL, Prag. (*Deutsche Medizinische Wochenschrift*, 1910, No. 31, p. 1433). A boy aged 12, was run over by an automobile and was picked up unconscious and brought to a near Hospital. A wound, 8 cm. long, was found at the occipital protuberance, and the patient complained that he could not see anything. There was not the slightest perception of light, pupils somewhat more than medium sized, reacted sluggishly to light, motility and fundus were normal. After 3 hours large objects were recognized, and after 4 further hours fingers counted near by, but there was right-sided homonymous hemianopsia and symptoms of amnesia aphasia. The next day the visual field extended over the median line into the hemianopic half. Retrograde amnesia was ascertained, as the remembrance of the accident lacked entirely. On the third day vision and visual field were perfectly normal. The amnesia lasted a few days longer but disappeared completely.

H. attributes the transient cortical amaurosis to commotion of the brain, which from the symptoms was beyond question: unconsciousness for a few minutes, pallor of face, sluggish reaction of the pupils, marked retrograde amnesia, lower temperature at the beginning, irregularity of the, at first retarded, then transiently accelerated, pulse, the sudden onset of all symptoms at the moment of the traumatism, then the gradual subsidence in a short time and complete recovery.—C. Z.

Handbook of Physiological Optics. By H. VON HELMHOLTZ. Third edition, supplemented and edited by Prof. W. Nagel, Rostock, in conjunction with Prof. A. Gullstrand, Upsala, and Prof. J. von Kries, Freiburg. Vol. I. Introduction edited by Prof. W. Nagel. The dioptries of the eye edited by

Prof. A. Gullstrand, 376 pp., with 146 illustrations in the text. Hamburg and Leipzig. Leopold Voss, 1909. 14 M., \$3.50. Leather 16 M., \$4.00. The reappearance of von Helmholtz's famous book in a modern form, "the bible of the scientific ophthalmologist," as it has been very appropriately termed, will be hailed with enthusiasm all over the world. The first edition which appeared in 1866, and also the 2d edition of 1885-1896, have been sold out for years, but the demand for them has never ceased. In order to preserve the original work of von Helmholtz, the editors left intact what he wrote, but in order to properly utilize the progress of science since that time, they brought the new edition up to date by additions to the respective paragraphs and by independent exhaustive discourses at the end of each volume, indicated by their initials. In these additions some parts of physiological optics, only briefly, or not at all, treated by von Helmholtz, which have been created by recent researches, are discussed. In other chapters novel theoretical expositions are presented. The text of the first edition was given preference over that of the 2nd, as the editors found that the new work could in general be easier and better connected with the foundations laid in the first edition than with the changes in the second which were based on investigations now far more superseded than the contents of the first edition.

In the first volume, on dioptries of the eye, Prof. Gullstrand gives an elaborate essay of 151 pages on those chapters in which important progress has been made, as the actual conditions of the formation of images in optical systems, the so far unknown laws of optical images in media with variable refracting indices, in a form comprehensible for those not familiar with mathematical analysis. The application of these laws are considered in special chapters on the cornea, entering closely into ophthalmometry, lens, the refracting system of the eye, schematic eye, etc., followed by special sections on refraction, mechanism of accommodation, and monochromatic aberrations of the eye.

The chapter on mechanism of accommodation is of especial interest, dealing in the light of new researches with external changes of the lens in accommodation, indicial equation of the accommodating lens, intracapsular mechanism of accommodation, schematic accommodating eye, extracapsular mechanism, contraction of the pupil, accommodative decentration of the lens, dynamics of contraction of the ciliary muscle, essence of the mechanism of accommodation, manifest and latent contractions of the ciliary muscle, Tscherning's theory. G. remarks, that there exists in medical science no more complete chain of proofs than those of the mechanism of accommodation and the recent investigations, here set forth in detail, have shown that the mechanism of accommodation in all essential points stands unaltered as formulated by the discovery of Helmholtz, truly ingenious for the status of knowledge at that time.

The second volume will contain the visual sensations by W. Nagel, and the third the visual preceptions by J. von Kries. This distribution into three volumes became necessary on account of the expansion of the work by the abundance of new material and the heavier and better paper. The size of the pages has also been enlarged and a more agreeable type used, which gives the book a splendid external appearance. C. Zimmermann.

International Test Types with Utilization of Landolt's Rings. HESS, C. Prof., Würzburg, Wiesbaden, J. F. Bergmann, 1909. M., \$0.25. These test types (two plates with 2 pages of text by C. Hess, in a portefeuille), contain numbers and Landolt's rings, and were declared as international ophthalmological congress at Naples in 1909 by the commission appointed by the 10th international congress at Luzern, 1909, which consisted of Charpentier, Dimmer, Eperon, Jessop, Nuel, Revmond and Hess. They are calculated for a distance of 5 m., and the acuity of vision is expressed in decimals.

The principle for the construction of these tests was that the normal eye at an average distinguishes two points separately if seen under an angle of one minute, on which also Landolt's rings are based. As the majority of oculists did not wish to discard numbers or letters, it was ascertained by systematic investigations, of which sizes the numbers must be, in order to be accurately recognized at the same distance as the corresponding rings. The result was that the numbers had to be made quite smaller than so far supposed from erroneous theoretical conceptions. Hence V.=1.0 of these types represents a higher degree of vision than V.=6.6 of the old designation, according to Snellen.

For a more detailed exhaustive discussion of the subject we refer to the excellent exposé of C. Hess in *Archiv für Augenheilkunde* LXIII, p. 239.

After the international ophthalmological congress has stamped these test types as international, it is to be wished that every ophthalmologist will make immediate use of them.—C. Zimmermann.

Contribution to the Knowledge of Metastatic Orbital Abscess and the Visual Disturbances Associated with it. WIRRS, M. (From the eye clinic of Prof. E. Krüekmann in the University of Königsberg. *Zeitschrift für Augenheilkunde*, XXIII, Juni 1910, p. 506.) In a girl, aged 14, a panaritium was followed by a metastatic orbital abscess and staphylococcus pyogenes aureus found in pure cultures from both places. Before the operation the diagnosis could not be made with certainty, as the cardinal symptoms of orbital abscess: redness, swelling of upper lid, chemosis and increased temperature, were lacking excepting the (not determining) exophthalmus. At the acme V. was considerably reduced with a relative, later absolute, central scotoma, and the ophthalmoscopic aspect of complete arterial obstruction. An anatomical examination not being possible, a compression of the central artery at its entrance into the optic nerve was most likely, or a compression of its branches within the globe in consequence of increased intraocular tension reproduced by the orbital pressure. The case showed, that, if in the course of orbital phlegmon the aspect of intense restriction of the arterial blood supply occurs, not only the circulation may be restored after evacuation of the pus, but also the function, if the impoverished nutrition of the retina did not last too long.—C. Zimmermann.

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ORIGINAL ARTICLES.

THE PREVENTION AND TREATMENT OF SEPTIC INFEC- TIONS OF THE EXTREMITIES.

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If we could secure accurate statistics of the havoc caused by seemingly insignificant injuries of the extremities, I am sure we would be appalled to find how many people annually suffer impairment of or loss of one or more of their members, or who succumb to these infections. I dare say, every physician of several years' practical experience can recall some patient who has lost his life or a limb or has been left with contractures as the result of a septic infection consequent upon what seemed at first a trivial injury. It is for this reason that every abrasion of the skin, every pin prick, thorn prick, cut, etc., should receive the proper treatment as soon as possible after the injury occurs. I do not want to seem to be an alarmist and be understood to say that every time a farmer or mechanic gets a small cut or abrasion he must hasten to the doctor and undergo elaborate treatment, for such a contention would be ridiculous; but if every layman were taught simply how to care for the slighter injuries and if physicians and surgeons were more careful in treating the severer ones, the working and earning capacity of our people as a whole would be greatly enhanced, for we must not forget that the young, vigorous, productive portion of our population is the class that suffers most from these infections and their consequences. The layman should know two things: first, how to take care of the simple injuries, and, second, that in all extensive superficial and in all penetrating wounds no time should be

lost in consulting a thoroughly competent, conscientious and painstaking physician. The layman can take care of the minor injuries satisfactorily by gently squeezing or sucking the wound so as to draw outward with some fresh blood any particle of septic material that may have gained entrance. Besides, fresh blood is the best germicide we have and if the vigorous, active leucocytes can get at the few bacteria that may have gained entrance they will usually quickly destroy them. If in addition to the above the layman will wash the member carefully with clean soap and water and will apply a freshly laundered cloth over the wound and keep the wound clean for a few days these smaller wounds will scarcely ever cause any trouble. Should the part become tender a wet dressing, consisting of one-half alcohol and one-half boiled water applied over night, will usually relieve the trouble permanently. Witch hazel and a considerable number of extensively advertised remedies have real virtue, but it is principally dependent upon the alcohol which they contain and people have been exploited and overcharged for decades because we have not informed them that half alcohol and half water would be just as effective and only one-tenth as expensive. Besides, they would then have been disillusioned as to the supposed almost miraculous potency of these advertised remedies and would not have had undue confidence in them. Undue confidence is worse than complete lack of confidence.

I make these preliminary remarks because if we will perform our duty to the people and if we wish to rob the patent medicine quack and other quacks of their power we must become more and more active and efficient in teaching prophylaxis and personal hygiene to all of our patients.

The severer wounds that naturally come to the physician from the very first we must divide into two classes: those which are likely to be infected with ordinary pyogenic micro-organisms only, and those which are likely to be infected with the tetanus bacillus in addition.

In the latter the same method of disinfection is used as in the former with the addition that we always give a prophylactic dose of antitetanus serum and if the wound is deep or likely to contain foreign material we lay it wide open, remove the foreign material and leave the wound gaping and allow it to heal by granulation subsequently. In some parts of Chicago tetanus is quite prevalent, and up to seven years ago we had quite a number of cases, but since we have followed the above routine we have had only one case of tetanus develop and that in a case of severely infected compound fracture who came to us on the sixth day after the injury. All fresh wounds are

treated in the following manner when they first come in. If the laceration is very extensive the patient is given a general anesthetic; if less severe the extremity is immersed in a two per cent carbolic acid solution in tepid water, from five to ten minutes. This is an excellent local anesthetic and makes it possible to thoroughly scrub the parts without causing undue pain. We now scrub the extremity thoroughly with soap and sterile water by the aid of a brush or pieces of sterile gauze; then wash it off with ether, scrub it well with turpentine, swab it with tincture of iodine, rinse it with alcohol and finally put on a sterile dressing. I go thus into detail for four reasons: first, because when I was a medical student the learned professors seemed to consider it beneath their dignity to give the students detailed instructions about these matters. They were much more likely to go into great detail about some rare abdominal operation that possibly not five per cent of their students would ever do than to give them accurate instructions how to treat cases of which they will treat dozens, yes hundreds, during their professional career. Second, because I have noticed many a medical man go at these cases in a mighty bungling manner. Third, because I have had to treat many of these cases subsequently, a large number of which could have been saved the infection if the above routine had been followed, and finally by scrupulously adhering to the method just described I have not seen a case of alarming septic infection develop in a large number and great variety of traumatic injuries.

If in spite of the above precautions or because of their neglect septic infection does develop, by instituting and rigidly adhering to a definite rational plan of treatment we can secure healing with practically no mortality, rarely, if ever, lose a member and usually without permanent impairment of function. Thus in a period of over fifteen years I have not lost a case, amputated even a finger or toe and have not one single claw-hand to my discredit in cases which came to me before incision had been made.

As most of these infections occur in young, vigorous persons at the height of their economic productiveness, the prognosis must be viewed from four angles: namely, mortality, loss of member, permanent disability and period of convalescence. The last three may be classed under the general term morbidity. While it is of the utmost importance to save the life and limb of such a patient, it is almost as important to prevent permanent contractures, such as claw-hands, etc., and to shorten the period of illness and convalescence as much as possible. When the pathology of septic infections is once

fully comprehended the treatment becomes easy and satisfactory. Whatever the exact species of micro-organism may be, the pathologic process and the principles involved are fundamentally the same. It is the warfare between the bacteria and the defensive powers of the body. We must try to destroy the former—the bacteria—with something which does not weaken the latter—the defensive powers—and to strengthen the latter by means which do not favor the former.

In practice these things can actually be done quite readily. We know that healthy leucocytes in the presence of opsonized blood serum will destroy innumerable bacteria. We have learned that the blood of a vigorous, healthy individual that is well aerated has serum of high opsonic power and leucocytes of great vigor. For these reasons we place the individual under the best possible hygienic conditions and provide good arterial blood for the involved extremity. The patient is placed in the best possible hygienic conditions, plenty of fresh air and sunlight, because we have learned that oxygen and sunlight greatly increase the opsonic index of the blood. The patient is put on a restricted diet; first, because most persons consume from two to four times as much food per day as they require, and, second, because a febrile patient cannot assimilate properly even the normal ration; the patient is given a moderate dose of saline cathartic to remove any residue that is left in the bowels, because a patient with fever, as the result of faulty metabolism, may generate a variety of toxins, which, if absorbed, will reduce his resistance; in addition, the patient should be given a glass of hot water or cold water every hour to secure better elimination. We have long been talking about elimination, but most of us have failed to realize that in addition to excreting chemic poisons the kidneys, liver and skin all excrete millions of bacteria. Only recently I was able to collect pneumococci in pure culture from the gall-bladder in a patient who recently had had a pneumonia. and about two years ago we had a young woman suffering from colon bacillus septicemia who eliminated millions of colon bacilli with her urine.

How can we provide the affected part with arterial blood? This can easily be accomplished by securing full, unobstructed circulation and preventing stasis. As soon as the infection takes place edema and swelling develops and if special attention is not paid to this matter the edema will soon make pressure on the thinner-walled vessels, the lymphatics and veins, and stasis will result. This can be avoided by elevating the extremity and applying a loose elastic dressing. In applying the bandage we must avoid extending the bandage

proximally beyond the gauze and cotton and thus causing constriction. If these directions are followed the edema will soon subside, the circulation become full and unencumbered, and sufficient arterial blood will bathe the tissues.

In this relation permit me to make a passing remark about the Bier passive hyperhemia. From the first it did not appeal to us as rational and we have never employed it. I have, however, seen some cases where it was used and I am sure better results could have been obtained by other methods. The great trouble with it is that in a large per cent of instances it actually causes venous congestion instead of arterial hyperhemia, and we know from extensive clinical experience that venous blood favors instead of retards the growth of pathogenic bacteria. Bier's passive congestion is theoretically untenable and practically worse than useless.

In addition to the elevation of the affected extremity rest, not only of the extremity, but of the whole patient, is very essential. A patient with septic infection with pyrexia, be it ever so slight, should be kept in bed with the extremity elevated in a comfortable relaxed position. This last point is of considerable importance. If the muscles are not relaxed they make pressure on the lymphatics and veins, and hinder return circulation and the tenseness of the muscles tires the patient unnecessarily and reduces his resistance. The two factors which lower resistance almost more than any other two, are pain and fatigue and by observing the rules here laid down these can be reduced to the minimum.

We now have briefly considered the factors that support the defensive powers and raised the opsonic index of the patient. How can we destroy the bacteria, or, at least, materially reduce their virulence without at the same time injuring the tissues or impairing the resistance of the individual? Such remedies we have in carbolic acid, boric acid, alcohol and tincture of iodine, and by their proper combination and judicious application one can practically always obtain the desired results. Ninety-five per cent carbolic acid is a very powerful germicide and can be safely applied with a cotton swab over the reddened, inflamed area until the area turns white, if it is then quickly washed off with strong alcohol. It has often surprised me how much 95 per cent carbolic acid inflamed skin will tolerate. It will tolerate an amount that would destroy normal healthy skin. It will instantly destroy many pathogenic micro-organisms and almost instantly relieve the pain without injuring the skin in the slightest, providing, of course, that it be properly applied. After this preliminary appli-

cation, the extremity is encased in a large elastic wet dressing. For wet dressing we use a saturated solution of boric acid in water, to which $\frac{1}{6}$ to $\frac{1}{2}$ of 95 per cent alcohol is added. Saturate solution of boric acid, in my judgment, is the best non-toxic antiseptic we have, and alcohol is a powerful dehydrant and, in addition, keeps the part warm and comfortable, preventing that cold, clammy feeling which a wet dressing is so apt to cause. Boric acid does not seem to have much power in inhibiting the growth of pathogenic bacteria, but I am fully convinced it has great power in reducing their virulence. I have repeatedly withdrawn a 60-minim syringe full of pure streptococcus pus from a septic patient that had had this dressing on for several days, then injected from 10 to 60 minims of this pus into the peritoneal cavity of a guinea pig, or even a mouse, without causing the death of these test animals. You know that ordinarily these animals are very susceptible to virulent strains of streptococci, and that from one to five minims of pure virulent streptococcus pus will practically always kill either of them.

For a number of years the ultra-scientific have been trying to tell us that the application of an aqueous solution of any remedy to the skin was old-womanish and useless. In making these statements they have often assumed the superior, supercilious, obnoxious air of the pseudo scientific.

At my suggestion, Professor Louis Kahlenberg, of the University of Wisconsin, has made a series of chemical investigations, which have scientifically proven beyond possible contradictions that an aqueous solution of boric acid applied as a wet dressing to the skin will be absorbed in very appreciable quantities. Thus for a time when a patient with a septic infection of an extremity would come to the hospital, I would apply a large wet dressing consisting of a saturate solution of boric acid in water and 95 per cent alcohol in the proportions above mentioned, collect the urine every two hours, put each specimen thus obtained in a separate bottle and ship them all to Professor Kahlenberg. He found that easily detectible quantities of boric acid would be present in the urine within one hour after the application of the dressing, to continue present constantly during its application and for some time after the wet dressing was removed.

Permit me to here emphasize the importance of having the boric acid in a saturated aqueous solution. Some fifteen years ago I found that in order to be effective it must be saturated; and almost twelve years ago I published these findings in the transactions of the Illinois State Medical Society.

The saturated solution is much more agreeable—immeasurably more effective—than either the super-saturated or the unsaturated solution. The super-saturated solution causes a deposit of fine boric acid crystals on the skin which is both uncomfortable to the patient and seems to interfere with the rapid absorption, while the unsaturated solution is uncomfortable, macerates the skin and is absorbed in much smaller quantities than the saturated solution. Thus a patient being treated with a saturated solution, showed 0.001 per cent of boric acid in the urine within an hour after the application which increased to .035 per cent. Another patient treated with the saturated solution showed from .001 to .1 per cent. Again, another varied between .05 per cent and .2 per cent, while another patient treated with a 2 per cent solution of boric acid never showed more than .001 per cent of boric acid in the urine, and this not until the dressing had been in place continuously for 46 hours.

This slightly more detailed table will illustrate the difference still more plainly:

Patient treated with solution consisting of three parts saturated boric acid solution in water and one part of 95 per cent alcohol.

Spec. of urine voided 1 hr. after application of dressing contained 0.01 per cent boric acid.

Spec. of urine voided 4 hrs. after application of dressing contained 0.01 per cent boric acid.

Spec. of urine voided 16 hrs. after application of dressing contained 0.05 per cent boric acid.

Spec. of urine voided 36 hrs. after application of dressing contained 0.03 per cent boric acid.

Spec. of urine voided 48 hrs. after application of dressing contained 0.02 per cent boric acid.

Patient treated with 2 per cent watery solution of boric acid.

Spec. of urine voided 1 hr. after application of dressing contained no boric acid.

Spec. of urine voided 12 hrs. after application of dressing contained no boric acid.

Spec. of urine voided 18 hrs. after application of dressing contained no boric acid.

Spec. of urine voided 26 hrs. after application of dressing contained no boric acid.

Spec. of urine voided 40 hrs. after application of dressing contained trace of boric acid.

Spec. of urine voided 46 hrs. after application of dressing contained 0.001 per cent boric acid.

These experiments explain satisfactorily for the first time, I believe, why the saturated solution is absolutely essential to the success of the method. You may recall that about 20 years ago boric acid had quite a reputation which subsequently declined considerably, and I believe this decline was due to the fact that it was not always used in saturated solution. In my study of the literature, Sir Frederick Treves is the only one I have found who advises always employing a saturated solution, but he simply makes the statement, without giving any reason for it, or without especially emphasizing it.

We now come logically to the discussion of the question of drainage. In the great majority of cases, the veins and lymphatics can be drained by simply elevating the affected extremity, and this can be done so effectually that incision rarely becomes necessary. This drainage by elevation is assisted by the dehydrating power of the alcohol in the solution above advised.

There is an old rule in surgery, so old that I have not been able to trace its origin, which says: "*Ubi pus, ibi evacuo*,"—or, in English, "Where there is pus, there evacuate." This rule, with certain modifications, is still a good one, but in recent times it has too often been exceeded. Many surgeons seem to have construed it to read: "Before there is pus, evacuate," which, of course, is an absurdity. To many of you the above statement may seem like an exaggeration, but in reality it is not. Some times these too-early incisions are due to excessive zeal, and again they are prompted by fear of criticism on the part of one's fellow practitioners. I have no doubt but that every one of you can recall one or more cases either in his own practice or that of a colleague when this early incision was actually practiced. I can recall many such cases, of which the following is a fair example:

On May 27, 1901, a colleague, 38 years of age, was brought to the Augustana Hospital. Five days before admission he operated upon a very septic patient, and while scrubbing up after the operation he pricked himself under the thumb nail with one of the bristles of the scrubbing-brush. He thought nothing further about it until the following day, when he noticed a small infection under the thumb nail. The swelling, pain and redness increased so that the day before entering the hospital he cocainized the thumb itself, made two spiral incisions around it and removed the nail. The infection spread rapidly, and on admission the whole left arm was swollen, red, hot, painful and tender. The lymphatic glands in the axilla were enlarged and painful.

The thumb was greatly swollen and portions of the skin necrotic, the raw surfaces covered with white septic membranes, and the systemic disturbance was expressed in pyrexia and intermittent delirium. One would think that he had had enough energetic treatment, but instead he clamored for more cutting, and we had some difficulty in persuading him that it would not be wise to make more extensive incisions. Above all, he insisted on having his axillary glands removed. We finally persuaded him to let us try the treatment above outlined, and in eight days he left the hospital with all active manifestations completely under control. There was no pain, no redness, no pyrexia, no delirium. All that remained was the granulating surface which he had himself caused by his incisions. Now what this physician had tried to do was not to evacuate pus before it was present, but to secure drainage. One should always secure drainage just as soon as an infection occurs, but until macroscopic pus develops, this can be done much more safely and effectually without incision. If pus has formed before the patient applies for treatment, or as will sometimes, though rarely, be the case, in spite of the treatment, and a localized abscess develops, as manifested by fluctuation, the proper thing to do is to secure reasonably free drainage by incision, and the old rule finds its proper application. There are, however, several points about the incision that are of utmost importance. First of all, before the part is incised, it is always well, whenever possible, to apply an Esmarch constrictor proximally to the proper point of incision, and after the incision is made, pack the wound with a strip of gauze which has been soaked in tincture of iodine. The Esmarch will block the veins and lymphatics until the tincture of iodine can secure the closure of the cut ends by favoring the formation of thrombi, when the Esmarch can safely be removed. If these precautions are not observed, it often happens that the incision and necessary manipulation forces virulent septic material into the general system, as manifested by severe chills, marked pyrexia, and delirium a few hours after the operation. The part should be manipulated as little as possible in order to avoid these undesirable consequences, and especially is this last precaution to be observed if the incision is in some part of the body where an Esmarch cannot be applied. One more precaution in reference to the incision is, that the incision should always be within the line of demarcation or distal to it. An ordinary boil is always surrounded on all sides, except the skin covering it, by a wall of leucocytes. It can practically always be incised without getting through this line of defense. An infected finger is eliminated from the rest of the body

by an infiltration of the tissues with innumerable leucocytes standing guard and ready to destroy any bacteria that come their way. The ridge can always be seen or felt, and it is just as easy to make the incision distal to this wall as to break down this barrier. I could cite many cases where this little rule was not observed, and almost always the convalescence was unnecessarily prolonged. One case in particular do I remember where extensive incisions were made without an Es-march, and no attention was paid to the line of demarkation. The patient developed a chill within a few hours. The temperature rose to 106 degrees F, and he died within two days from septicemia. Even if the patient is not thus overwhelmed with the septic poison, the wrongly executed incisions always infect new areas which take much time and vitality to heal, and sometimes the convalescence is thus unnecessarily prolonged for weeks and even months.

For a long time it was the practice of many surgeons to excise all accessible, enlarged lymph glands. I consider that this is a grave error. When a lymph gland has broken down, is suppurating, drainage is, of course, necessary, but so long as it is simply inflamed, it shows that it is doing its duty, and it would be just as wise to withdraw an active fighting garrison from the last fort, as it would be to excise an active lymph gland, even though it be inflamed. So long as it is not suppurating, it is waging a winning battle and demands our support. It is sometimes the only barrier left, and its removal may lead to general sepsis.

Vaccine therapy has its field of usefulness in the septic infections, but in my opinion only in the later stages, and then only auto-genous vaccines. There are so many species and strains of streptococci and staphylococci that stock vaccines may do more harm than good, and it always takes several days to prepare autogenous vaccine. In the neglected cases, when the resistance has been greatly reduced, who are sluggish and do not respond properly after the acute symptoms have subsided, the judicious use of vaccine will sometimes greatly hasten the recovery. But let us repeat two cautions: the vaccine must be autogenous vaccine, and it must be given in doses much smaller than are ordinarily recommended in the literature.

In conclusion, permit me to briefly recapitulate: Absolute rest and proper elevation of the affected extremity. Recumbency in bed of the patient if there is the slightest pyrexia. Do not incise until there is unmistakable evidence of pus, and do not remove the lymph glands unless they are necrotic and suppurating. If incision becomes necessary, it should be within the line of demarkation, and, if possible,

distal to it and to an Esmarch constrictor. Swab the incision with tincture of iodine before releasing the constrictor so as to close the cut veins and lymphatics. Manipulate, knead, and squeeze the inflamed part as little as possible. Attend to general hygiene and elimination. If very red and inflamed, paint the skin with ninety-five per cent carbolic acid until it turns white, and then wash it off with strong alcohol, and apply a copious wet dressing, consisting of from one to five parts of saturated solution of boric acid, and one part of ninety-five per cent alcohol.

If these directions are carefully followed, healing can be secured in a relatively short time, with the minimum of morbidity and almost no mortality.

THE EARLY DIAGNOSIS OF CANCER.*

BY F. GREGORY CONNELL, M. D.,

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The importance of the subject of cancer is well shown and emphasized by its marked increase throughout the entire civilized world. If cancer continues to increase, and tuberculosis to decrease, in the future as they have done in the recent past, the death rates of these conditions will be equal by the year 1931.

In England and Wales, while the population doubled, from 1850 to 1905, the death rate from cancer increased six times. In the United States in 1850 there were 9; in 1880, 29; in 1890, 33; and in 1900, 43 deaths in 100,000 due to cancer. Cancer is the cause of death (in people over 35 years of age), of one man in eleven and of one woman in eight. Cancer has the highest death rate of any condition amenable to surgical treatment, being the cause of one-third of all deaths from surgical conditions.

Cancer, if recognized early, while still local, is a curable disease. But cancer is rarely recognized while still local; therefore the necessity of early diagnosis, which is the most important phase, to-day, of the cancer problem. This necessity of improved methods of diagnosis in cancer is well shown by the report of Bashford and Murray, in the Imperial Cancer Report of 1905, who found that in three years the total number of cases of malignant disease, at all ages, occurring in 13 of the leading London Hospitals, was 3532, of which, approximately one in six, were not diagnosed clinically.

*Read before the State Medical Society of Wisconsin, June 23, 1910.

We have a treatment—complete excision—that is good enough for practical purposes; of course it will be improved upon, but for the time being it is efficient. The reason that the results are unsatisfactory, is not because this line of treatment is inefficient, but because it is rarely instituted at the proper time—that is, early.

There are some few observers who contend that cancer is a general disease, but such are in the great minority and until they present proofs, and with them a method of treatment that is more satisfactory than that of complete excision, they may be, for the present, ignored.

The usual diagnosis of cancer is not arrived at until the time for treatment is past. In cancer, *per se*, there is no symptomatology; the signs and symptoms that we read of in our text books, and those that we find in our cases, are not those of the cancer itself, but are evidences of its result. Inaugural signs and symptoms are wanting; those with which we are familiar are what might well be called, terminal. The symptomatology of cancer will have to go through the changes that were necessary in appendicitis, in which for a long time the symptoms attributed to this condition were not those of appendicitis but those of a perforative peritonitis. The same has been the history of gastric and duodenal ulcer; they were not recognized as such and were not detected until secondary complications had arisen, such as hemorrhage, stenosis, or perforation. The same evolution has been passed through in many other conditions, and such a progressive step is sadly needed to-day in the condition called cancer. Our failure in the treatment, and the frightful and disconcerting mortality rate, are due to the fact that cancer has no recognized symptomatology. Therefore there exists the necessity of discovering or creating a symptomatology that will reveal the presence of beginning cancer, so that the horse may be placed in front of the cart and a diagnosis made in time so that our treatment may be applicable.

Earlier diagnosis may be achieved in one of two ways:

(1) By educating the profession, and in turn the laity to the fact that certain signs and symptoms that have been heretofore misinterpreted or ignored, may possibly be a primary sign or symptom of cancer.

(2) By the discovery or creation of some diagnostic test that will prove the presence of cancer in its beginning or earliest stages.

As showing the efficacy of a campaign of education among the laity, one might cite the experience of Winter, who a few years ago began the distribution among his dispensary patients of circulars detailing the symptoms that might mean early cancer, and urging upon

their appearance an immediate and thorough examination. As a direct result he found that the number of operable cases coming to his clinic was increased about 80 per cent.

Results differ in different countries, and in different clinics. Taking cancer of the uterus for example, Wertheim reports 22½ per cent cures, after hysterectomy, in all cases, regardless of the extent. In America, on the other hand, with surgeons technically at least his equal, our recovery rate at best is under 10 per cent. This discrepancy is explained by the fact that the diagnosis of cancer is made at an earlier stage of its development in Germany than it is in our country.

By means of education of the lay and professional people much may be gained. The lesson to be driven home is that cancer is to be suspected in the great majority of chronic conditions, of which the exact nature is not definitely known, suspicion to be promptly followed by careful study, which will probably result in either the exclusion, or the demonstration of the disease.

This line of procedure is best shown in cancer of the cervix and of the breast. The knowledge among the lay people that irregular menstrual flow at the time of the menopause, is very often evidence of a beginning cancer, and not a natural manifestation of the "change of life" will lead patients to submit to early examination, at a time when something may be done for their relief. If they do not know this fact and wait until, in their judgment, they are sick enough to consult a physician, the case has usually advanced to a hopeless state. This knowledge does practically no good to any one as long as it is confined to the profession: it must be known by those in whom a cancer is liable to occur. The knowledge that a swelling in the breast usually means cancer, that between 80 and 90 per cent of breast tumors are or will become malignant, when generally understood, will result in earlier consultation with the family physician, an earlier recognition, more thorough treatment and better results. The same line of reasoning will apply to other regions of the body where the growth is accessible, visible or palpable, but it cannot be made to apply in the same forceful manner to the deep seated carcinomata, for example those in the abdomen. And it is in these deep seated growths that some early change from the normal must be recognized in order that we may be able to make an early diagnosis.

The major amount of research work in cancer at present is being carried on in the hope that the cause of the disease will be discovered, the supposition evidently being that as soon as the cause is

discovered, a cure will follow as certainly at night does day. In an attempt to show that this supposition may not be entirely correct attention may be called to the fact that discovery of the tubercle bacillus did not bring about an immediate cure of tuberculosis; and that definite and specific cures for syphilis and malaria were established long before their etiological factors were known.

A knowledge of the cause of cancer will, of course, be a great aid in combating the disease; yet all our energies should not be devoted to a search for a cause, without some attempts at a cure, or to arrive at some method of making an early diagnosis; so that the cure, available at the present time, might be made applicable to, at least, a larger proportion of cases.

Where shall we look for these inaugural symptoms, or prodromal signs of the disease? Where with more likelihood of success than in the blood? The blood was studiously examined in the early days of hematology, but characteristic morphological changes in the cells were not discovered; the count of both white and red corpuscles, and an estimation of the hemoglobin, were found to be of no value. These observations at the time, only a few years ago, were looked upon as the highest refinement of diagnostic methods, but to-day, when compared with newer procedures they are as is gross morbid anatomy when likened to histo-pathology.

The new subject of immunity has evidently opened up a field in medicine which is, from what we can see now, boundless, and within which all things in medicine may become possible. This, of course, has led to a renewed investigation of the blood in cancer patients.

Attempts to utilize the principle involved in the Widal reaction, led to a demonstration of the fact that the red cells of the blood could be agglutinated by some cancer sera. But it was soon shown that this was not specific, and that it was a possible result after the use of non-cancerous sera.

Attention was next directed to hemolysis, by which is meant the breaking up of the red cells and the liberation of the hemoglobin, by the blood serum from the same or another individual. Kelling was among the first to apply this hemolytic reaction in cancer cases, comparing the action of cancer and normal sera upon the red cells. His work has been repeated by a large number of experimenters, among whom may be mentioned: Weil, Crile, Whittemore, Blumgarten, Janeway, Johnson and Canning, Smithies, and Krida. And it has been observed that cancer serum will often hemolyze normal corpuscles.

and will not hemolyze corpuscles of a cancer patient. A reverse hemolysis has been observed by Crile in cases of tuberculosis, that is, in which the serum of the alien is capable of destroying the corpuscles of the tubercular subject.

The presence of hemolytic serum in cancer cases is generally admitted, but as to the value and reliability of the test there is a great variety of opinion, varying from that of Crile who claims to get this reaction in practically all cases of cancer, except those in the very advanced stages in which the clinical picture is so plain that there is no question as to the diagnosis, to that of Whittemore, who says: "From these results at the present time, hemolysis is of no value in the diagnosis of carcinoma."

Owing to the conflicting results and opinions regarding the hemolytic test it cannot at present be accepted as a reliable test for cancer. The technic is time-consuming and difficult, but it is by no means impracticable. Weil, at the recent meeting in St. Louis, stated again that he was unable to secure the satisfactory results attained by Crile and that the great bulk of experiments had likewise failed.

In a very recent communication Krida collected 1812 observations reported by 10 different workers, as follows:

472 cancers, 67 per cent positive.

79 benign, $11\frac{1}{4}$ per cent positive.

507 miscellaneous diseases, 15 per cent positive.

509 normal, 2.6 per cent positive.

40 post operative. No recurrence. No positive reaction.

This principle of hemolysis has been utilized by Chas. A. Elsberg, of New York, in a very ingenious and simple manner as a method of early and rapid diagnosis. In Elsberg's method technical difficulties are in great part removed, and he brings about this hemolytic test, not *in vitro*, but in the living body of the patient. Washed red blood cells from a normal individual are injected subcutaneously into the suspect; if non-cancerous there will be no reaction; if the suspected patient is suffering with cancer there will be within from 3 to 12 hours, a local reaction, dusky red in color, slightly raised and tender, 2 to 4 cm. in diameter, at the site of the injection.

In his latest report Elsberg found that this cutaneous reaction was positive in 90 per cent of cancer cases, except those in the late stages. In non-cancerous cases 94 per cent were negative and in suspected but not proven malignancy, 78 per cent were positive. It is important that the blood cell for injection be derived from absolutely normal individuals and those not recently anesthetized or traumatized.

He secured such blood in most cases from infants or youths while in the early stages of anesthesia and about to undergo radical cure for hernia. This method has not had an extended trial in the hands of others, but has received favorable mention in Europe. Its simplicity is certainly in favor of an extended trial in large clinics where the material is available. Krida in his recent communication reports 75 per cent positive results.

The biologic test known as "Complement Fixation" or "Deviation of Complement" brings one into the minutiae of immunity work, and without a thorough understanding of the principles underlying the various immunity reactions, this test will seem quite complicated. But in reality it is quite simple and one of the most remarkable and fascinating pieces of detective work ever presented in medical diagnosis. The technic is most complicated and the margin of error is large with the beginner, but in the hands of those who have become proficient with the details, the results are quite constant and reliable.

LITHOPEDION. CASE REPORT.*

BY 'M. M. SPITZ, M. D.,

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The case which I intend to report this evening and the specimen accompanying it, I owe to the courtesy of Dr. E. E. Tanner of this city who has kindly consented to allow me to present it before this society. The history of this case is briefly as follows:

Mrs. D., aged 67, married at 30, one year later gave birth to a child. For the next seven years menstruated regularly. After 4 months of amenorrhea, patient presuming she was pregnant, while lifting some boxes and barrels in a cellar, was seized with a terrific pain, profuse hemorrhage and collapse. After a few weeks she temporarily recovered from this attack but did not entirely regain her health. There were no appearances of a miscarriage—nothing but the pure blood coming away. After this accident she consulted several eminent European medical men who diagnosed her condition as pregnancy but were unable to account for the above mentioned attack. Four months after the accident she was delivered of a healthy child. She menstruated regularly after this for eleven years, but the symptoms she complained of preceding her accouchement increased instead of subsided. These symptoms were as if a mass or body moved from side to side in her abdomen, at times causing frequent urination, at

*Read before the Milwaukee Medical Society, Dec. 13, 1910.

other times lying on her rectum and interfering with defecation. She suffered with dyspnoea at times, dizziness, was extremely nervous, and had hemorrhoids. About the time she ceased menstruating in 1884, a diagnosis of hypertrophied uterus was made.

Whether a fibroid was meant or a condition of subinvolution, we are unable to determine. All treatment she underwent was of no avail.

In 1906 she was examined by Dr. Tanner who diagnosed her condition as Uterine Fibroma and advised operation. This she did not consent to until May, 1909. A laparotomy was performed for a hysterectomy and the following interesting condition was discovered:



A fetus completely ossified was found lying imbedded in the uterus forming one solid mass with the uterus. The legs of the fetus were imbedded in the uterine wall, while the trunk and head were free in the abdominal cavity. The entire mass with the uterus was removed and amputated at the cervix. The patient made a complete recovery. She had not been pregnant since the birth of the child in 1883, which

undoubtedly was a twin of this ossified fetus. The uterus ruptured during this twin pregnancy, the one fetus partially obtruded through the perforation, lying half in the uterus and half in the abdomen, died and was held fast by the uterine contractions, in which position it grew to the uterus and underwent a lithopedion change. So that this lithopedion remained in the situation in which it was found for 26 years and did not materially interfere with the co-existing pregnancy or with the subsequent labor.

LITHOPEDEION.

The natural tendency of all aberrant pregnancies is to spontaneous termination by rupture of their enclosing envelopes, whether the pregnancy be tubal, ovarian or tubo-ovarian, and in the great majority of cases this is also true in the interstitial or tubo-uterine variety; but in this class delivery of a full term child is possible through the uterus, *per vias naturales*.

After rupture has taken place, which is usually the case between the 6th and 10th week, the embryo is absorbed or must be removed by operation, either on account of the hemorrhage and fatal collapse or the sepsis which results from the disintegration and breaking down of the extravasated blood clot. If, however, a favorable rupture takes place and the embryo attaches itself to some other structure, it may continue to grow and be delivered at term by abdominal section, or if left to itself spurious labor sets in, the fetus dies, the liquor amnii is absorbed and the gestation product either breaks down and discharges itself piecemeal through the rectum, bladder or abdominal wall, or it may remain in its sepulchered nest indefinitely if protected, and undergo calcareous degeneration, mummification or maceration. Sometimes the calcareous incrustation is confined to the membranes alone, when the specimen is called a lithokelyphos, and if the deposit engages both membranes and superficial tissues of the foetus, a lithokelyphopedion, and if the embryo alone is calcified, a lithopedion. These different changes depend upon the location of the fetus, the amount of moisture surrounding it and its proximity to the intestines. If an adhesion exists between the sac itself and the bowel, and the gestation sac has been thinned out by distention so that gases and bacteria pass freely and easily into it, decomposition and abscess formation take place very rapidly; but when the membranes are thick and the product is deposited well down into the broad ligament between its layers and is thoroughly and strongly walled off, it may

remain without producing any very great discomfort. Cases are on record where lithopedia have been removed post mortem after being carried for 50 years or more. Many cases of lithopedia have been reported, the earliest as far back as 1595 by Venetiss, in 1597 by Albosius, 1661 by Densingens and by J. G. Waller of Berlin in 1778.



One of the earliest recorded cases is the so-called lithopedion of Sens which was removed from a woman in the town of Sens in 1601. Likewise one of the most interesting specimens of lithopedion was obtained by Leinzell in 1720 at an autopsy upon a 74 year old woman who had carried it within her for 48 years during which time she had several children. This has been described by Kieser, in 1854, who collected most of the cases which had been reported up to that time.

The condition was also exhaustively considered by Albers in 1861 who collected 10 cases from literature, 8 of which had been retained by their mothers 25 years or more.

Winchel in his *Lehrbuch der Geburtshülfe* speaks of an extraordinary case in an 84 year old woman who carried a 7 months' fetus in the right Fallopian tube 56 years.

Morehouse and Guswöld reports a case in the *Journal of the American Medical Association*, Vol. 48, which had been carried 26 years, and Evans (*American Medicine*, Apr., 1903), reports one found in a postmortem examination that had been retained 33 years. Kelly collected several cases of 50 years' duration, and 30 of between 25 and 30 years between pregnancy and removal at autopsy or operation.

Mann in his *System of Gynecology* tabulates 185 cases of abdominal pregnancy, half of which existed one or more years. Several of these must have been cases of lithopedion, but unfortunately they are not distinguished.

Beede in an article in *Surgery, Gynecology and Obstetrics*, September, 1906, wrote to 50 representative Western American Surgeons, and from the replies of 40, found 18 cases, 12 of which were positive cases of lithopedion within the abdomen, the others macerated products or of uncertain origin. Of these 12, 4 had developed to term 1 to 8 months, 3 to 2 to 2½ months, 2 not stated. 2 remained in abdomen 12 years, others the time not known or not stated. The most valuable monograph upon the subject we owe to Kuchenmeister, who, after carefully reviewing the literature and studying several cases of his own, divided lithopedion into three classes:

1. In which the calcification is limited to the fetal membranes; 2. both fetus and membranes partially calcified; and 3, in which calcification is limited entirely to the fetus.

When the fetus has attained a certain size it undergoes one of several changes—whether it remains in the gestation sac or lies free in the abdominal cavity. Generally speaking these may be: mummification, skeletization, calcification, suppuration or adipocere formation. In mummification the fluid portions of the fetus are gradually absorbed and its internal organs converted into a soft pulpy mass, which is gradually absorbed so that eventually nothing is left except the skeleton whose bones are held together by a dry and shriveled skin. If infection does not occur the mummified fetus or the membranes surrounding it or both become converted by a coating of calcareous material, and a true lithopedion results.

Lithopedion formation is comparatively rare and is generally regarded as the most favorable outcome in advanced cases of extra-uterine pregnancy, as the calcified fetus may be carried for years as a harmless foreign body and do no harm except at labor, when it may

give rise to partial or complete obstruction of the pelvis. In a considerable number of cases in which the dead product of conception remains within the mother, suppuration of the sac occurs and gradually spreads to the fetus and eventually leads to the liquifaction of all its parts except the skeleton. As the process advances, adhesions are formed with the various organs, and an abscess forms which later perforates at the point of least resistance, and if the patient does not succumb to septic intoxication portions of the skeleton may be extruded through the abdominal walls or into the intestines, bladder or vagina.

This termination occurs with especial frequency in most broad ligament pregnancies. What is responsible for these strange pathological anomalies is an interesting study, and what enables one peritoneal cavity to tolerate and encourage such a foreign body while another immediately rebels, is not so easily explained.

So much has been taught us on natural resistance and increased leucocytosis that we fall back to them for a ready explanation to account for this strange behavior of an ectopic ovum; and if we add to them some peculiar combinations of salt and calcareous elements in the blood of the mother we can understand how such stony productions are possible, just as the branch of a tree falling into a stream of water will under suitable conditions, petrify and become hard and adamantine, while under other combinations it softens, melts and decays.

DIET AND GENERAL MANAGEMENT OF TYPHOID FEVER.*

BY LOUIS M. WARFIELD, M. D.,
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As long as there is no unanimity of opinion upon the question of diet in typhoid fever the subject should be discussed from every standpoint, however trite it may seem to some.

In spite of active prophylactic measures practised at the present day, typhoid fever continues to be a most important factor in the morbidity and mortality tables. In the Report of the Bureau of Vital Statistics for 1909 there were 10722 deaths in the year 1909. In 1908 there were 11375 deaths. It would appear that the number

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of deaths was actually 653 less in 1909 but the statistics were taken from a smaller registration area, therefore the total as reported is not the actual number of deaths. Estimating a mortality of 10 per cent gives 107,220 cases in the registration area alone. I do not think that it would be exaggerating to say that in the United States there were at least 200,000 cases of typhoid fever last year. No argument is needed to bring out the importance of the subject to be discussed.

The idea of starvation in fevers which had its origin with Hippocrates and his followers received its first real blow when Graves in England about the middle of the last century taught and practised the feeding of fevers with liquid and soft food-stuffs. It was due to his powerful influence that the profession gradually began to treat fever patients more rationally.

It is generally admitted that in fevers of short duration it is not absolutely necessary to give any food, but that patients who desire food may have certain articles. In a prolonged fever like typhoid where it would seem that food is most essential, it was, until recently, the practice to give only milk and liquids.

Some of us have been taught that food increased the fever and that the administration of even a piece of bread would give a reurdescence or even initiate a relapse. This seems to be true in many patients who have been fed exclusively on liquid diet. That it does not always hold good will be shown later.

In 1882 von Hoesslein (*Virchow's Archiv*, LXXXIX. 95.303. 1882), found that the temperature of patients on days when food was administered was only from 0.11° C. to 0.3° C. higher than on starvation days. Moreover he showed that the absorption of light articles of diet goes on almost as perfectly in the febrile as in the non-febrile state.

Studies of metabolism in acute febrile diseases have shown that the chief characteristic of the metabolism of fever is a great increase in the destruction of nitrogen-containing tissues while the mainly carbonaceous components of the body, such as fat, are affected to a much smaller degree. It is also known that in prolonged fevers the various digestive juices are not secreted in the same amount as in health. Theoretically a diet rich in nitrogen-containing compounds should be given, but actual observation has shown that it is impossible to bring about a condition of nitrogenous equilibrium in acute fevers on any feasible quantity of food. The explanation is probably that although one may cover the waste which is due to simple inanition, it is impossible to prevent that which is brought about by the destructive

action of toxins on the cells. Also the nitrogenous waste floods the circulation, increases the strain thrown on the kidneys and, in all probability, tends of itself to bring about a condition of toxemia. We look, then, for articles of food which are "proteid-sparers" and these in the order of their importance are gelatin, carbohydrates, and fats. The use of gelatin should be restricted because of the fact that the end products of its digestion are the same as the end products of nitrogenous food-stuffs and therefore the same objections apply to the former as to the latter. The use of fat in quantity is practically prohibited on account of the objection and repugnance which febrile patients have to fatty foods. This leaves us with the carbohydrates as the food *par excellence* for fever patients. Even carbohydrates do not act in fevers as "proteid-sparers" to the same extent as they do in health. This fact, however, does not detract from their great value in fevers.

It is generally admitted that a mixed diet containing 3000 calories suffices for the maintenance of health in a person of average weight doing light work. For one at rest 2000 calories suffices. I am not aware of any experiments which have been made on typhoid fever patients to show how many calories are necessary to keep the average case in weight. The waste being great in fever it would be reasonable to suppose that weight for weight a man would need more calories when in a febrile attack than when at rest in bed without fever. I think we may assume for purposes of argument that 1500 calories is the minimum energy equivalent for a patient of average weight who is in the throes of a moderately severe attack of typhoid fever.

Again, it has been considered that it was dangerous to give any but liquid food in typhoid fever because of the ulcerations in the intestines. Now, typhoid fever is a general infection, a bacteriemia, with local lesions in the ileum and at times in the colon. The ulcers are from ten to twenty feet from the stomach. Any food-stuff that is bland and easily digestible is reduced to a semiliquid homogeneous consistency by the time it has reached the lower jejunum. There is no room for dispute about that fact. Advocates of milk diet seem to lose sight of the fact that tough curds are more difficultly broken up than a soft egg, for example. Curds not infrequently occur in fairly large masses in the small intestines when a patient is fed largely on milk. The danger of injuring the intestine by feeding digestible food-stuffs is imaginary, not real.

We have assumed that 1500 calories is a fair estimate of the energy required by a fever patient. Now let us see what is actually recommended by some authorities.

McCrae (Osler's System, Vol. II., p. 211), says the food should be fluid, easy of digestion and absorption. He recommends 24 to 36 oz. milk daily together with the whites of 8—12 eggs. Taking the outside figures gives 870 calories *per diem*, a figure surely too low for the body requirements. He goes on to say, "There is a temptation to give too much rather than too little food and more patients are over than under-fed." With that statement I can not agree. "Ice-cream may be given Other foods, such as barley water, may be given: bouillion and clear soups may be added for some patients, but should not replace the other foods. Cocoa may be tried but frequently disagrees; tea and coffee can be given at any time If an change from the diet given above be required it is usually in the direction of reduction. There is little danger in a severe attack of the patient receiving too little nourishment." "Constipation is to be desired."

A. O. J. Kelly (Practice of Medicine, 1910), advocates a milk diet of about the same caloric value. He says that he has never seen good results from a generous diet. David Riesman prefers the liquid diet composed largely of milk. On Dr. Osler's wards in the Johns Hopkins Hospital we adhered strictly to a milk diet alternating however with albumin water. The caloric value was the same as McCrae uses (McCrae's statistics coming from the Johns Hopkins Hospital).

On the contrary, Dreschfeld and Lorraine Smith (Allbutt's System 2nd Ed. Vol., p. 1144) say: "Besides milk, the patient may take mucilaginous soups, containing carbohydrates, which are of first importance; oatmeal, sago, rice, tapioca, wheat, aleuronat flour, most broths, such as chicken or mutton broth, beef-tea. Gelatinous substances such as chicken jelly, calves' foot jelly, and some of the other jellies."

"Constipation lasting only a few days and not accompanied by much tympanities and flatulence, need not be treated medicinally."

If it can be shown that the mortality and complications following the practice of feeding typhoid fever patients is no greater than by the liquid diet method we shall then be in a position to discuss the advantages of liberal diet.

It was my privilege to be in the wards of the Johns Hopkins Hospital under Dr. Osler. I was trained in the liquid diet method. I have seen recrudescences and even relapses occur following the eating of a small piece of bread. I have seen patients so emaciated after a moderately severe attack that they were living skeletons. I have seen men cry like children for something to eat. I was a firm believer

in the liquid diet in spite of its many drawbacks. I should have considered it nothing short of criminal to give soft foods to ill patients, even eggs were prohibited except as albumin water. No solid food was allowed until the temperature had been normal ten days. Gradually since leaving the hospital I have added little by little to the diet so that now I may be called an advocate of liberal diet.

Let it be understood that no patient is urged to eat, there is no forced feeding. There are times when for several days very ill patients, especially those who are profoundly toxic, take little or no food of any kind. Even water must be fed to them. In such cases we give milk or albumin water but often it is difficult to get patients to take that little nourishment. Just as soon however as the desire for food returns, even if the temperature is high, they are given oatmeal, farina, cream of wheat, milk toast, or other farinaceous foods but in small quantity, gradually increasing until in a few days they are on our regular soft diet. Moreover we never aim to satisfy the hunger of our patients. Our idea is to feed them but at the same time to keep them hungry.

DIET.—Bearing in mind the caloric requirements of a person at rest we have calculated that our patients receive a diet containing 2000—2500 calories. Taking the total amount of food prepared and the number of patients in hospital we found that we were theoretically giving 2560 calories to every patient. As this included both ill and convalescent cases the figures for the ill patients are necessarily slightly high.

A sample diet for one day to a case of moderate severity or even to a very ill patient who desires food is as follows:

Breakfast 6 A. M.—4 to 6 ounces (cooked) rolled oats, 2 ounces milk, $\frac{1}{2}$ ounce sugar, 6 to 8 ounces milk.

Lunch 9 A. M.—6 to 8 ounces milk.

Dinner 11 A. M.—8 ounces pea or bean soup, thick, 1 ounce toast in soup, 4 to 6 ounces rice pudding, 6 to 8 ounces milk.

Lunch 3 P. M.—6 to 8 ounces milk.

Supper 5 P. M.—6 to 8 ounces farina, etc., 2 ounces milk, $\frac{1}{2}$ ounce sugar, 1 ounce toast (soft), 6 ounces hot milk, 6 to 8 ounces custard.

Lunch 8 P. M.—6 to 8 ounces milk.

Lunch 1 A. M.—6 to 8 ounces milk.

It will be noticed that eggs form no part of our diet, nor do we give any patent-food preparations. Milk is still with us a staple article but except at lunches it is always given with a cereal food. We

use any of the cereals, custard, junket, gelatin occasionally, calves'-foot jelly, vanilla ice-cream, purees of peas, beans, potatoes. With these easily obtained and cheap articles of diet we carry our patients through the entire illness. We do not give meat until the patient has been up. It is not that we object to scraped beef but we have to regulate our diet according to our means. We have never had the least difficulty in our feeding. No patient has complained for long as with our varied diet some food-stuff will be found which he will eat.

COMPARATIVE FIGURES.—During the period from October 1, 1908, to January 1, 1910, at the Milwaukee County Hospital there were 118 cases of typhoid fever treated with milk or milk and albumin, in other words on the accepted semi-starvation treatment. Of these 15 died, a mortality of 12.7 per cent. From Jan. 1, 1910 to Jan. 1, 1911, there were 126 cases treated with the liberal diet directly under my care. Of these 12 died, a mortality of 9.5 per cent. It would be fair to exclude one patient who entered with peritonitis following a perforation and died within fourteen hours. Our mortality is then 11 cases, 8.8 per cent. I recognize that this is too small a number from which to judge the result of any course of treatment. All that can honestly be said is that liberal feeding does not increase the mortality.

RELAPSE.—In the 126 cases there were five cases of relapse 3.9 per cent. In one the relapse was much more severe than the original attack. Among 82 cases from Oct. 1, 1907, to Oct. 1, 1909, there were 3 relapses, 4.8 per cent.

INTESTINAL HEMORRHAGE.—There were more hemorrhages than are usually found. While hemorrhage is a severe and often fatal complication, the cases in this series were for the most part mild. There were nine cases (7.1 per cent) three of which were multiple with only one death. In the other series there were three hemorrhages, 3.6 per cent. It appeared that the epidemic last year was a rather virulent one. We do not believe that feeding of the patients had any effect on the incidence of hemorrhage.

PERFORATION.—This serious accident occurred in three of our cases. One entered the hospital with peritonitis, two were in the hospital at the time, both were operated upon and both died. In one case a laparotomy was performed for a suspected perforation. None was found but there was one deep ulcer over which the peritoneum was thinned and covered with a fresh fibrinous exudate. This was turned in. The patient later coughed so violently that a piece of omentum about the size of a lead pencil and 5—6 cm. long was

forced out on the skin. He developed paralysis of the intrinsic muscles of the right side of the larynx. Later there was a pyo-pneumothorax which was operated and drained. He made a complete recovery.

In the other series only one perforation with death was recorded.

OTHER COMPLICATIONS.—There were two cases of generalized furunculosis. Both recovered. Two cases of appendicitis with recovery (elsewhere reported). Four cases of otitis media with recovery. One case of edema of the leg during convalescence. One case of post-typhoid paralysis with typical foot-drop in both feet. He recovered. One case of phlebitis; recovery with only slight swelling of the leg. One case of simple cholecystitis; one of empyema with death; two with pleurisy, one with serofibrinous pleurisy; these recovered. One case of pyo-pneumo-thorax recovered. One case of erysipelas recovered.

FATAL CASES.—There were twelve deaths. In three there was a complicating lobar pneumonia caused by the pneumococcus. Three died as the result of peritonitis following perforation. One died following an operation for a complicating empyema. Autopsy revealed the pleural cavity full of blood clots. At the operation the intercostal artery was torn. Whether or not this patient would have recovered had not that unfortunate accident happened is a question which can not be answered. One patient died as the result of repeated intestinal hemorrhages. Four died apparently from toxemia. One of these entered the hospital in the fifth week of illness in an emaciated condition and with several large, necrotic bed sores. He lived 22 days. Leaving out the patient who entered moribund, the average length of time from admission to death was 14.4 days; the longest was 36 days (death from pneumonia), the shortest, four days (death from toxemia).

The mortality rate in such a hospital as the Milwaukee County Hospital should be higher than in a private hospital or in private practice. In the first place our patients come from the very poor classes who live under conditions unbelievably unhygienic. They are in their homes from one to several weeks without attention until they are brought to the hospital. In the second place all of our patients must be carried in ambulances at least five miles and we have had patients brought fourteen miles in the ambulance. Many of our patients who have been ill for many days, get up, put on their clothes and sit up in the ambulance. We feel, therefore, that our results compare most favorably with those in any other hospital.

GENERAL MEASURES IN TREATMENT.—The majority of our patients are carried through the whole course of fever without any drugs.

The one exception is that we give urotropin two days a week. We rely entirely upon feeding and baths. We encourage the drinking of large quantities of water.

Recognized authorities say that constipation should be encouraged and it was the practice at the Johns Hopkins Hospital to give an enema every second day if the bowels did not move. Under milk diet and the above regime distension of the abdomen was exceedingly common. We cannot believe that such a condition is not harmful to the patient. It must favor the incidence of hemorrhage and perforation and produce paralysis of the intestines. Besides it is a source of great discomfort to the patient and tends to obscure the early signs of perforation owing to the difficulty of judging grades of rigidity in an already tense abdominal wall. We do not, therefore, believe that constipation should be encouraged. Among our 126 patients only one, other than the cases of general peritonitis following perforation, had even a mild distension. He entered hospital with a tense abdomen which, however, became soft in two days.

Abdominal pain and tenderness was so much of a rarity that it was always to us an alarming symptom. There were no cases of diarrhoea, except in a few very ill or delirious patients. Every morning every patient (excepting those with recent intestinal hemorrhage or those having diarrhoea) is given a warm soap and water enema. We feel that this is a most important and essential feature of our treatment. To this measure and to our feeding of varied food-stuffs we attribute the absolute lack of tympanites in our patients. The recollection of turpentine stupes, turpentine enemata, and turpentine by mouth is very vivid under the treatment of milk diet and an enema every second day if the bowels did not move. We do not give a purge to the patient when he enters. We can see no reason for so doing as our patients are always in at least the second week of the disease when they come to the hospital.

Typhoid fever patients die from one of three causes: (1) complications, (2) toxemia, (3) exhaustion, the last being apparently dependent upon the relaxation of the blood vessels and the inability of the weakened heart to maintain the circulation to the vital centers situated in the medulla.

Deaths from complications we can not always prevent. Some are amenable to operative procedures. Deaths from toxemia we can only prevent by endeavoring to keep the patient in the most favorable condition for the production of specific antibodies. We are of the opinion that feeding as we do is a better means of preventing death from toxemia than feeding milk and liquids only.

Deaths from exhaustion we can prevent only by stimulating the vaso-motor centers. To accomplish this we have the cold bath and the circulatory stimulants of which the most important are strychnine, digitalis, adrenalin and caffein. We have added another measure which seems to be of value. This consists in elevating the foot of the bed on blocks so that the patient lies with the head lower than the feet. Usually an elevation of from nine to ten inches is used. We have found that when signs of a failing heart make their appearance this measure suffices in many cases to restore the circulatory balance. We have taken numerous blood-pressure estimations with the patient horizontal, and inclined by the elevation of the foot of the bed, but we can not show that there is any change in the pressure in the brachial artery. Nevertheless we feel that the inclined position does mechanically cause a stimulating effect on the peripheral arterioles. It is conceivable that in the inclined position the blood flowing always towards the heart by gravity promotes venous return, brings about a reflex stimulation of the vaso-motor center, the arterioles contract down upon the blood contained in them, and the heart has some resistance against which to exert its contraction. That this is not shown in a rise of blood pressure in such an artery as the brachial does not seem to us to vitiate the reasoning. Occasionally we have gone a step farther and have attempted to combat the loss of vasomotor tone by bandaging the legs from the ankle to the hip and by placing a tight binder around the abdomen. For this a bandage six inches wide is used. The legs are wrapped in cotton batting and the bandage is started at the ankle. It is put on snugly in order to force as much blood as possible to the trunk. The binder is then put on the abdomen and pinned so that pressure is made on the abdomen. These are left on for two hours with a two hour interval between the bandagings. We have tried this in a number of cases and it has seemed to do good in some. It is troublesome and disturbs the patient somewhat. No rise of blood pressure can be shown in the brachial artery by the sphygmomanometer. We do not attach the importance to this measure that we do to the elevation of the foot of the bed. We have kept patients in the inclined position for weeks. It does not seem to be uncomfortable. The heart stimulants are given, should this not be sufficient to control the failing heart.

The enteroclysis recommended by Riesman is used by us often. Many patients do not take the enteroclysis well, they expel the salt solution at once or shortly after the tube is removed from the rectum. Hypodermoclysis is then given beneath the pectoral muscles or in the thighs.

It is not at all difficult to give 800 c.c. of normal salt solution beneath the pectoral muscles. If one is careful to insert the needle beneath the pectoralis major muscle in the loose areolar tissue of the chest wall and to allow the fluid to flow in slowly, there is never any pain or discomfort. The fluid distends the tissues beneath the pectoral muscles and travels to the axilla in the loose tissue of which a great deal of fluid is readily accommodated. The temperature of the fluid should be about 100 degrees F. Should it be too cold there is some shock. When it is too hot necrosis and sloughing occur. We have taken always the necessary precautions, have used aseptic technique, and we have never had any ill effects. Infusions have been given daily for a week to ten days. We think that infusion is one of the best means we have of combating toxemia. It has long been known that diuresis is caused by saline infusions and toxins are eliminated through the kidneys.

A not uncommon occurrence is slight fever from 99 degrees F. to even 100 degrees F., which commences after the temperature has fallen completely to normal and has been normal a few days. The pulse often is rapid, easily influenced by any form of excitement, registering even 100 to 112 beats to the minute. Normally the temperature should remain at or even below the normal temperature and the persistence of fever is rather disquieting. If the appetite is good, there are no complications discoverable, the bowels move daily, and the tongue is clean, we let such patients sit up, at first in bed then in a chair, if in two weeks the temperature has not become normal. Invariably the temperature has become normal and the convalescence has been satisfactory. Some judgment and courage of conviction are necessary to order patients with fever out of bed. I have so far not seen any but good results follow this rather radical treatment.

ALCOHOL.—We do not give alcoholic stimulants to our patients at any stage of the disease. Not that we are prohibitionists, far from it, but we do not believe that alcohol is a heart stimulant and we do not need it as a food to supply energy. Recent experimental work on the combined toxic action, especially upon the liver, of bacterial and chemical protoplasmic poisons apparently contraindicates the use of alcohol in infections. We have had some desperately ill cases who recovered without the use of alcohol, and we do not believe that alcohol would have saved those who died. I am aware that this position is not the usual one and that there is room for much argument. However, I take this stand now after having tried both methods.

It is evident from the foregoing that there are certain advantages

in feeding patients who have typhoid fever a more liberal diet than milk, albumin water, and broth. Moreover it appears that the danger to the patient is more imaginary than real. To one who has followed both methods there comes a firm conviction that liberal diet is better than restricted liquid diet. The most striking circumstance noticed by one who visits a ward where the patients are fed as we feed them, is that the general condition of all patients is most excellent. The average ease lasting four to five weeks shows very little loss of weight and surprisingly little loss of strength. Patients seem to sleep better, and while hungry, they never fret about getting something to eat. The rapidity of recovery after the temperature is normal is another noticeable result. We do not see the marked weakness which has usually been held to characterize the convalescence of typhoid fever. Our patients are kept in bed from seven to ten days after the temperature has returned to normal. During this time they get a very liberal soft diet. Strength and health return rapidly. Many of our moderately severe cases are sweeping the wards and doing other light work when they have been out of bed only three to four days.

The fear of doing harm by feeding contrary to the practice of well-known authorities, is undoubtedly the main reason for the general adherence to the liquid diet. I feel convinced that this fear is absolutely unfounded and that those who resort to liberal diet will find in this method of feeding all that its advocates claim for it.

TRAUMATIC HERNIA.*

BY DRS. PEMBER AND NUZUM,

JANESVILLE, WIS.

About a year ago, T. S., an Austrian laborer, fifty-four years of age and married, came into our office and complained of a swelling in his left groin, the beginning of which he dated from a blow received in the following manner. "He was pinching a ear with a crow-bar, which was between his legs, when a ear was switched against the one he was pinching and caused the crow-bar to fly up and strike him on the buttocks, throwing him three feet into the air."

He immediately felt a pain in the groin and noticed a small lump, but did not stop work or report his injury for about six months.

*Read before the State Medical Society of Wisconsin, June 24, 1910.

Then he came to consult us. Upon examination we found him suffering from a large hernia which could not readily be retained with a truss, so we advised and later did a radical operation.

This led us to investigate the subject of traumatic hernia, one that becomes important when we consider the liability of employer and accident insurance companies. But we did not find the literature on this subject to be voluminous; on the contrary it was quite meager.

During the time of our investigation we were called upon to attend:

S. S.—Italian, age 24, single, section man. While lifting on a heavy "frog" was seized with a severe pain in the inguinal region, and was immediately taken to his bunk in a car. I was called to see him. He was suffering from a strangulated hernia for which we operated and made a radical cure. He had never suffered from hernia before nor was he aware he had any tendency to hernia.

J. B.—Laborer, age 54, married, was crushed between a boat and an ice box which he was endeavoring to move. When he was caught he shoved his body through from between them and the pressure was most severe on his abdomen and back. There were no marks of violence on either but the side of the head and face were excoriated. He suffered from an old inguinal hernia on the left side but this was not forced down.

This accident happened in the early morning and soon after eating a heavy meal. He vomited, had a pinched countenance, temperature normal most of the time, pain not very severe, but the rectus abdominis muscles had a board-like hardness to the touch. Operation was refused and he died in about four days.

Post mortem showed a small tear in the ileum allowing the intestinal contents to escape freely into the peritoneal cavity, causing a diphtheritic peritonitis and thrombosis of the mesentery vessels near the site of the injury.

The most peculiar thing in this case was that the hernial contents were not forced down even though the grinding and pressure motion was so severe as to do great violence to the intestine and mesentery; but we should here remember that the surface of the boat was round and the surface of the ice box was flat, so the pressure was applied to a narrow strip across the abdomen, pressing the intestine across the vertebra, and his forcing his body out before the pressure was relieved was undoubtedly the cause of the fatal injury.

In order to familiarize ourselves with the comparative anatomy of the cat as compared with that of the human animal, we made a dissection of the inguinal region of six cats, on both sides, some male and some female. We found in the male that the cord was very small and pierced the muscle almost at a right angle, making a very small

and short canal and scarcely perceptibly weakening the abdominal wall at this point. This was especially true of the old and muscular cats, so that the abdominal walls in these cats would withstand a great amount of pressure without any hernia being produced.

In the female there was no opening at all as there was no round ligament to pass through the abdominal wall at this point; thus the cat has a great advantage over the human male especially, who have a large and fleshy cord and the muscles diverge and leave a sufficiently large opening for it to escape into the scrotum and still not be compressed and so interfere with the circulation.

As to the advantage of the obliquity of the canal in the human animal there is some room for dispute; but the upright position of the human subjects this region to much greater strain than in the animal walking on all fours, and there is not so marked divergence of the external oblique muscle from the conjoined tendon of the internal oblique and transversalis muscles. It is thus manifest that much less force would be required to produce a hernia in man than in the animal, and this is still further proven when we remember that hernia in animals is extremely rare and only produced by a severe kick or blow which breaks through the abdominal wall and allows the hernial contents to escape, thus amounting to a punctured wound, although the skin may not be broken.

It must be admitted by all that herniae are produced by some sudden fall or jolt, or from strenuous efforts of many varieties, even in men who consider themselves well and free from such ailment, and this may occur while they are performing the duties they have performed daily for an indefinite period of time. It is argued by many that the lax or open canal existed previously. This would be difficult to prove, although it is very apparent that few come up to the type of perfect physique, which is especially true of the weak points in the abdominal cavity.

Traumatic hernia may well be divided into two varieties. 1st, Accidental, where the canal is not well closed and the sack easily formed by the hernial contents being crowded into and stretching the peritoneal opening. 2nd, True traumatic, where the hernial contents are forced through the abdominal parieties, usually at some weak points, as through the diaphragm into the pleural cavity, or through the inguinal canal into the scrotum, or even out through the scrotal coverings or umbilicus, or at other points in the abdominal walls.

It has been claimed by some authors that in true traumatic hernia there is no peritoneal sack, but the peritoneum and other tissues are

torn to or through the skin, and the abdominal contents are forced out into the tissues or out into the air, as I have often noted when a boy, when a mouse or gopher was crushed beneath my feet.

The former or accidental variety is very common and are caused in many ways; from a fall, jumping from a height and striking on the feet, heavy lifting, severe straining at stool, straining to pass water especially in the aged, sudden sneezing, gaseous distention, or carrying objects that press against the abdomen, or any circumstances that may cause a severe or sudden increase in abdominal pressure.

True traumatic hernia is caused by a severe squeezing of the abdomen, as being squeezed between two cars, falling timbers, a falling under a horse or being trampled, stab wounds, being gored by a bull; or as in one case to which I was called, where the patient, a strong man, had fallen upon a saw and his side was ripped open, causing a hernia of the lung and liver.

In such cases there is a solution of continuity of the peritoneum and abdominal walls, more or less extensive, and the abdominal contents are literally pushed out into the tissues, where they may become strangulated. Owing to the great and unusual force which is required to cause the latter variety, the prognosis is correspondingly grave.

The immediate symptoms in accidental hernia are pain, a swelling which is usually small at first and may not extend beyond the external ring, although it usually does; where a loop of the small intestine is incarcerated, the patient soon complains of nausea and vomiting, obstruction to the fecal current soon supervenes as indicated by obstipation, failure to expel flatus, belching and gaseous distention, anxious expression of the countenance; later hiccough, small, feeble pulse, and exhaustion and death, unless relief is obtained.

In true traumatic hernia, you have the history of a most severe injury, the profound shock that always accompanies it, the protruding mass or swelling, and often ruptured internal viscera. If the strength and condition of the patient will warrant operative interference, the indications are so plain that he who runs may read.

The favorite locations for each variety are the weak points in the abdominal parietes, as: the inguinal canal, femoral canal, diaphragm and umbilicus, and in the order here mentioned. A kick or severe trauma may cause a hernia in any part of the abdominal walls.

In the accidental variety the prognosis is good, if promptly relieved and the hernial contents liberated and returned into the abdominal cavity; if unrelieved, it rapidly leads to gangrene of the incarcerated contents with the death of the patient.

The diagnosis of the former is easy, in fact the patient can usually make it himself, but I have met with some cases, where the true nature had been unsuspected and the patient had been treated for cholera morbus, stomach or bowel trouble until it was too late to render any assistance.

Where the hernia is small and the patient corpulent, diagnosis is often a very difficult thing; but the history of the onset, together with the symptoms of obstruction to the fecal current, more or less complete, should put one on his guard. In true traumatic hernia, the history of the injury, the condition of the patient, and the local findings should make the diagnosis easy.

The treatment of the former should be prompt. If the contents can not readily be reduced by taxis, morphine, anesthesia, or by inverting the patient, an operation to reduce them and make a radical cure should be instituted.

Ochsner says that it is in just such cases that delays are extremely dangerous, and taxis should never be long continued, nor harsh manipulation indulged in, because of the fatal injury likely to result to the intestine. An operation done by one less skilled, if done immediately, before the gut has become hopelessly strangulated, is often more successful than one done by the most expert after serious changes have taken place. In the latter, operation offers the only relief and often this is of little avail.

In order to obtain more definite knowledge concerning this very important subject, we conducted a series of experiments on twelve cats, young and old, to determine,

1st. What force or injury would most readily produce a traumatic hernia?

2nd. Where the hernial contents would escape from the abdomen?

3rd. Would the contents tear through the peritoneum or carry it along as a sack?

4th. What if any injury would the abdominal organs sustain?

5th. The difference in effect when fasting and not fasting.

We anesthetized the cats and applied the force in three ways.

1st. By direct pressure to the abdomen up to 750 pounds with a six-inch board in one case and 2x4 in another.

2nd. The same weight applied to the abdomen in the same way and a grinding or rolling motion.

3rd. With a hard blow across the abdomen with a 2x4 thirty inches long.

CASE NO. I. Female cat two-thirds grown, not fasting. Direct pressure of 325 pounds applied on the abdomen by a 2x4, no rotary motion. Post mortem findings: a large left, inguinal hernia, and a hernia under the left crus of the diaphragm. The peritoneum was torn in each case, the large mesentery veins were ruptured, and the injury proved fatal.

CASE NO. II. Female cat, not fasting, struck on the abdomen with a 2x4 three times, the injury proved immediately fatal. Post mortem findings: large intestine entirely severed, vena cava severed, lungs and liver crushed, and the intestine forced through the middle crus of the diaphragm ruptured the peritoneum.

CASE NO. III. Male cat, not fasting, crushed with six-inch board on the abdomen, and under 325 pounds pressure, no rotary motion. Post mortem findings: no hernia was produced, the mesenteric vessels were crushed and bleeding.

CASE NO. IV. Female cat crushed under a 2x4 timber, 325 pounds pressure applied under rotary motion, not fatal. Post mortem findings: diaphragmatic hernia on the left side with peritoneum pushed in front of it, vena cava crushed off and mesenteric vessels injured.

CASE NO. V. Female cat not fasting crushed under a six-inch board, 325 pounds pressure applied with rolling motion. Post mortem findings: right inguinal hernia containing the urinary bladder and a large portion of the intestines; the peritoneum was unbroken and pushed ahead of the hernial contents, thus forming a peritoneal covering.

CASE NO. VI. Female cat, not fasting, struck a hard blow on the abdomen with a 2x4 three feet long. Post mortem findings: the small intestine was cut in one place and the vena cava crushed off; no hernia was produced, was not immediately fatal, but must have proven so in a short time.

CASE NO. VII. Large male cat, full grown, fasting, anesthetized and placed on the back, with a six-inch board on the abdomen, under 460 pounds pressure, no motion. Post mortem findings: renal vein on the left side ruptured, no hernia or other serious injury.

CASE VIII. Female cat, fasting, anesthetized and placed on the back and a three-inch board placed on the abdomen and 600 pounds direct pressure applied. Post mortem findings: hernia through the right crus of the diaphragm, peritoneum torn, and rupture of the right renal vein near the vena-cava.

CASE NO. IX. Male cat, fasting, anesthetized and placed in the left lateral position, a three-inch board placed across the abdomen, and 770 pounds pressure applied. Post mortem findings: no hernia produced, no intestine or large vessels ruptured, right psoas muscle crushed from the diaphragm to the pelvis and a portion of the greater omentum torn loose from above.

CASE NO. X. Large female cat, fasting, anesthetized and placed on the back, and 260 pounds pressure applied on a three-inch board placed on the abdomen, rolling motion. Post mortem findings: no hernia produced, but pressure crushed off the spleen one quarter of the way from the tail to the head of the same. Some ecchymosis around the abdominal aorta and vena-cava. Psoas muscle slightly crushed.

CASE XI. Female cat, two-thirds grown, fasting, anesthetized and placed on the left side and crushed under a six-inch board and 460 pounds pressure, rolling motion. Post mortem findings: right inguinal hernia and right diaphragmatic hernia, peritoneum pushed in front of the hernial contents, in each case unbroken and forming the hernial sack. Renal veins and vena-cava on the right side, seriously traumatized. Pelvis of the right kidney ruptured.

CASE NO. XII. Large male cat, fasting, anesthetized and placed under a six-inch board, and 330 pounds of pressure applied, with rolling motion. Post mortem findings: no hernia produced. The veins ascending from the pelvis over the promontory of the sacrum traumatized and much ecchymosis in said locality.

Summary of twelve experiments.

Twelve cats were utilized, six fasting and six not fasting.

Herniae were more often and more easily produced in those that were fed.

A rolling motion more often produced hernia, as well as serious trauma to the viscera, than direct pressure of equal severity.

Seven herniae were produced, three inguinal and four diaphragmatic.

The peritoneum was torn in three instances and was pushed in front of the hernial contents, forming a sack for the same in four cases.

In every instance there was more or less severe injury done to the vessels, viscera or to both.

Conclusions. 1st. Traumatic hernia is not likely to be produced by a blow which is short of lethal, unless a punctured wound is produced.

2nd. A rolling motion with squeezing is more likely to produce hernia, as well as other serious injuries to the abdominal walls and contents than mere pressure.

3rd. A blow which is sufficiently severe to produce hernia would be certain to do sufficient violence to the other abdominal organs to prove fatal.

4th. The two extremities of the abdominal cavity are the points of least resistance: the inguinal regions and the diaphragm.

5th. Hernia is more easily produced in young than in fully developed and muscular animals, and in those with full stomach and intestines than in the fasting state.

6th. In true traumatic hernia the peritoneum may be and often is forced through the abdominal walls ahead of the hernial contents, forming a sack for the latter.

Discussion.

DR. T. L. HARRINGTON, Milwaukee: I think the society is very fortunate in having this valuable paper presented, and I want to say that I wish we all would take the pains when we furnish a clinical paper of this kind to endorse our findings by laboratory experiments, or by the laboratory method, as has been done in this case.

This is an important subject, and growing more important because many of our states are agitating the question of industrial insurance, and there is no doubt that, as in Germany, we will have within a short time a system of industrial insurance in which the corporation will pay a certain amount when the employé is injured and payment will be made without resort to a suit in court.

All I can hope to do in the brief time that I will take to discuss this paper is to emphasize a few points brought out by the doctors in their essay.

And in the first place I want to call attention to the fact that force is a factor in the production of every hernia. A man may be lifting, or he may fall, and discover a hernia after the lifting or the fall. That does not prove that it is a traumatic hernia. That is the first and essential principle we should get in mind, that the presence of a hernia following force is not sufficient to bring it under the classification of traumatic hernia.

By a traumatism we mean a morbid or pathological condition produced by external violence, and by violence we mean unrestricted or unusual or unlawful use of physical force. We now know, and the doctors' experiments show, that many injuries of the abdomen may be so severe as to rupture the intestines or other viscera without producing a hernia. I had two cases in my office this week that illustrate the thought I wish to bring out. One was the case of a retired capitalist who is eighty years old. He has been having painting done in one of his houses where he was obliged, or felt he was obliged, to go up and down four or five flights of stairs a number of times. He had just gotten up from a sick bed and during his sickness he lost some fifteen or twenty pounds of flesh. After this walking up and down stairs and carrying some little things, he noticed a slight swelling in the inguinal region and a little discomfort there. That man came to me and I found a small hernia easily reducible. Now if that man had been stepping off the street car and the car had started up so that he had dropped to the pavement, or if he had been touched by an automobile and had fallen; I will warrant that you could find fifty physicians in Milwaukee who would go on the stand and swear that the hernia following a slight accident that he may have had was a traumatic hernia. Do you see the point? That hernia was produced by force but it is not a traumatic hernia because the force was not unusual or unlawful.

Again, a young fireman was sent to my office for examination after he had

attempted to light the headlight of his locomotive, and something gave way and he fell to the ground. He struck his abdomen and groin. He complained of pain in the right inguinal region. On examination I found there was no hernia present, but that man has a patulous inguinal canal, so that the finger passed up through the canal to the internal ring; and if you ask him to cough you get not only the impulse on the tip of the finger but you get the impulse on the sides of the finger. I told the young man that he would develop a hernia, in all probability, in that inguinal canal before very long.

But supposing there is an inguinal canal that is patulous, and supposing that after a fall a hernia is present: I am sure that you could find fifty or a hundred physicians in Milwaukee who would be willing to go on the stand and swear that that was a traumatic hernia.

Now I want to insist that you cannot get a traumatic hernia without severe shock; you cannot get a traumatic hernia without the symptoms of an unusual and violent injury; and the fact that we constantly have men developing hernias at their ordinary labor makes it necessary for us, and makes it necessary for the profession as a whole, to distinguish clearly the hernia that is really a traumatic hernia and the hernia that follows a weakened or unguarded inguinal canal, that pushes its way through the weakened or unguarded inguinal canal after the ordinary occupations or some slight accident that had absolutely nothing to do with the production of the hernia.

Again, some writers on this subject have insisted in the past that you cannot get a traumatic hernia without a tear of the peritoneum. The doctors in their experimental work on the cat show that you may get a traumatic hernia either with a tear of the peritoneum or with a pushing of the peritoneum down in front of the contents of the hernia. So that this again shows us the importance of fortifying our theories with experimental work.

DR. H. REINEKING of Milwaukee: I am glad to have heard this interesting paper, but must say that the doctor's clinical cases are not convincing. The diagnosis of traumatic hernia should not be made unless it can be based on the following conditions: if seen soon after the occurrence of the injury there should be pronounced local symptoms; if seen later, the diagnosis should not be made unless the surgeon is personally familiar with the patient's condition before the injury, for the reason that although the patient may be perfectly honest, a partial hernia may have been present without his knowing it. Personally, while I see and treat a considerable number of hernias and examine a great many injured persons, I have never seen a case which I could consistently call traumatic hernia at one of the so-called hernial openings. I have repeatedly been confronted with men with the statement that they had become ruptured through an injury, but in no instance have they maintained this assertion on close questioning as to their previous history, and on finding that I was not ready to accept their statement.

DR. R. G. SAYLE of Milwaukee: I think Dr. Reinking struck the key note when he says they *may* occur. I doubt whether we could get fifty reputable physicians in Milwaukee to speak very strongly for frequent production of traumatic hernia. My own opinion is that true traumatic hernia is always the result of a direct blow; and there is always an immediate local disturbance if trauma produces a hernia. I do not know whether we could

not maintain in court that a hernia was traumatic even if a man had a rather funnel-shaped exit at the usual point of an inguinal hernia, where he had suffered local disturbance at the time of the injury, especially if it were by direct force, somewhat limited at the point of rupture. I have met with cases of traumatic hernia that could be successfully maintained as such in court. I might cite the instance of a young boy of fifteen who received an impact from a base ball directly in the inguinal ring; he immediately had tumefaction and tenderness there, and shortly afterwards there was a bulging and an apparent hernia developed. I operated upon the young man. The sac was very limited in extent but somewhat wide; the inguinal ring was attenuated and pushed away from its normal position; I think there had been a traumatic injury to the supporting tissues. Although he may have had a somewhat unusual aperture (no more, however, than many of us have for hernia), yet I think the blow resulted directly in the formation of a hernia. We cannot say that the local blow is not sometimes productive of a disturbance which may result in a hernia.

I agree in the main with Dr. Reineking; and I do not fully concur in the conclusion drawn by the essayists from their experiments as to the production of hernia from trauma. But I do believe that an argument can be made in favor of the diagnosis of hernia by trauma, where the blow is somewhat severe and is localized, causing an injury to the muscles which afford protection at the particular point, the withdrawal of this protection resulting in a hernia which might properly be called traumatic.

Dr. T. W. NUZUM, Janesville (Closing): I want to say with regard to the first case reported, that we did not believe it was due to the injury for he did not report, as I said in the paper, for more than three months, and that was when he was discharged by the company. We had some correspondence with the company and they were very willing to settle with him and to pay the expense of having him cured. So that is the way the company felt about it. I think he would have had a difficult time to establish his claim in court, and we were surprised at the willingness with which the company settled that claim and paid for his hospital expense and operation to cure the hernia.

As to the possibility of producing a hernia, I think there is no possible question that it may be done—not only by a blow but by sufficient squeezing force, especially if the intestines are full of gas, food and feces. That it is not very common I feel just as confident. That many a hernia is produced by lifting, jumping or falling and striking on the feet, as our notes in men who have not had any symptoms heretofore indicate, I have not a particle of doubt; and such a hernia might be produced in one of us, and still we might consider ourselves absolutely as safe from hernia as any one. Especially is that apt to be the case where one has suddenly lost flesh, or, as when we get older, the tissues become more lax.

A short time ago a physician, a friend of mine, told me that he was carrying a couple of valises on ship-board when starting for Europe, he got into a crowd, and was pushed and squeezed quite hard; he felt a pain in the groin and as soon as he was in position to make an examination, discovered that he had been ruptured. He is an athletic, well-built man in whom you would not suspect anything of the kind. This pushing, crowding and squeez-

ing did not cause much of a trauma, and still he had a hernia produced by squeezing and lifting in combination.

If we consider the case of the laborer, the young man who had the open inguinal ring, that the doctor speaks of, who fell and struck heavily on his feet, suffering pain immediately as the result of trauma in the inguinal region, and a hernia developing either at once or later: it would be pretty hard to convince a jury that that injury had nothing to do with the production of the hernia. I think we would all have to admit that it might have had some causative influence in its production.

That such a thing is possible as a traumatic hernia, produced not only by squeezing—which is the most easy and common way—but by falling heavily, striking on the feet with a sudden jar, or as I said before, by any force which would cause undue intra-abdominal pressure, there can be no doubt.

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No. 11

EDITORIAL COMMENT.

THE ANNUAL MEETING.

PRINCIPAL ADDRESSES BY DRs. R. C. CABOT AND J. E. GOLDTHWAIT
OF BOSTON.

The Program Committee announces that the program for the Waukesha meeting is about complete. It is believed that it is fully up to the standard of former years and that, being representative of all departments of medicine, something of interest will be found in it for every member in attendance. The addresses on medicine and surgery will be given by Dr. R. C. Cabot and Dr. Joel E. Goldthwait, both of Boston. It is needless to say that these numbers alone will make the scientific program of unusual value.

The number of papers to be delivered will be fewer than usual, not more than twenty in place of twenty-four as on last year's program. This cutting down has been done in order to give more time for discussion which has too frequently had to be curtailed in the past. It is proposed to give full time for every paper presented, and to encourage and even demand full discussion. Openers of discussion will be provided as usual, but it is hoped that others will have something to say in reply to those papers which especially interest them. It is the belief of the committee that discussion is the most valuable part of the program.

Titles and abstracts will be published in the May number of the Journal and will also appear in the usual booklet sent to each member before the meeting.

SECRETARY'S NOTES.

The Annual Meeting of the Council was held at the rooms of the Milwaukee Medical Society, Dec. 31, 1910, and was called to order at 11:45 A. M. There were present Drs. Caples, Redelings, Windenheim, Hougen, Mears, Hall, Sleyster, Seaman and Sheldon. The reports of the Councilors present were favorable and indicated a consistent progress in the efficiency of the organization. The Secretary reported the total membership in 1910 to date as 1607. The total number of new members added during the year was 257, of delinquents 78, making a net gain of 179.

In the different Councilor districts the number of new members and delinquents were reported as follows: First district, 11-5, second, 6-5; third, 34-8; fourth, 19-8; fifth, 20-1; sixth, 25-7; seventh, 23-3; eighth, 16-6; ninth, 48.5; tenth, 26-9; eleventh, 16-4; twelfth, 18-17.

Several successful district meetings were reported, and it was the sense of the Council that one or more district meetings should be held in each year in each district.

The managing editor of the Journal made a report, and affairs relating to the Journal were discussed at length.

Dr. Edward Evans was elected chairman of the Council, Dr. S. S. Hall was elected Treasurer, and Dr. C. S. Sheldon was elected Secretary for the ensuing year.

THE ANNUAL REPORTS.

The Annual Reports are now due and the County Secretaries are urged to make all expedition in completing and sending them in as soon as possible. As so often stated, the County Secretary is the most

important factor in the whole problem of organization, and he can not regard the duties of his office too seriously. To maintain the splendid growth of the past year will mean most active and devoted effort on the part of every County Secretary. The reports should be made out as fully as possible before sending in, and the status of every delinquent should be clearly stated. It is necessary that the reports be sent in promptly since our Annual Meeting this year is earlier than usual, June 7-9. Only 24 out of the 53 reports have thus far been sent in and some of these are only partial. All reports should be in by May 1st, at the very latest.

THE ANNUAL MEETING.

The Annual Meeting will be held this year at Waukesha, and the headquarters and the meeting will be at the magnificent new hotel, Resthaven. This year, the time, the place, and the man (President Caples), are all auspicious and should bring out the biggest and best kind of a meeting. We are almost certain to have good weather, and escape the suffocating heat of the last two meetings. The hospitality and good cheer of Waukesha are known the world over, and President Caples has been waiting all these years to give us the time of our lives. Waukesha water may not be as exhilarating as Milwaukee beer, but it is said to be good for the kidneys, and may be safely taken in large quantities. We shall have our "Smoker" on Wednesday evening, to get better acquainted with each other, and the "Banquet"—which each year grows more delightful—on Thursday evening. If there are other "stunts" in store for us, they will be duly reported in the May Journal. Information of a confidential character has leaked out from the office of Chairman Gray that the scientific program will be "classy," to a high degree, in fact, "equalled by few, and excelled by none." He is understood to stake his reputation on this statement.

Dr. J. E. Goldthwait of Boston will give the annual address in Surgery and Dr. R. C. Cabot, Boston, will give the address in medicine. These men are at the very front of the medical profession and their well known great ability insures us a genuine treat which no member of the society should miss if he can possibly raise the necessary funds to get to Waukesha.

This is simply *one* attraction, but there are other excellent reasons, too numerous to mention, why you should regard it as a real privilege to meet once a year, with your brother physicians of the state. It is a well-known fact that the best and busiest doctors are the ones to be found attending the Medical Society; so, if you are not there,

it logically follows that you are not able to trot in that class. Accordingly, delay no longer, but just make up your mind to drop everything and come! If you have been overworked, you need the rest, and your *patients* too. If you have not had much to do, that is the best reason in the world for you to come and get a new grip on things, to return to your work with a new enthusiasm and an increased devotion and respect for your chosen profession. By all means bring your wife along. She will have a good time, and has richly earned it by answering you telephone calls and trying to satisfactorily explain your numerous derelictions. There is only one side to this argument and nothing further need be said. Out of our 1600 members, one half should be at the meeting. Such a demonstration of the organized power and influence of the medical profession of the state would be worth while, in more ways than one.

C. S. S.

A COURSE IN PUBLIC HEALTH AT THE UNIVERSITY.

In the President's Annual Address before the State Medical Society two years ago Dr. G. E. Seaman, who has recently been appointed to the Board of Regents by Gov. McGovern, made the following plea:

"Particularly would I urge the advisability of the medical department of our State University, with its splendid laboratories, its contact with the Department of Engineering, Agriculture, Biology, Law, Social Economics, the Hygienic Laboratory, State Board of Health, Bureau of Vital Statistics, and Food and Dairy Commission, seriously considering the development of a School of Public Health and Sanitary Science, where men may pursue the study of the great health problems, in such a way, and for such a time, as would fit them for public health positions of all kinds.

The subject is too vast for me to attempt the elaboration of such a course; but I would point to the fact that no such school as here suggested is now in existence in this country, although the University of Pennsylvania and Columbia University and others have recently made a start in this direction by the establishment of more comprehensive courses of lectures on hygiene and public health; and I understand that there is, in contemplation at Columbia the elaboration of a complete course in sanitary science. By way of contrast I would say that such a course leading to the degree of doctor of public health, is given at Oxford, Cambridge, the University of London and other Universities in Great Britain; and the highly trained public health

officer is a special feature of English professional life. And I have the authority of Dr. Osler for the statement that at the present time in England the man who has been trained in public health in the courses which lead to the D. P. H. degree, is the only man who is thought of in connection with the most important public health positions. This is surely as it should be, for the public health is too sacred a consideration to be subjected to the degrading and dangerous touch of partisan politics.

The subjects of water and food supply, disposal of waste, the proper housing of the people, the stamping out of preventable diseases, and many other questions of this nature, deserve the demand the study of a lifetime; and men who devote their time to these matters should first be adequately trained, and then should expect and be permitted to make it their life work.

The highest function of the State, without doubt, is the preservation of the life and health, and the promotion of the comfort and happiness of its people; and why should not our State University, recognizing the course of evolution in medical progress, take the next step in medical education and provide such a school as is here suggested, and thus, without adding greatly to the present cost of maintenance of the University, vastly increase its prestige as a progressive educational institution, and confer a lasting benefit upon all the people within the sphere of its influence?"

Since that time courses of this character have been introduced at the University of Pennsylvania, Harvard and Columbia.

It will be a source of much gratification to all the members of the medical profession in Wisconsin to know that the University of Wisconsin is now prepared to give the following course in Public Health, and that for its completion a diploma in public health will be granted:

FIRST SEMESTER.

1. Bacteriology for health officers—to be given in conjunction with medical bacteriology, but with special laboratory work and some special lectures. Tu. W. Th. F. S.—5/5 Cr.
2. Physiology—Respiration, dietetics, the chemistry of food, air, water, sewage, etc. Lectures daily at 11. Laboratory work M. W. F. 2:30-4:30.
3. Meteorology, Prof. Miller.
4. Medical Zoology—Tu. Th. 1:30-4:30. Prof. Allen.

SECOND SEMESTER.

Special bacteriology, pathology and hygiene for health officers—to include bacteriology of air, water, food and soils, epidemiology diseases of animals

transferable to man, occupational diseases, etc. Tu. Th. F. S. 12. Dr. Ravenel and Dr. Bunting, to be in part in conjunction with the regular course in pathology.

2. Microscopical examination of drugs and foods. M. W. F. 10—2. Prof. Denniston.

3. Public Health Administration and Vital Statistics. Mr. Hutchcroft. Course to be arranged for afternoon work in conjunction with the following course.

4. Practical field work—including use of disinfectants, inspection of slaughter houses, cow sheds, meat, schools, factories and work shops. Dr. Frost and Dr. Harper.

5. Hydrology. Prof Mead—2/5 cr.

It is to be hoped that many physicians will avail themselves of the opportunity thus provided to fit themselves for this important field of work.

NEWS ITEMS AND PERSONALS.

Dr. I. Buckeridge, Beloit, is seriously ill.

Dr. L. F. Bennett, Beloit, has returned from an extended trip through the west.

Dr. F. P. Stiles, Sparta, was operated upon for gall-stones, March 14, at Rochester, Minn.

Dr. H. B. Newell, Waterford, has returned home after spending the winter in California.

Dr. S. G. Higgins, Milwaukee, has resigned the position of assistant medical inspector of the public schools.

Dr. F. W. Bromley, Palmyra, retires May 1st, after twenty-eight years of practice. He will be succeeded by Dr. C. A. Dodson, Chicago.

The New York Post-Graduate has plans and descriptions of its new School and Hospital, at the International Hygiene Exhibit at Dresden, Germany.

Dr. Wm. F. Whyte, Watertown, has been reappointed a member of the State Board of Health, by Gov. McGovern, for a seven year term, ending in February, 1918.

Sturgeon Bay is soon to have a general hospital. Definite steps for the organization of a corporation to maintain such an institution were taken at a meeting held on March 23rd.

Dr. Edward F. Ashley, a bacteriologist, died on Swinburne Island, in New York Harbor, March 21, a martyr to the fight against the entry at this port of cerebro-spinal meningitis through infected Greek immigrants.

Five counties in the state are desirous of having the power to erect tuberculosis sanatoriums of their own. La Crosse heads the list, inasmuch as La Crosse County has appropriated \$5,000 to carry on the work, while the other four counties—Marathon, Winnebago, Eau Claire and Kenosha—have put themselves on record as favoring such power.

Removals. Dr. H. J. Higgs, Wausaukee to Crivitz.

Dr. Otto Sporleder, Black Hawk to Logansville.

Dr. D. W. Clark, Dodgeville to Ladysmith.

Dr. J. M. Hogan, Rhinelander to Oshkosh.

Dr. Waite, Columbus to Big Bend.

Dr. O. L. Hansen, Argyle to Chicago.

Dr. C. E. Phillips, Eau Claire to Gueydan, La.

Dr. Oscar Houck, Wautoma to La Crosse.

Deaths. Dr. L. B. Lewis, Sun Prairie, died suddenly March 20th, at Redlands, Cal., of paralysis, aged 65 years.

Dr. John B. Trowbridge, Hayward, died on March 20th, of cancer, after an illness of two years. Dr. Trowbridge was born November 12, 1855, at Knowlesville, N. Y. Later his parents moved to Wisconsin. In 1876 he graduated from the State University, and from Rush Medical College in 1882. He was a member of the Wisconsin State and American Medical Associations, and was president of both the Inter-county Medical Society and Washburn-Sawyer-Burnett County Medical Society.

Dr. Carl L. R. Zimmermann, Campbellsport, died on March 30, 1911. Deceased was born on August 12, 1829, at Friedeburg, Brandenburg, Germany. After finishing his studies at the parochial schools, he entered the gymnasium at Koenigsberg. He also studied at the Gymnasium of Neu-Ruppin, the University of Griefswald, Germany, and later took a four years' medical course at the University of Breslau. Dr. Zimmermann came to America in 1858 and shortly after settled at New Cassel, which is now a part of Campbellsport. Twelve years ago Dr. Zimmermann retired from active practice.

THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORGANIZED 1841.

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Delegates to American Medical Association.

L. F. Bennett, Beloit. C. S. Sheldon, Madison. A. H. Levings, Milwaukee.

Alternates.

F. S. Wiley, Fond du Lac. Wilson Cunningham, Platteville. R. G. Sayle, Milwaukee.

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TERM EXPIRES 1911.			TERM EXPIRES 1914.		
1st Dist., H. B. Sears, - -	Beaver Dam		7th Dist., Edward Evans, - -		La Crosse
2nd Dist., G. Windesheim, - -	Kenosha		8th Dist., T. J. Redelings, - -		Marinette
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TERM EXPIRES 1913.			TERM EXPIRES 1916.		
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6th Dist., H. W. Abraham, - -	Appleton		12th Dist., H. E. Dearholt, - -		Milwaukee

NEXT ANNUAL SESSION, WAUKESHA, JUNE 7, 8 and 9, 1911.

The Wisconsin Medical Journal, Official Publication.

SOCIETY PROCEEDINGS.

CALUMET COUNTY MEDICAL SOCIETY.

The Calumet County Medical Society met at Forest Junction, March 31st.

Meeting called to order by Dr. William Martens, vice-president, in the absence of the president. The following members were present: Drs. Bolton, Greengo, McComb, Lawler, Martens, MacCollum, and Schmidt. Visitors: Drs. Witte and Blaine, Milwaukee; Schmitz and Egloff, Elkhart Lake.

Minutes of previous meeting read and approved. We then listened to a paper by Dr. C. F. Lawler on Nephritis. Discussion opened by Dr. William Martens, a general discussion following. We then listened to a very interesting paper on Recent Advances in the Treatment of Fractures, by Dr. W. C. F. Witte of Milwaukee, the doctor at the same time exhibiting an apparatus for reduction of fractures and holding them in place until a cast is applied. He also showed some very interesting plates of fractures, etc., before and after reduction. These plates were mostly the work of Dr. Blaine, and certainly were some of the best we had ever seen. The doctor brought

out the point of the value of the X-ray in fracture cases. General discussion of the paper and subject in general followed.

Moved and carried that we extend a vote of thanks to Dr. Witte for presenting the paper referred to above.

Moved and carried that the president appoint a committee of three members to confer with the telephone company as to telephone service at Hilbert Junction. Drs. MacCollum, N. J. Knauf and Bolton were appointed. Moved that we adjourn.

After adjournment we partook of a bounteous supper at the dining room of the Hotel Thomas and spent an hour in a social way.

J. A. SCHMIDT, *Secretary.*

JOINT MEETING FOND DU LAC-WINNEBAGO COUNTY MEDICAL SOCIETIES.

A joint meeting of the Fond du Lac and Winnebago County Medical Societies was held at Fond du Lac on March 8th. There were fifteen visitors from Oshkosh.

Dr. F. Gregory Connell read a paper on The Early Diagnosis of Cancer and Dr. L. A. Bishop presented a paper on Tuberculosis in its Incipient Stage. An informal discussion of both papers followed.

Supper was served at the Erving Hotel.

LA CROSSE COUNTY MEDICAL SOCIETY.

The fourth regular meeting of the La Crosse County Medical Society was held at the La Crosse Club, April 6, 1911, Dr. Marquardt presiding. It having been suggested at a previous meeting, that the relative powers of our health board and the individual physician be considered, we decided to do so at this meeting. Dr. Furstman read the State laws regulating the reporting and quarantine of infectious diseases. Some misunderstandings have arisen regarding the diagnosis and quarantine of various infectious diseases, these were taken up and discussed. The discussion was general and in good spirit, and matters were thoroughly cleared up, all leaving in a spirit of good fellowship, after spending some time in a social session.

M. W. DVORAK, *Secretary.*

LANGLADE COUNTY MEDICAL SOCIETY.

The Langlade County Medical Society met at the City Hall, at Antigo, March 25th.

Dr. Watson read a very interesting and instructive paper on Normal Salt Solution as Used Today. Dr. Wolfrum read a paper on Therapeutics. Both papers were well discussed and brought out some good ideas. Clinical cases were then taken up, experiences related, and a rousing good meeting was the result.

After the meeting a banquet and smoker was held at the Cafe Davenport.

J. C. WRIGHT, M. D., *Secretary.*

MANITOWOC COUNTY MEDICAL AND HISTORICAL SOCIETY.

A joint meeting of the Manitowoc County Medical and Historical Societies was held at the Public Library of Manitowoc on March 25th.

Dr. Louis Falge read a paper on History of the Medical Profession in Manitowoc County.

The meeting was open to the public and was an interesting one.

OUTAGAMIE COUNTY MEDICAL SOCIETY.

The Outagamie County Medical Society held a meeting at Appleton on March 9th, at which the annual election of officers took place, resulting as follows:

President, V. F. Marshall, Appleton; Vice-president, J. J. Laird, Black Creek; Secretary-Treasurer, F. P. Doherty, Appleton; Delegate, C. D. Boyd, Kaukauna; Censor, C. G. Maes, Kimberly.

Prof. Schroeder of Chicago, surgical director of the Northwestern University, read a paper on Surgery, and Dr. M. P. Ravenel, University of Wisconsin, read a paper on Quarantine and Isolation.

The meeting was followed by a banquet at the Sherman House.

JOINT MEETING ROCK COUNTY AND THIRD COUNCILOR DISTRICT MEDICAL SOCIETIES.

A joint session of the Rock County and Third Councilor District Medical Societies was held at the City Hall at Janesville on March 28th.

Dr. Frank Van Kirk read a paper on Diagnosis of Pelvic Infection, and Dr. Julius Noer presented a paper on Obstetrical Emergencies. Both papers were discussed. Dr. L. R. Head, Madison, then read a paper on Gastric Ulcer. A paper on Renal Calculus, by Dr. L. W. Bannerman, Chicago, completed the morning program.

Following a dinner at the Grand Hotel, Dr. E. H. Ochsner of Chicago read a paper on Acute Infections, followed by Prof. Lewis Kahlenberg of Madison on Osmosis. These papers were discussed. Dr. L. R. Moyer of Monroe then read a paper on Diabetes Mellitus, with Clinical Report and Presentation of Case. Dr. Fred Johnson of North Freedom closed the program with a lecture on Diabetes Insipidus.

TWIN CITY MEDICAL ASSOCIATION,

The Twin City Medical Association held a meeting at Marinette, on March 8th, the public being invited. Dr. H. T. Schroeder acted as chairman.

Dr. M. D. Bird, Marinette, delivered the first address on Recognition of Contagious Diseases. Dr. H. T. Sethney, Menomonie, followed with a paper on Prevention of Contagious Diseases. A general discussion followed.

**THE ASSOCIATION OF
COUNTY SECRETARIES AND STATE OFFICERS
OF THE STATE MEDICAL SOCIETY OF WISCONSIN.**

T. J. REDELINGS, M. D., Marinette,
President.

W. F. ZEIRATH, M. D., Sheboygan,
Vice-President.

ROCK SLEYSER, M. D., Waupun, Secretary.

NEXT ANNUAL SESSION, WAUKESHA, 1911.

Under this heading will be published each month, papers, editorials, sermons, reports of meetings and all that relates to the County Medical Societies of the state. To it all are invited and asked to contribute, especially the County Secretary. It is yours—make good use of it, and may it be of help to every County Society. It will be edited by Rock Sleyster of Waupun, secretary of the new association, to whom all communications for this department, reports of meetings and news matter should be addressed.

THE ASSOCIATION OF COUNTY SECRETARIES AND
STATE OFFICERS OF THE STATE MEDICAL
SOCIETY OF WISCONSIN.

BY ROCK SLEYSER.

EASTER BOOSTER SERMON.

This is the season, Beloved, of new hats, new greens and foliage, new ideas and ambitions, and last but always foremost, new members for your county society. It is the season of awakenings. The budding trees, the flowering brush, the song of the north-bound bird, all tell us that all nature is awake. Ah! would that this were true of all of our county secretaries! I fear the season is backward in some sections of the state! We have worked early, we have worked late, under the banner of St. Boostheimer; we have quite a number of heathens to our credit for 1911, but we are out of names and some of these secretaries won't even write us who their heathens are! Only five weeks remain before the Waukesha meeting. The time is very short and the Head Booster is getting "durn peevish" for fear we won't show a greater gain than last year.

This, then, is an appeal not only to the county secretaries, but to all others. If you have a man in your neighborhood who should belong to your county and the state society and who does not, make an effort to get his application. If you have tried and failed, try again or write to me and let me try. Last year I secured 119 applications from just such fellows. Many of them had not had the matter explained to them at all and had no idea of the advantages of belonging to the organization. Others had been overlooked entirely. We need them and they need us to make a united profession in Wisconsin, Help these coming weeks and may St. Boostheimer bless you!

THE ANNUAL LETTER.

Every wide-awake secretary recognizes the advantage of sending out at this time of the year, or earlier, a letter reminding members that a new year of society activities has begun, and reminding them in a delicate way that the dues are payable for the new year. It is often hard to word these letters so they accomplish their entire purpose without giving offense. I append herewith a letter sent out by Dr. Glasier, secretary of the Grant County Society, this year. I consider it a model of its kind and well worth copying.

GRANT COUNTY MEDICAL SOCIETY.

OFFICE OF THE SECRETARY.

BLOOMINGTON, WIS., March 1, 1911.

DEAR DOCTOR:—Another year has passed into history, thus reminding us for the eighth time since this Society was organized that another thread has been unwound from off the reel of Father Time.

At the beginning of this the ninth year we again come to you to ask for your support and assistance for *your* Society for another twelve months. We need your influence, your good will, your attendance at the meetings, and your money to keep our Society on the high plane it has occupied in the past.

Four dollars makes you a member of the Grant County Medical Society. the Wisconsin State Medical Society, affords you protection by the Medical Defense Society, and gives you the Wisconsin Medical Journal for one year. You will also be eligible to membership in the American Medical Association.

We ask you to leave this request in plain sight on your desk, so that you will not forget it until your dues are paid for 1911.

Hoping to hear from each one of you by return mail, I am, with wishes for a happy and prosperous New Year,

Sincerely and fraternally yours,

M. B. GLASIER, *Secretary.*

THE BUSINESS SIDE OF THE SECRETARIES' WORK.*

BY M. V. DEWIRE,

SHARON, WIS.

"The Business Side of the Secretaries' Work" is, in the majority of instances, the management of the whole society. He keeps the records of the Society, collects the dues, remits to the State Society, incurs the expenses and pays the bills of the Society, arranges for the time and place of meeting, works up the program and sees to it that it goes off smoothly, looks out for the social features, arranges for the clinical cases, sees to the printing and mailing of programs, solicits new members, and generally keeps the machinery of the society well oiled and in good running order.

That this is no small task you will all agree, and that the secretary often has problems to face that will keep him in a brown study for days at a time, is doubtless the experience of many of you. But perseverance, coupled with a fair amount of tact, will help us over the worst places and bring us out fairly successful in the end.

The number of meetings to be held each year will vary with the number of members in the society, their convenience in getting together and the transportation facilities in your district. In the counties containing cities and having a large membership the meetings may be held semi-monthly or even weekly, but in the outlying districts, where the membership is small and scattered, quarterly meetings are about all that can be managed.

In Walworth county the meetings are held in the county seat which is in the center of the county, and are held quarterly. A number of the members have to drive from fifteen to twenty-five miles to attend these meetings and still we have a very good average attendance. The meetings are held in January, June, September and November. The January is the annual meeting at which we elect our officers for the ensuing year, make our annual reports and so on. The September meeting is held at Lake Geneva and is largely a social affair, and the whole day is given up to it.

The arrangement of the program will depend largely on the turn of mind of the majority of the members, as to whether they are Surgeons, Obstetricians, Internists, or what. It is well to alternate the subjects and we have found it advantageous to make a sort of symposium of the subject in hand, in programs, so as to be able to dis-

*Read at the First Annual Meeting of the Association of County Secretaries and State Officers, Milwaukee, June 21, 1910.

cuss the subject from all angles. The program should not be too long, so as to give plenty of time for discussion and the members should be encouraged to ask questions and express their views, for a free and open discussion brings out points that will be helpful to many of them.

Some little social feature, such as a dinner or lunch, should be a part of every meeting and should be entirely informal. The time thus spent in chatting and visiting with each other seems to get the members better acquainted, to break down prejudices and petty jealousies, and to cement friendships that serve to increase the value of the society work, and the amount of good done to all the members.

In order to have a successful meeting it is best to commence to arrange for the program at least three months in advance. Get the program outlined, select the men whom you wish to appear on it, and then either see them personally or open up correspondence with them on the subject, get their consent to prepare a paper and then stimulate them by word or letter until the work is done and your program goes off smoothly. If you can get your membership to feel that each man is responsible for some part in the work and get him to do his part cheerfully, you will soon have a society that will run smoothly and evenly and will accomplish great things.

And don't forget to express your appreciation of the help given you in getting the program ready. It is often quite a hardship for a busy man to take the time necessary to prepare a paper such as he deems suitable to be read before the society, and a few words of commendation of the way in which he has handled his subject, or brought out certain points in his paper, and of appreciation for his help in making up the program, will make him feel well repaid for his effort and be ready and willing to help you another time when you may want him.

If any clinical cases can be brought before the meeting, they are of great help and serve to make a deeper impression of the points brought out. Members should be urged to bring these cases before the meeting, and patients can often be persuaded to come by explaining to them the fact that they will get the benefit of the experience of the entire society instead of their one man. A well written case-record of some case that has been a little out of the ordinary, makes an interesting paper and often proves beneficial to some man who has been at sea on a similar case. In short, anything that proves interesting to one member of the society is very apt to prove interesting to other members and is well worth considering as good material for some future program.

Our September meeting is largely a social affair and we make a sort of a holiday out of it. We try and make the program of a semi-public nature, discussing some question occupying the public attention at that time. We invite the doctors and their wives, the dentists and their wives, and the nurses of the county to meet with us. We have the program in the forenoon, then a good dinner followed by a short program of some four or five toasts, and then wind up the day with an excursion around the beautiful Lake Geneva. This meeting usually brings out a full attendance and all seem to have a good time, and it nearly always brings us in some new members.

Invitations should be printed and mailed at least a week before the time set for the meeting. We have found it convenient to use a three page invitation. The front page contains the invitation with place and date of meeting. The second page contains the program. The third page contains a letter to the members and gives the secretary a chance to boost the society and its work and to invite non-members to attend the meeting and join us in our work.

The collection of dues has been a comparatively easy matter with us. Those members who are present at the January meeting are invited to pay their dues at that time. Then about the last of February a notice is sent to those members who have not paid, stating that it is time for the annual dues and a request that they send them in promptly. About the middle of March a personal letter is sent to the delinquent members stating that the time for paying the annual dues has almost expired and that if they wish to be reported in good standing with the other members of the society it will be necessary that I receive their dues before April first, when the annual report is sent in. This method usually gets them pretty well rounded up, and the report goes in on time and in good shape.

And now just a word about the handling of men. The good old saying that "Talent is something but Tact is everything," was never better illustrated than in the secretary's handling a lot of M. D.'s. Many of these men have troubles and worries of their own that go very far beyond the endurance of the average man. As a result they are nervous, live at a high tension and must be handled carefully. Our profession being one in which we are in the habit of giving orders, and having them obeyed, rather than receiving them from any one, makes it necessary to be careful in the way in which we approach the members when we want any thing done.

So, if Dr. Jones is in arrears with his dues and I meet him and say to him "Jones, you are back on your dues. I shall have to drop

you if you don't pay up," Jones will probably tell me to "Go to Blazes." And that is perfectly proper, and the secretary should expect it. That is what they have got him for. But if I should say "Good morning Doctor Jones, I did not see you at our last meeting. Am sorry you could not be there? We had a fine program and a good time. Sorry you missed it. Try and come out to the next meeting. By the way I have not received your dues yet," the probabilities are that I will go away with Dr. Jones' dues in my pocket and that he will be present at the next meeting.

Another thing that frequently vexes members of the society and tries the patience and ingenuity of the secretary are the frequent little infractions of the "Code of Ethics" by thoughtless members: Dr. "A" reports "that his fellow practitioner, Dr. "B," is advertising, or has taken undue advantage of him in a consultation, or is not using him in a professional manner, or in some other way is not living up to the code. Now, our code is plain and the by-laws are explicit on this particular subject. We had better drop him, hadn't we? The society would be better off without him any way."

You have been up against these things, or if you haven't you will be. How are you going to handle them? If you have a definite charge made and a demand for a trial, then you must proceed according to the by-laws of the society. But nine times out of ten it is just a feeling of dissatisfaction over the way Dr. B is acting and in order to keep the machinery of your society in good running order it must be cleared up.

If you can see these members and have a heart to heart talk with them, you can usually show them where they have made their mistake. They can be told of it in such a way that they will be thankful to you for calling their attention to it, and will not err in the same direction again. If differences can be settled in this manner it is very much better for the society and certainly better for the profession. The man who is called up before the society takes up the plea that he is a martyr to other peoples' jealousies, and it hurts the society and it hurts the profession.

Tact, gentlemen, Tact. Use all you have, all you can borrow, and then use more tact. And even then you will often feel that you are woefully short of what you would like to be.

BOOK REVIEWS.

Handbook of Human Physiology. NAGEL, W., Professor, Rostock, in conjunction with numerous collaborators. Volume IV, Third Part of Second Half, 200 pp. with 55 illustrations in the text, and Supplement, 183 pp. with 18 illustrations in the text. Braunschweig, Friedrich Viewieg und Sohn. 8 M. \$2.00. Supplement 7 M. \$1.75. Leather 9M. \$2.25. The 200 pages of this last instalment of volume IV contains the splendid exposé of M. Cremer on the general physiology of the nerves. In the introduction on the anatomical structure of the nerves in which the interpretations of the significance of the tissues composing the nerves by different authors are given, Cremer remarks that the controversy between neuron and fibrillae theory is of minor importance for the general physiology of the nerves, while they receive their full significance in considering the influence of the central organ on nervous processes or the embryologic relations as well as regeneration and degeneration. Then the fundamental vital properties of the nerves are discussed: conductivity, metabolism, and the chemistry of the nerves; mechanical, thermic, chemical, and electric excitation of the nerves, and the influence of temperature on it, the electric current in the nerve at rest, seat and amount of electromotor power, negative wave, polarization of the nerves, the theories of the process of conduction in the nerves, changes of irritability by electric currents and finally the law of contraction and its explanation, with a list of the most important handbooks and monographs on physiology of the nerves.

The first essay of the supplement is by H. Boruttau on blood and lymph, originally planned for the first volume. Not being intended to be a complete hematology, everything essential on the subject is given, according to the latest researches, in 3 chapters the first on qualities of the blood as a whole: density, reaction, color, coagulation, viscosity. The different methods of ascertaining the circulating quantity of blood of the healthy adult are presented in detail.

In the 2nd chapter, on the formed elements of the blood, the red blood corpuscles with regard to dimensions, number, properties; coloring matter, hemoglobin and its combinations and derivations, the chemistry of the coloring matter of the blood and its products of decomposition, crystals, etc., are discussed in detail, then the white corpuscles and the bloodplates. The 3rd chapter deals with the blood plasma, serum and the processes of coagulation. To the chapter on lymph, tables on the quantitative composition of the blood, blood corpuscles, plasma, serum, lymph, and the behavior of the blood at different ages of life are appended.

The 2nd essay is a very good one on entoptic phenomena by Alfred Lohman. The remainder of the volume contains up to date additions to the other volumes by the respective authors and an alphabetical index to the whole work. Quite interesting are the supplementary remarks of O. Weiss on the secretion and efflux of the aqueous, in which his experiments are described in detail. He laid special stress on the relations of the intravascular to the intraocular pressure, a factor so far neglected by former investigators. Weiss concludes that the assumption of a continuous current in the aqueous has become desultory.

With these volumes the handbook of human physiology is concluded. As

mentioned in our reviews of the preceding volumes, its chief object is the physiology of man, and the physiology of animals has only been drawn upon as far as the latter serve in experiments as substitutes for man. Those subjects which are of greatest interest to the physician have been given larger space. The single articles have been written by authors who by their original researches have become famous in their particular fields. They are admirable in their completeness with due and critical considerations of various views, history of research and an abundance of references, including the most recent literature, and enabling the reader to pursue his studies still further. Thus a splendid authoritative work has been created which represents the modern state of physiology, equally welcome not only to the physiologist but to the anatomist, psychologist, ophthalmologist, aurist, etc., and not least to the general physician, who constantly are confronted with physiological questions and will derive special benefit from such an exhaustive work.

The external appearance of the work, paper, print, the numerous illustrations, plates, and binding display the well known superiority peculiar to the publications of the renowned firm.—C. Zimmermann.

The Poisonous Animals. TASCHEBERG, OTTO, Professor of Zoology in the University of Halle a. S. A textbook for zoologists, physicians and pharmacists. 325 pp. with 68 illustrations. Stuttgart, Ferdinand Enke, 1909. 7 M. \$1.75.

This valuable book is an expansion of the lectures of the author held in the University of Halle as "Publicum", i. e., for all classes of students, and addresses a wider circle of readers. The author being a zoologist, the zoological stand point is, of course, predominant and the toxicological and medical questions are treated according to views of recognized authorities, collected from literature. This feature makes the work especially useful for physicians who wish to enter into the subject more closely and are thus spared the trouble of gathering the desired information from a widely scattered literature not easily accessible.

Those animals are defined as poisonous which constantly or temporarily contain in their whole bodies or in certain organs, and generally by their metabolism produce, substances which by their chemical nature are under certain conditions capable of damaging more or less severely other animals, and especially man, in their health or relative well being. They are described in detail under the following headings: animals which exert a poisonous action by their metabolism or regressive products; animals with poison apparatus; animals which contain poisonous substances in all parts of the body or in single organs, without secreting them; animals which assume poisonous qualities through their nourishment; animals who may act as poisons in an unknown manner. Within these groups the animals are discussed from the lower to the higher orders. Numerous illustrations of animals and of the mechanism of the poisonous organs facilitate the understanding.

Although the book is termed by the author a text-book it is written in a most fascinating style, conveying an abundance of important information, and intensely arousing the interest of the reader. It is very handsomely gotten up and deserves the widest circulation.—C. Zimmermann.

A Treatise on Orthopedic Surgery, by ROYAL WHITMAN, M. D. Fourth Edition. Illustrated with 601 engravings, 900 pages. Lea & Febiger, Publishers. 1910. Price, \$5.50.

In this edition the author again shows his broad conception of orthopedic surgery, and dwells with especial reference on the prevention of deformity. From this standpoint the work is of special interest to the general practitioner who sees many of these cases in their earliest stages when proper treatment directed toward prevention of deformity is likely to be most fruitful.

Tuberculosis of bones and joints occupies nearly 1/3 of the volume. Not many advances are to be recorded here. In the consideration of Pott's disease the author has given due cognizance to Calot's method for correction of deformity. Beck's bismuth mixture is recognized as an important aid in the closure of persisting sinuses, but he cautions against its use in active cases where sinuses act as drains. In hip disease, with very prolonged suppuration, exploration of the joint is advocated in cases where a detached femoral head, or other large sequestrum, is suspected as causing the delay in repair. This is in harmony with the present views of those of large experience, and it seems likely that the operation will be resorted to more frequently in the future.

In the discussion of arthritis deformans and like conditions, no mention is made of chronic local inflammation as an etiological factor, a point on which others have laid much stress. Sacroliac strain to which Goldthwait has recently directed special attention as a frequent cause of back-ache, often erroneously ascribed to pelvic disease, receives but scant consideration, and little practical advice as regards treatment.

The subject of scoliosis is thoroughly dealt with, though corrective exercises receive perhaps more attention than their just due, while the method of Calot of fixed support in the plaster jacket with fenestra and suitable pressure pads might be emphasized. This method has been systematically practiced by Sever, of Boston, with excellent results.

In the consideration of congenital dislocation of the hip, the author alludes to the probability that, in some cases at least, the condition at birth is merely a subluxation, later becoming complete through muscular action. Recently the view is gaining ground that this condition in the majority of cases is not congenital, but acquired at the time the child begins to walk. Ridlon's method of reduction perhaps as simple and reliable as any, deserves mention.

The chapters on disabilities and deformities of the foot, and diseases of the nervous system, are admirable. The same may be said for that on the operative treatment of paralytic deformity. The author conservatively points out the possibilities of improvement here, urging that even partial restoration of function by judicious operative procedure, such as tendon transplantation, arthrodesis, etc., means much to these patients by enabling them to earn a livelihood more easily, and in making them less dependent upon apparatus.

To those familiar with the previous edition of this very excellent work, little comment is really necessary on the present edition. Dr. Whitman's vast experience has made him an authority on the subject. Throughout the work, differential diagnosis and especially treatment are the strong points, and the author's belief, expressed in the preface, that the book in its present form fairly represents this department of medicine at the present time, is amply justified.

F. J. G.

THE WISCONSIN MEDICAL JOURNAL

MAY, 1911.

ORIGINAL ARTICLES.

THE EARLY DIAGNOSIS OF CANCER.*

BY F. GREGORY CONNELL, M. D.,

OSHKOSH, WIS.

(Continued from page 678.)

This method of deviation of complement has been applied with the best results in syphilis and is known as the Wasserman reaction; but in cancer it has not met with the same satisfactory results. Livirato, of Italy, has made some very encouraging observations along these lines. Simon, of Baltimore, with Thomas, has made a preliminary report with this method in the diagnosis of cancer, but the result has not been satisfactory as yet. Simon emphasizes the technical difficulties and warns against drawing conclusions from the work of any except those known to be expert. Simon found that cancer antigen may react with syphilitic sera, and that syphilitic antigen may react with cancer sera. This observation, if confirmed, will of course impair the value of the Wasserman reaction, and likewise make such a test for cancer of less value. The method is new in cancer, and up to the present time has not been found applicable.

Work with blood serum has resulted in the demonstration of the fact that normal blood serum has an antitryptic action. By antitryptic power of a serum is meant the faculty of antagonizing or inhibiting the digestive activity of the ferment trypsin. It was soon found that the antitryptic action varied with different pathological conditions and might be either increased or decreased.

Von Dungen in 1898 observed that this power was much more than normal in patients affected with suppurative osteomyelitis. Ascoli and Benzola in 1903 demonstrated an increase in antitryptic

*Read at the 64th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 23, 1910.

content in serum of pneumonia cases before the crisis, with a fall after the crisis.

In 1908 Golla of London began estimating the antitryptic index in tuberculosis, and about the same time Brieger and Trebing in Germany, and Hort in England began observing this phenomenon in cases of malignancy. The earlier experiments were carried out by methods that were technically difficult and the margin of error was large. There has been a constant simplification of methods until at present the technique is comparatively simple to the trained laboratory worker. The results obtained by different observers vary. Brieger and Trebing found an increased antitryptic index in 90 per cent. of malignant cases. They also found the same condition in many various conditions that were marked by cachexia and called it a "Cachexia Reaction." Von Bergmann and Meyer found a raised index in 92.7 per cent. of cancer cases, and in 24.2 per cent. of non-cancerous cases. They conclude that it is not a cachexia reaction, which is generally accepted by those who have worked with this index. They conclude that a "negative" reaction, that is, no increase, points strongly toward the absence of cancer in questionable cases; while a "positive" reaction is considered only as confirmatory evidence. Roche, from Simon's Laboratory in Baltimore, likewise emphasizes the greater importance of a negative reaction in excluding cancer. Herzfeld and others arrive at practically the same conclusions.

Hort concludes: "The finding of a normal antitryptic content in a case of possible malignancy is of great value in excluding cancer." This he found to be true in 94 out of a 100 cases. On the other hand, a raised antitryptic content in such cases, does not justify the diagnosis of malignancy, for he and others have found an increased index in various conditions such as measles, scarlatina, enteric fever, tuberculosis, leprosy, syphilis, nephritis, infections, auto-intoxication, etc. A raised antitryptic content speaks for malignancy in cases of tumors that may be malignant, such as cases of benign or malignant breast tumors, simple hypertrophy or cancer of the prostate, gastric ulcer or cancer of the stomach.

Weil, in a recent review of this subject, says: "It is apparent that an increase in the inhibitory value of a serum is not at all exclusively characteristic of cancer: and in the second place a considerable number of advanced cases of cancer do not evince any such increase." It is lacking in normal individuals and is present in other conditions generally as an accompaniment only of very severe and serious general infections. The exact philosophy of the process is as

yet unknown and its clinical value is likewise not understood at present.

The latest attempt in this line is the so-called Meio-Stagmain reaction of Ascoli, who, by means of the stalagmometer, measures the surface tension of an immune serum and its specific antigen before and after incubation. A lowering of the surface tension, as shown by an increase in the number of the drops, consists of a positive reaction. Izar and Ascoli applied this in cancer cases in 1910 and have met with very favorable results.

Leaving immunity, of which we know little, and turning to anaphylaxis, of which we know less, we enter a virgin field that is full of great possibilities. The term anaphylaxis is derived from *ana*, against or backward, and *phylaxis*, protection; meaning opposite to prophylaxis. Hypersusceptibility or supersensitiveness are other terms used to designate this peculiar condition, in which an animal may be made so susceptible to a proteid substance which is ordinarily harmless, by the injection of a very small amount, that at a second injection, severe illness or even death results. This phenomenon has been observed for many years, Magendie in 1839, noticed sudden death following a second injection of egg albumen. In 1904 Richet called attention to this reaction in connection with a poison derived from sea anemone. With the use of therapeutic and diagnostic sera, this anaphylactic reaction was observed with increasing frequency. In 1905 Von Pirquet, now of Johns Hopkins Hospital, described the "serum disease" which follows the injection of horse serum in man, and which is related to anaphylaxis. This disease comes on after an incubation period of about ten days, and is characterized by fever, skin eruption, urticaria, lymph gland swelling, joint symptoms, edema and albuminuria. This was an epoch making work, and helped wonderfully in clearing up this very obscure condition.

The most important experimental work has been carried out by Rosenau (now of Harvard University) and Anderson, of the U. S. Hygienic Laboratory at Washington. In Germany, Otto has investigated the so-called "Theobald Smith Phenomenon," which relates to the fact that pigs previously injected with a mixture of toxin and antitoxin, could later be readily killed or made severely ill by the simple injection of normal serum. Which is, of course, but a subdivision of the subject of anaphylaxis. As a result of these numerous experiments it has been found that anaphylaxis may be caused by any proteid substance, either animal or vegetable. That the reaction is specific, that the sensitizing dose is wonderfully small, one millionth of a c.c. having been sufficient, but the usual dose is from 1/500 to

1/250 of a c.c., with an incubation period of from 7 to 10 days, usually not over ten days, and that this condition may be transmitted from mother to young. The reaction manifests itself by symptoms of respiratory embarrassment, convulsions and paralysis, these symptoms come on usually within 10 minutes after the injection, and death usually occurs in a few minutes. Death is due to failure of the respiratory centers, and autopsy reveals nothing of significance. The symptoms may vary from those serious reactions that terminate in death, to such slight spasms, that they may be very easily overlooked or misinterpreted. A drop in temperature is characteristic of the reaction, and according to Pfeiffer, this alone would constitute a reaction. This has been questioned by others.

The cause is as yet unknown. Among the many theories we may mention that of Vaughan and Novy who have demonstrated that proteid molecules may be broken into toxic and non-toxic groups, and claim that the first injection serves as an exciter to this quality of the body, and when the second injection is given that the injected proteid is broken up so rapidly and so vigorously that the body is overwhelmed by the toxic group and death results. Other explanations rest on the supposition that the reaction is due to ferment action, or that the first injection causes a small lesion in the nervous system, and that the second injection accentuates the lesion and causes death. At the present writing we may say the cause is not known.

As a diagnostic measure, anaphylaxis has been attempted in tuberculosis by Rosenau and Anderson, and by Baldwin of Saranac Lake, with unsatisfactory results.

Yamanauchi injected blood or serum into rabbits, and then injected tuberculin 24 hours later and caused death. This observation has failed of confirmation, and the result is questioned by Roepke. But on the other hand Caraffa has met with results that were entirely satisfactory and very encouraging. In a very recent communication Krause of Saranac Lake fails to corroborate the findings of Yamanauchi. H. Gideon Wells has employed this reaction as a very sensitive test for the purpose of differentiating between serum and egg albumen.

The fact that the reaction is specific and that the sensitizing dose may be very very small, led me to apply it in an effort to arrive at a simple method of early recognition of cancer. Hoping to administer the sensitizing dose by injecting the blood serum of the patient and securing material for the secondary injection from cancer tissue, using serum from a non-cancerous individual as a control. I made experiments with guinea pigs and rabbits, and in 15 cases there were only

4 positive reactions; 2 died, and 2 gave symptoms of anaphylactic shock but recovered. In no control did I get anaphylaxis. At this time I found that two German experimenters, Pfeiffer and Finsterer, had been working along the same lines and had found that guinea pigs untreated, or previously injected with normal serum, when injected with cancer juice gave no reaction; but on the other hand, guinea pigs injected with serum of cancer patients, and 48 hours afterwards injected with cancer juice show anaphylaxis, by a drop in the temperature. This reaction occurred whether the serum used for the sensitizing dose was from the same individual who had the cancer, or from another.

The accuracy of this observation was at once questioned and Krause says that the temperature of these animals is readily affected by excitement and trauma and that no special significance attaches to the variations.

But no less an authority than Kelling has recently, within the present year, made a series of experiments in which he uses extract of embryos for the second injection and secures a fall of temperature in a large proportion of cases of malignancy.

Relative to the fall in temperature my own observations, six in number, show in one case a drop of 3° Fahrenheit in two hours with no physical signs of anaphylaxis, in the second a fall of $8\frac{1}{2}^{\circ}$ F. in one hour with physical signs, in the third case a drop of 1° F. in one hour, with no physical signs; in the fourth case a drop of 4° F. in 40 minutes, with physical signs, and in the fifth case a drop of 2° F. in 20 minutes, with no physical signs. Of these cases in the two in which there were physical signs there was a marked drop in temperature, $8\frac{1}{2}^{\circ}$ in one case, and 4° in the second. There was no marked fall of temperature after the first injection in any case, nor in controls.

In view of the conflicting opinions and experiences regarding the anaphylactic drop of temperature, we must await further experiment and observation before reaching a conclusion regarding the anaphylactic test for cancer.

In this rather lengthy recital of methods in which there is more or less hope of a solution of the problem of early diagnosis of cancer, we have concerned ourselves largely with theory, but when we remember that the theory of to-day may be the demonstrated fact of tomorrow, our time and efforts can not be considered as wasted.

This review shows that with cancer being attacked from so many different angles it can only be a short time until its secrets are as plain as are those of tuberculosis.

ANEURISM OF THE DESCENDING THORACIC AORTA.*

BY JOSEPH F. SMITH, M. D.,

WAUSAU, WIS.

Aneurisms of the arch of the thoracic aorta of any considerable size are usually rather readily diagnosed, presenting as they do the characteristic symptoms of abnormal pulsation, dullness on percussion, tracheal tugging, paralysis of the left vocal cord, dysphagia, and in a considerable percentage of the cases a bruit on auscultation. When X-rays are used these aneurisms generally are readily demonstrable, being surrounded by the more transparent lung tissue against which the aneurismal shadows stand out with distinctness.

Aneurisms of the descending portion of the thoracic aorta, however, do not present the signs and symptoms generally found in cases of aneurism of the arch and the symptoms and signs presented are readily confounded with those arising in connection with some of the diseases of the upper abdomen and are therefore readily misinterpreted. It is with the idea of bringing out some of the difficulties of diagnosis and misleading clinical features that the following case is reported:

L. K. W., age 40, timber estimator, was referred to me for examination by Dr. D. T. Jones, July 9, 1909. He complained of pain in the right lumbar region and under the right costal arch, loss in weight and general weakness. The pain was worse when moving about, was described as a constant, boring pain, relieved by deep pressure on the right side beneath the costal arch and by lying on his stomach. During the severe paroxysms of pain the patient frequently sought relief by lying in the knee-chest position with pillows under the abdomen. The patient had been losing weight for three months, having lost 20 to 30 pounds at the time he was seen. At times he complained of pain on the left side similar to that described on the right. He complained especially of difficulty in riding or jolting and after riding on the street cars described his pain as a "dull aching" under the right costal arch radiating around to his back and relieved by lying on his right side with the knees drawn up. At times he enjoyed intervals of almost complete relief from pain; at others the pain was so excruciating as to require opiates for relief. His appetite was good, bowels moved without difficulty and there were no digestive or urinary disturbances. There was a doubtful specific history and also a history of traumatism at the back several years before.

On examination the patient was seen to be quite emaciated and appeared to be suffering from pain. Examination of the chest, abdo-

*Read at the 64th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 24, 1910.

men and nervous system were negative except for the presence of slight rigidity of the right rectus muscle. No tenderness could be elicited over the abdomen at any point. The pulse and temperature were normal, urine negative, stomach contents normal, feces contained no blood or pus, glycosuria did not appear after taking 100 grains of grape sugar; tuberculin test negative, X-ray examination showed no evidence of calculi in the kidneys or ureters; blood examination showed:

Reds	5,040,000
Whites	8,300
Hb.	77 (Dare)
Color index .....	.7+

No abnormal pulsation could be felt over the chest or abdomen and no bruit could be heard. The heart was normal in outline and the spine showed no tenderness or rigidity anywhere. X-ray plates showed the vertebrae to be everywhere normal.

A probable diagnosis of (a) specific disease of the spinal meninges, (b) retroperitoneal tumor or (c) aneurism of the descending thoracic aorta was made. The patient was put upon iodides which were not well borne. Later he sought relief at one of the springs, but became rapidly worse and still later consulted Drs. Joseph L. Miller and B. W. Sippy, of Chicago, who diagnosed probable specific spinal meningitis or malignant disease of the pancreas. An X-ray plate of the thoracic region made by D. Hollis E. Potter was negative. At the suggestion of Dr. Miller the patient returned to his home and received injections of mercury succinamide gr. 1/5 every second day until thirty injections had been given. This was again followed by iodide. This treatment was carried out by Dr. D. T. Jones, his family physician. The patient's general condition improved somewhat but the pain continued quite severe at times and he continued to lose weight, being reduced from 170 to 123 pounds. Large doses of aspirin were given at times to control the pain. Constipation developed, but could be readily relieved by cathartics.

On October 31, 1909, I again saw the patient in consultation with Dr. Jones. At this time grave hematemesis had developed. The patient had once or twice vomited large quantities of blood and between the vomiting spells continued to spit or gulp up mouthfuls of bright red blood. He was extremely anemic and died Nov. 1, 1909, from the effects of severe hemorrhage.

An autopsy was held about three hours after death. The abdominal and genito-urinary organs were found normal. The lungs and heart were normal. The arch of the aorta showed atheromatous changes and the descending thoracic aorta showed a large sacculated aneurism extending down to but ending abruptly at the diaphragm. The aneurismal sac had eroded the esophagus forming an opening as large as a twenty-five cent piece which was closed on the side of the blood vessel by partly organized blood clot. The stomach was filled with dark blood. In this instance we have an example of specific mesoarteritis described by Chiari and Benda resulting in gummatous degeneration and scarring and finally in sacculatation.

The chief clinical features in our case were pain *distinctly influenced by posture, and emaciation*. None of the men who examined the case discovered any physical signs of aneurism or tumor. The X-ray picture of the chest in this instance failed to show the aneurism, probably because the aneurismal sac lay directly behind the heart.

Huchard has called attention especially to the pain in aneurism of the descending thoracic aorta, emphasizing the significance of variations of the pain with changes in posture.

Hewlett and Clark have reported six cases with autopsies on two of the six cases and X-ray examinations made in all six cases. They call attention to the value of fluoroscopic examinations made at different angles and emphasize the fact that in this way the outline of aneurisms lying behind the heart can be made out. The fact that the plates in our case were made in the antero-posterior direction only, may explain the failure of the X-rays to demonstrate the presence of the aneurism.

Hewlett and Clark divide their cases into two groups:

(a) those in which the main symptom was pain—five of the six cases.

(b) those in which no symptoms whatever were present—one of the six cases. They quote Baetjer who examined 104 cases of thoracic aneurism with X-rays; of these 104 cases 5 per cent. showed no symptoms or physical signs whatever.

The pain in the five cases reported by Hewlett and Clark was of much the same character as that in our case. It showed variations in severity from time to time, was extremely severe at times, the location was practically constant and it was very difficult to afford relief by medication.

One of Hewlett and Clark's cases complained of pain in the center of the back, and four of pain in the left side of the thorax which was of a neuralgic character with tender spots or areas of hyperalgesia. The hyperalgesic zones were present in three of their cases, and are described as being broader behind than in front and associated in one case with anesthesia in front. The pain in the five cases as well as in our own case showed decided nocturnal exacerbations. Three of the five showed postural changes in severity, the pain being exaggerated or increased by lying on the back. One of their patients slept on his face, one on his left side, and one had to sit up, while one patient was relieved by lying in the knee-chest position.

In two of their cases the pain was referred to the front of the body, in one to the heart, simulating angina pectoris, and in another to the upper abdomen. In our case the main pain was referred to the right lumbar region and beneath the right costal arch. These referred pains may easily lead to the assumption of a diseased viscus as was the case in one of Hewlett and Clark's cases, who had been sent to the hospital for an operation, and in a case reported by Baetjer in which an operation for gall stones had been performed three years before the X-ray examination established the diagnosis of aneurism.

The pain in these cases may be due to pressure upon the intercostal nerves with erosions of the spinal column or ribs as often described in the clinical histories of aneurisms. It may also be due to chronic inflammation about and adhesions to the sac without erosion of the bony structures. Our case showed no erosion whatever of any of the bones of the spinal column or of the ribs, but there was rather firm adhesion of the sac to the posterior wall of the thoracic cavity and mediastinum.

Milanoff collected the histories of 120 cases with aneurism of the descending thoracic aorta and found 72 had pain, 20 had dysphagia, 13 had hematemesis, 21 had hemoptysis and a few had pleural effusion.

Andreef collected 8 cases of paraplegia from this cause. These symptoms with the exception of pain are late manifestations coming on after extensive bony erosion or destruction of tissue by long continued pressure. This serves to emphasize the importance of pain in the early diagnosis of thoracic aneurism.

In none of Hewlett and Clark's cases was a murmur heard over the aneurism. In one in which the aneurism was directly behind the heart, the heart sounds were unusually distinct; two patients showed pulmonary compression signs, three showed diminished mobility of one side of the chest and in one the diaphragm was shown by fluoroscopic examination to have a lessened excursion on one side.

In view of the readiness with which aneurism of the descending thoracic aorta may be confused with diseased conditions of the upper abdomen, it is well to keep this condition in mind in all cases complaining of dull, aching pain in the region of the diaphragm, especially if no definite swelling or tenderness can be made out, and still more especially in cases with a doubtful specific history in which the results of thorough examination are negative. In all these cases careful fluoroscopic examination should be made or Röntgen plates obtained at different angles through the chest.

Huchard (quoted by Hewlett and Clark) says: "When one is dealing with symptoms of pain characterized by their persistency, their long duration, their intensity, when they remain unexplained, when they resist all ordinary medication, finally, when they present certain special characteristics, such as a fixed location or a diminished severity in certain attitudes of the patient, then we are not dealing with true neuralgia, as is too frequently assumed. In such cases one should consider aneurism as a probable diagnosis, and if no tumor is perceptible as yet, one should turn to the X-rays in order to obtain certain proof."

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Discussion.

DR. W. H. WASHBURN, Milwaukee:—In the treatment of aneurism, especially of the aorta, in any position, the main object of the physician is to relieve pain. That is practically the only thing that can be done and that is not done very successfully in the majority of cases. I think iodide of potassium is probably the drug that has been most commonly and efficiently used. I have had three cases, two of aneurism of the thoracic aorta, and one of the abdominal; and two of these, the thoracic aneurisms, had been treated with iodide potassium with some relief, and I afterwards treated all of these cases with sulphocyanate of sodium; and the patients with the thoracic aneurism agreed that their relief was greater with the sulphocyanate of sodium than with the iodide. In the case of the abdominal aneurism the patient had not been treated previously to the time that I saw him and his relief was quite marked with the sulphocyanate. The drug was given in two grain doses three times a day.

It seems to me as though it is worth while to try this drug in any case where this disease exists. It seems as though there is a possibility at least that the sulphocyanate will be more effectual than the iodide.

THE PLASTER SPICA IN HIGH FRACTURES OF THE
FEMUR.*

BY CHAS. H. LEMON, M. D.,

MILWAUKEE.

Buck's extension as a treatment for fractures of the femur was a demonstration by a genius of an elementary principle. Over-riding and angulation are the result of contraction of muscles, and the first conception of the treatment of fractures of the long bones deals with the problem of prevention of over-riding by extension. The practitioner who brought me a little four year old boy with a fracture of the thigh with two inches of over-riding, whom he had treated by anterior and posterior splints held in place by a bandage, allowing the boy to run around with a cute little pair of crutches, had not learned this lesson. The ambitious surgeon who would convert every simple fracture into a compound one, because he knows that he can nail, rivet or screw the fractured bones together, has not learned this lesson. It would seem that prior to Buck's time, in the decade following the Civil war, no one had learned this lesson. One thing, however, has been learned since by advocates of the open method of treatment, that some bones which could not be sutured because of their proximity to joints were found to remain in place when the roughened surfaces were approximated or jammed into each other. My observation of results of radical treatment is not unlike that of the late Professor Wolff who compared Hoffa's open treatment of congenital dislocations of the hip with Lorenz's bloodless method as follows: Before operation they walked like ducks; after operation they walked like lame ducks.

There is no one method of reduction that is applicable to all cases. Some methods are better than others in the great majority of cases. Yet all have as their leading thought the elementary principle of extension with fixation. The method which the individual surgeon finds gives the greatest comfort during treatment with the least amount of deformity following, is the method of choice. Therefore while placing the laurel wreath upon the tomb of Buck for exploiting the idea of extension, let us not forget that extension will fail without a compensating fixation. It is the combination of these two factors which gives the ideal result.

If we would learn what is possible of accomplishment in the treatment of fractures we will read the literature of Orthopedic Surgery.

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This generation will never learn its debt of gratitude to Royal Whitman of New York whose classic paper on the treatment of fractures of the neck of the femur is scarcely known outside of his own city. It is the most important contribution to the literature of fractures during the past forty years. This paper adds to the two factors already considered extension and fixation, the third necessary factor in all fractures of the upper part of the shaft of the femur, namely, abduction. On this three-legged stool we may perch ourselves with absolute safety.

Fractures of the upper third of the femur as they come to the surgeon, may be divided into two groups—those seen immediately after they occur, and those which come after the lapse of days or weeks. Those that come immediately involve greater responsibility because they are treated first hand, while the others leave a loop hole for escape because of previous efforts by colleagues. They are the worst fractures we are called upon to treat, and when treatment is inefficient they are the most disabling. If they were frequently transverse to the line of the shaft the problem would be comparatively simple, but typically always oblique, or, what is worse, spiral. Further, the producing force is usually extreme and we have distortion of the soft parts with transfixion by the pointed fragments.

It is my opinion that without the open incision we are seldom able to completely reduce the fragments. It is my experience that the open incision in the majority of cases is fraught with the greatest dangers. Were one to consider only his reputation he would make the open incision in the majority of cases, as with ordinary technic no greater percentage of infection should occur than in other equally important operations. By clamp and screw approximation can be secured, as fragments which are impossible of reduction can be removed and an approximation which will look well in a skiagram can be secured. In the hands of the few and with all the accessories of a well ordered operating room, ideal results can be obtained. This, moreover, is what the public expects of us, and no matter how clearly one may attempt to explain that these results are only in the rarest of instances obtainable, if we do otherwise, we are sure to be criticised. We are sure to be accused of making promises in the beginning which the patient fully understood meant an approximation equal to that possible of attainment by a cabinet maker, and when the skiagram shows the bones in one plane superimposed we have the foundation laid for a suit for mal-practice.

If on the other hand we are less solicitous for our reputation and

more considerate of the ultimate welfare of our patients, we will pause to recall, that because of the location of the necessary wounds in the vicinity of the orifices of the body, the risk of infection is no trifling matter. Infection may not only preclude the possibility of union but may eventuate in loss of limb and life; we will therefore hesitate before converting a simple into a compound fracture.

The difficulties encountered in making permanent fixation after open incision with direct fixation of fragments are so great that my experience prompts me to recommend safer means.

No matter what the skill of the operator may be, unless he possesses the necessary mechanical ability to immovably fix the thigh and leg after operation, failure will result. No mechanical device introduced into the bone tissue of the upper part of the thigh can alone support the fragments and resist the action of the powerful muscles.

If, by mechanical means designed to immobilize the fracture, the fragments can be accurately approximated with the open incision, there is no need of local mechanical supports, either of wire sutures or plates. Every radiographer's office is full of illustrations of the futility of depending upon these so-called supports. If the seat of the fracture is exposed by incision it must be with the leg controlled by the hand of an expert or by some external mechanical means.

It is conceded that it is impossible always by extension to place the lower fragment of bone in line with the upper fragment in fractures of the upper third of the femur. The upper fragment is flexed and abducted and traction upon the lower fragment frequently increases the interval between the fragments. Where the shaft of the bone is comminuted and the fragments stand apart from each other, no amount of traction will pull them completely together. But the question arises, is apposition of the entire fractured surfaces necessary?

With the plaster spica applied with the leg and thigh abducted, the thigh flexed on the trunk, under positive extension during its application and with later local pressure upon the upper fragment, through a fenestrum in the cast these seemingly impossible obstacles can many times be overcome. Some one has truly said that the greatest opponents of the plaster dressing are those who have had the least experience with it.

Under the most advantageous conditions in the oblique and spiral fractures, with the closed treatment, there will be some shortening, the maximum about an inch. Without extension, while applying the spica, this amount of shortening will be considerably increased. The

shortening is the result of the shrinking of the encased hip and thigh, permitting the spica dressing to ride on the trunk. To meet this difficulty the writer added a cuff to the Lorenz Spica which surrounds the upper portion of the sound leg, making it impossible for the cast to pull upwards.

With transverse fractures, after full extension, the fractured ends reduce readily and have a tendency to remain reduced after the traction is withdrawn. With spiral fractures, however, such extensive surfaces have simultaneously to be approximated, that the writer concedes complete reduction impossible of achievement in the closed cases. The oblique ends of the fragments slip readily over one another and only too frequently are to some extent impinged in the over-lying muscle. After a few days, when the cast is thoroughly dried, a window may be cut into it over its outer and upper portion, above the site of the upper short fragment, and direct pressure be made upon this fragment by inserting layers of cotton wadding beneath the cast. In a recent case it was surprising how well this pressure was borne. It was equally surprising how completely the upper fragment was then controlled.

To attain success then, we must have extension of the leg and thigh with abduction and flexion of the thigh on the trunk. We must apply the cast under this positive extension, and later, if necessary, force the upper fragment downwards, by direct pressure, by means of pads of sheet wadding, and firm bony union will usually result.

It will be seen that the writer is not an advocate of attaining what may be called the ideal in this class of fractures, unless one understands by this term the attainment of an ideal functional result. When once the cast has been applied in the manner stated, pain ceases: the patient can be moved from his bed to a chair: the limb can be placed in any position which affords comfort. No interference with the seat of fracture is made and no disturbance of the hematoma occurs—that bridge which unites the fragments when the periosteum is completely severed: and no risk is entailed.

Rash indeed would the surgeon be who would convert into a compound fracture the case it is my good fortune to present as illustrating my position. The accompanying skiagrams taken four months after the accident occurred, at which time the patient is able to walk with the aid of a cane and a Taylor brace used for additional safety, show five large fragments of the shaft of the femur, and there is but one inch of shortening and no angular displacement. The other skiagrams submitted illustrate in other cases what is possible of attain-

ment, and in urging conservatism the writer believes he is advocating what is best for patient and surgeon.

It matters little what the skiagram shows so long as the alignment of the leg is such that no angular deformity is present. The patient will not complain so long as the foot bears its normal relation to the leg and we are able to assure him that firm bony union exists. The plaster spica is by no means an easy dressing to apply. Its use requires a definite apprenticeship, but when one has become sufficiently skilled in its use that he has confidence in his ability to accomplish definite results, there is no other appliance that gives greater comfort to the patient nor greater peace of mind to the surgeon. If the skiagram taken through the cast shows good apposition of the fragments there can be no question as to what the surgeon has accomplished, and in the event of a misunderstanding between the patient and the surgeon it is the best defense that can be produced.

A surgeon of the ability of Mr. Lane may use special fixation plates with success because of his finished technic. Others will be less successful until they have acquired the same technic. As a large number of these fractures must be treated at points remote from well equipped hospitals and by men of average ability, it is my hope that my fellow practitioners may be encouraged to treat the larger per cent of these cases, if not all of them, by the bloodless method. It is fortunate that fractures at the upper third of the thigh are comparatively rare. Let us place less reliance upon local mechanical supports introduced through a necessarily long incision in a very unfavorable portion of the body to guard against infection; let us rather remember the three essentials: abduction, extension and fixation, and, whether we use the plaster spica or the old fashioned Buck's extension, success will crown our efforts.

OLIVE OIL IN THE TREATMENT OF GASTRIC ULCER.*

BY OSCAR LOTZ, M. D.,

MILWAUKEE.

The use of olive oil in the treatment of diseases of the stomach is by no means a recent therapeutic procedure. As a matter of fact the application of fats and oils in hyperacidity and ulcer of the stomach has been advocated at various times for the past twenty years. My excuse for bringing this subject before you this evening,

*Read before the Milwaukee Medical Society, October 25, 1910.

is largely due to the fact that this method of treatment is so conspicuous by its absence in the majority of our American text-books, and only within the past few years has it appeared in our literature. The Germans, on the other hand, have not been so remiss in this matter, and as a result their literature is fairly well interspersed with experimental work and especially clinical reports relative to this subject.

In 1886 Ewald and Boas first demonstrated the inhibitory property of fats upon the acid secretion of the gastric mucosa. While their experiments were not undertaken with this point in view, nevertheless the fact was brought out that after the introduction into the empty stomach of a starch-oil mixture, in contrast to a pure starch paste, during the first half hour as a rule, very little if any secretion of free hydrochloric acid took place. In a latter series of experiments by the same men their results led to the conclusion that in giving a test meal of wheat bread and fat, the smaller the percentage of fat present, the greater the acid content of the resulting filtrate.

Although these experiments seemed to bring out to a certain extent the inhibitory power on the secretions of free HCl, it appears that comparatively little practical importance was attached to their results. Twelve years later in 1898 Strauss and Adler advised the use of fats and cream in hyperacidity, and it was about this time that Pawlow showed by experiments on dogs with gastric fistulae, that the addition of fats to the regular meat diet decreased the secretions of gastric juice about $\frac{1}{3}$. Following up this line of work Backman, in 1900, conducted a series of observations on patients, and claimed to have been able to reduce the free HCl of the gastric contents on an average of 19 per cent. by the administration of butter; by use of cream, as much as 42 per cent.

A little later Cohnheim's attention was forcibly called to the use of oil in diseases of the stomach, by a patient who was under his treatment for gastric ulcer, for about eight weeks, without improvement. This patient finally left the hospital, and returning to his home in Northern Germany, he resorted to the use of olive oil for several weeks, and then presented himself to Cohnheim in apparently healthy condition. Upon inquiry it was found that olive oil in gastric diseases was a much used house remedy in that part of the country. Cohnheim then employed oil with favorable results in a large number of cases of hyperacidity and ulcer and came to the conclusion that the use of oil in gastric ulcer fulfilled four indications

1, for the relief of pain; 2, for the reduction of friction; 3, as a food, and 4, for the inhibition of acids.

Ewald, and later Blum, while admitting the apparent inhibitory action of oil on the acidity of the gastric contents, claimed that nausea and vomiting so frequently followed the administration of the oil, that this fact alone constituted a direct contra-indication to its use in ulcer cases. However, when one considers that the co-called oil treatment at that time, consisted in the administration of two, three and even four ounces of pure oil at a single dose, it is perhaps surprising that not more unfavorable results, due to vomiting, were reported.

Among others who reported good results from the use of oil in hyperacidity and ulcer are Walko, Merkel, Reigel Akiman-Leretz, who employed an emulsion of almond oil, Ageron, a suspension of bismuth in the oil, and Krausz who added 5 per cent sodium bicarbonate to the oil.

My attention was first called to this subject by that admirable paper of Cowie and Munson entitled "An experimental study of the action of oil on gastric acidity and motility," which appeared early in 1908. Their experiments seem to me to have been carried out with such thoroughness and attention to detail, and are so convincing that a brief resumé of a number of their results can perhaps do no harm.

In a case of gastric neurosis, after 9 consecutive control meals, it required an average of 49 c.c. decinormal soda solution to neutralize the free HCl, and an average of 66 c.c. to neutralize the total acids. They then gave the patient 1 oz. of olive oil one-half hour before each meal and as a result it required an average of but 40 c.c. decinormal soda solution for the free HCl and 55 for the total acidity.

In a patient with a peptic ulcer the free HCl after control meals was neutralized by 62 c.c., the total acids by 72 c.c. but when oil preceded the meals, it required but 25 c.c. to neutralize the free HCl, and 42 c.c. for the total acids.

In a case of hyperchlorhydria the free HCl averaged 92 in terms of c.c. decinormal soda solution. When 1 oz. of olive oil was administered immediately before the meals, the average dropped to 84; with 2 oz. of oil immediately preceding the meals, a farther drop to 70 followed and when the 2 oz. of oil were given one-half hour before the meal, but 56 c.c. decinormal soda solution were required to produce complete neutralization of the free HCl, and finally, when the oil was discontinued the free HCl content again increased to 97.

In an epileptic with no gastric symptoms, the control meals showed a total acidity of 53. Then for 21 meals, which were preceded by oil, the average was but 28, to be followed by two controls, after which the acidity increased to 67, and when the oil was resumed the total acidity again decreased to 32.

And finally in a brief resumé of 310 meals, in 170 controls the average number of c.c. required to neutralize the free HCl was 36.4, for the total acidity 51.3, while in 140 oil meals the figures were 22.4 for the former and 35.5 for the latter.

At about the time the above paper was published, I was struggling with two intractable recurrent cases of gastric ulcer, which seemed to have as a more or less exciting factor, a marked hyperacidity. Both cases apparently recovered from the acute condition under the use of rest, dietetic measures, bismuth and alkalies but so soon as these were discontinued the old symptoms of hyperacidity would return, while the general nutritive condition of the patient was not much improved. I then resorted to the use of olive oil before meals. The results in both cases were exceptionally gratifying, and the oil treatment was used in all cases of gastric ulcer and hyperacidity, only to find out the truth of the old story that after all the patient must be treated, and not so much the condition.

In the six cases of gastric ulcer treated by means of olive oil, which are used as illustrations in this paper, no mention is made of the acidity of the gastric contents. There are several reasons for this—in the first place, several years ago numerous and persistent attempts were made to obtain the gastric contents after a test meal in some doubtful cases, but the difficulties and inconveniences encountered were so numerous, and the results were so unsatisfactory, that I soon lost faith in the diagnostic assistance obtained from a few gastric analyses. Furthermore I believe it has been sufficiently demonstrated within recent years, that the secretion of the gastric juice is modified by so many conditions, both mental and physical that unless the patient is in a hospital, and under absolute control, very little dependence can be placed on a few isolated gastric analyses, made at different times and under various conditions. Finally the cases used as examples are such that there is no doubt as far as the diagnosis is concerned—as all the cardinal symptoms of gastric ulcer, characteristic pain, tenderness, vomiting and hemorrhage were present.

CASE I. J. M., Female, 19 years, January 9, 1908. Previous History: Has not been sick in bed since childhood. Two years ago began to complain of stomach trouble. Began with severe pain in

stomach after eating, occasionally accompanied by vomiting. Under treatment pain disappeared, but a burning sensation in the stomach was almost constantly present. During last two years has had five similar attacks, each one lasting from 3 to 5 weeks. During last attack suffered from diarrhea for several days, the dark color of the stool being noted at that time. Since beginning of illness two years ago patient has gradually lost weight, having dropped from 122 to 109 lbs. Bowels have always been very costive.

Present Illness. Three days ago again complained of pain in stomach after meals. Last night after supper suddenly vomited, first the food she had taken, and then four very large clots of blood. This morning the stool was reddish black in color.

Examination. Skin and mucous membranes pale and anemic in color, body very poorly nourished. Abdomen soft and relaxed with an area of tenderness about the size of a half dollar, one inch above umbilicus and $\frac{1}{2}$ inch to right of mid line. Treatment consisted of absolute rest in bed, milk diet and the use of bismuth and sodium bicarbonate. Bowels kept open by means of salines. By February 21st, all gastric symptoms with the exception of constant burning sensation in stomach had disappeared. Weight 107 lbs. Hemoglobin 55 per cent. R. B. C. 2,430,000. Was given sod. bicarbonate gr. xx. before each meal. May 30, reported that she had continued powders for about four weeks, then feeling well, discontinued treatment. Two weeks ago again noticed some gastric discomfort and yesterday pain and vomiting returned. Patient was then given $\frac{1}{2}$ oz. olive oil $\frac{1}{2}$ hour before meals, and placed on a restricted diet for a few days. Has not used a laxative since taking oil. August 24th, is still taking oil, but has had no symptoms of old trouble for past two months. Weight 123 lbs. October 22, absolutely well up to 4 days ago, then had slight attack of pain in stomach and vomited once. Weight 127 lbs. Resumed the use of oil for 4 weeks then discontinued same. March 15, 1909, since last report patient has been absolutely well. Eats and enjoys all food without restriction. Bowels regular. Weight 134 lbs. H. 80 per cent. R. B. C. 4,340,000. July 18, 1910, has had no return of stomach trouble.

CASE II., M. M., Female, 27 years, April 29, 1908. Previous History: Three years ago patient had first attack of gastric ulcer. Decided to go to her home in Ireland for treatment, but while at sea was very sick all the time—could take no food. By the time she reached the other side all gastric symptoms had disappeared. Remained well for one year, when symptoms reappeared and patient was under treatment in a hospital for five weeks. Since that time has always had a very sensitive stomach. Was free from gastric symptoms only when she limited her diet to toast and milk. As soon as she increases the variety of her food she complains of feeling of discomfort in stomach and vomiting.

Present Illness. Two weeks ago began to complain of severe pain in stomach about 15 to 30 minutes after taking food. At once limited her diet to small amount of milk and toast, but pain still continues. Also complains of continued burning sensation in stomach,

especially marked when latter is empty, and also of a severe boring pain in back—left side below angle of scapula. One week ago began to vomit after taking toast, this occurring since then at least once every day. This morning vomited a small amount of bright red blood. Four years ago patient weighed 162 lbs., lost 30 lbs. during the first attack, and has never been able to regain same. Bowels always constipated. Patient very pale in color, poorly nourished. Abdomen shows slight tenderness in left hypochondriac, and in epigastric regions. Very tender spot about $\frac{1}{2}$ inch below tip of xiphoid in mid line.

Treatment consisted of absolute rest in bed, milk diet and Ag NO_3 gr. $\frac{1}{4}$, t. i. d. Saline to regulate bowels. After two weeks pain and vomiting having ceased was given sodium bicarbonate before meals. Four weeks later patient was apparently well and enjoying a fairly liberal diet. Weight 134 lbs. August 5, patient returned again complaining of pain and vomiting after food.

This time she was placed on bismuth and sodium bicarbonate for two weeks and then given $\frac{1}{2}$ oz. olive oil $\frac{1}{2}$ hour before meals. September 15, with the exception of an occasional uncomfortable feeling in stomach, and the pain in back, patient feels very well. Has gained 3 lbs. Weight 137. December 3, 1908, enjoying 3 meals daily and feels very well; no gastric symptoms. Weight 142 lbs. Still taking oil, but find it unnecessary to use salines. August 6, 1909, Has had absolutely no return of symptoms. About every two months patient takes a tablespoonful of oil before meals for a period of one week. July, 1910, has taken no oil for past 6 months. No gastric symptoms. Present weight 150 lb. Color greatly improved. Bowels regular.

CASE III., Mrs. J., 32 years, April 29, 1908. Previous History: six years ago under treatment for syphilis, 3 years ago just previous to coming to this country was in hospital for treatment of gastric ulcer. One year ago had another attack of acute gastric ulcer, under treatment for about 3 months.

Present Illness. Has had more or less stomach trouble ever since last attack one year ago. At times pain in upper part of abdomen is very severe. As a rule comes on after food, but occasionally is present all night long. During night pain is not so sharp and cutting but is more of a burning and boring nature. Vomits frequently and has vomited blood at three different times, the last time three months ago. At present complains of sharp cramp-like pains every time after taking food. Vomits almost every day; vomitus intensely sour. Also complains of a sore spot in back just below angle of left scapula. Patient has lost considerable weight during last five years. Bowels at times fairly regular, at other times costive.

Examination. Color good, body fairly well nourished. Marked tenderness present all over abdomen, the slightest pressure producing pain in region just above and a little to left of umbilicus.

Treatment. As absolute rest could not be enforced patient was placed on a milk diet and large doses of bismuth subnitrate and sodium bicarbonate were given three times daily. May 13, 1908,

patient has vomited but twice since beginning treatment and is free from pain when taking powders, but is obliged to take one powder during night to obtain relief, marked tenderness all over abdomen still present. Patient is continually committing gross indiscretions in diet. May 27, condition same as above. Free from pain only when taking powders. Given $\frac{1}{2}$ oz. olive oil $\frac{1}{2}$ hour before meals and potassium iodide in ascending doses after meals. June 14, 1908, no improvement. Removed to hospital where under enforced rest, strict dietetic measures, and the use of olive oil and bismuth and soda, patient made a rapid recovery. Continued the use of oil for about four months and while doing so patient was in fairly good condition. November 6, 1909, discontinued use of oil one month ago. Two days ago pain and vomiting returned. Not wishing to tire you with details, will state that this patient could obtain relief during the acute condition from bismuth and sodium bicarbonate only. The olive oil, when no ulcer was present, apparently held the symptoms in abeyance, by inhibiting the excessive secretion of acid, but as soon as the oil was discontinued the old symptoms returned. No permanent result obtained in this case and in June 1910, patient left for Europe to undergo surgical treatment for her condition.

CASE IV, Mrs. V. S., July 2, 1909. Previous History: Trouble began 14 years ago. In hospital six weeks for treatment of gastric ulcer, was well for three months when symptoms returned and patient again entered hospital, this time remaining ten weeks. One year later had a third attack, and refusing to enter hospital was treated by means of bismuth. Since that time patient has always had some bismuth at hand treating herself by means of the bismuth and restricted diet, whenever any gastric symptoms manifested themselves. These attacks would occur about once or twice every year.

Present attack began about 4 months ago; improved for a time under her own treatment, but pain and vomiting soon returned, and have gradually increased in severity. Pain at present is sharp and cutting, and always follows any food taken within a few minutes. Vomits two to three times a day, and two days ago, and yesterday vomited some bright red blood. Before her first illness patient was quite stout, but recently has never weighed more than 129 lbs. Since last attack has lost about 6 lbs. Bowels always costive. Except for the fact that the patient is rather thin and poorly nourished and has a very sensitive spot on deep pressure in the epigastric region, the findings are practically negative. Treatment consisted of rest in bed, milk diet, and olive oil $\frac{1}{2}$ oz. $\frac{1}{2}$ hour before meals.

This patient was unable to retain the oil consequently 1 oz. cream was substituted and this was gradually increased in amount until 4 oz. were taken three times daily, without discomfort. Olive oil was now gradually mixed with the cream in increasing quantities until at the end of three weeks, the patient was taking pure oil three times a day. The bowels were regulated by small doses of agar-agar given in the morning. September 23, 1909, patient taking a slightly modified general diet with $\frac{1}{2}$ oz. oil before meals. No gastric symp-

toms. August 17, 1910, has not taken oil for about 4 months. Is feeling well and has gained about 15 lbs. in weight. Is taking small amount of regulin about once a week.

CASE V, S. O., Male, 22 years, May 12, 1909. Previous History: Stomach trouble began about five years ago with a feeling of discomfort and occasional vomiting after meals. While under treatment condition improved every time but always reappeared after treatment had been discontinued.

Present attack began four weeks ago with vomiting and pain after meals. Pain in the stomach occurred after every meal but vomiting with a few exceptions took place only after breakfast. Three days ago noticed that vomitus contained a small amount of blood. Since that time pain after meals, and to some extent before meals, has been more severe than at any other time. No loss in weight. Patient never weighed more than 118 lbs. Bowels regular.

Examination. Very slight build, and poorly nourished, no definite area of tenderness found, but deep pressure in epigastric region produces a distinct burning sensation. Patient refusing to remain at home was placed on a diet of milk and toast and was given bismuth and sodium bicarbonate before breakfast and 1 oz. of olive oil one hour before lunch and before dinner. June 13, one month later, patient reported that vomiting had ceased at once, and the pain had gradually decreased in severity. Deep palpation over stomach still produces a slight burning sensation. Has gained three lbs. Bismuth and sodium discontinued, given olive oil $\frac{1}{2}$ oz. $\frac{1}{2}$ hour before each meal. September 19, 1909, is still taking olive oil, no recurrence of symptoms. Weight 128 lbs.

CASE VI, M. B., Female, 19 years, October 26, 1908. First attack of pain in stomach and vomiting following food occurred two months ago. Recovered under treatment. Second attack began two weeks ago with very severe pain in abdomen after every meal. A feeling of discomfort and burning sensation is constantly present, but after food the pain takes on a more cramp-like and cutting character. Last few days has been unable to take food on account of pain. Last night vomited two large clots of blood. Bowels always costive. Has lost considerable weight during past two weeks.

General development, nourishment and color good. Point of marked tenderness in abdomen about 2 inches above umbilicus, slightly to left of mid line.

This patient was given bismuth and sodium bicarbonate for several weeks and apparently recovered, but shortly after discontinuing treatment the symptoms returned. She was then given $\frac{1}{2}$ oz. of olive oil about one hour before meals, and bismuth immediately preceding food. One month later the symptoms having again disappeared, the bismuth was discontinued. June, 1910, unable to find patient but sister reports that she has not been sick since.

After reviewing these cases the question naturally arises—How are the apparently beneficial results of olive oil in gastric ulcer and hyperacidity brought about? Not being in a position to delve into

the mysteries of physiology to any extent my version is perhaps somewhat crude and unscientific and if by any discussion a little more light can be thrown on the subject my conscience will be somewhat reconciled for taking up your time this evening.

Taking for granted that persistent hyperacidity of the gastric contents is an important factor, if not in the production of acute gastric ulcer, at least in the recurrent chronic form, it might be suggested that the action of the oil in these cases is two-fold; direct and indirect.

The direct action is of course, due to the inhibitory property of the oil upon the acid secretion of the stomach during the time of its administration. By preventing the excessive secretion of acids, the oil is certainly of value in promoting, or at least permitting, repair of the ulcerated gastric mucous membrane. That fats and oils do decrease the secretion of acids, seems to be an assured fact, but how this is brought about, while a logical question, is a rather difficult one to answer. Pawlow advances the view that fats and oils inhibit the secretion of acids of the stomach by reflex stimulation of the inhibitory nerves of the glands, or the inhibitory center of these nerves. Cowie and Munson, on the other hand, while admitting that reflex stimulation may play some part in the decreased production of acids, hold that the mechanical effect of the oil is by far the more important factor; namely that the food coated by the oil does not so readily stimulate the gastric nerve endings which are at the same time covered with oil.

While the above may suffice to explain the beneficial action of fats and oils during their administration, we must look to some other reason for the disappearance of the symptoms of gastric hyperacidity and ulceration after the use of the oil has been discontinued. To any one having used the oil treatment for a short time only in this class of cases, it at once becomes apparent that the inhibition of acids by the oil is by no means permanent—that is while the acidity may be decidedly lowered and the symptoms of hyperacidity held in abeyance when the oil is administered before meals—if the oil is omitted for one or two meals, or the treatment is discontinued entirely, the acidity at once rises to its original position, with a consequent return of symptoms. How then are we to explain the non-recurrence of the gastric symptoms after long continued use of the oil?

Contrary to the text book lore it has been my experience that a large majority of the patients suffering from hyperacidity and chronic ulcer of the stomach give a history of a gradual loss in weight.

extending over a long period of time, and frequently present themselves in a nutritional condition far below par. Besides this, a history of chronic constipation is in this class of cases very conspicuous, while signs of secondary anemia are likewise of common occurrence.

Without exception all of the above mentioned ulcer cases, under the use of pure olive oil, a liberal diet, and somewhat regulated mode of life, gained rapidly and steadily in weight, some of the signs of anemia disappeared, while the constipation ceased to be an annoying factor. Furthermore up to the time of writing, so long as these patients have retained their normal weight, no symptoms of gastric hyperacidity have appeared.

Taking these results as a working basis, could it not be possible that the persistent hyperacidity, which has at the present time an unknown etiology, is due to the presence of a so-called vicious circle, the hyperacidity preventing normal digestion and assimilation, with chronic constipation, anemia and poor nutrition as resulting conditions, while these same conditions in their turn act as exciting factors in maintaining the hyperacidity.

The continued use of olive oil before meals, is I believe, an effective manner of breaking into the vicious circle. By holding in check the excessive secretions of acids for the time being, the oil permits of a liberal diet as soon as pain and tenderness have more or less disappeared, it of itself has a high nutritive value, and finally with very many patients the olive oil acts sufficiently as a laxative, to keep the bowels in a normal regular condition.

These combined factors will as a rule result in a normal healthy increase in weight of the individual, with improved general nutritive condition, and these being once obtained, it requires but comparatively slight prophylactic means to prevent a return of the old marked process.

THE CO-RELATION BETWEEN SPLANCHNOPTOSIS AND
PULMONARY TUBERCULOSIS.

BY WILHELM BECKER, M. D.

MILWAUKEE.

The subject of Tuberculosis is one of the most vast and important in the realm of medical sciences. The ramifications of the matter are so diversified and so extensive that it seems necessary, in the discussion of one of them, to keep a few salient points in view and to set forth a limited number of premises. The objective point of this discourse is the analysis of the *Habitus Phthisicus* and its recognition for the purpose of possible prophylactic measures. The cardinal premises to be kept in mind are:

1) *Heredity is the preservation of qualities throughout the cosmos.* Heredity becomes more specialized and obvious to us, in its manifestations, as it narrows down to our planet, and, gradatim, to its anorganic and organic life; to the great realms of the latter, to the various orders, families, species, and finally, to the individual. *The chromosomes of the sperm cell and the ovum being the carriers of heredity, in the individual, tuberculosis cannot be a hereditary disease, for it is inconceivable that these somes could contain the tubercle bacillus.* (Prenatal infection must not be confounded with heredity.)

2) *Two factors are required to produce tuberculosis: the tubercle bacillus and the susceptible host.*

3) The tubercle bacillus is ubiquitous.

4) *No individual escapes contact with the tubercle bacillus. Only a fraction of the total number of individuals contracts the disease. Those contracting the disease are specially disposed.*

5) *The disposition of a race is a specific inheritance.* Question: *Is the individual disposition likewise a specific inheritance?* (Acquired disposition of members of a susceptible species or race is admitted but will be disregarded in this discourse.*)

The traditional description of the phthisical thorax reads about as follows: Sterno-vertebral diameter is conspicuously smaller, so that the anterior surface of the thorax appears flattened. Owing to the

*Read before the State Medical Society of Wisconsin, June 23, 1910.

*Birds of prey are hereditarily susceptible to avian tuberculosis; in captivity, the individuals of these species show an increased disposition acquired. The human species is hereditarily susceptible to mammalian tuberculosis; a stone-cutter, by reducing the germicidal and protective capacity of his respiratory surfaces, acquires an increased disposition.

greater width of the intercostal spaces, the ribs appear prominent, the visibility of the ribs extending also to the costal cartilages. The collar bones are still more obtrusive, revealing markedly the supra and infra-clavicular fossae. Their acromial ends are displaced forward, the sterno-clavicular articulation downward. Notwithstanding the downward displacement of the entire sternum, the epigastric or costal angle is extremely acute, in consequence of the abnormal length of the thorax. Not infrequently one of the clavicles stands lower than the other. On the back we see the scapulae project, wing-like, from the thoracic surface. Their vertebral margin is visible in its entire length. Freund, as early as 1859, discovered the shortness of the first rib, and the premature ossification of its cartilage.

Fully a decade ago the observation of a large number of cases of splanchnoptosis demonstrated to me the identity of the phthisical habitus with that of splanchnoptosis, but it is only since the reading of Prof. Stiller's masterly little sketch, presented to the Sixth International Congress of Tuberculosis, at Washington† that I have given the matter closer scrutiny. I will quote Stiller's own description of the habit of what he has named "Asthenia Universalis": "Delicate skeleton, long, flat, thorax, slanting ribs, broad intercostal spaces, narrow epigastric angle, and, as part evidence of the asthenic thorax, the loosening of the costal arc, manifested in the remaining free of the normally fixed extremity of the tenth rib, in consequence of a congenital defect of its own cartilage." This fluctuating, loose, tenth rib, is the well-known "Stiller's Costal Stigma," and, as its discoverer first indicated, its presence suffices to establish the asthenic habitus. As Stiller further says: "It (the stigma) is not the essence of this inherited anomaly (asthenia), but merely the visible index of the general asthenic constitution, which is associated with atony of all tissues, with hypoplasia of the heart and vessels, and other congenital anomalies." Stiller's statement, in 1899* "The finding of the floating tenth rib designates the future nervous dyspeptic," may safely be extended to "designate the future phthisic."

The study of the phenomena of splanchnoptosis or Asthenia Universalis affords a clear insight into the causes of the reduction of the resistance in the apices of the lung against infection by the tubercle bacillus.

†B. Stiller, *Lungentuberculose und Asthenia Universalis*. Sixth International Congress on Tuberculosis, Washington, 1908. Vol. I.

*B. Stiller. *Die Lehre von der Enteroptose*. Berl. Klin. Wochenschrift. 1899, No. 34.

Let us first determine the situs changes of the thoracic and abdominal viscera wrought by this congenital muscular weakness. The most conspicuous of these changes is the downward displacement of the stomach, intestines and the liver, and, indeed, the entire condition has received its name "splanchnoptosis" from these anatomical anomalies.

Gastro-enteroptosis, with its attending digestive and nervous disturbances, is a very common ailment, especially in the female sex, after the years of puberty. A stomach which shows its lower border 10 cm. below the umbilicus, its upper border 2 or 3 cm. above that landmark, is an everyday finding in gastro-enterologic practice. In the majority of cases of this kind the liver has followed this descending tendency and projects 5 to 10 cm. below the costal margin. Dropping of the colon completes the abdominal disturbance, resulting in an exquisitely prominent abdomen, and in a depression in the epigastric space, the normal situs of the stomach where now the pulsations of the abdominal aorta are conspicuously visible. These displacements are easily diagnosed in spare individuals, by mere inspection. The most casual palpation will locate the liver where inspection fails, and inflation of the stomach and colon will outline these organs.

The attachment of the liver to the under surface of the diaphragm, as well as the attachment of the gastric end of the esophagus in the diaphragmatic slit, postulates inevitably a flattening of the diaphragmatic dome. The diaphragm being part of the general asthenic muscular system, readily yields to the downward traction. The weakened intercostal muscles interpose no resistance, as is evident from the greatly widened intercostal spaces. This circumstance, therefore, supplies one of the potent factors tending to increase the long diameter of the chest cavity, and impede materially the normal, transverse, expansion of the same. The same factor exerts a lengthening effect upon the thoracic vessels, at the expense of their transverse diameter, thereby offering extra resistance to the primarily weakened heart muscle and the circulatory apparatus in general, thus diminishing the pulmonary blood supply, particularly in areas most remote, i. e. the apices.

The increase of the long diameter of the chest cavity is partially or wholly equalized by the reduction of the antero-posterior diameter.

The illy nourished lungs, undoubtedly mechanically congested in their lower lobes, gravitate upon the sunken diaphragm.

This would cause a vacuum in the cupolae of the pleural cavities, were it not for the production of *apical emphysema*. This apical emphysema is observable in almost all autopsies of individuals with

flattened thorax. We very frequently find scars, puckering and even solidifications, with apical adhesions, indicating obsolete tuberculosis, surrounded by exquisite marginal emphysema. Author used to believe the emphysema a compensatory sequel of the scar formation.

The aforementioned lack of blood supply is a considerable factor to the formation of the emphysema by causing an atrophy of alveolar walls and subsequent rigidity and rupture thereof.

Here, then, we find the conditions most favorable for the colonization of the tubercle bacillus, viz: poor nutrition of the tissues, and, above all, absence of ventilation. Not alone *that*, the absence of a thorough and vigorous current of air produces degenerative changes in the smaller bronchioles, many of which may completely collapse; the epithelial lining of others undergoes mucoid degeneration. The irritating effect caused by the deposition of infectious dust particles, for the chemical destruction and the physical removal of which there are no more means, often gives rise to chronic, non-tubercular, inflammation, attended with physical symptoms. More ideal conditions for the propagation of the tubercle bacillus cannot be imagined.

A great number of splanchnoptotic patients, of both sexes, have come under the writer's observation, where the physical signs of the aforementioned anatomical changes in the apices of the lung are in evidence. For convenience sake I shall describe a few typical cases, in this category, to illustrate the points:

Fig. 1, represents E. J., 19 years old. Family history: Mother living and well; father (the owner of a small mill in a country town), suffering with pulmonary tuberculosis. The father* came to me two years ago with gastro-intestinal symptoms. His stomach was markedly ptotic, there is also hepatoptosis and Stiller's sign. Pulmonary tuberculosis discovered in routine examination.

The son, the case in question, complains of distress and pressure after meals, eructations and constipation. Pulse 65, irregular, weak. Blood pressure 85. Respirations 26 to 30, distinctly abdominal. Supraclavicular dulness and mesial hyperresonance. A few fine râles on both sides, both supra and infra-clavicular. Temperature normal and no cough. Lower border of the stomach 7 cm. below the umbilicus. Lower border of the liver 5 cm. below the costal margin. Flabby abdominal musculature, exquisite Stiller's sign.

The study of the photograph will offer a better idea, than my verbal description, of the visible configuration of the skeleton. Note the descent of the right clavicle, following the traction of the dropped liver.

*Father's father died of carcinoma of stomach, mother of apoplexy, both at advanced age.

Repeated examination of sputum does not reveal tubercle bacilli. Conjunctival and skin reaction negative.

I consider this case of especial instructive value on account of our acquaintance with two generations, and the very obtrusive heredity of the *Asthenia Universalis*. Hitherto, the son is free from tuberculosis, notwithstanding the presence of râles, prolonged expirium, and supra-clavicular dulness. We are dealing here with a striking example of the "pre-tubercular stage" of the phthisical habitus. Infection with tuberculosis in the case would, of course, give rise to increased tem-

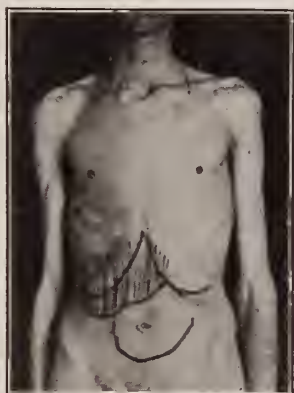


FIG. 1.

perature, and the tubercular toxemia would undoubtedly increase both the frequency as well as the force of the heart heat. The occurrence of this infection would be manifestly acquired and not inherited. Our patient did not inherit the Phthisical Habitus, but merely the Asthenic Constitution, and all its predisposing factors to the acquisition of tuberculosis. The patient's father undoubtedly went through the greater period of his life, weakened by general asthenia, superadded to which was the lung weakening occupation of miller (abandoned a year ago), without contracting tuberculosis. *Asthenia Universalis* does surely not predispose exclusively to tuberculosis. We are all familiar with the susceptibility of patients suffering from splanchnoptosis, to chlorosis, neurasthenia, constitutional albuminuria, etc.

Fig. 2, represents the female type of *Asthenia Universalis*: L. E., a girl of 25, who has been under observation for over two years. Her clinical examination report reads: Father dead from accident, mother living and suffering from "nervous dyspepsia" (asthenia). The patient was never severely ill but has been suffering from gastric disturbances for the past six years and has always been chlorotic. Present complaints: Pain in gastric and umbilical region after meals, anorexia, constipation, headache, dizziness, loss of weight. Objective findings: Pulse extremely variable, between 80 and 100. Blood pres-

sure 100, also quite variable; heart sounds negative. Sibilant râles in both supraclavicular spaces. The liver reaches the umbilicus in its downward displacement, the stomach has its lower border 10 cm. below the umbilicus, the upper border is hidden by the liver. You will observe the typical (asthenia) thorax, the general muscular flabbiness. The costal stigma is very marked. The epigastric angle is asymmetrical, as marked by the black lines. This asymmetry is undoubtedly caused by the forward pressure of the liver. As is frequently the case in these individuals, the condition is complicated by a downward and retro-displacement of the uterus. Like many



FIG. 2.

other similar cases this one was entered into my archives as "pulmonary tuberculosis" with a question mark. Very frequent examination of the sputum, which was at times rather copious, never revealed the presence of the bacillus. The cutaneous tuberculin reaction was negative. The patient frequently returns with an aggravation of the gastro-intestinal symptoms. With absolute regularity these aggravations follow every attempt to perform work in the standing position, and are regularly attended with respiratory symptoms: cough, dyspnoea, as well as palpitation of the heart and loss of weight. The temperature has always been normal. Rest in the horizontal position brings immediate amelioration of most of the symptoms and total disappearance of the pulmonary symptoms.

I have selected these two young individuals because of their striking typification of the few facts set forth. My records show 850 cases, 312 males and 538 females. 35 cases later developed tuberculosis.

The youngest case that has come to my observation was a girl four years old, whose mother was suffering from pulmonary tuberculosis and extreme splanchnoptosis. The mother's sister, also a case of extreme splanchnoptosis with marked asthenic habitus, no tuberculosis, eight years ago. The little girl shows the lower border of the stomach 2—2½ cm. below the umbilicus, and likewise a dropping of the liver,

the exact measurement of which was not taken. The costal stigma was very pronounced and was the only manifestation of the asthenic habitus, as regards the skeleton. The principal symptoms, when she came under my observation, were vomiting and constipation. According to last reports (she is with her mother who is availing herself of climatic treatment, out West) she was well and thriving. The girl's critical period will ensue with the age of puberty, during which all the manifestations of Universal Asthenia become more pronounced and deleterious factors more manifest. The skeleton will take on its characteristic conformation, the thorax will become elongated, with all the concomitant intrathoracic deteriorations. In consequence of the flattening of the diaphragm, followed by the descent of the lung, the upper portions of the skeleton of the chest need not any longer take part in the respiratory excursions. The superior thoracic aperture will incline more vertically and become narrow. The cartilage of the first rib will become shortened and Freund's stigma will now develop: rigidity and ossification of the first costal cartilage. Breathing will be principally restricted to the lower segments of the thorax and take on therefore the abdominal type. The obtrusively logical deduction arrived at, from these developmental steps, is that the development of Freund's sign is a secondary phenomenon.

All these deteriorative factors of adolescence are aggravated in the working classes, where the occupation requires a standing position, further complicated by rigid clothing and where the opportunity for optional rest is wanting. (The recumbent position is one of the great salutary measures.)

The anterior occupation of the arms, in most routine employment during adolescence, seems to aid in the typical formation of the asthenic thorax, since it postulates a physical compression of the thorax and a stoop of the shoulders, which in turn adds to the narrowing of the superior thoracic aperture. For a majority of cases, therefore, Hart's* statement, that the vertically inclined, narrow thoracic aperture is a phyletic atavistic and, therefore, congenital condition does not apply. On the contrary, I think, with Stiller, in the light of the above observations, that the condition is, like the ossification of the first costal cartilage, a developmental anomaly in consequence of the asthenic habit. It is further evident from all the foregoing data, that the phthisical habitus, so-called, is not specifically a tubercular inheritance, but merely affords a predisposition to tubercular infection by producing a nutritional inferiority, faulty anatomical conformation of the skeleton and the organs contained therein. If it were a specific tubercular inheritance and the recruits not drawn from other con-

*Carl Hart. Die Disposition d. Lungenspitzen z. Tuberculosen Phthise. Sixth International Congress on Tuberculosis. Vol. I.

tingents, I believe that the phthisical habitus would necessarily exterminate itself.

It is a well-known fact that advanced pregnancy, and particularly parturition, predispose to tuberculosis and aggravate a present case to the point of immediate fatality. While I do not wish to make any positive statement, I believe that these circumstances are due, not so much to the toxemia of pregnancy, but rather to a temporarily produced state simulating the Asthenic or phthisical habitus.

PROPHYLACTIC POSSIBILITIES: Mindful of the proposition that the eradication of the tubercle bacillus from the face of the earth is a chimerical attempt, the object of attack in the war against the White Plague must be the protection of the individual. Two principal methods of attaining this end are at our disposal:

The tubercle bacillus, no matter of what type, must by all available means be forced out of the respiratory air of our habitations and out of our food products.

The second mode of protection, much more feasible, and the one to which I venture to add a few suggestions, consists in the protection of the susceptible individual. This protection proves so much the more efficacious the earlier it is begun in life. Acquired susceptibility usually offers but little encouragement for its combatment.

The hereditary disposition, however, which we know now to be equivalent and identical with *Asthenia Universalis*, can be attacked from the earliest infancy. Splendid opportunities present themselves to the far-seeing and conscientious pediatrician, in searching for and finding among his little patients the costal stigma, the unmistakable sign of the asthenic habit.

The investigatory power of the official school physician should be extended to enable him to discover the asthenic type. The family physician and general practitioner should not allow opportunities to escape to discover Stiller's sign in those entrusted to his care during the age of adolescence, principally. The palpation of the 10th rib ought to develop into a routine "stunt," the same as asking the patient to "stick out his tongue."

Once the asthenic type is discovered, efficient measures can be taken to partially eradicate it and its concomitant susceptibility to tuberculosis.

Children with the asthenic habit are usually bright and alert, but not endowed with a great deal of energy or staying qualities. These mental faculties may be made use of to a certain extent in shaping their hygienic education.

At the head of the list of measures to be instituted, is outdoor life, muscular and respiratory developmental exercises carried on along very systematic lines, but not to the point of exhausting the patient. Rest in the recumbent position is an important factor in the treatment. Sleeping upon a hard mattress, the foot end of which may be slightly raised, will do much in the prevention of a ptosis of the abdominal organs and consequent formation of the phthisical habit.

Puberty and adolescence are the critical factors in the life of the asthenic individual. The selection of a vocation is of paramount importance. All indoor occupations should be regarded as disastrous. Among young girls the contingent for the greatest number of recruits is the employees of department stores, and the next in order, girls doing housework. Clerks and office employees furnish the male parallel. An occupation should be selected which insures variability of muscular action, combined with plenty of out-door air. It goes without saying that the selection of a "dust" occupation is equivalent to suicide.

Breathing exercises and moderate muscular exercise, with proper intervals of rest in the horizontal position; in women the wearing of the modern "straight front" corset, adjusted while lying down; in men, the abolition of all constricting bands, are to be recommended.

If the case comes under observation with the ptotic character already well marked, nothing is so efficacious as a prolonged Weir-Mitchell cure. If this procedure is not possible, frequent rest in the recumbent position, especially after meals, and a general anti-tubercular treatment, are indicated.

CONCLUSIONS: The phthisical habit and Asthenia Universalis (splanchnoptosis) are identical. Hence, the phthisical habit is not a specific phthisical inheritance.

Stiller's costal stigma is a constant concomitant of the same, indicating its presence, but not its degree.

Stiller's costal stigma, being a congenital defect, and present in earliest infancy, can, therefore, be considered a diagnostic feature of the *Habitus Phthisicus* (so-called) long before phthisis has developed.

The early diagnosis of Asthenia Universalis offers great opportunities of combating the congenital disposition to tuberculosis.

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Vol. IX.

MAY, 1911.

No. 12

EDITORIAL COMMENT.

AN OMISSION.

Attention is called to the fact that through the accidental omission of "To be continued" at the end of the first portion of Dr. F. G. Connell's article on "The Early Diagnosis of Cancer" in the April Journal, the impression would be given that the complete article had been published, while in reality that instalment comprised only about one-half of the article, the concluding section of which begins on the first page of the present issue.

THE WAUKESHA MEETING.

The full program of the 65th Annual Meeting of the State Medical Society is published in this issue of the Journal. It will be a splendid meeting. The Annual Addresses will be of great merit and of great practical interest. They will bear more directly on the problems confronting the average man than any we have heard for several years.

The papers are all good and especial attention will be given to bringing out a full discussion of them. Plenty of time will be allowed for all to be heard. And in passing it may be mentioned that it will be possible *to be heard*, for, in striking contrast to last year, the place of meeting will be quiet.

If you are tired and worried and feel that you never want to hear another medical paper as long as you live, be especially sure to come to hunt up old friends and swap hard luck stories. You need the change and the cheering influence of good comradeship. Only half the meeting is on the program; the other half or more lies in seeing old friends, making new ones, and strengthening the bonds of good-fellowship.

THE MEETING OF THE ASSOCIATION OF COUNTY SECRETARIES AND STATE OFFICERS.

While the meetings of this association are primarily for the benefit of the County Secretaries and the officers of the State Society the meeting which is planned for June 6th at Waukesha promises to be of such great interest that other members of the State Medical Society who do not belong to either of these groups may wish to be present. To *all* who feel an interest a cordial invitation to attend is extended on behalf of the Association by Brother Sleyster, our energetic Head Booster.

The program for this meeting is given in full on another page of the Journal.

Make your plans to arrive in Waukesha on the 6th! Come to these meetings and get into the spirit of the occasion!

UNDESIRABLE PUBLICITY.

The two clippings which are printed below are from a local newspaper in one of the smaller cities of the State and have been forwarded to the editor with a request for an opinion as to whether it is ethical to have items of this character printed in a town where there are several physicians.

"* * * * last Sunday accidentally cut his left wrist badly with a knife while busy building a new boat. The ulnar artery was severed and the blood spurted from the gash. Dr. * * * responded promptly to a call for medical assistance and managed to stop the flow of blood. One of the tendons was also cut and may cripple the little finger of the hand."

"The 1-year-old daughter of Mr. and Mrs. * * * * underwent an operation last Thursday, Dr. * * * removing an abscess from the child's neck. The little patient is now doing well."

In the opinion of the writer the publication of items of this sort is undesirable and improper. While it is probable that the items quoted were published without the knowledge of the physician whose name is mentioned the continued appearance of bits of news of this character would give rise to a suspicion that the man in question had not used the energetic measures to prevent this occurrence which the situation demanded. A physician may plead that he cannot help it when items are printed giving his name in connection with medical or surgical details, but so far our observation goes, a firm but courteous request to the editor to have his name omitted from news items of this character will relieve him in the future of the unpleasant criticism by his colleagues which is almost sure to be occasioned by this kind of newspaper publicity.

One would not feel that the physician who permitted his name to appear frequently in print in connection with items of this class had committed an unpardonable sin against medical ethics, but if it is not a sin it is at least a weakness to allow his name to be used in this way. He is "practicing the small vices" of medical ethics, and there is no surer way of stirring up unpleasant feelings among his colleagues.

BIENNIAL REPORT OF THE WISCONSIN BOARD OF MEDICAL EXAMINERS.

Hon. Francis E. McGovern, Governor State of Wisconsin, Madison, Wis.

DEAR SIR:—We beg leave to present to you the biennial report of the Wisconsin Board of Medical Examiners for the period ending December 31, 1910.

The Board has held two regular meetings each year, as required by law and have held two special meetings each year for the better accommodation of applicants for license and to expedite its work.

We have held four examinations, at these examinations 146 applicants have written, 127 were successful, 17 failed and of those who failed 14 have been re-examined.

Of 207 applicants for reciprocal licenses on the basis of having been licensed by some other state board with whom reciprocal relations have been established, 204 were granted licenses, three were refused; many have informally applied whose credentials were objectionable to the Board and consequently there do not appear to be many rejections.

We have established reciprocal relations with New York, New Jersey, Illinois, North Dakota, Oklahoma, Arkansas, Louisiana, Texas and Wyoming on the basis of a license obtained by examination. And with the following states on the basis of a license obtained by the endorsement of a diploma, Maine, Vermont, New Hampshire, Dist. Col., Maryland, Virginia, West Virginia, Georgia, So. Carolina, Ohio, Indiana, Michigan, Kentucky, Tennessee, Minnesota, Iowa, Kansas, Missouri, Nebraska, Nevada, Colorado and Utah.

Ninety-seven physicians' reciprocal applications have been endorsed to other states.

During this time a campaign has been carried on against the United Doctors, who were prosecuted twenty-two times and convicted the same number of times. There has been one successful prosecution against the Chicago Daily Papers for publishing obscene advertisement, this has resulted in these papers publishing an expurgated edition for Wisconsin. There have been two successful prosecutions against the local papers.

We have in this State a cult calling themselves Chiropractors. Two of these men have been successfully prosecuted, on the basis of advertising themselves Doctors, and in the case of S. R. Jansheski, one successful prosecution before a jury for practising medicine, surgery and osteopathy without a license. This makes a total of thirty-six cases prosecuted by the Board's attorney, Mr. A. C. Umbreit, and not a single unsuccessful prosecution.

An important addition to our medical laws was enacted by the Legislature of 1909, viz.: "An act to create sections 1435F-12 to 1435F-24 inclusive, of the Statutes regulating the practice of Midwifery in the State of Wisconsin. Under this Act your Board has licensed 300 Midwives in the State.

I append herewith a statement of receipts and disbursements:

Total fees received.....	\$10,229.94
Secretary's salary, attorney's fees, sundries and return fees	\$5,405.77
Attorney's fees and court costs.....	1,722.10
Members per diem, R. R. fare and incidentals.	2,891.54
Cash in bank.....	210.53
	<hr/>
	\$10,229.94

We beg to remain,

Yours respectfully,

(Signed) LEWIS F. BENNETT, *President.*

JOHN M. BEFFEL, *Secretary.*

PROGRAM SIXTY-FIFTH ANNUAL MEETING.

REPORT OF COMMITTEE ON ARRANGEMENTS.

The following announcement of the Committee of Arrangements is made for the meeting of the State Medical Society of Wisconsin to be held at Waukesha, Wisconsin, June 7, 8, 9, 1911.

WEDNESDAY, June 7th. 11:30 A. M.

Invocation.....	Rev. C. E. Bovard
Address of Welcome.....	Mayor Geo. S. Love
Response by the Vice-President of the Society.....	J. M. Dodd
Report of Committee of Arrangements.....	W. T. Murphy
Report of Program Committee.....	A. W. Gray

AFTERNOON SESSION. 2:30 P. M.

Annual Address of the President.....	B. M. Caples
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REGULAR PROGRAM.

7 P. M. Ride for physicians and guests about Waukesha, arriving at Moor Baths at 8 P. M., where will be held the Annual Smoker for society members, with an address on the Advantages of Medical Defense by W. M. Spooner, Attorney for the Society. At the same hour Dr. Margaret Caldwell and Dr. Sara Elliott, assisted by the

wives of the Waukesha County physicians, will hold a reception for the visiting ladies at the residence of Dr. Caldwell.

THURSDAY, JUNE 8th, 9 A. M.

Regular program during the forenoon.

AFTERNOON SESSION, 1:30 P. M.

REGULAR PROGRAM.

President's Reception at Waukesha Springs Sanatorium—5:30 to 7 P. M.

Annual Banquet, 8:30 P. M.—M. R. Wilkinson of Oconomowoc, Toastmaster.

FRIDAY, JUNE 9th.

MORNING SESSION, 9 A. M.

REGULAR PROGRAM.

Electric car ride to Waukesha Beach, 2:30 P. M. Lunch served.

All meetings will be held at Rest Haven. This hotel is amply able to accommodate the large attendance at the State Medical Society meetings.

Accommodations for those members of the association who wish to remain at the hotel will be furnished at \$3.00 per day. First come, first served. Make reservations promptly as those who arrive early will get the best apartments.

One large room has been set aside for the exhibits. This room is near the general meeting hall.

Arrangements have been made for the automobile exhibitors to use the garage which is just across the street from the hotel and at the end of the driveway leading to the hotel.

W. T. MURPHY, *Chairman.*

PROGRAM.

The Second Annual Meeting of the Association of County Secretaries and State Officers of the State Medical Society of Wisconsin.

TUESDAY, JUNE 6th, 1:30 P. M.

What to Strive For..... Edward Evans, La Crosse
 Address.....J. B. Murphy (President Elect, A. M. A.) Chicago
 The Scientific Spirit in the County Society..... E. B. Brown, Beloit
 The Business Side of Practice..... W. F. Zeirath, Sheboygan
 Preventive Medicine A. Egdahl, Menomonie
 Membership and Attendance..... H. A. Jegi, Galesville

How can we get the Attendance of Country Members to Meetings,	M. V. Dewire, Sharon
Informal Talk.....	C. S. Sheldon, Madison
The Relation of the Councilor to the County Society.....	
.....	R. U. Cairns, River Falls
Booster Sermon.....	Rock Sleyster, Waupun

GINGER TEA.

Address.....	J. B. Murphy, President Elect A. M. A., Chicago
Address.....	A. R. Craig, Assistant to Secretary A. M. A., Chicago
The County Society and The Public Press..	D. Hopkinson, Milwaukee
The County Society and Public Health....	G. V. Mears, Fond du Lac
One Way of Getting and Holding Members.....	
.....	R. H. Buckland, Green Lake
The County Secretary as a Peace Maker.....	A. T. Gregory, Elroy

PROGRAM.

WEDNESDAY, JUNE 7.

AFTERNOON SESSION, 2:30 P. M.

1. Annual Address of the President: B. M. Caples, Waukesha.
2. Relation of Physician to Public Campaign against Tuberculosis.
Hoyt E. Dearholt, Milwaukee.

The Wisconsin Anti-Tuberculosis Association has made a close study of 1,200 case histories of living and dead consumptives for the purpose of determining the factors responsible for the spread of the disease. The data collected by non-medical and unprejudiced social workers offers a serious indictment of the medical profession. The reports give evidence of an amazing situation concerning the lack of proper diagnosis and treatment of the disease. More serious than this, however, is the lack of precise directions to patients and friends of simple precautions necessary to prevent family and neighborhood infection.

The study holds a mirror before the medical man in which he may see himself as he is frequently seen by patients, by the social worker, or as he is described. Whether or not the image is correct, it is unpleasant. A number of case reports are detailed. The profession is asked to study this evidence; if found correct to remedy the evil situation; if found incorrect, to protect itself from similar evidence falling into unfriendly hands.

3. The Treatment of Puerperal Infections. Frank W. Van Kirk, Janesville.

Brief review of recent literature. Etiology, Pathology. Review of a series of cases. Complications: pyogenic abscess, pneumonia, iliopsoas abscess (non-tuberculous), phlebitis, intestinal obstruction, acute nephritis. Treatment. Indications for supportive treatment. Length of time in hospital. Deaths. Classification.

Discussion opened by

A. C. HELM, Beloit.

J. S. EVANS, Madison.

4. The Venous Pulse and the Heart Sounds. J. A. E. Eyster, Madison.

Review of more recent literature on venous pulse and heart sounds, together with some recent work not yet published. Especial reference made to the "h" and "x" waves of the venous pulse and the third heart sound.

5. Annual Address in Medicine—Essentials and Non-essentials in Physical Diagnosis. Richard C. Cabot, Boston.

THURSDAY, JUNE 8.

MORNING SESSION, 9 A. M.

6. Intra-peritoneal Rupture of Urinary Bladder, with report of case, resulting from automobile injury. Everett L. Mason, Eau Claire.

Etiology, pathology, symptoms, and diagnosis. Technique of operation, closure of bladder and peritoneum, injection test. Complications. Causes of death; peritonitis, shock, hemorrhage. Report of case. Review of literature.

Discussion opened by

KARL W. DOEGE, Marshfield.

EDWARD QUICK, Green Bay.

P. MCKITTRICK, Eau Claire.

7. Axis Traction Forceps. Jos. P. McMahon, Milwaukee.

History of obstetric forceps. Evolution of axis traction forceps. Description. Mechanism and advantage of delivery by axis traction instruments. Technique. Indications. Plea for more universal employment of axis traction forceps when high and middle applications are necessary.

Discussion opened by

G. A. HIPKE, Milwaukee.

W. W. KELLY, Green Bay.

J. H. SURE, Milwaukee.

8. Ileo-cecal Adhesions (Lane's Kink and Jackson's Membranous Pericolitis). F. Gregory Connell, Oshkosh.

It has been said that one in six cases of appendectomy for chronic catarrhal appendicitis is not followed by satisfactory result. Among the various possible causes that may account for this fact the Lane

Kink, and the Jackson Membrane must be given a prominent place. These conditions are described, and their relation to each other considered; likewise their probable cause or causes, the clinical results of their presence, and treatment.

9. Graves' Disease (Hyperthyroidism). Louis F. Jermain, Milwaukee.

Some remarks on pathology. Diagnosis. Early diagnosis of great importance. Hyperthyroidism and the menopause. Results of treatment.

Discussion opened by

J. L. YATES, Milwaukee.

W. H. WASHBURN, Milwaukee.

10. The Action of Arsenic on the Skin. Robert G. Washburn, Milwaukee.

Indications for use of arsenic in dermatology. Effects of idiosyncrasy on the skin; erythematous eruptions, melanoderma, keratosis, zoster. Theories as to cause of these by-effects.

Discussion opened by

L. SCHILLER, Milwaukee.

C. A. BAER, Milwaukee.

11. Cancer of the Sigmoid Flexure and Upper Rectum. Karl W. Doege, Marshfield.

THURSDAY, JUNE 8.

AFTERNOON SESSION, 1:30 P. M.

12. Medical Inspection of Schools. Richard W. Jones, Wausau.

History of the movement with arguments for and against mandatory inspection of the public schools. Preliminary report of the system in use in Wausau, Wisconsin, with reports of results obtained after trial of one year.

Discussion opened by

GEORGE P. BARTH, Milwaukee.

C. R. BARDEEN, Madison.

13. Injuries to the Orbit. Gilbert E. Seaman, Milwaukee.

Frequency of occurrence. Some anatomical considerations. Means by which such injuries are produced. Brain involvement. Comment on some illustrative cases. Injuries occurring in operations on nose and sinuses. Fractures. Foreign bodies in the orbit. Diagnosis and treatment.

Discussion opened by

L. P. ALLEN, Oshkosh.

EDWARD EVANS, La Crosse.

14. Arterio-sclerosis in the Young. Daniel Hopkinson, Milwaukee. Autopsy records show that arterio-sclerosis in the young, especially of the visceral vessels, is not an uncommon finding. Recognition of

acute infectious diseases as a frequent etiological factor. Syphilitic history, congenital and acquired, frequently negative. Reports of sudden death from arterio-sclerosis of coronary and cerebral vessels.

Discussion opened by

G. C. RUHLAND, Milwaukee.

G. A. LANDMANN, Milwaukee.

15. Relative Value of Diuretics. A. S. Loevenhart, Madison.

Diuretics considered; theobromine sodium salicylate, theophylline sodium acetate, sodium sulphate, sodium acetate, urea, and calomel. Rabbits were used in the experimental work. Effects of above drugs on blood pressure, cardiac output, and secretion of urine were determined. Suggestion that all of these drugs except calomel are suitable for intravenous use in man.

Discussion opened by

L. M. WARFIELD, Wauwatosa.

16. Annual Address in Surgery—The Present Understanding of Rheumatoid Conditions. Joel E. Goldthwait, Boston.

FRIDAY, JUNE 9.

MORNING SESSION, 9 A. M.

17. Rabies in Wisconsin and its Control. Mazyck P. Ravenel, Madison.

Rabies becoming more prevalent through U. S. Wisconsin has suffered severely during last three years. Outbreak apparently entered from south, beginning at Beloit and working steadily northeast. Scattering cases in western part of state. Large number of farm animals lost. Laboratory examination of dogs who have bitten people shows about 50 per cent rabid. Pasteur treatment begun by Wisconsin State Hygienic Laboratory and State Board of Health in November, 1909. Many cases treated with uniform success. Lack of muzzling laws makes control difficult in our state and throughout country. Proper preventive measures. Result in England and Paris.

18. Marriage and Disease. Frank I. Drake, Madison.

Man is a mammal and equally with other mammals is subject to nature's laws. Popular ignorance of laws of heredity and laxity of moral and civil laws governing marriage have resulted in increase of insanity, epilepsy, and imbecility. Efficiency of Indiana method of sterilization. Duty of the state to educate the people along lines of sex hygiene and eugenics through the University extension department.

Discussion opened by

T. L. HARRINGTON, Milwaukee.

P. H. MCGOVERN, Milwaukee.

ALFRED W. WILMARTH, Chippewa Falls.

19. Vaginal Ptsosis: Surgical Treatment. Ralph Elmergreen, Milwaukee.

If more reparative gynecic work is done less major work will be called for. End-result of our work very gratifying. If you successfully overcome a rectocele and cystocele with general vaginal fullness you often cure an old neurasthenic. Anatomic and physiologic causes of vaginal ptosis. Modern surgery must recognize these causes in aiming at a permanent cure. Our technique.

Discussion opened by

W. F. MALONE, Milwaukee.

HARRY GREENBURG, Milwaukee.

F. C. GILLEN, Milwaukee.

20. Impaling Injuries of the Pelvis. Chas. J. Habegger, Watertown.

Historical note. Definition. Nature of accident and character of impaling instruments. Frequency. Description and classification of injuries: (a) extraperitoneal without injury to organs, (b) extraperitoneal with injury to organs, (c) intraperitoneal without injury to organs, (d) intraperitoneal with injury to organs. Total impalements. Multiple impalements. Source and character of infections. Symptoms and diagnosis. Prognosis. Treatment. Report of a case and citation of cases from literature and otherwise.

Discussion opened by

W. C. F. WITTE, Milwaukee.

W. G. DOERN, Milwaukee.

J. L. YATES, Milwaukee.

21. The Examination of Tuberculous Sputum by the Antiformin method. J. X. Neumann, Madison.

Examination of tuberculous sputum offers no difficulty when bacilli are plentiful, but in some cases the bacilli may be very few and ordinary examination may not reveal them. Various methods, such as centrifugation, treatment with carbolic acid, solution in caustic alkalis with sedimentation, etc., have been used. Antiformin, recently introduced, rapidly dissolves sputum and bacilli are then thrown down by centrifugation. It seems to be free from objections which the ordinary caustic solutions had and offers a rapid and convenient method for detection of bacilli in sputa containing small numbers.

PROGRAM OF THE MARQUETTE UNIVERSITY MEDICAL DEPARTMENT ALUMNI MEETING AND CLINICS.

The second annual Alumni Meeting and Clinics of Marquette University Medical Department, will be held June 5, 6 and 7, 1911, at the school building, 9th and Wells Streets. We extend an invitation to these clinics to all members of the State Medical Society. These clinics will not interfere with the program of the State Medical Society.

MONDAY, JUNE 5, 1911.

- 8- 9 A. M.—“606,” Drs. Beyer and D. Hopkinson.
 9-10 A. M.—Rectal Diseases, Dr. L. Hopkinson.
 10-12 A. M.—Medical Clinic, Dr. W. H. Neilson.
 2- 4 P. M.—Surgical Clinic, Drs. Witte and D. Hopkinson.
 4- 6 P. M.—Clinic. Intracranial Complications of Ear Diseases,
 Drs. Stolte and Russell.

TUESDAY, JUNE 6, 1911.

- 8-10 A. M.—Eye, Nose and Throat Clinics, Drs. Stanley, Messmer
 and Morgenroth.
 10-11 A. M.—Medical Clinic, Dr. W. H. Washburn.
 11-12 A. M.—Pediatrics, Dr. G. H. Fellman.
 Dermatology, Dr. R. G. Washburn.
 2- 4 P. M.—Surgical Clinic, Drs. Purtell and W. Nelson.
 4 -6 P. M.—Surgical Clinic, Dr. Chester M. Echols.
 8:30 P. M.—Annual Banquet and Meeting.

WEDNESDAY, JUNE 7, 1911.

- 8-10:30 A. M.—Gynecological Clinic, Drs. Hill and Beyer.

NEWS ITEMS AND PERSONALS.

Milwaukee Hospital, Milwaukee, plans a new \$70,000 addition.

Dr. E. C. Cary, Welcome, has been elected health officer of that village.

Dr. Max Staehle was on April 22nd elected health officer of Manitowoc.

Dr. G. A. Grafton was re-elected county physician of Hayward, on May 4th.

Dr. Gustav Bjorkman, Racine, is seriously ill as a result of an injury of the foot.

Dr. C. H. Lewis, Milwaukee, sustained severe injuries to his head and back in a runaway.

Dr. J. A. Palmer, Arcadia, who was recently operated upon for appendicitis, is convalescing.

Dr. Lester B. Bell, Grantsburg, Rush Medical College, 1906, was killed on May 12th in an automobile accident.

The Wisconsin College of Physicians and Surgeons, Milwaukee, conferred degrees on 16 graduates of the medical department, on May 30.

Columbia Hospital, Milwaukee, is to have a new building. A site comprising 15 acres has been purchased. It is proposed to raise the sum of \$750,000 for building and endowment.

Percival Washburn, Milwaukee, pleaded guilty on May 5th in Federal court to a charge of violating the government's pure food laws by selling a medicine containing prohibited ingredients. He was fined \$10.00.

Dr. E. W. Malone, Waukesha, County Physician, secured a judgment for services rendered Matthias Rosner, a supposed pauper. Subsequent to his death it was discovered that he had about \$11,000 on deposit. The contention was that Rosner was not an indigent and that his care at the poor farm at the county's expense was a fraud on the county. Dr. Malone claimed \$504, the court allowing him \$420.

Marriages. Announcement has been made of the marriage of Dr. Jacolyn V. Manning, formerly of Eau Claire, Wis., and now of Manhattan, to Christian S. E. Spoerl, of Wilkesbarre, Pa., at the Church of the Transfiguration, March 22nd, by the Rev. Dr. Geo. Houghton.

Mr. Spoerl is a native of New York, but went to Wilkesbarre to engage in business, from which he retired about two years ago. Mr. and Mrs. Spoerl will live in New York.

American Bureau of Information of the International Committee for Post-Graduate Medical Education. The Delegates of the United States to the International Committee for Post-Graduate Medical Education will maintain a Bureau of Information on Medical Education, particularly Post-Graduate Medical Education. All available information on this subject will be kept on file for the benefit of those who inquire personally or by mail about the educational facilities of the different medical centers of the world. This Bureau of Information will be located at 303 East 20th Street, New York City, and will bear the name of American Bureau of Information of the International Committee for Post-Graduate Medical Education.

All communications should be addressed to "Medical Information Bureau, 303 East 20th Street, New York City." Communications requiring answer must be accompanied by stamped envelope.

Removals. Dr. L. S. Shauger, Manawa to Ogema.

Dr. G. R. Fugina, Fountain City to Janesville, Minn.

Dr. F. C. Welch, Waukesha to Mukwonago.

Dr. M. P. Houck, Wantoma to La Crosse.

Dr. F. M. Blair, Benton to Baltimore, Md.

Dr. W. H. Lewis, Eau Claire to Bangor.

Dr. Chittenden, Janesville to the State of Washington.

Dr. J. M. Hogan, Rhinelander to Oshkosh.

Dr. L. J. Friend, Merrill to Wausau.

Removals. Dr. O. A. Eckardt, Waterloo to Glidden.

Dr. S. W. Forbush, Black Creek to Waterloo.

Dr. B. Bantly, formerly of Milwaukee, but for the past eight years chief

surgeon at the Wisconsin Veterans Home at Waupaca, has returned to Milwaukee to resume practice.

The American Red Cross announces, in connection with the **International Conference of the Red Cross** which will be held at Washington, D. C., in May, 1912, that the Marie Feodorovna prizes will be awarded.

These prizes, as may be remembered, represent the interest on a fund of 100,000 rubles which the Dowager Empress of Russia established some ten years ago for the purpose of diminishing the sufferings of sick and wounded in war. Prizes are awarded at intervals of five years, and this is the second occasion of this character. These prizes in 1912 will be as follows.

1 of 6,000 rubles.

2 of 3,000 rubles each.

6 of 1,000 rubles each.

The subjects decided upon for the competition are:

(1) Organization of evacuation methods for wounded on the battle field, involving as much economy as possible in bearers.

(2) Surgeon's portable lavatories for war.

(3) Methods of applying dressings at aid stations and in ambulances.

(4) Wheeled stretchers.

(5) Support for a stretcher on the back of a mule.

(6) Easily portable folding stretcher.

(7) Transport of wounded between men of war and hospital-vessels, and the coast.

(8) The best method of heating railroad cars by a system independent of steam from the locomotive.

(9) The best model of a portable Roentgen-ray apparatus, permitting utilization of X-rays on the battle field and at the first aid stations.

It rests with the jury of award how the prizes will be allotted in respect to the various subjects. That is to say, the largest prize will be awarded for the best solution of any question irrespective of what the question may be.

Further information may be obtained by addressing the Chairman, Exhibit Committee, American Red Cross, Washington D. C.

Very respectfully,

CHARLES TYRRELL,

Major, Med. Corps, U. S. Army, Chairman, Exhibit Committee.

Seventh International Congress Against Tuberculosis to be held in Rome from the 24th to the 30th of September, 1911, under the distinguished patronage of T. M., The King and Queen of Italy.

The last International Congress against Tuberculosis, held at Washington in 1908, chose Rome as the meeting place of the Seventh Congress.

To justify the high honor conferred on Italy and on Rome by this choice, the General Organizing Committee, of which the Government nominated Prof. Guido Bacelli president, had laid upon it the arduous task of rallying round it for the prophylaxis of tuberculosis and the battle against it, men of science, philanthropists, including those of the gentler sex, statesmen, all in short who have at heart an ever more vigilant defence of mankind against this terrible scourge.

To this Congress of ours, then, we invite all who wish well to their

fellow-men and who realize the enormous gain to the resources of the race from a united and harmonious advance along the path of sanitary science.

The work of the Congress will be distributed among three great Sections, in order to give scope to the discussion of every possible mode of operation, whether in the individual battle against the disease in its diagnosis and its treatment, or in the combinations against it for the defense of the race against its terrors and its fatal consequences. The three Sections are the following:

- (a) Etiology and Epidemiology of Tuberculosis.
- (b) Pathology and Therapeutics (Medical and Surgical) of Tuberculosis.
- (c) Social Defense against Tuberculosis.

The Congress will be held at Rome from the 24th to the 30th of September; and a Special Committee is making preparations for an Exhibition of Social Hygiene (to be held at the same time with the Congress) which will be the best possible illustration of its work.

(Signed) GUIDO BACCELLI, *President.*

VITTORIO ASCOLI, *Secretary General.*

Those who intend to take part in the Congress should apply to the Secretary General, 36, Via in Lucina, Rome.

Members' tickets 25 francs.

Members' relatives can obtain tickets at 10 francs.

Payment to be made by postal order, on application to the Secretary.

The above tickets give their holders the right to reduced railway-fares, admission to various social gatherings, etc., etc.

Deaths. Dr. W. C. Coburn, Washburn, died on May 5th, aged 70 years. Some months ago Dr. Coburn suffered a paralytic stroke from which he never recovered. Dr. Coburn was a resident of Washburn for about 20 years.

Deaths. Dr. Andreas Quisling, Madison, died on May 12, of pneumonia.

Dr. Quisling was born in Norway, January 30, 1859, coming to this country in 1885. He studied medicine at Iowa City, Iowa, and later took a course at Northwestern Medical College, Chicago. He also studied in Stockholm, Sweden, and Germany.

Dr. H. A. Lathrop, Marshfield, one of the oldest physicians and a pioneer of this part of the state, died at his home on April 23rd, of nephritis, aged 63 years.

Dr. Henry Allison Lathrop was born in Bedford, Ohio, September 26, 1848, and was graduated from the Hahnemann Medical College of Chicago, in 1881, since which time he has practiced at Marshfield. He was a member of Wood County, Wisconsin State and American Medical Associations.

Dr. C. L. Rudolf Zimmermann an old and respected resident of Campbellsport died at his home in that village at 4:30 P. M. Tuesday, March 28, 1911, of old age.

The deceased was born Aug. 12, 1829, at Friedeburg, Brandenburg, Germany. After finishing the parochial school he entered the gymnasium at Koenigsburg in 1838, and later that of Neu Ruppin, from which he graduated in the year 1849. He then studied law at the University of Greifswald for three years, from there going to the University of Berlin to finish the law course, at the same time attending medical courses, completing the

law course at the age of 21 years after which he took a four years medical course at Breslau. When at Berlin he heard some of the distinguished lecturers, such as Langenbach, Alexander von Humboldt, Seepold, and Schoenlein, and at Breslau he heard Frederichs, Reichert, Middledorf, etc. Then he went back to the University of Greifswald and completed the medical course. His testimonials from the various universities were excellent.

He came to America in the year 1857 from Hamburg, the passage lasting 32 days, and many of the passengers dying of cholera. They were quarantined for 14 days on Staten Island before landing in New York. He remained in New York one day and after six days of traveling he arrived at Chicago, he then came to Milwaukee and worked on a farm for two weeks, after which he and one of his comrades went peddling, he then went to Beaver Dam and from there to Fond du Lac where he practiced medicine for one year in company with Dr. John Weinam, and from Fond du Lac he came to New Cassel in 1859 where he practiced medicine until about 15 years ago, since which time he had retired.

His sister, who made her home with him, preceded him in death in 1899. The funeral was held Thursday forenoon from the Reformed church with Rev. Wm. Landsiedel officiating and interment took place in Schrooten's cemetery in the town of Auburn. The pallbearers were the Drs. M. A. T. Hoffman, P. A. Hoffmann and Uelmen, of Campbellsport, N. Edw. Hausmann of Kewaskum, G. Hoffman and Rogers of Hartford.

To the Knowledge of Pathological Color Sensations. HILBERT, R. Sensburg (*Centralblatt für Augenheilkunde*, Feb. 1910, p. 33), reports 6 cases, viz., 2 cases of xanthopsia, one caused by poisoning with fungi, the other in albuminuric chorioretinitis, complicated by pregnancy, similar to the case of Yamaguchi, published in the *Klin. Mon. für Aug.*, August, 1909.

One case of chloropsia occurred in a woman, aged 30, who had opacities of the vitreous and saw two stationary green spots in the temporal portion of the visual field. They disappeared within 10 days under diaphoresis, physostigmin, and staying in the dark room. The other was due to santonin intoxication. The 5th was a case of ianthinopsia. A physician after exhaustive work for several days and nights rested on the couch. On awakening he noticed, for 2 or 3 minutes violet contours around all objects. This corresponds with an auto-observation of H., a few years ago, who saw the contours carmin red.

Very peculiar was the 6th case: a man aged 33, with albuminuric retinitis, hemorrhages and edema of the retina, 7 per cent. albumin, complained of periodical flickering and that he saw everything brown, then yellow and green, finally red and, when looking towards the sky, yellowish green. He also suffered from headache and vomiting.

The color vision in the case of retinitis most likely was due to the peripheral affection, in the other cases central.—C. Zimmermann.

THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORGANIZED 1841.

Officers 1910-1911.

BYRON M. CAPLES, Waukesha, President.

J. M. Dodd, Ashland, 1st Vice-President. T. J. Redelings, Marinette, 2d Vice-President.

Wilson Cunningham, Platteville, 3rd Vice-President.

CHAS. S. SHELDON, Madison, Secretary. S. S. HALL, Ripon, Treasurer.

ROCK SLEYSER, Waupun, Assistant Secretary.

A. W. GRAY, Milwaukee, Chairman Program Committee.

G. E. SEAMAN, Milwaukee, Chairman Medical Defense Committee.

J. P. McMAHON, Milwaukee, Chairman, Committee on Public Policy and Legislation.

Delegates to American Medical Association.

L. F. Bennett, Beloit. C. S. Sheldon, Madison. A. H. Levings, Milwaukee.

Alternates.

F. S. Wiley, Fond du Lac. Wilson Cunningham, Platteville. R. G. Sayle, Milwaukee.

Councilors.

TERM EXPIRES 1911.		TERM EXPIRES 1914.	
1st Dist., H. B. Sears, - - Beaver Dam	7th Dist., Edward Evans, - - La Crosse	2nd Dist., G. Windesheim, - - Kenosha	8th Dist., T. J. Redelings, - - Marinette
TERM EXPIRES 1912.		TERM EXPIRES 1915.	
3rd Dist., F. T. Nyc, - - Beloit	9th Dist., O. T. Hougen, - - Grand Rapids	4th Dist., W. Cunningham, - - Platteville	10th Dist., R. U. Cairns, - - River Falls
TERM EXPIRES 1913.		TERM EXPIRES 1916.	
5th Dist., J. V. Mears, - - Fond du Lac	11th Dist., J. M. Dodd, - - Ashland	6th Dist., H. W. Abraham, - - Appleton	12th Dist., H. E. Dearholt, - - Milwaukee

NEXT ANNUAL SESSION, WAUKESHA, JUNE 7, 8 and 9, 1911.

The Wisconsin Medical Journal, Official Publication.

SOCIETY PROCEEDINGS.

GRANT COUNTY MEDICAL SOCIETY.

The regular meeting of the Grant County Medical Society was held at Laneaster, Thursday, May 11th. Through the kindness of Judge E. B. Goodsell, we were privileged to meet in the probate court room of our new court house.

Dr. W. P. Hartford, Vice-President, called the meeting to order. Dr. Wilson Cunningham presented an excellent paper on *Cholelithiasis Diagnosis and Treatment, with Report of Cases*. Dr. Gault reported an interesting case of *Impaired Vision and Defective Intellect in a Child, due to Enlarged Turbinates*. Interesting cases were also reported by Drs. J. McGovern, J. C. Doolittle, A. W. James, W. W. Pretts, C. A. Cooper, J. Oettiker, J. C. Betz, C. S. Hayman.

The names of Drs. T. H. Marsden, C. H. E. Wheeler, J. C. Willman, T. H. Baldwin, J. J. McMers and J. W. Ovitz were presented, and after being reported upon favorably by the censors, they were elected to membership in this Society.

Upon invitation of Drs. W. P. Hartford and J. J. DeMers it was decided to hold the September meeting at Cassville, and make it a day of outing.

Members present were: Drs. W. Cunningham, H. Gasser, J. Oettiker, W. W. Pretts and J. W. Ovitz of Platteville; A. W. James, Muscoda; J. McGovern, Patosi; F. H. Baldwin, Livingston; C. A. Cooper, Montfort; W. P. Hartford and J. J. DeMers, Cassville; C. S. Hayman, J. C. Betz, and E. A. A. Hanneman, Boscobel; J. M. Lewis and M. B. Glasier, Bloomington; J. A. Gault and J. C. Doolittle, Lancaster. Visitors: Judge E. B. Goodsell and Mrs. A. W. James.

M. B. GLASIER, M. D., *Secretary*.

GREEN LAKE-WAUSHARA-ADAMS COUNTY MEDICAL SOCIETY.

The regular meeting was held at Princeton, April 19th, at 1 P. M. After taking lunch at the American House the doctors held their session in the hotel parlor. The President, Dr. Baldwin, called the meeting to order. The following were present: Drs. Prince, Berlin, Poppe of Wautoma, Travis, Racek and Froelich of Princeton and Buckland of Green Lake. A heavy rain-storm prevented a larger attendance.

The minutes of the previous meeting were read and approved. Dr. A. L. Travis, who is again practicing in Princeton, was accepted as a member. It was agreed to hold our next meeting at Green Lake sometime in June.

Program: *Infantile Spinal Paralysis*, Dr. L. H. Prince, Berlin.

This was in every way a splendid writeup of the disease. Discussion was full and free.

Dr. Racek presented a clinical case of much interest. A boy of 18, previously well, injured three years ago by a fall on the head. The boy's character had changed and he presented a number of symptoms indicating pressure upon the brain. Diagnosis not agreed upon. Trephining suggested.

It was then voted to withhold the discussion on the Toxemia of Pregnancy until the next meeting, leaving a half hour open for general conversation.

Meeting adjourned.

R. H. BUCKLAND, M. D., *Secretary*.

LANGLADE COUNTY MEDICAL SOCIETY.

The Langlade County Medical Society met in the City hall Saturday evening, March 25. There was more than usual interest manifest, with a good attendance, considering the amount of sickness that is in the city, at this time. Dr. Watson read a very interesting and instructive paper on *Normal Salt Solution as Used Today*. The paper brought out many valuable points.

Dr. Wolfrum read a paper on *Therapeutics*. The paper was well discussed and brought out some good ideas.

Then there were clinical cases taken up, experiences related and in fact a rousing good meeting was the result.

We were all glad to welcome our friend Dr. Helen B. Tennies, of Sparta.

at our meeting and it seemed good to have her with us. Though living in a different county she prefers keeping her membership with us.

After the meeting a banquet and smoker was held at the Cafe Davenport and Mr. and Mrs. Cushing under the management of Harvey Finch did themselves proud. The chicken surely was fine so also the salads and delicacies of which there was a variety and the doctors all did justice to the occasion. All in all everything passed off very satisfactorily and long live the Langlade County Medical Society.

J. C. WRIGHT, M. D., *Secretary.*

MONROE COUNTY MEDICAL SOCIETY.

The Monroe County Medical Society met at Sparta, March 22, 1911. A banquet was tendered the members by the Sparta physicians, at the Ida House, after which the regular meeting was held in the offices of Drs. Sarles, Beebe and Beebe. Officers present: Dr. C. H. Cremer, President; Dr. J. W. Christensen, Vice-President; Dr. A. R. Bell, Secretary and Treasurer; 16 members in attendance.

After the business meeting Dr. Edward Evans, of La Crosse, read a paper on *Differential Diagnosis*. Discussed by Dr. Riordan, of Wilton.

A vote of thanks was extended to Dr. Evans.

A Smoker was held after the meeting and a spirit of goodfellowship prevailed.

A. R. BELL, M. D., *Secretary.*

ROCK COUNTY MEDICAL SOCIETY.

The monthly meeting of the Rock County Medical Society was held at Beloit on April 24th, and was well attended.

Dr. D. N. Eisendrath, Professor of Surgery in the College of Physicians and Surgeons, Chicago, delivered an illustrated lecture on *The Surgery of the Kidneys*. Papers were also read by Drs. Paul A. Fox, of Beloit, and F. B. Weleh, of Janesville.

The annual banquet of the Society will be held at Janesville on May 30th.

NINTH COUNCILOR DISTRICT MEDICAL SOCIETY.

The annual meeting of the Ninth Councilor District Medical Society was held at Stevens Point on May 2, 1911, with 35 members in attendance. After an excellent supper at the Hotel Sellers, the meeting was held at the Library Rooms, where the following program was enjoyed: *Use of Sodium Salicylate in Pneumonia*, Dr. S. S. Leith, Junction City; *Subcutaneous Emphysema in Respiratory Diseases, with Report of a Case*, Dr. J. B. Vedder, Marshfield; *Treatment of Cholera Infantum*, Dr. Merle Casey, Almond; *Illustrations of an Enteratoma at Umbilicus*, Dr. Karl Doege, Marshfield.

Dr. T. H. Hay, Stevens Point, was elected President and Dr. R. P. Potter, Marshfield, Secretary-Treasurer.

After the meeting a smoker was held in the Elks Club Rooms.

R. P. POTTER, M. D., *Secretary.*

**THE ASSOCIATION OF
COUNTY SECRETARIES AND STATE OFFICERS
OF THE STATE MEDICAL SOCIETY OF WISCONSIN.**

T. J. REDELINGS, M. D., Marinette,
President.

W. F. ZEIRATH, M. D., Sheboygan,
Vice-President.

ROCK SLEYSER, M. D., Waupun, Secretary.

NEXT ANNUAL SESSION, WAUKESHA, JUNE 6, 1911.

Under this heading will be published each month, papers, editorials, sermons, reports of meetings and all that relates to the County Medical Societies of the state. To it all are invited and asked to contribute, especially the County Secretary. It is yours—make good use of it, and may it be of help to every County Society. It will be edited by Rock Sleyster of Waupun, secretary of the new association, to whom all communications for this department, reports of meetings and news matter should be addressed.

SECRETARIES' MEETING.

The Second Annual Meeting of The Association of County Secretaries and State Officers will be held at Rest Haven, Waukesha, St. Boostheimer's Day, June sixth, at one-thirty P. M. The "Ginger Tea" will follow the afternoon program. Every man attending both the afternoon session and the "Tea" will receive a special blessing.

These meetings are intended primarily for the county secretary but all officers and others interested in organization work are invited to be present. See that your county secretary attends even if the society must pay his expenses. He has earned it and the good he derives from the meeting will revert to the society. The program, published on page 731 is even better than last year's. You county officers can't afford to miss it. Make your plans now and write me that you are coming—that's so I will order enough "Tea". The house of delegates meets the same evening and every delegate can and should attend by leaving home only a few hours earlier. This is the most important meeting of the year for it brings the active workers together to exchange ideas.

Dr. J. B. Murphy (President Elect of the A. M. A.) and Dr. A.

R. Craig (Assistant to Dr. Simmons) will be present at both meetings and address the society.

Now, Brother, this is to be a regular "Booster" love feast. Don't miss it! Leave your troubles at home and come with an open heart and a strong right hand. Make your plans now—carry them out the sixth—and may St. Boostheimer bless you!

ROCK SLEYSER.

SOCIAL FEATURES OF THE COUNTY SOCIETY.*

BY J. H. CLEARY, M. D.,

KENOSHIA.

My appearance today is an unsolicited one and somewhat of a coercion, as I knew nothing about my name being on the program until notified of that fact by a certain head booster, not to mention any names or call attention to the proximity of a certain individual—suffice it to say that he is an arbitrary being, and has not learned to take no for an answer. Had I a choice I would have insisted that so important a subject be handled by one of larger experience in the office of a County Secretary, and one whose eloquent and forceful language would portray this subject in the manner which it deserves.

The query naturally arises why the necessity for social features in an organization which offers so many other advantages to its members, yet none will deny that the social features of the county society are among its most important, and without them most other features would be a dismal failure. Man is pre-eminently a social animal, and doctors are no exception to the rule. The mere gathering together in a society constitutes a social feature of no mean standing and proves the prime importance of the social element in all human organizations.

In order to hold the continued interest of a body of men we must contribute to their mental or material welfare or amuse them, and most frequently both, and a doctor's life is such a serious one that anything which serves to take his mind from his daily work and furnishes relaxation assumes greater importance in medical organizations than in most other societies.

In the new era of medicine just being fairly inaugurated, the era of enthusiastic and systematic organization, the era of harmony, good-

*Read at the First Annual Meeting of the Association of County Secretaries and State Officers, Milwaukee, June 21, 1910.

fellowship, unity and co-operation, the need for social features in our basic societies becomes more apparent, for without these features we cannot gain that thorough knowledge of the man, by which we know him as he is and not as he is painted, and without which knowledge the apparent harmony and co-operation will be a hollow sham.

To the disgrace of our profession we still find members of our county societies in good financial standing maintaining petty enmities and lending a willing ear to unfriendly gossip about a fellow member. Bickering and enmity cannot long endure the mellow sunshine of the social hour when we extend our legs under the mahogany of our competitor and eat his salt together with other good things. We learn that he is a good fellow, a good citizen and an honest man as well as displaying a medical knowledge, the equal, if not superior of our own. We learn that most of the knocking is done by the well-intentioned but ill-famed efforts of our patients to further the success of their own doctor, and that the doctor is in most cases wholly innocent. We meet our fellow practitioner in a different atmosphere from that of our daily life, and find him human like ourselves. To drop generalities and come down to details we find we must consider the opportunities for social features. Regular meetings should be held once a month—oftener would have a tendency to eliminate social features for want of time, and less frequent meetings would favor loss of sustained interest.

In our county, with a membership of thirty, we find that holding meetings at the homes of members by invitation guarantees successful meetings. Just sufficient formality is observed to conduct the business of the society, but the spirit that pervades is the spirit of sociability and goodfellowship, and all await the hospitality of the doctor's wife and the social hour that follows adjournment.

Special amusement provided for these meetings will depend on circumstances and available talent and must vary in different communities, but the opportunity is there and may be taken advantage of by the local officers.

During the summer months it would be well to hold one or two meetings in the country and in counties having inland lakes they should be utilized to the fullest extent.

It has been our fortune to attend a few such meetings and combined with the excellent entertainment of our county members they were occasions to be remembered. Few doctors are so busy during the summer that they cannot spare an afternoon to contribute to the success of these meetings, and if they are busy they need the outing all

the more. Why not make these summer diversions an old fashioned picnic and bring the ladies—whether wives or sweethearts—as nothing would contribute so much to the desired harmony as a better acquaintance of the gentler sex who contribute so much to the life of most social affairs—only too frequently differences are carried into the family of the physician which seriously interfere with the complete healing of old wounds which have begun in the county society. Other summer amusements must suggest themselves according to locality and environment.

The annual meeting should be a feature of the county society and should be made a social occasion. As the business of an annual meeting can be completed in a short time, usually consisting of the election and reports of officers—the social features can be elaborated, and as has been many times suggested, may consist of a banquet and its accompanying features, presided over by a toast-master, roast-master or tea-master as the occasion demands. Such a program would insure a full attendance, for let us not lose sight of the fact at this time that a full attendance even with a little discord is as desirable as harmony with a few. Special meetings may be provided or a regular meeting may be utilized in which to collaborate with our neighboring counties. We have had some experience with these joint meetings in Kenosha, and they were very enjoyable affairs. I have not attempted to take advantage of my full time, as the meeting is one for the most wide exchange of ideas, and the prime object of every paper should be to present a subject and a few of its many sides for active discussion. This being the first meeting of its kind in our state, it should be highly educational, as we are all anxious to learn how they do it in other counties and bring home a lot of new ideas. Before closing, let me say on behalf of the over-worked county secretaries that the social features of the county society should be in charge of a special committee on entertainment.

PRESIDENT: The paper is now open for general discussion.

DR. G. F. ADAMS, Kenosha: I want to back up our worthy secretary. Dr. Cleary is secretary of the Kenosha County Medical Society, and I want to tell Dr. Sleyster, the head booster, that if he fails in having 2,000 members at this meeting it will be largely on account of some of the social features that have been developed in Kenosha, because in return for an invitation that the Kenosha County Society extended to Lake County, Illinois, which contains the city of Waukegan, the Waukegan men have invited Kenosha County down there, and that meeting is to be Thursday night. I am going to be at Waukegan myself, though I would like to be in Milwaukee. I do not know how I can be in two places at the same time.

We also exchanged meetings with Racine: we go there and they come to

us; and it adds very, very much to the successful interest of the society. The social features that Dr. Cleary referred to, so far as meeting at various households is concerned, I believe adds equally as much to the interest. One of the men who spoke wanted to know how to get in the country members. I will tell you. Feed the beast; you can't get him there any easier way.

DR. W. F. ZIERATH, of Sheboygan: We have had some special meetings. Whenever a man comes from out of town, any man that has a reputation, we telephone around and have the men get out. These men come up in an emergency occasionally. Dr. Bayard Holmes came up at one time, and from my experience with him in Wesley Hospital, I am acquainted with the fact that he is a royal good entertainer. I knew he would be, and I promptly set to work and got out all the men, and we had a meeting that went down in the history of the society as a great time. Dr. Watkins was up there, and we had him give us a talk on a scientific subject, and later we adjourned to a restaurant for a little lunch, and everybody got sociable. But as for having any meetings in the houses of the doctors or anything like that, we have not done anything of that character, but we are going to. Next month and in August we are going to have a meeting at Elkhart Lake. Our facilities are such that we can go over by electric line to Elkhart Lake, and we are going to have one of these meetings such as they have in Kenosha, and have a basket picnic, or whatever we want.

PRESIDENT: Is there any further discussion? I want to announce that in Marinette and Menominee counties during the past two years we initiated our annual meeting by a banquet at our hotel, the best hotel in the cities, and the meeting was well attended. It brought out a full membership, and the expense of the banquet was met by the funds in the treasury of the society. We have no expense for a place of meeting, and consequently the only item of expense we have is postage and printing, and there is a little surplus that accumulates, and the members chose to use it in that way. I believe it was a very good way to appropriate the money on hand.

DR. DANIEL HOPKINSON, Milwaukee: I would like to say that in Milwaukee we have two meetings that are partly social and partly scientific, the May meeting and December meeting. The December meeting being the annual meeting for the election of officers, at this time the program instead of being of a scientific nature is usually some general civic topic. We have usually some member of the Health Department, the Health Commissioner or his assistants, to tell us what the health department has been doing during the year; and if not that some other civic order represented by one of their members, and this seems to gather together the largest attendance that we ever get, these two meetings; usually we have an attendance that exceeds twice the usual number. Apparently the feast, as everybody says, seems to attract.

DR. SHELDON: I think it is a good idea, as Dr. Hopkinson has suggested, to have during the year one or more meetings of a semi-public character in which subjects that the laity are interested in are discussed. In Dane county last year I think we had three such meetings which were quite largely attended. One was upon the water-supply. There was a great deal of public discussion at one time in regard to the question of an intake from the lake. We have a system of artesian wells, and the people, and the profession especially, desire we

should be above suspicion in regard to that matter. The whole question of water-supply, the future needs of the city and the best methods of preserving the purity of the water under all circumstances was discussed, and the meeting was very serviceable along that line. At another meeting the subject of school hygiene and school athletics was discussed. At another the treatment of contagious diseases, and preventive medicine, was taken up. We make these meetings public, inviting the laity, and invite several laymen to take part in the discussion of the subjects. It brings the public and profession in closer relations, and brings about a better understanding as to what we are all trying to accomplish.

DR. G. WINDESHEIM, of Kenosha: Mr. Chairman, I for one am convinced, that the social features at meetings of the county medical society are of great value. I think the great success that Walworth county has had in holding its membership together and in increasing its membership in the county, is due almost altogether to the social features. I remember that the first time I struck Walworth county as the Councilor of the district, I was very much impressed with the spirit of good fellowship, with the interest taken by all present in the meeting. I also think that the success in Racine county is principally due to the social features. Since they have adopted this plan they have made great gains. Five years ago at the Racine county meeting, held at Burlington, there was not one member from the city of Racine present. Four years ago at another meeting held in another town there was one member present, and that was a candidate for election. There were hardly enough present to have a quorum to transact business. Last week Thursday there was a meeting of the Racine County Society at Burlington at which I could not be present, but the acting secretary notified me that there were 15 from the city of Racine present at the meeting in that other town. This change of conditions, I think, has been brought about by the social features of their meetings.

DR. M. J. SANDBORN, Appleton: One of the ways in which we solve the difficulty of reaching the country member in Outagamie county—and by the way, I think Outagamie county is almost as good as Kenosha county, we have a large membership and we have well attended meetings—is by carrying our meetings to the country, at least half of them. We have six meetings a year, and at least three and sometimes four of these are taken to the small places about the county. We have afternoon meetings, and we always have a very good attendance. I do not know what the average has been for the past year, but the year previous the average was 22 for each meeting, and I think that would compare very favorably with the other reports that have been made. For our annual meeting we make a special inducement for the country members to come in, by always having an out of town member come in. This last year we had Dr. Mix of the Northwestern University Medical School, and each year we have a man from the medical faculty of one of our schools; and then follow it with a banquet. This year we are planning on an outing meeting, and we emphasize very largely the social side. But we do not lose sight of the scientific side. I will say that during the last five years only one paper. I think, that has been assigned has not been read. The man has not always been there, but his paper has always been there. I think that one of the

greatest values that we get out of our county society is the mingling together of the men, and if we can bring that about best by cutting out some of the scientific side, why, let the scientific side go. But we in Outagamie county have been able to combine the two, and we hardly ever have a meeting without at least one paper, and our usual quota is two.

BOOK REVIEWS.

A Text-Book of Bacteriology. A Practical Treatise for Students and Practitioners of Medicine. By PHILLIP HANSON HISS, JR., M. D., Professor of Bacteriology, College of Physicians and Surgeons, Columbia University, New York City, and HANS ZINSSER, M. D., Associate Professor in Charge of Bacteriology, LELAND STANFORD, JR., University, Palo Alto, California. With one hundred and fifty-six illustrations in the text, some of which are colored. D. Appleton and Company, New York and London, 1910, 8vo, 745 pages.

Text-books on Bacteriology become old almost before the ink is dry upon the paper, so rapidly has this science advanced since its birth some forty years ago. Time was when such a text-book was an enumeration of the bacteria known with descriptions, etc., applying strictly to bacteria. From this comparatively simple, morphological and pathological treatment the step seems wide to the discussion of the phagocytic and humoral theories of immunity and to a discussion of the new science of Serology in general, yet it is no distance but really an integral part of bacteriology which has developed from the study of the relation of the host to the bacteria.

The book before us indicates how Gargantuan this infant Bacteriology has grown. The authors say, "The volume is primarily a treatise on the fundamental laws and technique of Bacteriology." They might have added that it is also a comprehensive abstract of the theories of Immunity and the more recent science of Serology.

The book is divided into five main sections: I. The General Biology of Bacteria and the Technique of Bacteriological Study; II. Infection and Immunity; III. Pathogenic Microorganisms; IV. Diseases of Unknown Etiology; V. Bacteria in Air, Soil, Water and Milk. Section III occupies almost one-half the book. The scope of the work is readily gathered by a glance at these five sections. The authors have not hesitated to enter the fields of Sanitary, Agricultural and Industrial Bacteriology in order to show correlations of these subjects to Medical Bacteriology.

The text reads well. There is scattered all through the pages references to the authors' original work. Frequent references to original articles which are quoted in the text makes it possible for the reader to go deeper into the subjects should he so desire.

The discussion of Immunity and the technique of the various serum reactions which have been developed within the past few years, is one of the best features of the book. The reviewer believes that this is one of the safest books on Bacteriology to put into the hands of a student or practitioner who desires an impartial discussion of the many problems of Bacteriology concern-

ing which there is still much difference of opinion. It is well written, terse necessarily, but when brief, the essential facts are found in the text and numerous references to the original sources.

The volume is well and profusely illustrated with charts, drawings, and microphotographs. For a first edition the text is singularly free from typographical errors, only an occasional one is found. The publishers have given the book an excellent setting with clear print and good, not glazed, paper. There is an index of authors quoted in the text and a very complete index of subjects. These add to the value of the book as a reference volume.—L. M. W.

A Case of Transient Amaurosis. STASINSKI, J., Posen. (Klin. Mon. für Augenheilkunde XLVIII, Feb., 1910, p. 177). Cases of chinin amaurosis are very rare. Uthoff saw only one out of 100,000 patients. S. reports the following: A man, aged 60, took about 4.00 hydrochlorate of chinin in claret, within $\frac{1}{2}$ an hour. After 2 hours his sight commenced to fail, so that in the evening he could not see the shine of a bright lamp. He also complained of intense tinnitus. The pupils were very much dilated and did not react. Nine hours after the occurrence of complete amaurosis the patient could see again the outlines of persons, and, after 5 hours more, he recognized them. Total color blindness existed for four days, then visual hallucinations, flickering, paraphasia, literal aphasia and contraction of the visual field for colors, partly also for white. After when S. saw him for the first time, all cerebral symptoms had disappeared. The optic discs were pale and their borders indistinct, the retina opaque, the vessels partly invisible, arteries very thin, also veins narrower but still, twice as wide as the arteries. The temporal half of each retina looked as if folded. V. was normal after about three weeks, but the contraction of the visual field for colors remained. S. follows the explanation of Lewin and Guillery the contraction of the retinal vessels, viz. that chinin is a muscular poison. Small doses increase the muscular tonus, large quantities cause a rigidity of the muscular fibres in the state of contraction. Like in rigor mortis the contraction of the vascular muscles is functional, i. e. chemical, not due to mechanical irritation, otherwise the spasm could be relieved, e. g. by amylnitrate, which is not the case. As chinin amaurosis has also been observed with perfectly normal fundus of the eye, while the nervous lesion was constant, the chief cause may have been a primary affection of the nervous elements. S's case, however, did not speak against the circulation theory, as the intelligent patient stated distinctly that in recumbent position his vision and the cerebral symptoms were much better. These symptoms apparently were due to circulatory fluctuations.—C. Zimmermann.

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