

# The . . Association of American Medical Colleges.

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**Proceedings of the Meeting at Denver,  
June 6, 1898.**

**President's Address and Papers Read.**

**Constitution, By-Laws, and Rules and  
Rulings of the Judicial Council.**

**List of Colleges in 1896-98.**

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## THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES.<sup>1</sup>

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In making this address, among many small difficulties the chief one is to choose the right topic. To make my task yield a result which shall not be too much of a bore to you the material to be threshed must not have been thrice beaten by the flail. The ethical features discernible in this organization have been brought to the light more than once. They have been descanted upon in such a broad way as to leave the impression that experienced heads consider morals, difficult to regulate from without. In this matter conformity in details is left to the conscience of those called to administer the rules, enlivened by the sense that derelictions being known tend to the loss of self-respect as well as the forfeiture of reputation. It is not well to dwell much on the things open to censure lest the address should seem to give aid and comfort to the common scold.

Turning from this uninviting field to seek a pasture new, the lessons of history give kindly promise. What valuable suggestions come to us from our past? A new member is not in a favorable position to get matter to edify those who have been with the society from the beginning. Should this association ever have a historian there is a possibility that he will bear a grudge against the annalist of current events. Perhaps it is best that our annals should be so simple, but one who has not been a part of the past of this body cannot suppress his wonder that so little of a narrative form has been produced at its successive meetings. May it not be well that at an early date someone who was associated with its foundation should gather from memory and tradition those facts which the dry and business-like minutes take no note of? Some day there will be, indeed there exists already, a craving for just such information as can be furnished by only a few now with us. The silent reaper is ever busy gathering in his ripe sheaves. Let us get some of the golden grains ere they are garnered by the harvester of the tomb.

While the speaker cannot contribute to the past history of this

<sup>1</sup> President's address before the Association of American Medical Colleges, Denver, June 6, 1898.

organization he is not without information as to its forerunner, the American Medical College Association. His memory of the particular set of facts pertaining to it has been refreshed by reference to the published transactions which were quite full enough to serve the purpose.

At the time when various educational and other national movements were beginning to stir with the inspiration of our centennial exposition it occurred to Prof. J. M. Bodine, Dean of the Medical Department of the University of Louisville, that it was a favorable time for the medical colleges to organize for a common advance in the standard of requirements. After taking counsel with the deans of many colleges he sent out an invitation for a convention, which was held in Philadelphia, June 2nd, 1876, at the Jefferson Medical College. At this first meeting, although urged by Prof. J. B. Biddle, he declined to allow his name to be proposed for the presidency, and contented himself with a more active though less conspicuous rôle. Recognition came to him later when he presided at the fifth annual meeting.

The first outcome was a *provisional* organization which, at the meeting held June 2nd, 1877, in Chicago, was merged into a permanent association with constitution and by-laws. It was declared that "the objects of this Association shall be the advancement of medical education and the establishment of a common policy among medical colleges in the more important matters of college management." The articles of confederation contain provisions as to the medical curriculum which were a distinct step in advance of the practice of most of the colleges at that time. Much was done towards awakening the colleges and instructing the public when the first convention in 1876 adopted the resolution of Prof Bodine which embodied the hope of inducing students to prolong and systematize their studies by recommending to the colleges to offer without extra cost the option of three courses of lectures graded in character in lieu of two repetitional years. One prominent feature which is conspicuously absent from the constitution of the present body is an article minutely regulating the fees. This article was not framed to prevent overcharging or extortion but to give recognition to the custom of reducing or remitting fees in worthy cases, while limiting the

number of beneficiary scholarships, carefully regulating the charity "lest one good custom should corrupt the world," of medical colleges.

At that time, 22 years ago, the spirit of business enterprise sometimes took the shape of sending out blank certificates to men of influence over wide areas, giving reduced rates under the name of scholarships to any person whose name was inserted. Under the cloak of charity was covered a shrewd scheme for enlisting the congressman or representative as an advertising agent for the college glad to get students at any price. If the parties concerned were willing that the loss of dignity should be compensated by an increase of revenue it was expected that no one else would complain. In the opinion of the colleges the loss of dignity involved all colleges that affiliated with the too liberal ones, with the further disadvantage of losing their students to those who solicited patronage in this way. It was determined by the association to put upon such methods of underbidding the stamp of disapproval by refusing to recognize the work and the diploma of the offending institutions.

In the second annual meeting at Buffalo, resolutions were passed which had been offered by Prof. S. D. Gross and seconded by Prof. N. S. Davis. These resolutions noted the failure of concerted efforts by previous national organizations to secure a uniform high grade system of instruction in accord with the requirements of the age and called for definite action by the colleges at the same time urging the dissemination of right views by the medical and secular press. The fourth annual meeting was held in New York City, in 1880. By this time the secretary was enabled to report that in its workings the association had (1) greatly diminished the number of diplomas, bestowed without thorough study and examination; (2) it had diminished the number of "deadheads" in the classes; (3) it had diminished the undignified bidding for students; (4) it had increased the revenues of the colleges as a whole; (5) it had promoted uniformity in medical teaching and in requirements for graduation; (6) it had reformed the schools holding two official terms in one year.

These desirable ends had been achieved by very little display of force. Mutual support and organized opinion had sufficed to give the needed pressure to shape the medical education of the continent. On the other hand, in another report it is stated that, judged by their annual announcements, the majority of the colleges in the country did not show that they conformed to all the requirements for active membership. Along with a great show of opportunities for medical instruction in the catalogues there was a relatively small amount actually required.

The committee on a plan for registration of the medical colleges of the United States took the position that no plan would command general respect unless it required of the registered colleges a three years' course with a preliminary entrance examination. On the motion to amend the articles of confederation so as to make the requisite number of courses three instead of two, 20 out of 25 voted in the affirmative.

One ominous incident was the withdrawal of two metropolitan colleges whose support was highly valued. It was felt that if institutions having faculties and teaching facilities of the first order withdrew at this critical juncture it meant that the advance movement could not be sustained. At the fifth meeting held at Richmond, Va., in 1881, it was reported that the number of colleges violating some one or more of the regulations of the association during the previous year had diminished from 35 to 16, showing a marked improvement. It was further stated that in all the essential elements 22 surpassed the requirements.

At the sixth and last meeting, held at Cincinnati, in 1882, the continued prosperity of certain metropolitan colleges which had withdrawn from the association at the time of the proposed extension of the course to three years gave a chill to the enthusiasm of those agitating for that step in advance. In a formal resolution it was declared that the action of lengthening the course had not met with the support of the medical profession nor of some of the older schools whose status should have made them leaders in the reform. The law exacting a three years' course was suspended for that year. It is to the credit of the western colleges that this movement which originated in the middle west was maintained loyally by most of the western colleges up to the last

meeting. Having no real mandatory powers, the function of the association was performed when it diffused such benefits among the colleges as come from the organization of men or institutions drawn together by common aims. It was recognized that the recently established state boards of medical examiners in Illinois, Alabama, and North Carolina had stretched forth the strong arm of the law to give the impulse, lacking when the colleges were left to their spontaneous action.

The part played by the association was of some consequence in the educational drama we have witnessed in the last two decades. In the first act, the teachers openly recognized the fact that the medical education considered equal to the demands of the public and the profession during the first century of our history was no longer adequate. Up to that time as the public seemed content with the two years' course with its economies it was equivalent to suicide for a medical college to exact a longer period and a greater outlay.

The college association made the offer of a better system than was then in vogue, but most of the students and presumably their preceptors and advisers were content with the shorter and cheaper curriculum. Hence it was to the interest of the public which demanded a more highly trained profession, and indirectly it was to the profit of the medical college that larger powers were given to the licensing boards. Most of these boards have taken the position that society requires that the doctor shall have availed himself of the higher facilities by taking a three years' course, and a few require a four years' course.

The unseen powers work in many ways for the improvement of the world. Licensing bodies have been created under legislative authority to carry on the work initiated by the colleges, and those who were active in promoting this first movement to raise medical education to a higher plane are to be congratulated at the final outcome.

Perhaps they builded better than they knew. It is certain that some of the credit of the very marked progress of the past 20 years belongs to the pioneers of 1876.

It is a fact known to all that within the brief lifetime of this association its members, with few exceptions, have passed from

100000 1937

the lower stage of two years' schools without entrance examination to the much higher one of four years' schools with a preliminary qualification. The historian while noting a few known lapses from the standard set up may record that about this time a suspicion prevailed that the rules as to entrance requirements were more honored in the breach than in the observance. At the same time he must recognize an advance all along the lines to an extent which it is no exaggeration to say is prodigious.

A — The state examining boards have pursued their course parallel with our forward steps and sometimes in advance of them. Sixteen of these boards<sup>1</sup> embody an idea which has found expression in more than one address delivered before the college association or other medical meeting; namely, a separation of the teaching body from the one which examines and passes upon qualifications. While the value of the diploma is recognized officially in many states that of the medical curriculum is conceded in all. Three or four years of systematic instruction must precede the propounding of questions by the examiners. It is expected that examiners free from college control or personal bias will decide justly the merits of the candidates. It is within the knowledge of all present that the schools vying with each other for the purpose of fitting graduates for this test feel a lift such as no other power has imparted. To this fixed standard of achievement all must come or lose in reputation and patronage. The testimony of the state examiners is to the effect that a very perceptible improvement has been observed in the later graduates.

No less helpful has been the legislation giving the examiners authority to determine the preliminary education. On the other hand there is danger lest this authority now stretched to the utmost may be exerted to a degree not contemplated by the acts of legislature, and which will not commend itself to public approval.

It is not our function to take care of the custodians, but it is within the bounds of just observation to state the fact that com-

<sup>1</sup> Alabama, Arkansas, Florida, Maryland, Minnesota, Mississippi, New Jersey, New York, North Carolina, North Dakota, Pennsylvania, South Dakota, Texas, Utah, Virginia, and Washington. *Vide Journal of The American Medical Association*, 22, 354.



monwealths in a democracy like ours, when they have permitted the examiners to determine if candidates, for the right to practise medicine, have a competent English education, did not intend to exclude from that privilege any one whose preparation was sufficient to enable him to profit by his studies. The main point for the protection of the public should be considered as covered when it is shown that the doctor at matriculation had the essentials for beginning medical study. Persons of my political faith must raise objections when official bodies set up non-essential, expensive, and, in many cases, impossible barriers to the ambition of men feeling a natural inclination towards medical practice, fully able to understand the medical course and acquire a sound professional education. Experienced men who have had their own way to make should not be debarred from turning to the study of medicine because they did not or could not follow, in their childhood, a certain curriculum of advanced English and classic studies more or less ornamental and which few will declare are of positive value to the physician.

The writers, speakers, and law-makers who have been working out these elaborate and, in some degree, impracticable tests of preliminary education have been so devoted to that ideal as to ignore certain truths known to the medical teacher which a little attention would make obvious to all. It will not take long to state the essentials of an education for the active American who wants to devote himself to the special life-work of a doctor. The word "essentials" is used to denote the things that are absolutely needed. Outside of these would come other features which we call "liberal" of more or less importance, which may be elaborated to infinity. To all who would enter on this highway the equipment of moving must be provided. Certain kinds and amounts of knowledge have been properly called the tools to use in obtaining any kind of higher education.

Those of universal application are reading, writing, and ciphering. Correct reading almost every American acquires very early, and while correct writing is far more difficult a sufficiently correct use of the mother tongue in composition is the common possession of most men sharing the opportunities of this land of free schools. In some states of the Union so universal is the

possession of this degree of elementary education as almost to justify Dogberry's absurd statement; *i. e.* "that reading and writing come by nature." Let the average man in our, or any other, business honestly estimate the amount of ciphering he has had to do in a fairly successful career and if he is not a professor of mathematics, an engineer, or an astronomer he will confess to himself that his needs have been small, and if of a practical turn of mind, that the main education of his life need not have been delayed by years of study in algebra and the higher mathematics. These three essentials for training, all should possess: Correct reading, writing, and arithmetic as far as ratio and proportion, and they are the tools which almost every American boy has put in his hands. If he has not these he is obviously unfit to make right progress in the science and art of medicine or in the acquirement of any other knowledge but that of the lower craftsmen. He is debarred from developing his natural capacity for mental pleasures and giving solid assurance to the principles of a high character.

Your speaker does not hold a brief in favor of the least available education. All must recognize that with this equipment we do not end our quest for the benefits to be derived from education. It is only the outfit for the journey in search of greater powers, higher character, and fuller life. The pupil of the public school passes very early into the land of biblical story. He gets glimpses of the history of the race, especially of our own people and thereby is supposed to acquire standards of heroism as well as examples of private morality. Some acquaintance with geography is obtained at the same time and, if he has been fortunately placed, a training in the elements of some science such as physics, geometry, or physiology. Grammar has helped somewhat in cultivating the powers of analysis, if not in giving precision to the spoken and written language.

Let it be understood just here that this is an attempt to report the facts verifiable by all of us, as to the actual outcome of our ordinary public school education. The vast majority of the industrious, persevering, successful Americans at this stage are put into some sort of productive employment. In the hard school of experience they get their handicraft, their power of ob-

ervation, their forethought, their patience, and their balanced judgment. It matters much to the individual whether his employment is suited to develop his special aptitudes. "Blessed is he who has found his work. Let him seek no other blessedness." In the doing of useful things enthusiastically and well, the best traits of character come to their fruition.

How often we hear men not inclined by nature for the larger learning but who have had years of school training under the older systems acknowledge the narrow limit of their real profit in it. They will even express their doubts as Mr. Weller did of matrimony. "Whether it's worth while goin' through so much to learn so little." Said one of the keenest and broadest intellects of our time, Charles Darwin, "I believe that I was in many ways a naughty boy. . . . The school as a means of education to me was simply a blank." Joanno Baillie, writing of the influences which went to the making of John Hunter, says, "His mother had now to consider what she should do with a lad who showed great neatness of hands and quickness of perception in anything that regarded mechanism but remained obstinately impenetrable to everything in the form of book learning." John Hunter needed a field for the exercise of his precious gift of accurate observation and deduction. It was a lucky day for him when he was taken from the school of that period with its fixed curriculum of classic languages and the higher mathematics. He began his medical studies equipped with less than we require of our matriculates, but with all his native powers of perception and just inference. In his field no one of his own period or any subsequent to it has done more for the advancement of medical science.

If a boy's parents can afford it, and his innate powers tend that way in most cases they would and ought to give him all the systematic education to be had from adepts in molding the youthful mind. The highest ideal of development I do not presume to fix; it is so remote as to demand more than a lifetime of progress. Schools only furnish the methods; life itself is or should be a course of learning. In spite of the temptation to enlarge upon the theme of what kind and degree of education is worth most in the evolution of mind and soul let us limit our

attention to a much narrower field. Let us free ourselves from the cant that no one is educated who has not walked in the classic highway to the goal of an academic degree. In a democratic community we should have no difficulty in setting aside the aristocratic assumption that the only "liberal" education is that which is suited to a gentleman of leisure because of its graceful inutility. We of all men must know that to be of help in mental discipline the subject-matter need not be useless. On the contrary it is an easy contention that the special direction of medical study is calculated not only to cultivate the intellect but enlarge the sympathies. It is an advanced elective, chosen by pupils of full intellectual age, impressed at every turn with the actual importance of their study. They soon realize the joy of knowing things by their own observation, far richer than that which attends knowledge acquired at second-hand or from books. Reflect upon the memory training involved in the study of anatomy and materia medica; note the demands for exact observation and inference in the laboratory work in chemistry, physiology, pathology, bacteriology, diagnosis, therapeutics, and surgery; call the growing confidence in self and in the science as the student advances with firm step from point to point secure in the attainment of positive knowledge free from the errors due to personal or other bias. By the search after demonstrable truth the faculties are enlarged and in this honest endeavor consists an ever-growing improvement. The examples of sympathetic care for the patients in the clinic running through four years must avail to the development of the ethical nature. Here can be seen living instances of men finding their highest satisfaction in service rendered to others. The soul must be dead that does not have moral promptings as a result of such studies. In Christ's judgment they alone are worthy to sit in the mansions of the blest who, having the opportunity to render service to the poor, the ignorant, and the suffering, do not turn aside but set their hands to the work with love. Measuring knowledge as he measured men, by the kind and degree of usefulness and the test puts the medical curriculum of four years far in advance of any other as a means for moral growth. Those who have looked to the "liberal" education ending in

the college degree as representing the chief if not the only chance the student must have in the higher education, think of medical study as they do of a business career, which is to present to the higher intellectual and moral nature no such field for exercise as do the sequestered quadrangles of the academy. While there may have been some excuse for this view when medical education meant two years of indigestible cramming of the memory, the situation is now greatly changed. It may be the means of the highest education.

Every dean present is glad to matriculate the college graduate and we note with pleasure that the number entering on the medical course is increasing every year. They have been given advanced standing but the door has not been closed upon the men of slender opportunities, who wish to improve and who have the tools for getting the learning they seek. Experience with men most competent in all the fields of medical practice, whose early education was limited, will not permit us to treat with disdain a student whose preparation has not been scholastic but whose capacity for higher things only the medical curriculum can show.

Those who made up the schedule of our entrance qualifications have added physics, Latin, and algebra to the studies which have so far been considered essential. This is a recognition of the fact to which all must assent, that some acquaintance with these is of value to the beginner. The provision which permits the student to make up these subjects in the first year works well in practice. There is little hazard in the estimate that in the eastern schools not more than 10 per cent. need this chance. In many medical schools physics is taught as incidental to the courses in chemistry and physiology, and in the larger cities numerous night classes in algebra and Latin are offered by private tutors and various popular educational associations.

Some of the medical colleges have raised their entrance qualification above that fixed by us. As a rule this has not been done until, embarrassed by the numbers of its students, the medical department of a university has yielded to the pressure of the college department to set a premium on the college work and thus distribute the excess more conveniently. That such a con-

dition of things is enviable few of us will deny ; at the same time one may be permitted to think that this is not wholly a sacrifice for the sake of ideals. Most of us will feel a kinship to a friend of mine, a foreigner, educated in a foreign university, who spoke contemptuously of the educational tests required of aliens who would become American citizens. He fancied that a critical knowledge of the constitution of the United States and familiarity with the principles of political economy should be required of all admitted to the suffrage. He was naturalized ; he accumulated property and married. At this time he doubted if any one should be allowed to vote on questions of taxation who did not have a material stake in the prosperity of the country. When his first child was born, under the influence of this rich experience, he maintained that no foreign-born person could be properly Americanized until as an educated property-owner and father his interest in the future as well as the present of the commonwealth could be considered as firmly established. In all this there is a touch of nature which the college-bred men will be first to recognize if their breeding has done for them what it ought. Beside the obvious advantages accruing to a mind trained to accurate criticism and nurtured by the best methods, a college education is an excellent possession if it makes one know how secondary is its value in the hard work of life.

The scholar in medicine is a captivating figure. The pleasure we take in him is akin to that felt at sight of some rare ornament, the product of much labor directed to things of no immediate utility. There is a thrill of surprise in noting that a member of a profession usually so engrossed in doing necessary acts has had intellectual activities of a wholly unnecessary sort however elevating in character. The scholarship of a Stephen Paget is most engaging when it embalms in a book like his recent biography of John Hunter, the memory of an investigator of extraordinary powers whose devotion was undivided. Our highest admiration is for the man who originates rather than for the writer whose culture enables him to appreciate the signal merit of the discoverer. At the same time let us accord our liking to the scholar who has taken the mold imparted by the academy.

May his tribe increase! In most cases his nurture has not handicapped him in the race of practical life, but has given wings to his feet. But candidly we cannot impute to it the worth claimed by those who would not have any man practise medicine with out it.

No great insight is needed to trace some present tendencies of this body. One is towards a requirement that the entrance examination shall be enforced more strictly; that it shall be not simply an ideal for admiration, but for practical attainment. Another is towards a uniform curriculum and a definite statement of the minimum number of hours to be allotted to each session, if not each branch taught in that session. It is suggested that this may take the direction of augmenting the hours given to practical work in laboratories and dispensaries. Didactic lectures on the science of medicine and on therapeutics in the near future will be reduced in number whenever the patients at the clinic are sufficient to supply living illustration. At the German Congress for Internal Medicine, held in April of this year, Von Jaksch, representing the younger school in medical teaching, held that the advanced course in medicine should be incorporated into the clinics. By careful selection from the miscellaneous material of a large clinic the cases shown to the class may be so varied as to illustrate almost all of the diseases commonly seen and many of the rarer forms. The clinical lecture is not only more instructive, but it is far more attractive than the didactic. If it were not for the fear of an impending examination, how small would be the number of those attending the customary discourse about the appearance of things not themselves shown to the audience! Even Billroth found that he could not make his didactic lectures attractive, but his clinics drew spectators from every quarter of the globe. With a good clinician the student needs no such spur to his attention as the fear of the professor in the rôle of examiner. It is no exaggeration to say that every medical or surgical lecture which is not a demonstration of the subject-matter is just so far short of the best method as to be, in some degree, a waste of time. While all must recognize the force derived from the person of a great teacher who expounds impressively his mature

views in didactic discourses perhaps elaborate and profound, none can deny that these would lose none of their value if pronounced in the clinical arena and at the bedside. Systematic instruction is best given to the average student by recitations which will arouse him to make individual effort and give the instructor opportunity to elucidate points found to be obscure or difficult.

One step which we must soon take is that of requiring all of the four years of the graded curriculum to be taken in the medical college. As the medical course grows in completeness and variety it becomes more and more unsatisfactory to give allowance for work done in colleges of pharmacy, dentistry, veterinary medicine, and the department of arts or sciences. The time cannot be long delayed when we shall cease to concede advanced standing to any student except his work be done in a properly organized medical college. The board of regents of New York have been disposed to continue to advance the college graduate one year in his medical studies, but the law now in force in that state will not permit it. Can this body afford to ignore this sign of the times?

We must remember that the concert of action intended by us did not contemplate putting a clog on the movement for a more thorough medical education. Efforts to bring that movement to a standstill rob this society of its avowed object. There would be little satisfaction in our meetings unless we could feel that the coming together carries us on. While we press forward in company we can bear with less complete fellowship for a time because we feel that the general direction makes for a higher union. There is something in the spirit of the times and something in our own souls which justify the belief that progress in this movement is as inevitable as the current of the Gulf Stream. No one has escaped the stirrings of this unrest; to none has been denied some revelation of things that can be done for the betterment of our work.

There are not wanting shining instances of the success of individual action towards a higher standard, but most of us instinctively seek the assurance of support that comes from concerted effort. Ideals are indestructible; the career of the first



college association was not ended in futility when it finally adjourned. While to some, hope went into collapse the vision of better things remained and the aspiration for them persisted. We of to-day find ourselves at home amid conditions which to the members of the older body seemed a Utopia. Our ideals too will enforce their claims somehow, even though the hands of this younger day shall fail of support and full realization be deferred. It is this expectation that should merge our individual differences in a larger unity while we advance to the goal that beckons us on. Like an orchestra of many instruments, we are playing a symphony in which occasional dissonances serve to emphasize the total harmony. Let us look to the keynote of the composition and work out our great theme in chords and measures that shall win the applause of the profession and the approval of our own souls. In sentences as true and hopeful as they are limpid, Wordsworth has said, "The progress of the species is not like a Roman road which goes straight to its goal, but rather like a winding river, frequently forced to turn backward in order to overcome obstacles which cannot be directly eluded, but always moving with an additional impulse, conquering, in secret, great difficulties, and whether we can trace it or not, gaining strength every hour for the accomplishment of its destiny."

## THE DEVELOPING METHOD IN THE TEACHING OF MEDICINE.

By MONTGOMERY A. CROCKETT, A.M., M.D., University of Buffalo.

The aim of the medical school is the development of power in a special field and this power should manifest itself by the ability to apprehend and solve the particular problems presenting themselves during professional life. The majority of medical instructors, however, although recognizing the desirability of accomplishing this aim, assume that power always results from a large acquaintance with facts. Now, if the possession of facts means power, then the student receiving the highest marks on examination ought to be the most successful in attacking the problems set before him, but the melancholy failures of honor-men prove that high standing does not insure efficiency. Power results only when the necessary data are in the grasp of a trained mind, and ability to solve problems comes only through much exercise. In applying methods designed for filling the student with facts, the medical instructor has not regarded the psychologic processes by which facts become power and thus has left mental training to chance. Progressive educators claim that by regarding mental processes first and subject-matter second, power can be most economically developed and, at the same time, the largest number of facts implanted. Thus some knowledge of psychology and pedagogy becomes a necessity for the teacher, whatever may be the subject taught.

What is known as the developing method of teaching is the outcome of the study of pedagogic psychology. In making use of this method, the first step is that of preparation and consists in arousing in the student-mind those ideas which are to be used in grasping the new facts which the teacher wishes to impart. The importance of this step is appreciated when we remember that the interpretation and retention of new facts require the presence of an older mass of related knowledge and that success in the acquisition of new ideas depends upon the activity of the old. The greatest mental activity can be aroused by the discussion

1378

of a subject which appeals strongly to our interest : about such a subject the mind is most keen to acquire further information. Therefore, the instructor using the developing method gives first that portion of the subject possessing the deepest interest and then conducts the recitation in a way to promote the freest expression of ideas among the members of the class. The keynote is the self-activity of the pupil, for he alone can elaborate that which is to become power. In ordinary instruction, there occurs a considerable amount of wasted effort because the teacher does not use sufficient time to assure himself that the ground is ready to receive the new seed. The preparatory step must be carried on by a series of questions which will bring into prominence the ideas to be used in the recitation and if skilfully conducted various points for further investigation soon suggest themselves, one of which may be elaborated in pursuing the aim of the recitation.

In planning a recitation by the developing method, the selection of a proper aim is most important, as any undertaking becomes uncertain and inefficient unless controlled by some definite purpose. Every teacher has some general idea of what he wishes to accomplish, which often is designated as the general or teacher's aim, but the actual steps of the recitation must be guided by a more particular or special aim which always is stated in advance to the class. When this is done, both teacher and pupils can concentrate effort along definite lines and as the recitation proceeds the progress becomes apparent. The aim of a recitation should be contained in a clear, brief statement and, when possible, it is desirable that it be in the form of a problem to be solved, for the mental activity of a class is stimulated by the pleasurable sensations accompanying the successful attack upon a difficulty.

After the step of preparation and statement of the aim, the class is ready for the presentation of the new matter which results from the discussion and reasoning about the older facts and, when the need is clearly apparent, may be partly supplied by the instructor. The questions asked must be framed so that extraneous matter is excluded and, from time to time, it is wise to call for summaries in order to collect

the loose ends. After the desired number of new ideas is fully brought out, comparisons follow providing different points of view from which to look at both the old and newly-acquired facts; these comparisons throw new light upon knowledge which, if left to isolate, would fade away into darkness and be forgotten. Next, generalizations or principles are obtained which, in the final step are applied to problems suggested by the instructor. In passing through these steps considerable time is required so that all may not be included in one recitation, but the benefit to the student is in proportion to the amount of thought exerted so that the developing method, although slow, is economical in the end. A mind, whose operations pass rapidly and accurately, through the steps represented in the developing method is a trained mind and capable of exerting power in any field analogous to that in which it received its training.

In a former paper I touched upon the application of the developing method to the teaching of obstetrics; it is my purpose here to point out its advantages in teaching all medical subjects and to give the results of a more extensive experience. I began my course with the consideration of labor and the first recitation had for its aim to show what elements are contained in the problem before the parturient woman. Thus I took advantage at the outset of the student's interest and aroused in his mind the desire for further information so that he would pursue the subject in that state of mental activity most favorable for acquisition. A live interest means an impulse to learn and no teacher can afford to dispense with such a powerful ally. In general, the step of preparation consisted of a review of certain portions of anatomy and physiology, the knowledge of which had been previously acquired. For instance, in treating of the subject of "forces," the groundwork must be a knowledge of uterine anatomy and general muscular physiology; the mechanism of labor must rest on the anatomic details of fetus and pelvis and the hygiene of pregnancy involves a large part of general physiology. An aim to the class, in one of the recitations, was to show the effect upon the uterus of contractions of its muscular fibers. The discussion soon brought out certain

facts about the distribution of pressure through fluid media, the behavior of the upper and lower uterine segments, and the tendency of the cervix to yield, with the reasons for this process. When these new facts were gathered together and compared, I called for a statement of the general conditions under which dilatation pursued its most favorable course and required the students to apply their conclusions in explaining cases of rigidity, laceration, constriction about the child's neck, etc.

Another aim was to show the effect of uterine contractions upon the mother. Here the preparatory step embraced the physiology of muscular contraction with special reference to fatigue. From this point several most interesting recitations proceeded developing the effects of prolonged labor upon the nervous system, heart, nutrition, and elimination. The steps of comparison and generalization gave the class a full appreciation of the importance of the physical well-being of the woman, to establish which, involves the application to the hygiene of pregnancy of all the principles drawn from the preceding facts. Without going into further detail, I will state that such subjects as postpartum, accidental, and unavoidable hemorrhage, presentations, positions, mechanism of labor, and pregnancy afforded an excellent field for the developing method, provided each recitation was controlled by a clear aim and followed the steps already described.

At the beginning of the term I found the class rather unresponsive and slow in thought. Owing to the deleterious effect of many didactic lectures the students had become accustomed to use nothing beyond their receptive faculties in the classroom and there was a readiness to accept facts without considering their value. After a few weeks, however, there was a noticeable increase of strength displayed in the handling of data and a tendency towards independent thought. Statements were not allowed to pass unchallenged and questions were asked which showed that the discussion was not confined to the classroom. Interest in the subject notably increased and the voluntary attendance was larger. Many of the class personally expressed to me the feeling that they were acquiring a lasting grasp of the subject. On one occasion I asked the

students to write upon a bit of paper the name of that method of instruction which seemed to them to give the best quality of knowledge; sixty-four out of sixty-six favored the developing method.

One advantage of this method is that the instructor comes into such close touch with the members of the class that he is enabled to judge of the results without depending entirely upon the final examination. Nevertheless, it is wise to hold some formal test and give an examination which calls for thought-power rather than memory. I here give three questions illustrating the nature of such an examination.

1. "At the end of pregnancy the cephalic end of the child presents in about 97 per cent. of all cases. Premature delivery and still-birth of the fetus decrease greatly the proportion of head presentations." American Text-book of Obstetrics, p. 417.

How do you account for the facts stated above?

2. "Displacements of the gravid uterus tend to spontaneous cure as pregnancy advances. Thus, anteversion ceases spontaneously at about the fourth month of gestation. With retroversion the condition is much more serious." Davis' Treatise on Obstetrics, page 99.

Explain the reasons for the above statements.

3. During pregnancy, "the distinction between albuminuria and toxemia is to be sharply drawn." Davis' Treatise, p. 134.

How and why?

It is not claimed that the developing method is faultless; undoubtedly there is room for criticism, but the point at issue is what method is the best and for settlement of that question a few comparisons are necessary. In the didactic lecture, the instructor proceeds on the basis that telling is teaching and requires from the student merely exercise of his receptive faculties. We have seen that the promotion of thoughtfulness should be an essential feature of any good method of teaching and that the developing method carefully regards this important factor. The didactic lecture gives no time for thought, but rather clogs mental activity by pouring in an excessive amount of information. We have seen that the development method recognizes that the new must be adjusted to the old in order to make retention permanent. In the didactic lecture, the instructor has no assurance that the students possess the set

of ideas requisite for the grasp of the new facts and I have known of several instances where a class became utterly confused because the lecturer went steadily ahead on the supposition that every fact was grasped as uttered. The didactic lecture rests on the assumption that the mind is like a jug to be filled and neglects even to pull out the cork ; compared with the developing method the didactic lecture is neither scientific nor economic teaching.

The text-book is the didactic lecture in print; from it the student may acquire an immense number of facts but its use does not develop power. The text-book is like an interlinear translation of Caesar; difficulties and their solutions appear together so that the student is carried over the rough places and loses the healthy exercise of his mental faculties. We have seen that power follows exercise upon problems; for this there is no provision either in the text-book or didactic lecture. Text-books in medicine are not written from a teaching point of view nor are the topics arranged pedagogically. Subjects which should be taught in close relationship often are separated by hundreds of pages and treated in a manner either too brief or too discursive. There are few more wearisome exercises than those recitations which consist of attempts to drag from the student the facts contained in a certain number of pages of a text-book. However, when a book is used merely as a basis for discussion and to supply facts which are enlarged upon in the classroom the recitation assumes a higher character. This is because it now contains some of the features of the developing method and to that extent deserves commendation. The practical difficulties of conducting such recitations come from the fact that the necessary medical text-books are not in existence although there is a crying demand for them. In such recitations the book should be used for the step of preparation only and the subsequent steps carried out with due regard to the developing method.

The use of the developing method does not mean dispensing entirely with the use of books. I require outside reading from all my students, but this is not encouraged until after the classroom discussion. My plan is not only to

refer the class to certain books, but to call for brief summaries of the articles read. In this way the students acquire a wider range of ideas and are trained in the intelligent use of books besides. Voluntary reading occurs more frequently as a result of the developing method than after any other form of instruction. This is due to the keener interest aroused and gives promise of intellectual progress after graduation.

If we are correct in claiming these many advantages for this method, it is right to urge its wide application to medical instruction. There is not a subject contained in the medical curriculum of which some part cannot be adapted to this form of teaching. From clinical and laboratory teaching the didactic element should be entirely excluded, for in these fields the development of power is an essential. Whenever possible, I bring a pregnant or parturient woman before a group of students, for there are no better opportunities for the applications of pedagogic principles than in the laboratory or by the bedside. If the various medical studies be closely analyzed from the point of view of modern teaching it will be found that the scope of the developing method extends from one end of the curriculum to the other.

The trouble with the use of this method in medical teaching is not in its limited range of applicability, but the want of instructors who will take the trouble to prepare themselves to use it. To the medical instructor who wishes to use this method in his classroom a few practical suggestions may not be out of place. First, never undertake an exercise without having constructed a lesson-plan. Ask the average medical teacher, just before he goes to his class, for a statement of the plan of the coming lesson and you will receive such a hazy outline that it is no wonder that both class and teacher drift about in search of something to which they can make fast. The lesson-plan must be prepared with a clear practical aim, one which, when stated to the class, will prompt ideas and secure interest and attention. The importance of the aim cannot be overestimated, for a recitation is doomed to failure unless at the outset the class grasps the end in view and at the close has a conviction that the end has been reached.

An outline of subject-matter is of little use to the teacher



for it contains no suggestions of the method of presentation, but an outline of the leading questions marking the successive steps is of great value in preserving unity. Next to the selection of the aim, the framing of skilful questions is the greatest difficulty. Socrates, by his mastery of the developing method, became one of the world's greatest teachers; Plato's Dialogues will illustrate to the modern teacher what may be accomplished by a master in the art of questioning. In the step of preparation be sure to bring out all the necessary ideas and avoid introducing new matter during this process. Present the new facts in their proper order and with clearness; lay stress upon the difficult points and carefully limit the amount of new matter to the capacity of the class; call for frequent summaries, in order that the class may appreciate that it is making progress toward the fulfilment of the aim. Keep yourself in the background and repress any desire to hold forth; let the student make comparisons in his own way and display originality; finally, bring out the general law or truth in the material treated.

It is urged as an objection that this method is too slow and that it cannot cover the ground within the specified time.

There is but one rapid method of learning and that is cramming where the rapidity of forgetting almost equals that of acquisition. The slowness of the developing method is the result of allowing the student time for thought, by which alone knowledge is converted into power. The medical school attempts to give the student too many facts with too little time to meditate upon them. One may be eager to see a patient grow strong, but it is useless to administer food faster than it can be digested. At the rate with which we add new subjects, the four-year curriculum soon will be as overcrowded as the three-year. Let us not attempt to teach every student all about everything; let us use a slower method, but one which will give the student greater power over essential facts and at the same time implant such a living interest that, of his own accord, he will acquire the accessories. At present, he accumulates a very large number of facts which he will forget, instead of cultivating power over the few which he retains.

Many of us are obliged to prepare students for examinations

which set a premium upon cramming. The influence of such examinations reaches deep down into the school and hinders good instruction. Until our protests against such examinations are heard we must meet the conditions set before us. By the developing method we can convert a portion of every subject into a source of power. Those portions unadapted to the method or required only for the purpose of passing an examination can be assigned for text-book recitations and committed to memory. In this way, sufficient ground can be covered without entirely losing the benefits of the best kind of instruction. Already there are encouraging signs that examiners are beginning to value knowledge for its quality rather than its quantity. In this change of heart the Association of American Medical Colleges may become a potent factor.

In conclusion, I will summarize: Better than any other, the developing method of teaching fulfils the aim of the medical school, for it regards the normal steps by which knowledge is converted into power and trains the mind to use facts. It is economic, because it brings about the scientific adjustment of subject-matter to mind, by dovetailing the new into the old and supplying facts no more rapidly than they can be grasped. It encourages self-activity and originality, thus making the student a producer instead of merely a receiver. It leads to the better appreciation of knowledge because it furnishes the facts in their proper relations so that they can be generalized and used in the solution of problems. It can be applied to some portions of all subjects and seems slow only because it measures progress, not by ground covered, but by material assimilated. It arouses deep interest and thus affords the best guarantee for future intellectual progress. Although it makes large demands upon the teacher in the way of preparation, it nevertheless affords him, who appreciates its value, an opportunity for the exercise of his best talents upon a field where unlimited progress is possible.

#### DISCUSSION.

This paper brought forth an animated and interesting discussion; Dr. Crockett, in closing it, said:

Mr. President, the animated discussion to which we have listened is a

good illustration of one point claimed in my paper ; namely, that interest promotes the greatest degree of mental activity. Many of the speakers expressed marked dissatisfaction with the ordinary didactic method of teaching medicine, and some of them described the means adopted by them to remedy the defects. All of these means seem to me to represent an incomplete developing method of instruction, and I cannot but feel that were these instructors as scientific in their teaching as in their practice their work would be much more effective. It is well recognized that, before attempting to deal with any organ of the body, a knowledge of its physiology is of vital importance, and that he who works in harmony with physiologic processes obtains the best results. Is the case any different when we come to deal with the mind? Does it seem scientific for a teacher to remain in ignorance concerning the physiology of the mental processes involved in learning?

The developing method can be attacked only on the side of psychology. If it can be shown that the acquisition of knowledge does not follow the laws represented in the steps of the developing method, then this method must be abandoned or modified. Unless my critics are prepared to meet me upon psychologic grounds their remarks are entitled to but limited consideration.

During the discussion it was maintained that the developing method had but a limited range of applicability in medicine. It was not claimed in my paper that the method could be universally applied, but I would ask my critics whether they have given it such a thorough trial that they are prepared to state its limitations?

Dr. Shoemaker claims that the American schools are the best in the world. It is quite as true that they are the *worst* in the world, and certainly none of them are so perfect that we need make no effort for improvement.

The trend of the discussion has been towards the support of the position maintained in the paper. I only hope that every teacher here will be led to make further investigations and prepare himself for the scientific application of the developing method so that he can take his stand in the front ranks of modern education.

## TEACHING OBSTETRICS.

By J. WHITRIDGE WILLIAMS, Associate Professor of Obstetrics, Johns Hopkins University.

In most of our schools, a fairly good course of didactic lectures is given by the professor of obstetrics, who, however, usually delegates the recitations and demonstrations to his assistants, and is therefore unable to form a definite idea as to the practical knowledge and attainments of the individual student.

As far as we can learn, there are very few institutions in which it is attempted, in connection with the obstetric course, to give practical laboratory instruction upon the anatomy and pathology of the female generative organs, and of the various diseases which may complicate the pregnant, parturient, and puerperal condition, by which the student may gain an intelligent idea concerning the structure of the organs with which he has to deal, and of the morbid changes in the various diseases, which he may be called upon to treat. Unless such practical instruction is added to the theoretical teaching and the practical work in the lying-in ward, we cannot consider that the student has received a well-rounded course. And it will not be until our schools equip and maintain obstetric laboratories that we can expect our students to have an accurate conception of many of the conditions with which they have to deal.

How can we expect, for example, the student to have a definite conception of the changes in the endometrium, which result in the formation of the decidua, if he has not carefully studied and drawn sections of the normal endometrium and decidua, instead of hearing them described by a lecturer, who has obtained his knowledge from the meager descriptions of the text-books? Or, when studying the placenta, can he obtain an accurate idea of the structure of the chorionic villi, with their two layers of epithelium, concerning whose origin there is so much discussion; or of the nature of the intervillous spaces, unless he has carefully examined sections from placenta at various periods of development?

The ideal course in obstetrics, therefore, should include not only the usual lectures and practical work in the lying-in ward and upon the manikin, but also a certain amount of laboratory work ; and may be considered under the following headings :

1. Lectures ; 2. Recitations ; 3. Manikin work ; 4. Laboratory work ; 5. Demonstrations ; 6. Ward classes ; 7. Delivery of patients in the lying-in ward ; 8. Delivery of patients in the out-patient department ; 9. Clinical conferences or clinics.

#### 1. LECTURES.

At the present time, many teachers believe that didactic lectures are destined to be employed less and less, and eventually to give place to recitations and clinical conferences. We, however, believe that they still serve a useful purpose, but that their utility depends, to a great extent, upon the person giving them. If the teacher simply bases his lectures upon Lusk or some other standard text-book, we believe that he will best subserve the interests of his students by abandoning them, and allotting a certain number of pages or chapters of the text-book for recitation at each meeting of the class, which he will supplement by demonstrations of various kinds and free-hand drawings upon the blackboard.

If, however, he has higher aspirations than simply to rehash a standard text-book, and is able to avail himself of the recent English, French, and German literature, we believe that the didactic lecture will still play an important part in obstetric instruction, and will enable the student to obtain a rounded idea of the theory of obstetrics, four or five years in advance of the doctrines laid down in the last edition of his text-book.

The lectures should be accompanied by as many demonstrations as possible, and the teacher should rely less upon carefully prepared diagrams and drawings, than upon plentiful free-hand drawings upon the blackboard. The student may admire the former, but the latter he can reproduce in his note-book.

#### 2. RECITATIONS.

A recitation hour should be interpolated between every third or fourth lecture, and the student questioned not only upon the work immediately preceding the recitation, but upon the work

so far as it has been covered, thus necessitating a constant review of the entire subject.

The students should be encouraged to ask questions freely, and the recitations should be conducted as informally as possible; but at the same time a record should be kept of the work done, which should be considered in estimating the final standing of the student.

The recitation is almost as important for the teacher as for the student, in that it enables him to impress upon the latter the important parts of the work, and frequently enables the former to see how very imperfectly he has succeeded in rendering his meaning clear. The recitations should therefore be conducted by the teacher himself and not be delegated to one of his assistants.

### 3. MANIKIN WORK.

Exercises upon the manikin should form an integral part of the obstetric course; but their scope should depend, to a great extent, upon the amount of material which is available for clinical instruction. If there is a large lying-in hospital in connection with the medical school, it will be unnecessary to attempt to teach the technique of abdominal palpation, vaginal touch, and internal pelvimetry upon the manikin, as it can be taught very much more satisfactorily upon the living woman. But if the clinical material is limited in amount, we consider it advisable that the students be taught the rudiments of palpation, touch, and pelvimetry upon the manikin, so that they will know exactly what they are to do when they examine the patients in the wards, whereby clinical material is economized, and the patients saved considerable annoyance. For this purpose, the Budin-Pinard manikin is to be recommended.

The main object of the manikin work is to teach the various operative procedures, and each student should be obliged to perform all possible operations upon the manikin, at least once during the session.

The manner in which the work should be conducted must vary according to the size of the class. If it is composed of 50 members or less, we believe it best to attempt to instruct the

entire class together. This can readily be accomplished by employing three or four manikins, say one to every 12 or 15 students, and having the professor at one and an assistant at each of the others. In this way, three or four men can be operating at the same time.

At the beginning of the hour, the professor should give an outline of the operation, its mode of performance, indications, etc., and then call upon the students to perform the operations themselves under his supervision. While this is being done, it is well to quiz the class, and thus make the meeting serve a double purpose. Such meetings should last about one and a half hours, during which at least 12 men can operate upon each manikin.

If the class exceeds 50 in number, it will be necessary to divide it into sections. We believe that the professor should always take part in the manikin instruction; and if it becomes necessary to divide the class, he should alternate between the sections.

#### 4. LABORATORY WORK.

We consider it imperative that laboratory work should be included in the obstetric course. As already indicated, it is impossible for the student to grasp the subject intelligently, unless he be more or less intimately acquainted with the minute structure of the organs of generation, and with the lesions associated with the various diseases, which may complicate the pregnant and puerperal condition.

Of course, many of these subjects are studied during the first and second years in the courses upon histology and pathology; but owing to the immense field, which must be covered in each of these branches, it is impossible to more than touch upon salient points, which are soon forgotten. It is therefore necessary that this field should be gone over again more in detail and with especial reference to the practical side of obstetrics, and this can only be done by one, who is particularly interested in this branch of medicine.

This work should be delegated to a special assistant, whose duty it should be to prepare the material for the class, and, with

the aid of others, to demonstrate it to them. While this work is going on, the class should meet twice a week for one and a half to two hours. On meeting, the sections should be given to the students, who must stain, mount, and study them. At the next meeting, they should be described by the instructor, who should then go around the class and ascertain that the necessary points have been made out by each student. Experience has shown that not more than four or five sections should be given out in any one week.

This work should be begun at the commencement of the year, and the normal anatomy of the genitalia and the development of the placenta thoroughly studied. When this is accomplished, the same hours should be devoted to manikin work, and after its completion, the pathology of obstetrics should be taken up. In this way, two meetings a week of one and a half to two hours each may be occupied profitably throughout the year.

If the class exceeds 40 or 50 in number, it will be necessary to divide it into sections of convenient size.

This work, of course, will not necessarily require special laboratory accommodations, for it may be done in the histologic, pathologic, or clinical laboratories as may be most convenient.

In the following list are mentioned the specimens, which may be studied profitably in this manner. Where it is found to be too comprehensive, the specimens which are marked with an asterisk may be omitted.

1. Labia majora and minora.
2. Vaginal mucosa.
3. Longitudinal section of cervix, showing transition from cervical to vaginal epithelium.
4. Transverse section of cervical canal, showing its arborescent structure.
5. Endometrium of young girl.
6. Endometrium of adult.
7. Endometrium of old woman.
8. Pregnant uterus, showing increase in size of muscle cells.
9. Involuted uterus, showing decrease in size of muscle cells and degeneration of vessels.
10. Menstruating uterus.
11. Uterine end of Fallopian tube.
12. Central part of Fallopian tube.



13. Lateral end of Fallopian tube.
14. Round ligament.
15. Ovarian ligament.\*
16. Infantile ovary.
17. Girl's ovary.
18. Adult's ovary.
19. Senile ovary.
20. Corpus luteum, fresh.
21. Corpus luteum, eight to ten days old.
22. Corpus luteum, two to four weeks old.
23. Corpus luteum of pregnancy.
24. Ovary showing corpora fibrosa.
25. Ovary showing atresic follicles.
26. Corpus luteum cyst.\*
27. Decidua, four to six weeks.
28. Decidua, four months.
29. Decidua reflexa (from abortion).
30. Early chorion, to show double layer of epithelium.
31. Placenta three months.
32. Placenta four months, if possible in connection with the uterine wall.
33. Normal placenta at term.
34. Normal placenta at term injected.
35. Young umbilical cord, fetal end to show stalk of umbilical vesicle.
36. Umbilical cord at term.
37. Inflammation of decidua.\*
38. Early placental infarct.\*
39. Developed placental infarct.\*
40. Hemorrhagic placental infarct.\*
41. Normal fetal epiphysis.
42. Syphilitic fetal epiphysis.
43. Syphilitic placenta, fresh, tease out chorionic villi. Compare with normal.
44. Syphilitic placenta, hardened.
45. Hydatidiform mole.\*
46. Tubal pregnancy, to show decidual and placental formation.
47. Rachitic bone.
48. Osteomalactic bone.\*
49. Eclampsia, kidney.
50. Eclampsia, liver, to show necrosis.
51. Eclampsia, lung, to show placental giant cells.
52. Puerperal infection, showing streptococci limited to decidua.
53. Puerperal infection, showing streptococci in the uterine wall.
54. Puerperal infection, showing streptococci in the broad ligament.
55. Puerperal infection, showing non-involvement of the mucosa of Fallopian tube.

56. Puerperal infection, due to streptococci and putrefactive organisms.
57. Puerperal infection, due to putrefactive organisms alone.

It is apparent that any one who has carefully studied the sections just mentioned will have a far better and more lasting conception of obstetrics than one who has not.

In addition to the normal anatomy, he will have precise and accurate information upon the ordinary diseases of the placenta and will be able to diagnose fetal syphilis by the examination of the placenta and the fetal bones.

He will learn, for example, that the hydatidiform mole is not merely a myxoma of the chorionic villi, but that it presents marked changes in its epithelium, which places it in close relationship to the malignant growths, about which so much has been written lately; namely, the deciduoma malignum or syncytial carcinoma. He will also learn the true nature of rachitis and osteomalacia, and thus more readily understand the genesis of certain varieties of deformed pelvis. By studying the tissues from a case of eclampsia, he will learn that it is a disease not merely of renal origin, but that it is accompanied by lesions in the liver and other organs, which place it in a totally different light. The examination of sections from the various varieties of puerperal infection, will afford most important indications for treatment, and teach the futility of curetting the uterus in cases of streptococcus infection, and the marked benefit to be derived from the same operation in those forms due to infection with putrefactive and other organisms.

These and many other benefits will accrue from the study of obstetrics in this manner, and we feel that its importance cannot be urged too strongly upon the teachers of obstetrics.

#### 5. DEMONSTRATIONS.

Demonstrations should also play an important part in obstetric teaching. They should serve partly for the illustration of lectures and frequently be given independent of them.

Every teacher should exert himself to obtain as many objects as possible, which are suitable for demonstration. Many can only be collected gradually, such as frozen sections of the fetus and young children of various ages for demonstrating the fetal and infantile pelvis and the relations of the generative organs,

series of ova at various periods of development, placental diseases and abnormalities, and many other anatomic and pathologic specimens.

Among the various aids for teaching, which can be bought at any time, we may mention : Tramond's three specimens of dissections of the female perineum and pelvic floor, which greatly facilitate the demonstration of this difficult subject ; Tarnier's bronze pelvis, manufactured by Collin, of Paris ; Edgar's aluminum pelvis and blackboard, manufactured by Reynders, of New York ; Edgar's models of the pregnant uterus at the several months of pregnancy, also manufactured by Reynders. These models are of great value, in that they enable us to give the student an accurate conception of the exact size of the uterus at each month of pregnancy. Edgar's casts illustrating the immediate repair of the lacerated perineum are also very valuable, while his leather uterus is a useful adjunct to the manikin, and enables us to teach the student how to pack the uterus with gauze to check hemorrhage and to sew up the lacerated cervix for the same purpose.

One of the greatest aids in teaching, especially in this country, where certain forms of contracted pelvis are rarely observed, is the series of 24 models of the various forms of deformed pelvis, prepared by Tramond of Paris. All of them are modeled exactly after celebrated examples of pelvic deformity in the various museums of Europe. An appliance, which is invaluable for demonstrating the genesis of the various forms of deformed pelvis, is the pelvis in "composition molle" manufactured by Tramond, which can be given any shape by the hands.

This list might be extended almost indefinitely, but we have referred only to such models and appliances as we consider essential.

Any one interested in this line of work is referred to the interesting article by Dr. J. C. Edgar in the November and December numbers of the *New York Medical Journal* for 1896.

#### 6. WARD CLASSES.

For teaching the technique of examining pregnant women, the class should be divided into small groups, whose size must

depend upon the amount of clinical material available. Each student should be carefully drilled in principles of asepsis, taught to diagnose the position and presentation of the fetus by abdominal palpation and vaginal touch, impressed with the necessity of measuring the pelvis both externally and internally in every case, etc. They should also be required to take the histories of the patients in the ward, to make the necessary urinary examinations, and to accompany the professor or the resident obstetrician in the daily visit.

They should also be required to examine the puerperal women just before they are discharged from the hospital, so as to become acquainted with the condition of the genitalia in the latter part of the puerperal period.

Each student should be required to examine at least ten pregnant women, not including the cases seen during labor, before being allowed to come up for the final examination in obstetrics.

#### 7. DELIVERY OF PATIENTS IN THE LYING-IN WARD.

A small number of students, preferably two, but certainly not more than four, should be called to the ward to see every case of confinement. They should be required to examine the patient, both internally and externally, once during the first and again during the second stage of labor. In uncomplicated cases, one of the group should deliver the woman himself, under the guidance of a competent assistant.

A much larger number of students may be called to operative cases as onlookers. Each student should be required to see at least five cases delivered in the lying-in ward; for it is only there that he can learn the ideal method of conducting a labor case. A service of 150 cases yearly will be sufficient for a class of 100 students, providing four students are called to each class.

#### 8. DELIVERY OF PATIENTS IN THE OUT-PATIENT DEPARTMENT.

An obstetric dispensary should be organized in connection with every medical school, and poor women delivered at their own homes by the students under the personal supervision of an assistant.

The custom of sending two students alone to a labor case, is to be strongly deprecated; for they are almost certain to fall at

once into slipshod methods and fail to carry out the more or less rigorous technique, which they have learned in the lying-in ward. But when they are sent to these cases under the charge of a competent assistant, who is prepared to demonstrate the case and to see that the rules of asepsis are strictly followed, we believe that the out-patient obstetric service will be quite as useful in training students as the lying-in ward, and perhaps more so, in that it teaches them to conduct a labor aseptically under all the disadvantages which are encountered in the homes of the poor, almost as well as in the ward with all its conveniences, and thus are fitted directly for private practice.

The student should be required to visit the patient during the puerperium, say for the first five days and again on the seventh and tenth days, and should be provided with a fairly full printed history sheet, in which he should be required to outline the more important facts concerning the case, which should be given to the assistant in charge after the last puerperal visit.

It should be understood that the instructor regards the return of the history sheet as an important matter, and that the manner in which it is filled out should play an important part in determining the final standing of the student. We consider that two cases carefully observed in this manner are quite as valuable to the student, as ten cases seen in the usual way without supervision. Each student should be required to attend at least five out-patient cases; and a service of 250 cases a year would be sufficient to furnish cases for a class of 100 students.

In large cities, a considerable part of the out-patient obstetric material is lost for the purposes of clinical instruction by the time consumed in getting the student to the case, especially when he lives a considerable distance from the hospital. To obviate this difficulty, one or more rooms should be provided by the department, according to the size of the service, in which two or more students should be kept on call at night, until they have seen their quota of cases.

#### 9. CLINICAL CONFERENCES.

During the fourth year there should be a weekly meeting of the class, in which most of the teaching should be done by the

students themselves. Here the interesting cases which have been observed by the students are discussed. A student, who has lately seen an interesting case, should be informed a day or so in advance that he is expected to report upon it. When the class meets, he should read a concise history of the case, and then perform upon the manikin the operation which may have been required. The case is then discussed by the instructor, and the class questioned concerning more or less cognate cases.

At another meeting, a dead born child and its placenta may be exhibited. Two students may be called upon to perform an autopsy upon the child and to ascertain its cause of death ; to a third student the placenta may be given, with instructions to tease out some villi, examine them under the microscope, and ascertain if they present syphilitic lesions. This will consume about half an hour. Then the diagnoses are called for, and the history read by the student, who observed the case, and it is attempted to bring the clinical history into accord with the anatomic findings and *vice versa*.

At another meeting, several ova of various ages may be given to as many students, who should carefully examine them and then report what stages of development they represent, and their reasons therefor.

Another very practical manner of spending the hour, is to take three deformed pelves and give each one to a group of students with a pelvimeter and a piece of paper. Allow them 15 minutes to measure each pelvis. Then call upon one student in each group for the diagnosis, his reasons for making it, and the measurements upon which it is based. And ask the other how he would diagnose a similar pelvis in the living woman, and what procedures he would adopt to deliver her, etc.

Of course, this kind of work may be amplified to almost any extent, and is only limited by the amount of time and material at the disposal of the instructor.

A course conforming more or less closely to the one just suggested is given at the Johns Hopkins Medical School, extending through the third and fourth years, as follows :

Daily meeting of the class during the third year :

Monday, lecture, one hour.

Tuesday, laboratory or manikin work, one and a half to two hours.

Wednesday, lecture, one hour.

Thursday, lecture, laboratory or manikin work, one and a half to two hours.

Friday, recitation, one hour.

Fourth year :

Clinical conference for the entire class, one hour weekly.

Students divided into small groups for ward classes, and into still smaller groups for seeing cases in the lying-in ward and the out-patient department.

9th

## ASSOCIATION OF AMERICAN MEDICAL COLLEGES.

DENVER, COLORADO, June 6, 1898.

The association was called to order at 10 o'clock, A.M., at the Albany Hotel, Denver, Col., June 6, 1898, by Prof. James W. Holland, of Philadelphia, president. The secretary announced the following members present by delegates :

- Jefferson Medical College, Philadelphia.
- Cincinnati College of Medicine and Surgery, Cincinnati.
- St. Louis College of Physicians and Surgeons, St. Louis.
- University of Georgetown, Washington.
- Woman's Medical College, Baltimore.
- Columbian University, Washington.
- University of California, San Francisco.
- Willamette University, Salem, Oregon.
- Creighton Medical College, Omaha.
- University of Illinois, Chicago.
- Medical College of Indiana, Indianapolis.
- Woman's Medical College, Philadelphia.
- Detroit College of Medicine, Detroit.
- University of Louisville, Louisville.
- Hospital College of Medicine, Louisville.
- University of Colorado, Boulder.
- Baltimore Medical College, Baltimore.
- Kansas Medical College, Topeka.
- Kentucky School of Medicine, Louisville.
- University of Minnesota, Minneapolis.
- Arkansas Industrial University, Little Rock.
- University of Iowa, Iowa City.
- Keokuk Medical College, Keokuk.
- Medico-Chirurgical College, Philadelphia.
- College of Physicians and Surgeons, Boston.
- Omaha Medical College, Omaha.
- University of Denver, Denver.
- Illinois Medical College, Chicago.
- University of Southern California, Los Angeles.
- Milwaukee Medical College, Milwaukee.
- Barnes Medical College, St. Louis.
- Wisconsin College of Physicians and Surgeons, Milwaukee.
- Miami Medical College, Cincinnati.
- Ft. Wayne College of Medicine, Ft. Wayne.
- ✓ Syracuse University, Syracuse.



College of Physicians and Surgeons, Baltimore.  
 Rush Medical College, Chicago.  
 Western Reserve University, Cleveland.  
 Gross Medical College, Denver.  
 Woman's Medical School, Northwestern University.

On motion, the president appointed the following committee to consider and report on the proposed amendments to the constitution: J. M. Bodine, of Louisville; T. H. Hawkins, of Denver; and H. O. Walker, of Detroit.

Prof. Montgomery A. Crockett, of Buffalo, N. Y., read an essay on "The Developing Method in the Teaching of Medicine." The subject was approvingly discussed by the following gentlemen, all of whom had slight modifications to suggest: Prof. Chas. G. Stockton, of Buffalo; Prof. John Minney, of Topeka; Prof. Dudley S. Reynolds, of Louisville; Prof. A. Stewart Lobingier, of the University of Colorado; Prof. Bayard Holmes, of Chicago; Prof. John V. Shoemaker, of Philadelphia; Prof. Ernest Laplace, of Philadelphia; and Prof. H. J. Herrick, of Cleveland. Prof. Crockett was called on to conclude the discussion, after which the association adjourned until 2 o'clock, P. M.

#### SECOND SESSION.

2.15 P. M. The association was called to order by the president, Prof. James W. Holland. The secretary read the minutes of the last annual meeting, held at Philadelphia, May 31, and June 1, 1897, which were approved. By request, the secretary called the roll; 27 colleges answered present, by delegates.

The president called Past President Prof. James M. Bodine to the chair, and proceeded to read his address. The address was well received, and, on motion, the secretary was ordered to publish it, and furnish each member of the association a copy.

Prof. James M. Bodine, chairman of the Committee on Constitutional Amendments, reported as follows: The amendment proposed for Art. III, Sec. 5, extending the required hours for a year's work to 800, is not a desirable change, and your committee respectfully reports against its adoption. The proposed amendment to Art. III, Sec. 7, by the addition of the following, "*A college not giving the whole four courses of the medical curriculum and not graduating students, but otherwise eligible, may be*

*admitted to membership,*" is respectfully approved by your committee. On motion, the report of the committee was unanimously adopted and the amendment made part of the constitution.

Prof. Dudley S. Reynolds, chairman of the Judicial Council, reported as follows: "The University of Colorado having been, by recent decision of the courts, obliged to remove its medical department from Denver to Boulder, the question of retaining membership was presented to the council. The chairman advised as follows: "If you keep your dues paid up, and send annually, a representative to the meetings of the association, your membership is continued until somebody shall prefer, in due form, written charges of violation of some part of the organic law of the College Association, supported by convincing evidence. I would advise you, however, to make no attempt to confer degrees until you are thoroughly equipped for the completion of the required courses of instruction." This advice was accepted, and by your recent action in amending the constitution, the institution is still in every way eligible to membership.

In answer to a communication of August 7, 1897, addressed to Secretary Holmes, by Prof. G. M. Waters, M.D., dean of the Ohio Medical University, Columbus, O., the council rendered the following decision:

August 20, 1897.

*To the Ohio Medical University, Columbus, O.*

G. M. WATERS, M.D., Dean: For answer to your communication of August 7, 1897, addressed to Bayard Holmes, M.D., secretary of the Association of American Medical Colleges, your attention is invited to the following decision of the Judicial Council in answer to your communication of December 22, 1895: "III. The time-requirements of the association are fundamental," etc. Again, in answer to interrogatories of the Ohio Medical University, of September 4, 1896, the council decided that, "the whole period of time devoted to college work by the student shall not amount to less than four collegiate courses in four separate years in 1899, and thereafter, nor less than three collegiate courses of not less than six months each in three separate years, prior to 1899.

"Second, you cannot admit a man to the senior class who has attended but one course of college instruction, no matter how long since that course may have been taken. If he can establish the fact that he did attend one

regular collegiate course in an accredited college, you may graduate him after two full courses in addition to that one which he has already taken, provided you do it before 1899. After that time he would be required to take three additional courses. The College Association does not recognize any period of time devoted to practice as equivalent to any part of the prescribed course of study, and cannot grant advanced standing to any person upon any ground, other than previous collegiate work performed in regular and systematic order."

You say three-course graduates are eligible to registration in Ohio, until July 1, 1899. If this be true, the Ohio State Board lowers its standard beneath that of the College Association. No college in good standing can graduate a student in 1899, who has not attended four courses of graded instruction in four separate years, subject alone to the exemptions of Art. III, Sec. 6, of the constitution as amended at Philadelphia, May 31, 1897.

The Mr. Browning, of Charleston, W. Va., a copy of whose letter accompanies yours of August 7, 1897, cannot now avail himself of the provisions of Art. III, Sec. 5, of the original constitution of the Association of American Medical Colleges, and you cannot admit him for graduation on less than three courses of graded instruction in three separate years, prior to 1899, after which date you cannot admit him to the degree of Doctor of Medicine until after he shall have attended four courses of graded instruction of not less than six months each, in four separate years, subject to the exemptions herein cited. It is the judgment of the council that the date set for the observance of the four years' requirement in 1899, and subsequent classes, begins January 1, 1899.

The study of anatomy cannot be completed in less than two separate annual courses. Final examinations in no part of the curriculum are permitted prior to the conclusion of the second annual course.

No reputable college can admit the said Browning, or any other student, upon terms different from those specified in the constitution of the Association of American Medical Colleges as heretofore interpreted by the Judicial Council of the said College Association.

If the Ohio State Board of Examiners establish a standard below the minimum of the Association of American Medical Colleges, the council can simply deplore the fact, but it cannot permit your college, or any other institution holding membership in the Association of American Medical Colleges to violate the fundamental principles set forth in the time-requirements of Article III of the constitution of the Association of American Medical Colleges.

DUDLEY S. REYNOLDS,  
STARLING LOVING,  
JAS. H. ETHERIDGE,  
VICTOR C. VAUGHAN,  
ALBERT R. BAKER,  
RANDOLPH WINSLOW,  
JOHN B. ROBERTS.

On motion of Prof. P. Richard Taylor, of Louisville, the secretary was directed to publish this decision and supply a copy to each member of the association.

On November 15, 1897, Prof. Pinckney French, secretary of the Barnes Medical College, of St. Louis, addressed the following letter to Secretary Holmes :

ST. LOUIS, Nov. 15, 1897.

*Dr. Bayard Holmes, Chicago, Ill.*

DEAR DOCTOR: I have been instructed by the faculty of Barnes Medical College to make the following inquiries of you :

1. Is a medical college that begins its session on January 1, and terminates the same in the following June, strictly speaking, a summer school of medicine, especially when it issues to students who leave the institution on May 10, certificates of having attended a full course of lectures?
2. If the Barnes Medical College accepted into its regular session a student from such a college, in what way would it be a violation of the rules of the American Association of Medical Colleges?
3. Is there such a rule in force in the Association of American Medical Colleges that requires a lapse of six months' time between the termination of one session, at which a student attended, and the beginning of another which he desires to attend?
4. Is it not a fact that there is a rule only which requires that no two sessions shall be within the same year?

It was the view of our faculty that a summer school of medicine was one beginning its session in the spring months and terminating its session in the fall; that a school that began its session, 60 or 90 days later in the winter and terminated its session only six or eight weeks later in the spring months, was nothing more than a regular winter session of college work. This being our view with reference to question 1, it naturally follows that we can see no impropriety in accepting a student from such an institution, as having completed a regular course during the year prior to the time which he enters and terminates his session with us; hence this expresses our views with respect to the second question.

The asking of the third question seems to be an absurdity, when we reflect that such a rule would interfere with every college of first class standing in the United States. For instance, the length of session of all high-graded schools is from six and one-half to nine months. The Barnes Medical College began its present session September 13, and will close the same, April 12. Rush Medical College has eight months' session, and the medical departments of our state universities, almost invariably nine months' attendance.

In regard to question 4, we suggest that the rule requiring that no two sessions shall be in one and the same year is not violated by accept-

ing students from a college that graduates its students from the middle to the 25th of June, while other colleges graduate their students between the 2nd week of April, and the middle of May.

Barnes Medical College has always taken pride in enforcing the rules of the American Medical College Association, and it is the purpose of her faculty to abide by the decision of your committees, or the officers of the association—we, therefore, submit this question to you, desiring a speedy reply. If you feel like assuming the responsibility of speaking for the association, we will accept your individual views; otherwise we would be pleased to have you submit this communication to such committee as is empowered to pass upon the subject-matter involved and let us have an answer as quickly as is consistent with proper consideration of the subject.

I am, very truly,

PINCKNEY FRENCH, Sec'y.

The letter being referred to the chairman of the council, the following answer was returned :

LOUISVILLE, KY., Nov. 20, 1897.

*Prof. Pinckney French, M.D., Secretary Barnes Medical College.*

DEAR SIR: For answer to your letter of November 15, addressed to Prof. Bayard Holmes, of Chicago, I have to say that a medical college which begins its session on January 1 and terminates in the following June, cannot be held to comply with the rules of the Association of American Medical Colleges, if it issues tickets for a full course of lectures on the 10th of May. The time-requirements have been repeatedly held to be fundamental, and it cannot be maintained that a student who begins January 1, can possibly have attended one full course by the following 10th of May.

Second, if the Barnes Medical College accepted into its regular session a student with no other qualifications than those above stated, such student could not be credited with having attended one full course, and would therefore be obliged to enter the same grade over again.

The terms of Art. III, Sec. 5, of the constitution, as it existed prior to June 1, 1897, and of the amended constitution, as it now exists, demand that all candidates for the degree of Doctor of Medicine must have attended three courses of graded instruction of not less than six months each, in three separate years, prior to 1899. After the first of January, 1899, all candidates for the degree of Doctor of Medicine must have attended four courses of graded instruction of at least six months' duration, no two of which shall have been in the same calendar year.

The council has several times heretofore decided that "No student can be admitted to a second course of instruction within less than twelve months from the date of the beginning of the first course," and so on through all the succeeding annual courses required of candidates for the degree.

It has also been held that the Ohio Medical University could not receive a student for the second course of instruction in September, 1895, who had completed a first course of graded instruction beginning January 1, 1895, and ending with the month of June, 1895, notwithstanding the fact that the session of the Ohio Medical University beginning in September, 1895, would not terminate until May, 1896. No member of the Association of American Medical Colleges can be permitted to evade the time-requirements with impunity.

If this letter is not entirely satisfactory, I will cause your letter to be copied and submitted to the entire council; I am sure, however, that the council could not, without stultifying itself by a reversal of former opinions, dissent from the opinions herein expressed.

I am, with great respect, yours truly,

DUDLEY S. REYNOLDS,  
Chairman of Judicial Council, A. A. M. C.

Similar communications were received from Prof. Samuel O. L. Potter, secretary of the College of Physicians and Surgeons, of San Francisco; Prof. W. W. Grube, M.D., of the Toledo, Ohio, Medical College; Prof. Wm. V. Morgan, of the Central College of Physicians and Surgeons, of Indianapolis; and many individual correspondents, not connected with colleges, all of whom were answered in similar terms. Accompanying the application of the Milwaukee Medical College for membership, I have received a certified copy of resolutions adopted by the faculty of the Milwaukee Medical College, January 29, 1898, as follows:

**COPY OF RESOLUTIONS ADOPTED BY THE FACULTY OF THE MILWAUKEE MEDICAL COLLEGE AT A REGULAR MEETING HELD JANUARY 29, 1898.**

(1) *Resolved*, that beginning with April 5, 1898, the course of study of the Milwaukee Medical College shall consist of four years of six months each.

(2) *Resolved*, that in addition to the winter course, there shall be a spring course of six weeks, said course to be optional.

(3) *Resolved*, that henceforth the Milwaukee Medical College conform to the standard of requirements and rules of the Association of American Medical Colleges and to those of the Illinois Board of Health.

(4) *Resolved*, that the dean of this school be and is hereby instructed to make formal application for admittance to the Association of American Medical Colleges, with the view of having the school admitted at the next meeting of said association.

All the above resolutions were unanimously adopted.

B. A. BROWN, M.D., *Secretary*.

Upon the basis of these resolutions the application for membership is approved.

The application of the Illinois Medical College, made through its president, Prof. Randolph N. Hall, M.D., of Chicago, is approved, with the understanding that the institution will observe all of the requirements of our association.

On the 15th of April, 1898, Prof. P. S. Conner, of Cincinnati, charged the St. Louis College of Physicians and Surgeons with violation of Article III, Section 7, of the constitution, specifying that, in March, 1897, the institution conferred the degree of Doctor of Medicine upon Oscar B. Ormsby, of Murphysboro, Ill., and M. A. Finley, of Mortimer, Kansas, both of whom, it was charged, matriculated as first-course students at the Illinois Medical College, of Chicago, for the session beginning March 15, 1895, in support of which the statement of Prof. H. H. Brown, M.D., secretary of the Illinois Medical College, was filed. A correct copy of the charges and specifications, and the evidence supporting them, being furnished the defendant, it was shown that the Finley named in the charges had attended one full course of instruction at the Kansas City Medical College, Kansas City, Mo., one course at the Illinois Medical College in a separate year, and two terms in two separate years in the St. Louis College of Physicians and Surgeons; and that the Ormsby mentioned in the specifications, being a pharmacist, and having taken a regular collegiate course of instruction, was entitled to one-half term of advancement in his standing. The institution having acted in apparent good faith, and doubts of the sufficiency of the evidence to support the charges in the face of the testimony for the defence, the council decided that the charges should be dismissed, and they are declared, not sustained.

On the 15th day of April, 1898, Prof. P. S. Conner, of Cincinnati, preferred charges and specifications against the Hospital College of Medicine, of Louisville, and the Kentucky School of Medicine, Louisville, Ky., charging both of these institutions with graduating at the close of their annual sessions, on the 30th of June, and the 1st of July, 1897, respectively, students who had taken the first course of instruction at the Illinois Medical College, Chicago, during the session of 1895, in violation of Article III,

Section 7, of the constitution. To these charges, both institutions plead not guilty. To the specifications they plead guilty, and set forth the facts that students attending a full course of instruction in a regular medical college, in the year 1895, and a second course in the accused institution in the separate year of 1896, and a third course in the separate year of 1897, thus fulfilled all the requirements of Article III, Section 7, of the constitution, inasmuch as the Illinois College holds its sessions in the spring and summer only, and the two defendants begin their sessions with the month of January, and conclude with the month of June, holding no other official terms. In view of this testimony, and these facts, the charges are not sustained, and have been dismissed. In the determination of these matters against the Kentucky School of Medicine, and the Hospital College of Medicine, the chairman expressed no opinion, and cast no vote.

Before proceeding further with the report, on request of the chairman, that the association should take action upon so much as had already been submitted, it was, on motion, unanimously adopted.

Continuing the report, the chairman stated that the decision declaring the Medical College of Ohio to have forfeited its membership, having been published, and the institution thereby sufficiently punished, the chairman desired to submit the following: "The council now asks permission to declare that the judgment heretofore rendered against the Medical College of Ohio, declaring its membership forfeited, is now vacated, and set aside, and the said Medical College of Ohio is invited to renew its membership in the Association of American Medical Colleges. The chairman desires permission to promulgate this decision."

On motion, the consent of the association was granted unanimously.

On motion, the report of the Judicial Council, as a whole, was unanimously adopted.

By request of the chairman, all applications for membership from colleges not fully complying with the rules and regulations of the association, may, upon furnishing satisfactory evidence to



the council, of a determination in future to make full compliance with all the rules and regulations of the association, be admitted to full membership in the interval between this and our next annual meeting.

On motion, this request was unanimously granted.

Prof. Henry O. Walker, of Detroit, presented the following, which was unanimously adopted :

*Resolved*, that a committee of three be appointed to ascertain the amount of work being done by the several colleges, members of this association, and offer such amendments to the constitution as may seem fit to them, for consideration and action at the next annual meeting.

The president appointed the following committee to take charge of the resolution : Prof. Henry O. Walker, of Detroit ; Prof. John C. Oliver, of Cincinnati ; and Prof. Thomas H. Hawkins, of Denver.

On motion, the secretary was directed to publish the constitution, by-laws, rules of the Judicial Council, transactions of the association, addresses and papers presented, and all the decisions of the Judicial Council of permanent value, and to furnish six copies to each college holding membership in the association, and one copy to each of the other medical colleges in the United States ; homeopathic, eclectic, and to the secretary of each state board of health and to each state board of medical examiners.

The association then proceeded to the election of officers, with the following result :

*President*—Prof. Henry O. Walker, of Detroit.

*First Vice-president*—Prof. H. Bert Ellis, of Los Angeles.

*Second Vice-president*—Prof. Samuel C. Woody, of Louisville.

*Secretary and Treasurer*—Prof. Bayard Holmes, of Chicago.

The members of the Judicial Council whose terms expire at this meeting are: Prof. Dudley S. Reynolds, Louisville ; Prof. Victor C. Vaughan, Ann Arbor ; and Prof. John B. Roberts, Philadelphia, each to serve three years from this date.

The president-elect requested to be released from the duties of chairman of the committee created by resolution, which request was granted, and Prof. E. Fletcher Ingals, of Chicago, was appointed instead.

On motion, the association adjourned to meet on the last day

preceding the next assembling of the American Medical Association, at the place chosen by that body.

BAYARD HOLMES, Secretary.

**DECISION OF THE JUDICIAL COUNCIL DENYING THE RIGHT OF THE MEDICO-CHIRURGICAL COLLEGE OF PHILADELPHIA TO RESIGN ITS MEMBERSHIP.**

The council decides that the Medico-Chirurgical College, of Philadelphia, is now and has been continuously since 1891, a member of the Association of American Medical Colleges, in full fellowship. It signed the constitution and by-laws, and participated in each annual meeting, including that of June 6, 1898, thereby assuming the obligation of honor to maintain and observe all the provisions of the constitution.

Article III, Section 5, of the constitution, which the said Medico-Chirurgical College voluntarily pledged to observe, says: "Candidates for the degree of Doctor of Medicine in the year 1899, and thereafter, shall have attended at least four courses of medical instruction, each course of at least six months' duration, no two courses of which shall have been in the same calendar year."

Article III, Section 6, prescribes the conditions on which credits for one year of time, in the four courses, may be extended to certain persons whose claims for exemption are clearly defined.

Article III, Section 7, states that "Members of this association may confer the degree of Doctor of Medicine during the year 1898 upon students who have attended three courses of six months' duration each; each course shall have been in a separate calendar year."

The Judicial Council of the Association of American Medical Colleges has repeatedly decided that the constitutional requirement of four courses in 1899 and thereafter, must be construed to begin January 1, 1899, and these decisions have been unanimously adopted by the aid of the votes of said Medico-Chirurgical College participating in the general sessions of the association.

It is impossible that the said Medico-Chirurgical College, an institution of high character, could have promised any student to descend from the scale of honor, and to hold down the standard below the requirements it solemnly pledged to observe, in 1899 and thereafter.

The American Medical Association, at Detroit, June, 1892, unanimously demanded of all the colleges in the United States the adoption and observance of a standard of requirement for the degree of Doctor of Medicine, which should in no manner fall below the minimum standards of the Association of American Medical Colleges. At Denver, on the 9th of June, 1898, the American Medical Association unanimously resolved to hereafter deny the right of membership to any professor, or other teacher in any medical college which confers the degree of Doctor of Medicine on conditions below the published standards of the Association of American

Medical Colleges after January 1, 1899. Those receiving the degree on such conditions are likewise barred. It is clear, therefore, that the College Association must maintain its own published requirements, as these are conditions which shall hereafter determine the qualifications of membership in the American Medical Association.

The Association of American Medical Colleges cannot concede to any one of its members the privilege of resigning to fulfil a pledge made as a breach of faith.

It is the judgment of the council that the resignation of the college cannot be accepted; and, that the presence of Professor Laplace as the authorized delegate, and Professor Shoemaker as an associate, and their participation in the general sessions of the association on the 6th of June, 1898, directly contradicts the statements of Dean Egbert, in his letter of resignation of June 11, 1898.

DUDLEY S. REYNOLDS,  
 STARLING LOVING,  
 JAMES H. ETHERIDGE,  
 ALBERT R. BAKER,  
 RANDOLPH WINSLOW,  
 VICTOR C. VAUGHAN,  
*Absent in Cuba.*  
 JOHN B. ROBERTS,  
*Failed to report*

Exact copy of the original signed by five members of the council.

[Signed]

LILLIE B. BALDWIN, Clerk.

*July 8, 1898.*

# CONSTITUTION OF THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES.

## ARTICLE I.

This organization shall be known as the Association of American Medical Colleges.

## ARTICLE II.

SECTION 1.—Any medical college conforming to the requirements of the association, as expressed in this constitution and in the by-laws of the association, is eligible to *membership*.

SEC. 2.—Any medical college desiring membership in this association shall make *application* to the secretary and pay the annual dues of five dollars. This application shall be accompanied by evidence that the college applying is conforming to the requirements of this association. The application and all evidence and information in relation to the college applying shall then be put in the hands of the Judicial Council, to be reported to the association favorably or unfavorably, at the annual meeting, at which time the college shall be elected to membership if it receives the favorable recommendation of the Judicial Council and the favorable ballot of a majority of the colleges represented in the meeting. The neglect of the Judicial Council to report on the application of a college shall not be a bar to election.

SEC. 3.—Each college is entitled to one *representative* at all meetings of the association, and to one vote on all questions. The dean of the college will be its accredited representative in the absence of any other delegate.

SEC. 4.—The dues are five dollars a year, payable in advance.

## ARTICLE III.

SEC. 1.—Each college holding membership in this association shall require of each student, *before admission* to its course of study, an examination, the minimum of which shall be as follows :

1. In *English*, a composition on some subject of general interest. This composition must be written by the student at the time of the examination, and should contain at least 200 words. It should be criticised in relation to thought, construction, punctuation, spelling, and handwriting.

2.—In *Arithmetic*, such questions as will show a thorough knowledge of common and decimal fractions, compound numbers, and ratio and proportion.

3.—In *Algebra*, such questions as will bring out the student's knowledge of the fundamental operations, factoring, and simple quadratic equations.

4.—In *Physics*, such questions as will discover the student's under-

standing of the elements of mechanics, hydrostatics, hydraulics, optics, and acoustics.

5.—In *Latin*, an examination upon such elementary work as the student may offer showing a familiarity usually attained by one year of study; for example, the reading of the first 15 chapters of Cæsar's Commentaries, and the translation into Latin of easy English sentences involving the same vocabulary.

SEC. 2.—In place of this examination, or any part of it, colleges, members of this association, are at liberty to recognize the official *certificates of reputable* literary and scientific colleges, academies, high schools, and normal schools, and also the medical student's certificate issued by any state examining board covering the work of the foregoing entrance examination.

SEC. 3.—Colleges, members of this association, may allow students *who fail in one or more branches* in this entrance examination the privilege of entering the first-year course, but such students shall not be allowed to begin the second course until the entrance requirements are satisfied.

SEC. 4.—Colleges, members of this association, are free to honor official *credentials issued by medical colleges of equal requirements*, except in the branches of study embraced in the last year of their own curriculum.

SEC. 5.—Candidates for the degree of Doctor of Medicine in the year 1899 and thereafter shall have attended at least *four courses* of medical instruction, each course of at least six months' duration, no two courses of which shall have been in the same calendar year.

SEC. 6.—Colleges, members of this association, are free to give to students who have met the entrance requirements of the association additional *credit for time* on the four years' course as follows: (a) To students having the A.B., B.S., or equivalent *degree* from reputable literary colleges, one year of time. (b) To graduates and students of colleges, of *homeopathic* or *eclectic* medicine, as many years as they attended those colleges, provided they have met the previous requirements of the association and that they pass an examination in *materia medica* and therapeutics. (c) To graduates of reputable colleges of *dentistry*, *pharmacy*, and *veterinary* medicine, one year of time.

SEC. 7.—A college not giving the whole four courses of the medical curriculum, and not graduating students, but otherwise eligible, may be admitted to membership.

#### ARTICLE IV.

SEC. 1.—In addition to the representatives of colleges in attendance at regular meetings, who are termed *active members*, there shall also be associate members and honorary members. *Associate members* shall consist of former representatives and representatives of post-graduate medical schools and members of state boards of medical examiners. Distin-

guished teachers in medicine and surgery may be elected to *honorary membership*.

SEC. 2.—Only duly delegated and accredited active members in actual attendance whose annual dues are paid shall have *voting power*, but associate and honorary members may participate in all other proceedings and duties and may be elected to any office.

#### ARTICLE V.

SEC. 1.—The *officers* of this association shall be a president, senior and junior vice-presidents, secretary and treasurer, and a judicial council of seven members, all of whom shall be elected annually by ballot and serve until the election of their successor.

SEC. 2.—The *President*, or one of the vice-presidents in the absence of the president, shall preside at all the meetings, and perform such duties as parliamentary usage in deliberative assemblies and the by-laws of this association may require. The seven members constituting the *Judicial Council* shall serve three years each. Vacancies by expiration of term shall be filled at the annual election of officers. Vacancies by death or resignation shall be temporarily filled by the surviving members of the Judicial Council.

SEC. 3.—The *Secretary* and *Treasurer* shall record the proceedings of the meetings, conduct the correspondence, receive dues and assessments from members, disburse the funds of the association as provided by resolution, issue certificates of membership, and perform such other duties as the by-laws may require.

SEC. 4.—The *Judicial Council* shall investigate and determine all questions of violation of the rules and regulations of this association, and all matters of dispute between the members of this association. All charges or complaints shall be preferred formally in writing, and referred to the council. The council shall make written report at the next ensuing session of the association upon all matters received for adjudication.

#### ARTICLE VI.

SEC. 1.—The stated *meetings* of this association shall occur annually on the Monday preceding the Tuesday on which the American Medical Association convenes.

SEC. 2.—A majority of the active members whose dues are paid shall constitute a quorum.

#### ARTICLE VII.

This constitution shall not be altered or amended, except by written notice to all members at least 30 days previous to a stated meeting, and by a vote of two-thirds of all the active members present at such meeting.

## BY-LAWS.

**SECTION 1.**—The presiding officer shall, on calling meetings to order, call for the reading of the minutes of the previous session, which, when approved, shall be recorded in a book kept for that purpose, signed officially by the secretary and approved by the president.

**SEC. 2.**—After approval of the minutes, the secretary shall announce the colleges represented at the meeting, and an adjournment of ten minutes shall then follow to allow other representatives present to register and pay their dues.

**SEC. 3.**—Order of business :

1. The reading of the minutes of the previous meeting.
2. Roll-call of membership.
3. Reports of committees.
4. Secretary and treasurer's report.
5. Report of Judicial Council.
6. Papers and essays.
7. New business.
8. Adjournment.

**SEC. 4.**—These by-laws may be altered or amended at any time by unanimous consent of the members present, or by written proposition, to so alter or amend, being read in open session and receiving the approval of a three-fourths' vote of all the members present at an adjourned session of any stated meeting ; provided, however, not more than twenty-four hours shall have elapsed between the time of the proposition to amend and the final vote thereon.

## RULES OF THE JUDICIAL COUNCIL.

I. All complaints, charges, and other questions must be submitted in writing, through the secretary of the association, or directly through the chairman of the council.

II. All complaints of violations of rules and regulations must be in the form of written charges and specifications, signed by the complainant.

III. All charges and specifications must be presented to the accused for answer. In all cases the written answer must be filed with the chairman of the council within 10 days from the receipt of the copy of charges by the accused.

IV. All counter charges must be submitted to the accused for answer, and pleadings in the same manner as the original charges, and the council will take no notice of any evidence not submitted through its chairman in regular form and order.

V. As the strictest formality is necessary to insure justice equally, all decisions of the council must be rendered in writing, signed by each member taking part in the determination of any question.

VI. In the intervals between the annual meetings, the council may act upon all matters submitted in due form by its chairman, each member communicating his decision to the chairman who shall immediately, or within 10 days from the date of any decision, file a certified copy with the secretary, and notify all the parties interested.

VII. It will be the duty of the chairman of the council to file and preserve all original complaints, charges, and other matter referred to the council, and to deliver them to the secretary on the first day of each annual meeting next ensuing the date of final decision.

### COLLEGES HOLDING MEMBERSHIP DURING THE YEARS 1896-98.

- University of California.
- University of Louisville.
- Rush Medical College.
- Cincinnati College of Medicine and Surgery.
- University of Georgetown.
- Medical College of Indiana.
- Columbian University.
- Gross Medical College.
- Syracuse University.
- University of Denver.
- Jefferson Medical College.
- Creighton Medical College.
- Kentucky School of Medicine.



Drake University, Iowa College of Physicians and Surgeons.  
 St. Louis College of Physicians and Surgeons.  
 College of Medicine, Los Angeles.  
 Ohio Medical University.  
 Michigan College of Medicine and Surgery.  
 Sioux City College of Medicine.  
 Boston College of Physicians and Surgeons.  
 Hospital College of Medicine, Louisville.  
 Detroit College of Medicine. .  
 Louisville Medical College.  
 Central College of Physicians and Surgeons, Indianapolis.  
 Baltimore College of Physicians and Surgeons.  
 Western Pennsylvania Medical College.  
 Medico-Chirurgical College, Philadelphia.  
 Niagara University.  
 Wisconsin College of Physicians and Surgeons.  
 Maryland University.  
 Baltimore Medical College.  
 University of Iowa. .  
 Woman's Medical College, Philadelphia.  
 Arkansas Industrial University.  
 Howard University. .  
 Starling Medical College.  
 University of Minnesota. .  
 Medical Department, University of Buffalo. .  
 Toledo Medical College.  
 College of Physicians and Surgeons, Chicago. .  
 University of Colorado. .  
 National University.  
 Keokuk Medical College.  
 Hamlin University, Minneapolis.  
 Western Reserve University. .  
 University Medical College, Kansas City.  
 University of Michigan. .  
 Tuft's College.  
 Johns Hopkins University.  
 Woman's Medical, Northwestern University.  
 University of Virginia.  
 University of Oregon.  
 University of Baltimore.  
 Willamette University.  
 Northwestern University. .  
 Omaha Medical College.  
 Miami Medical College.  
 Medical College of Ohio.

- Woman's Medical College, Baltimore.  
 Kansas Medical College, Topeka.  
 New Orleans University.  
 - Yale University.  
 - University of Georgia, Augusta.  
 - University of Maryland.  
 Barnes Medical College, St. Louis.  
 College of Physicians and Surgeons, Cleveland.  
 - Albany Medical College.  
 Arkansas University, Little Rock.  
 Laura Memorial Medical College, Cincinnati.  
 Kansas City Medical College.  
 College of Physicians and Surgeons, Minneapolis.  
 Columbus Medical College.  
 Ft. Wayne College of Medicine, Ft. Wayne, Ind.  
 University of Wooster, Cleveland, Ohio.  
 Keokuk College of Physicians and Surgeons.  
 College of Physicians and Surgeons, Minneapolis.

AMERICAN MEDICAL ASSOCIATION.

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WILLIAM B. ATKINSON, M.D.,  
Permanent Secretary,  
1400 Pine Street, Southwest cor. Broad.

PHILADELPHIA, June 30, 1898.

DEAR SIR: At the recent meeting of this association the following was unanimously adopted:

WHEREAS, The American Medical Association did, at Detroit, in 1892, unanimously resolve to demand of all the medical colleges of the United States the adoption and observance of a standard of requirements of all candidates for the degree of Doctor of Medicine which should in no manner fall below the minimum standard of the Association of American Medical Colleges; and

WHEREAS, This demand was sent officially by the permanent secretary to the deans of every medical college in the United States and to every medical journal in the United States, now therefore, the American Medical Association gives notice that hereafter no professor or other teacher in, nor any graduate of, any medical college in the United States, which shall after January 1, 1899, confer the degree of Doctor of Medicine or receive such degree on any conditions below the published standard of the Association of American Medical Colleges, be allowed to register as either delegate or permanent member of this association.

*Resolved*, That the permanent secretary shall within 30 days after this meeting send a certified copy of these resolutions to the dean of each medical college in the United States, and to each medical journal in the United States.

Respectfully yours,

WM. B. ATKINSON,  
*Permanent Secretary, American Medical Association.*

The Secretary was directed by the Association to send six copies of this reprint to every college holding membership in the Association, and one copy to every other regular, homeopathic, and eclectic medical college on the continent, and two copies to every State Board of Health and Examining Board. Other copies can be obtained on request.