

COLLEGE ASSOCIATION NUMBER.



BULLETIN

OF THE

American Academy of Medicine.

NO. 22.—AUGUST, 1894.

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TIME OF NEXT MEETING.—Wednesday and Thursday, August 29 and 30, 1894.

PLACE OF NEXT MEETING.—Jefferson, N. H.

1074
In force from
May 8, 1894

W. H. P. S.

CONSTITUTION AND BY-LAWS OF THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES.

CONSTITUTION.

ARTICLE I.

This Association shall be known as the ASSOCIATION OF AMERICAN MEDICAL COLLEGES.

ARTICLE II.

SECTION 1. Colleges adopting and observing the rules of this Association, as herein provided, shall be eligible to membership. Each College shall be entitled to one representative at all the meetings of the Association.

SEC. 2. Colleges desiring membership in this Association shall make written application to the Secretary, officially signed, and pay to the Treasurer of this Association the sum of five dollars (\$5.00) annually, in advance.

ARTICLE III.

SEC. 1. Colleges, members of this Association, shall require of all matriculates an examination as follows: 1. An English composition in the handwriting of the applicant of not less than two hundred words, said composition to include construction, punctuation, and spelling. 2. Arithmetic—fundamental rules, common and decimal fractions, and ratio and proportion. 3. Algebra—through quadratics. 4. Physics—elementary—(Gage). 5. Latin—an amount equal to one year's study as indicated in Harkness' Latin Reader.

SEC. 2. Graduates or matriculates of reputable colleges, or high schools of the first grade, or normal schools established by State authority, or those who may have successfully passed the entrance examination provided by the statutes of the State of New York, may be exempted from the requirements enumerated in Section 1.

SEC. 3. Students conditioned in one or more of the branches enumerated as requirements for matriculation, shall have time until the beginning of the second year to make up such deficiencies; provided, however, that students who fail in any of the required branches in this second examination shall not be admitted to a second course.

SEC. 4. Colleges granting final examination on elementary subjects to junior students, shall not issue certificates of such final examination, nor shall any member of this Association confer the degree of Doctor of Medicine upon any person who has not been first examined upon all the branches of the curriculum by the faculty of the college granting the degree.

[As amended at San Francisco and affirmed at Baltimore].

Candidates for the degree of M.D. in 1899, or thereafter, shall have pursued the study of medicine for a period of four years, and attended at least four courses of lectures of not less than six months duration each. It is provided, however, that the following classes of students may apply for advanced standing:

- a. Graduates of recognized colleges and universities that have completed the prescribed course in chemistry and biology therein.
- b. Graduates and matriculates of colleges of homeopathy.
- c. Graduates and matriculates of colleges of eclectic medicine.
- d. Graduates and matriculates of colleges of dentistry requiring two or more courses of lectures before conferring the degree of D.D.S. or D.M.D.
- e. Graduates and matriculates of colleges of pharmacy.
- f. Graduates and matriculates of colleges of veterinary medicine.

All students shall be required to comply with the provisions of the entrance examination and prove their fitness to advanced professional standing, by an individual examination upon each branch below the class, he or she may desire to enter.

ARTICLE IV.

Membership.

SEC. 1. Membership in this Association shall be divided into active, associate, and honorary. The active membership shall consist of persons duly appointed to represent the college for the fiscal year. Associate membership shall consist of former delegates, representatives of post-graduate medical colleges, and of State Boards of medical Examiners. Honorary membership, of distinguished teachers in medicine and surgery.

SEC. 2. Voting power shall be confined to active members in actual attendance. Associate and honorary members may participate in all other proceedings upon invitation of the presiding officer.

ARTICLE V.

Officers.

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 successors.

SEC. 2. The President, or one of the Vice-Presidents in his absence, 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. Of the seven members constituting the Judicial Council, the three whose names appear first on the list of those first elected shall serve three years. Of the remaining four, the two first named shall serve two years, and the two last named shall serve for one year. Vacancies by expiration of term to be filled at the annual election of officers. Vacancies by death or resignation may, if business of importance arise, be filled by

the surviving members in the interval between the annual meetings of the Association.

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 preceeding the Tuesday on which the American Medical Association convenes. [Thus Amended at Baltimore].

SEC. 2. A majority of the members shall constitute a quorum.

ARTICLE VII.

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

BY-LAWS.

SECTION I. 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 ten 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 ten 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.

BULLETIN

OF THE

American Academy of Medicine.

No. ISSUED AUGUST, 1894. 22.

THE AMERICAN ACADEMY OF MEDICINE is not responsible for the sentiments expressed in any paper or address read at its meetings.

METHODS OF MEDICAL EDUCATION AT THE COLLEGE OF PHYSICIANS AND SURGEONS, CHICAGO, ILLINOIS.¹

I.

THE TEACHING OF PATHOLOGIC HISTOLOGY TO LARGE CLASSES IN UNENDOWED INSTITUTIONS.

BY W. A. EVANS, M.D., PROFESSOR OF PATHOLOGIC HISTOLOGY, CHICAGO, ILL.

It is assumed that the object of medical education is to make men capable of doing the thinking of a community on medical subjects. This means a training of the reasoning faculty, as well as those functions of the mind secondary to reason, such as observation, memory, self-reliance, etc.

The following unsupported statements are offered :

Clinical teaching of large classes in the amphitheatre is useless and extravagant.

Memory training can be secured better by recitation than by lecture.

That arrangement of studies is best which in greatest measure resolves a class into individual members.

Self-reliance is best given by placing responsibility for life and health on individual shoulders.

The following statement will be maintained :

¹ Read at the Fifth Annual Meeting of the Association of American Medical Colleges, at San Francisco, June, 1894. These papers, submitted by Professor Quine, were accompanied by various charts and drawings from the exercises of the students. We regret our inability to furnish illustrations of the excellent laboratory work submitted.

The laboratory furnishes the best opportunity for teaching pathologic histology and for cultivating observation and judgment.

Can one hundred men be taught pathologic histology in an unendowed institution? How much time will it take? The demonstrator's time, the assistant's time, the student's time? How much money will it take? This last question, Dr. Quine can answer better than I. What method shall we use?

First a statement of facts, then observations based on those facts.

In the College of Physicians and Surgeons of Chicago, the class numbers about eighty. It is practically the second-year class in a four-year's course. The men have previously taken the following laboratory work: Anatomy, comparative anatomy, embryology, normal histology and chemistry. They take simultaneously physiologic and pathologic chemistry, pathologic anatomy and bacteriology. They take subsequently surgical pathology. There is a director of the laboratories, and a curator with one assistant. To my work the class devotes four hours a week or two hours a day for two days each week. The laboratory is fitted with desks supplied with two locker drawers and gas for each student. The microscope room is easily accessible, as is the preparation room of each teacher. There are ample basin facilities. There is a dumb-waiter leading to the store room and cellar. All first-year students use one room for all the laboratory work of that year. The same is true of the second-year men. Anatomy and chemistry are exceptions. At the beginning of the year each student is sold an outfit previously prepared, which outfit he locks in his drawers. At the beginning of each exercise, to each student is issued a microscope, microtome, or other required apparatus. This apparatus is charged to him on a prepared chart. At the end of the hour he returns this and his debit is cancelled. This receiving and returning occupies about five minutes each. Articles required to replenish the outfit are ordered *via* the dumb-waiter during the first fifteen minutes of the hour.

Preparation Room.—Three students from the class have charge of the preparation room. The cost of the material they use is

prorated among those working in the laboratory. They keep all histories, prepare and issue all specimens. These positions are sought by the best men in the class. The occupants are excused from the regular work; they get a perfected technique, a maximum grade, and an opportunity to follow their natural bent in pathology. It takes six to eight hours a week on their part, but at such hours as they can best give. After they have served their time in the preparation room they are given an opportunity for investigation.

Assistants.—Four assistants are used. The class is divided into that number of sections and each assistant has a section. He visits each student weekly. Filling these positions offers a difficulty, but one that is decreasing every year.

The demonstrator gives six hours a week to the laboratory and preparation room. His emolument is the opportunity for the study of pathology.

Methods of Teaching.—The succession of organs studied is: respiratory, circulatory, digestive, urinary, nervous, blood-making, and tumors. A consideration of a system is preceded by a quiz on the normal histology of that system. It is followed by a quiz on the pathologic histology, especially as developed in the specimens examined. For example: In the lungs, the class studies exudative and productive inflammation, coagulation, necrosis, caseation and tubercular inflammation. Some specimens the student works up from the beginning. Some of them are furnished him mounted, but the majority are furnished as unstained sections. The major portion of the exercise consists in perfecting his technique, and in studying the specimens. He draws at his own and the instructor's discretion. During a portion of the hour the demonstrator describes the histology of a selected specimen, the class following with their duplicate slide. In addition, a certain number of mimeograph descriptions are distributed.

Recognizing the fact that the bulk of the class in after-life will not have laboratory connections, the simplest and most available technique is taught them. The work is individual; there is no class work except in the quizzes, and the short daily descriptive talk on some specimen. The first thing taught after technique,

is how to observe. The student is made to describe, without interference from the teacher, the appearance of a specimen as to color, evenness of color, density, opacity, tissue arrangement, in fact, everything to be seen in a specimen. Then he is taught to reason from observation and memory. He is made to describe what he sees, institute comparisons, give his opinion and the reason for that opinion, after which the teacher corrects errors and suggests new lines of study, observation, and comparison. If an opinion be expressed to twenty men, twelve will accept that opinion because the teacher expresses it, six will reject it for the same reason, two will investigate and accept it. These last two are the only ones getting full benefit. This plan consumes time but it is worth it. In the drawings, the aims are first, understanding, then proportion, then artistic effects. Drawing is good in that it demands thought and minuteness of observation. It is bad in that it consumes a great deal of time. We endeavor to waste no time in drawing, yet to draw enough to get its good effects. The examination consists in fixing, hardening, embedding, cutting, staining, and mounting a specimen, diagnosing it, and writing a description of the pathologic findings, and demonstrating the specimen with the description in the hands of the examiner.

In addition to the above, at each exercise the demonstrator asks a question to which a written answer is handed in at the next exercise. These questions are so selected as to call for thought, and the questions are graded on the thought displayed. Answers to them cannot be found in text-books.

The members of the class, under the direction of the demonstrator, have formed a pathologic society, meeting in the evening. To this the students present specimens and discuss them.

I think the proposition, to wit, the laboratory is the place beyond compare to teach pathologic histology, judgment and observation has been established.

Can the above plan be improved upon with the equipment and arrangement practically as it is now? Could the general plan be improved upon?

First. The student should stain only about one-fourth of his sections. He should work up entire about one-tenth of them.

This is enough to acquire a good technique and more is an extravagance of time. He should do one piece of experimental work. He should study together, a specimen of the normal tissue, a specimen of the lesion, pure and simple, and one of the lesion as it appears in that organ. To illustrate, in studying lobar pneumonia, study a section of normal lung, a slide of exudative inflammation in a simple tissue, and a slide of lobar pneumonia. How can the general plan be improved upon in an unendowed institution? Those things that would be undoubtedly advantageous, yet are not easily possible, will not be discussed. Of such, are the continuous session, obligatory bed-side attendance, diplomas granted by examining board separate from institutions, quarterly examinations for degree, etc.

If the institution cannot pay its teachers regularly, the following plan is feasible: Have the faculty guarantee a certain income to the teacher, and then send their chemic and microscopic work to them; the fee for this work will more than pay the guaranteed salary. In this way the laboratories could be kept always open. A desideratum, especially in chemistry and bacteriology. This would furnish opportunity for small classes. There should be so close a relation between the chair of pathologic anatomy, the medical and surgical clinics and the laboratories, that reports from the latter should embellish the work of the former. In the laboratory, as at present arranged, there is scarcely a time when any specimen is being studied by as many as ten students. Yet there must be even greater opportunity for individual work. It should be so arranged that one man can finish the work in eighty hours. Another must take one hundred and twenty. When we remember that progress depends upon a complex of application, memory, judgment, observation, and that almost indefinable something by which one student goes at once to the essential pathology of a structure and the next magnifies some incidental circumstance, we comprehend the necessity for more latitude in the curriculum.

Medical education has not sprung, like Minerva, from the front of Jove, full panoplied for war. It has unfolded slowly. It is yet unfolding.

II.

THE COURSE OF BACTERIOLOGY.

BY ADOLPH GEHRMANN, M D., PROFESSOR OF PATHOLOGIC HISTOLOGY, CHICAGO, ILL.

The subject of bacteriology introduces the student to a field of study so different in principles and requirements from the scientific branches with which he is acquainted that he generally experiences some difficulty in understanding what is required of him. On this account such a course must be carefully graded so as to bring before him gradually, yet quickly, its essential features. More than the principles cannot be included in a course for the medical student, but these must be presented so as to enable him to carry out future individual work with understanding. Here, as in other laboratory branches, it is necessary to gain the student's interest and attention in the subject, that the course shall be successful. This is especially true at its beginning; if too many technicalities are introduced at first, dislike is provoked and future progress is impeded.

The method employed is that of individual instructions adapted to classes. Each student works independently. It thus happens that the exact work of different students may differ widely in degree depending upon ability. Still a high general requirement is demanded.

These requirements are as follows:

Eighty hours laboratory exercise.

Twenty hours lecture exercise.

Presentation of an accurate record of laboratory work done.

Presentation of required drawings.

Attainment of an average of seventy per cent. in each of two examinations.

The details of the laboratory exercise include study of principles of sterilization, culture media and separation of species of bacteria, the complete biology and morphology of some twenty species of bacteria, the separation of species of bacteria from water, milk, urine, and decomposing fluids, and lastly a study of disinfectants and the thermal death-point of bacteria.

As was said, the beginning of the course should be made interesting to the students, and, on this account, should be as objective as possible. During the first four exercises a general

comparative study of moulds, yeast organisms, and bacteria is introduced. This enables the students to understand the relation of the bacteria to vegetable life, and to acquire the necessary skill in manipulation and in the preparation of culture media to easily carry out the actual work that follows.

They are then given a number of fluids containing numerous organisms, and from these, study the separation of species by Koch's, Petrie's, and Esmarch's methods; staining and the morphology of bacteria are introduced at this point. This is followed by the determination of the full biology and name of a number of unknown cultures that are given each student.

They then receive a number of known pathogenic bacteria and determine the morphology, biology, and pathogenesis of each. The course concludes with a determination of the death-point of bacteria by means of heat and several germicides.

That the method of presenting the subject is satisfactory is evidenced by the interest that is taken in the work. There are few absentees from the exercises and the quiz record is good. The results in the laboratory work are shown in the carefully prepared laboratory records of the students and the drawings that are prepared.

In regard to the lecture course, it follows the laboratory exercises closely and is aimed more as a guide for it than for pure didactic purposes. Quizzes are frequent, thus bringing out questions and fixing the details of the work firmly in the minds of the students.

III.

THE METHODS OF TEACHING CHEMISTRY EMPLOYED IN THE COLLEGE OF PHYSICIANS AND SURGEONS OF CHICAGO.

J. A. WESENER, M.D., PROFESSOR OF CHEMISTRY, CHICAGO, ILL.

The subject of chemistry has become of the greatest importance in the study of medicine, for the day has passed when anatomy is the real essence of a medical career. No physician who professes to be a scientific practitioner can do so purely on an anatomic education. Therefore I hope that preceptors hereafter will encourage the study of chemistry by their students with as much energy and zeal as they do that of anatomy. As a rule students are given to understand that chemistry is a most difficult branch

and of minor importance. The difficulty rests entirely with the teacher's ability to impart knowledge. The branch must be taught as arithmetic is. No time can be wasted in oratory. The student must think and reason.

My method is as follows: Drill the first-year student thoroughly in elementary chemistry, beginning with matter and working gradually up until writing salts is reached; at this point the teacher must exercise the utmost care in making this part plain and simple, for I believe that the whole subject of chemistry from now on will turn upon a thorough understanding of the formation of salts. As a rule this is neglected by teachers. Give the students at least three writing exercises in combining all the most important bases with the most important acids. The student who fails to grasp the subject at the end of this time will never grasp it, and his knowledge of chemistry will be nothing more than half memorized facts which he cannot apply. This much of the subject requires two lectures a week. The student is now ready to begin his work on qualitative analysis. Two lectures a week should be given, the lecturer performing before the class the experiments which they repeat in the laboratory. This requires about four hours a week throughout the term. The first exercise on qualitative analysis is to consider the first group metals, lead, silver, and mercury. Note the following tables:

Manipulation for lead.

Sol. A. + HCl = Prec. A. white.

Prec. A. + washing + hot water = Sol. B.

Sol. B. + KI = Prec. B. yellow.

Hence metal is lead.

For silver.

Sol. A. + HCl = Prec. A. white.

Prec. A. + washing + hot water = O.

Prec. A. + ammonia water = Sol. B.

Sol. B. + HNO₃ = Prec. B. white.

Hence metal is silver.

For mercury.

Sol. A. + HCl = Prec. A. white.

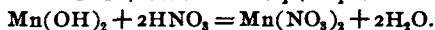
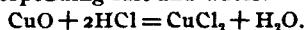
Prec. A. + washing + hot water = O.

Prec. + ammonia water = Prec. B. black.

Hence the metal is mercury.

These manipulations with tables are carried on throughout the entire five groups of metals, at the end of which time the student is given a table which covers them all. Similar tables are given for the analysis of acids. He is now ready to begin the analysis of unknown salts. These are given to him in boxes five at a time. On them he must report. A student should be required to analyze at least twenty-five such boxes. The lecturer, after finishing the subject of qualitative analysis (about eight lectures), should give one lecture a week on non-metallic elements, illustrated by experiments. One lecture a week should be devoted to equation writing. This is made very simple by giving fixed rules that should be as plain as the rules for addition and subtraction. The following are specimen rules:

Rule 1.—All oxids and hydroxids, when they come in contact with acids, form their corresponding salt and water.



Rule 2.—HCl precipitates first group metals as chlorids; the silver chlorid is insoluble in any of the acids, etc.

The students are given at least ten to twenty equations under each rule. These they must balance and hand in, on paper, at the next recitation. At this recitation, part of the hour is devoted to the following quiz: The students are sent to the board and given equations to balance. All of the above work, comprising the entire subject of elementary and qualitative chemistry can be finished in six months' time with eight hours a week.

To some minds chemistry, as outlined above, would seem difficult and in some parts useless; some would raise the objection, equation writing is not practical and is only a waste of time. I do not think so, for these teach a man how to reason and think, and although the facts and rules should be forgotten, the student can easily regain them if necessary by merely glancing over his notes. The laboratory work teaches him technique and observation.

The second-year chemistry will be easy for the student, provided he has done good work in that of the first year. At the beginning of the session two lectures a week should be devoted to organic chemistry, taking up only such compounds as interest physicians; *e. g.*, the hydrocarbon series, alcohols, ethers,

ethereal salts, aldehyde groups, acids, amides, and something about the sugars. At the end of this time a final examination on this branch is given. The remainder of the term is devoted to two weekly lectures on physiologic and pathologic chemistry. The subjects considered are: The urine, stomach contents, blood, milk, cystic fluids, etc. Enough volumetric analysis is given to make him competent to perform all necessary quantitative estimations. During this time six hours a week are spent in the laboratory. Toxicology is first taught. It comprises the analysis of all the common poisons. Unknown solutions and solids; *e. g.*, stomach contents and liver from poisoned animals, are given them on which they must hand in a written report. This is followed with a course of physiologic chemistry, as given in Hallerburton's Essentials. The student is now ready to begin his work upon urine analysis. After this is finished he takes up analysis of the stomach contents, then the blood, next milk, and lastly cystic fluids. Unknown solutions are given him under each of the above headings, on which he is to report, making a diagnosis.

As will be readily seen, the laboratory consumes the entire time of the teacher.

The tables on analysis of urine and stomach contents, which were drawn up by two of my students, will speak for themselves.

CHEMICAL EXAMINATION OF URINE—

1. Test for reaction—acid or alkaline.
2. “ “ specific gravity—color.
3. “ “ total solids—estimation.
4. “ “ “ amount of urea in 24 hours.
5. “ “ “ “ normal sulfates.
6. “ “ chlorids—estimation.
7. “ “ phosphates and urates.
8. “ “ acidity—estimation.
9. “ “ mucin.
10. “ “ albumin—qualitative.
11. “ “ “ —quantitative.
12. “ “ peptone —qualitative.
13. “ “ “ —quantitative.
14. “ “ sugar —qualitative.
15. “ “ “ —quantitative.
16. “ “ acetone —qualitative.

17. Test for indican.
18. " " blood.
19. " " pus.
20. " " bile.
21. " " typhoid fever—Erich's.
22. " " tyrosin and leucin.
23. Examine calculi.
24. " " sediment.

MICROSCOPIC EXAMINATION OF URINE—

- | | | |
|----------------------|---|--|
| Crystalline sediment | } | <ol style="list-style-type: none"> a. Phosphates. b. Oxalates. c. Carbonates. d. Uric acid. e. Urates. f. Leucin and tyrosin. g. Etc., etc. |
| Amorphous sediment | } | <ol style="list-style-type: none"> a. Urates. b. Phosphates. |
| Organized sediment | } | <ol style="list-style-type: none"> a. Pus. b. Blood. c. Epithelium. d. Casts. e. Spermatozoa. f. Bacteria. |

CHEMICAL EXAMINATION OF GASTRIC JUICE—

1. Test for reaction—acid or alkaline.
2. Estimation—total acidity.
3. Test for HCl—qualitative.
4. " " " —quantitative.
5. " " butyric acid—qualitative.
6. " " lactic acid—qualitative.
7. " " " " —quantitative.
8. " " butyric acid— "
9. " " albumin.
10. " " peptone.
11. " " blood.
12. " " pus.
13. " " bile.
14. " " pepsin.
15. " " rennet ferment.

MICROSCOPIC EXAMINATION—

1. For muscle fibers.
2. “ starch granules.
3. “ crystals.
4. “ bacteria, torulæ, sarcinæ,
blood and crystals.

In concluding this paper I have only this to say: “Give me a student with a fair knowledge of arithmetic and I will teach him chemistry.”

FREE MEDICAL EDUCATION.¹

BY ROBERT LEVY, M D., SECRETARY OF GROSS MEDICAL COLLEGE, DENVER, COL.

At this time, when largely through the efforts of this Association, with the co-operation of State Examining Boards, great advances are making in medical education, we not unwisely turn our thoughts to everything and anything which may assist in perfecting the system of medical instruction. I recognize the fact that the weighty subjects of preliminary requirements and uniform curriculum and extended study may be quite enough to handle at one time. There are, however, a few points which impress themselves upon me as being quite as important, inasmuch as they go hand in hand with the subjects already mentioned, forming the cement which makes them binding and of practical worth.

In the *preparation* of catalogues and announcements, it is evident that the majority of schools recognize the importance of thorough preliminary study and high grade curriculum. As a rule the requirements for graduation, *on paper*, are abreast of the most advanced ideas. Elaborate announcement of clinic, laboratory, and other facilities, tempt the student desirous of receiving the best and most for his money. How does it appear in actual practice? Many of the largest and best equipped, as well as the smallest colleges, fail in fulfilling their portion of the contract. The announcement is an agreement to do a certain part. The student fulfills his part by paying his fee; the college fails, in that only a portion of its contract is carried out. So much for the relation between college and student.

More than this, however, is in the readiness with which requirements for admission and graduation are disregarded, to the detriment of not only student and the cause of higher teaching, but to the injury of those colleges who conscientiously live up to their exactions. We can all give instances of students leaving one school to enter another, because the preliminary examination was less than a form. We know of many cases of eclectics and

¹ Read at the Fifth Annual Meeting of the Association of American Medical Colleges, San Francisco, June, 1894.

homeopaths who enter the senior class of certain colleges and receive degrees at the end of their first year in a regular school. Without dilating upon a subject so thoroughly known to you all as to only need mentioning to be condemned, I ask of what value are all our resolutions, all the demands of State Boards, if the honor of the college is so base as to disregard its contract? The matter of ethics might concern us quite as much here as in private work, and in fact a high-grade code of ethics should govern the actions of all medical schools. Honest rivalry is truly laudable; rivalry which resorts to deception is detestable.

Finally, I desire to say a word or two concerning the fee question. The fees of American medical colleges range from free tuition to \$200.00 per year. A glance through the table published in the Report of the Commissioner of Education, 1889-'90, page 1034, will show that as a rule the schools of least reputation charge the least. The better the school the higher the fee. There are exceptions of course to this statement, notably, in the case of the Minnesota and Ann Arbor schools. It is, however, evident that the low tuition fee is, in the majority of instances, established in order to offer a bid to students. I contend that this tends to lower the dignity of the profession; it tends to pauperize; it even places a premium upon the study of medicine.

Competition in medical schools should be only upon the broad platform of excellence and worth and good facilities, not upon price. Of course we are at once brought to face the question of endowments, and it is asked, why should not richly endowed schools give that which they can so readily afford for a nominal fee?¹ I again say it is lowering and depressing, and should not be done any more than should medical attendance, the performance of an operation, or the giving of anything for little or nothing. The extent to which this matter is used in order to draw students can be appreciated when we note that there is at least one school, to my certain knowledge, which advertises free tuition.

We are attempting to establish a uniform curriculum of study. This is a plea for the adoption of a uniform minimum tuition fee which shall at least be universal for particular sections of the

¹ The schools most richly endowed are charging the highest fees, *e. g.*, The College of Physicians and Surgeons, of New York.

country, if not for the entire Union. Under such a plan the best schools would stand, the poor ones fall, and thus would the cry of "too many medical colleges" soon be heard no more.

In conclusion permit me to place before you this summary of my poor effort :

First.—Colleges should live up to their requirements, both for admission and graduation.

Second.—A high-grade code of ethics should exist governing the actions of medical colleges.

Third.—The actions and resolutions of this Association will be of no practical value, unless honesty characterizes its members.

Fourth.—Free or poorly paid medical education should not be allowed to enter into competition.

Fifth.—A uniform minimum fee should be adopted.

LETTER ADDRESSED TO THE ASSOCIATION OF
AMERICAN MEDICAL COLLEGES AT THE
ANNUAL MEETING HELD IN SAN
FRANCISCO, JUNE, 1894.

BY N. S. DAVIS, M.D., LL.D., PRESIDENT OF THE ASSOCIATION.

Gentlemen of this Association :

Until the last few weeks I had expected to meet with you in San Francisco, and render all the aid possible for the accomplishment of the important objects for which the Association was organized. But the recent increase of some physical infirmities added to the natural impairment of strength from more than fifty-seven years of professional labor, has compelled me to forego the pleasure of doing so. Yet I am constrained to send you a cordial greeting, and to express the hope that your meeting will be well attended, harmonious in its proceedings, and successful in accomplishing results of the greatest importance to the profession. I am fully convinced that the time has come when the College Association must more clearly define and adopt a uniform standard of medical college educational requirements, at least equal to that already required by the oldest and most influential medical schools in our country, or its usefulness, if not its existence, will soon be at an end. The extent and nature of the ever-widening field of medical studies most imperatively demand the adoption and enforcement of a standard of preliminary education and mental discipline before commencing the study of medicine, equal to that required for entrance into any one of the leading universities of our country. The facilities for acquiring such a degree of education and mental training are so abundant in all parts of our country, that no valid excuse can be made for longer permitting any person to enter upon the study of the intricate and almost endless problems of medical science and art without it. Equally imperative is the demand that the time to be devoted to the study of medicine must not be less than *four* years, with not less than *eight* months of each year to be spent in direct attendance on medical college instruction, the details of which

should give a fair proportion to laboratory, didactic, and clinical work.

The adoption of such a standard should not be accompanied by an optional alternative one requiring but *three years* of study and eight months of medical college attendance each year. The proposition recommended by a committee of this Association in February last, that "colleges, members of this Association, shall require of all applicants for the degree of M.D., attendance upon three courses of lectures, of not less than eight months each, or four courses of six months each, in separate years," is founded on two fallacies. The first is, that only the time spent by the medical student in direct attendance on the medical school is of any real value to him; and therefore that three annual courses of eight months would be exactly equal to four annual courses of six months each. And some persons and medical journals have carried this idea so far as to suggest and advocate the policy of having the colleges continue their courses of instruction the whole year, that students, counting six months college attendance equivalent to one year of study, might complete their whole period of study and graduate at the end of twenty-four months of continuous college cramming.

That all such efforts to crowd the greatest possible amount of instruction into the shortest possible time, with neither time for reading, reflection, nor recreation, are in violation of all sound principles of education, mental and physical, is too apparent to require comment. The second fallacy consists in assuming that those colleges that require four annual courses of college attendance will make their courses only six months each year, while in fact nearly all the colleges that have actually required four annual courses, or given notice of their intention of doing so, have made their annual courses from seven to nine months each year. And it is the failure of this Association to come fairly up to this fair and reasonable standard of requirement that has prevented some of the more advanced colleges from becoming members thereof. Consequently I cannot too strongly urge you to adopt unequivocally, and without alternatives, the standards I have named for both preliminary requirements, and length of time of study, and of time of annual medical college attendance.

Any lower standard is unjust to the people and discreditable to the profession. I cannot close this letter without sincerely thanking you for the confidence and honor you have bestowed upon me in continuing me as your presiding officer from the organization of the Association to the present time. And I hope my successor in office will not only enjoy that confidence and honor in an equal degree, but also be able to serve you better than I have been able to do.

Yours truly,

N. S. DAVIS.

1894

ASSOCIATION OF AMERICAN MEDICAL COLLEGES.

TRANSACTIONS FIFTH ANNUAL SESSION.

The fifth annual session convened at the Palace Hotel, San Francisco, Cal., June 7, 8, and 9. ⁸⁴The following named colleges were represented as indicated.

Medical Department, University of California, Beverly Cole and W. F. McNutt.

Medical Department, University of Iowa, J. C. Schrader and W. D. Middleton.

Medical Department, University of Wooster, A. R. Baker.

Medical Department, University of Minnesota, Perry H. Millard.

Medical Department, University of Syracuse, H. D. Didama.

Medical Department, University of Denver, Chas. Denison and J. W. Graham.

Starling Medical College, Starling Loving.

Omaha Medical College, E. C. Moore.

Woman's Medical College (Chicago), D. W. Graham.

Medical Department, Arkansas Industrial University, Edwin Bentley.

Ohio Medical College, J. Ransohoff.

Cincinnati College Medicine and Surgery, R. Stockton Reed.

Miami Medical College, W. H. Taylor.

Rush Medical College, E. Fletcher Ingals.

College Physicians and Surgeons (Chicago), Wm. E. Quine.

Western Pennsylvania Medical College, J. D. Thomas.

College Physicians and Surgeons (Keokuk), J. C. Hughes.

Missouri Medical College, A. J. Steele.

Keokuk Medical College, E. F. Jenkins.

Gross Medical College, Robert Levy.

Barnes Medical College, C. H. Hughes.

The following colleges were applicants for membership:

The Creighton Medical College, Omaha.

Iowa College Physicians and Surgeons.

Milwaukee College Physicians and Surgeons.

Medical Department, University of Oregon.

The Hannibal Medical College, Memphis.

The following resolutions were adopted:

Resolved, That Section 5, Article III, of the Constitution be amended to read as follows: "Providing that students who intend to graduate in 1899, or in subsequent classes, four years of medical study and attendance upon four annual courses of lectures of not less than six months' duration each, before receiving the degree of M.D."

Secondly.—*Resolved*, That the following classes of students be recognized as entitled to apply for advanced standing in colleges, members of this body:

- a. Such graduates of recognized universities and colleges as have completed the prescribed courses in chemistry and biology therein.
- b. Graduates and matriculates of colleges of homeopathy.
- c. Graduates and matriculates of colleges of eclectic medicine.
- d. Graduates and matriculates of colleges of dentistry requiring two or more courses of lectures before conferring the degree of D.D.S.
- e. Graduates and matriculates of colleges of pharmacy.
- f. Graduates and matriculates of colleges of veterinary medicine.

It is provided, however, that the above classes of students be required to comply with the provisions of the entrance examination, and to prove their fitness to advanced professional study by an individual examination upon each branch below the class he or she may desire to enter.

It is provided that students availing themselves of these provisions be required to comply with the provisions of the four years' course.

Thirdly.—*Resolved*, That the colleges, members of this Association, require of student matriculates not otherwise exempt an examination as follows: 1. An English composition in the handwriting of the applicant of not less than two hundred words, said composition to include construction, punctuation, and spelling. 2. Arithmetic—fundamental rules, common and decimal fractions, and ratio and proportion. 3. Algebra—through quadratics. 4. Physics—elementary, (Gage). 5. Latin—an amount equal to one year's study as indicated in Harkness' Latin Reader.

The communication from N. S. Davis, LL.D., President of the Association, and papers by Dr. R. Levy, of Gross Medical College, and Dr. Wm. E. Quine, of the College of Physicians and Surgeons, were referred for publication.

The Secretary reported seventy-one colleges as members of the Association. That several colleges were ignoring the provisions of the curriculum governing entrance examinations and time of study. That communications were in his possession from thirty-six colleges, members of the Association, pertaining to the proposed amendment to the Constitution calling for the four years' course, thirty favoring the proposed course and six opposing the same at this time. Several other colleges had indicated a willingness to abide the result of the action to be taken at this present meeting.

Financial statement for year ending June, 1, 1894:

Annual dues received from colleges.....	\$160.00
Paid Bulletin American Academy of Medicine, extra copies.....	\$50.00

Printing	12.00
" circulars.....	6.50
Clerk hire	10.00
Printing	9.00
" amendments.....	12.00
Stenographer	12.00
Postage (estimated).....	8.00
	<hr/>
	119.50

Balance to credit of Association..... \$ 40.50

Upon motion, the Secretary was authorized to revise the roster of membership and to cancel the membership of colleges for the non-payment of dues or that desired to withdraw their membership owing to the adoption of the four years' curriculum.

Officers for 1894-'95: ✓

President, E. Fletcher Ingals, Chicago, Ill. *Rush*

First Vice-President, W. F. McNutt, San Francisco, Cal.

Second Vice-President, C. H. Hughes, St. Louis, Mo. - *Barnes*

Secretary and Treasurer, Perry H. Millard, St. Paul, Minn.

Judicial Council, Dudley S. Reynolds, term expires 1895; Victor C. Vaughan, term expires 1895; Wm. H. Pancoast, term expires 1895; A. R. Baker, term expires 1896; J. J. Chisholm, term expires 1896; Starling Loving, term expires 1897; R. Levy, term expires 1897. *Levy* *Sto*

P.S. Conner
Drs. P. S. Conner, Victor C. Vaughan, N. S. Davis, Jr., Wm. E. Quine, C. B. Stemen, and Perry H. Millard, were appointed a committee to formulate a minimum schedule of professional study, and a syllabus upon all branches taught in medical colleges and adapted to work in the proposed four years' course.

Sto
In the case of the Hospital College of Medicine, Kentucky, vs. the Kentucky School of Medicine the charges were sustained and the membership of the college cancelled by unanimous vote.

The next session will be held in Baltimore, Md.

PERRY H. MILLARD, *Secretary.*

LIST OF COLLEGES.

The following named colleges have been represented by delegates present at the various meetings of the Association:

ALABAMA.

Medical College of Alabama, Mobile.

ARKANSAS.

Medical Department Arkansas Industrial University, Little Rock.

CALIFORNIA.

Medical Department University of California, San Francisco.

COLORADO.

Medical Department University of Colorado, Boulder.

Gross Medical College of Denver.

Medical Department University of Denver.

CONNECTICUT.

Medical Department Yale University, New Haven.

DISTRICT OF COLUMBIA.

Medical Department Columbian University (National Medical College), Washington.

Medical Department University of Georgetown, Washington.

Medical Department Howard University, Washington.

GEORGIA.

Medical Department University of Georgia, Augusta.

ILLINOIS.

Rush Medical College, Chicago.

Chicago Medical College, Chicago.

Woman's Medical College, Chicago.

College of Physicians and Surgeons, Chicago.

INDIANA.

Medical College of Indiana, Indianapolis.

Central College of Physicians and Surgeons, Indianapolis.

Fort Wayne College of Medicine, Fort Wayne.

IOWA.

Medical Department University of Iowa, Iowa City.

Keokuk Medical College, Keokuk.

The College of Physicians and Surgeons, Keokuk.

KANSAS.

Kansas Medical College, Topeka.

Wichita Medical College, Wichita.

KENTUCKY.

Hospital College of Medicine (Central University of Kentucky),
Louisville.

Medical Department University of Louisville, Louisville.

*Kentucky School of Medicine.

LOUISIANA.

†Medical Department Tulane University, New Orleans.

† Resigned membership.

* Expelled.

MARYLAND.

University of Maryland School of Medicine, Baltimore.
 College of Physicians and Surgeons, Baltimore.
 Baltimore Medical College, Baltimore.
 Woman's Medical College, Baltimore.
 Baltimore University School of Medicine, Baltimore.
 Medical Department Johns Hopkins University, Baltimore.

MASSACHUSETTS.

Medical Department Harvard University, Boston.

MICHIGAN.

Medical Department University of Michigan, Ann Arbor.
 Detroit College of Medicine, Detroit.
 Michigan College of Medicine and Surgery, Detroit.

MINNESOTA.

Medical Department University of Minnesota, Minneapolis.
 College of Physicians and Surgeons, Minneapolis.

MISSOURI.

Missouri Medical College, St. Louis.
 Saint Louis Medical College, St. Louis.
 Beaumont Hospital Medical College, St. Louis.
 Marion Simms Medical College, St. Louis.
 St. Louis College Physicians and Surgeons, St. Louis.
 Barnes Medical College, St. Louis.
 Ensworth Medical College, St. Joseph.
 North-Western Medical College, St. Joseph.

NEBRASKA.

Omaha Medical College, Omaha.

NEW YORK.

Albany Medical College, Albany.
 College of Medicine Syracuse University, Syracuse.
 Medical Department Niagara University, Buffalo.

OHIO.

Medical College of Ohio, Cincinnati.
 Cincinnati College of Medicine and Surgery, Cincinnati.
 Miami Medical College, Cincinnati.
 Medical Department Western Reserve, Cleveland.
 Medical Department University of Wooster, Cleveland.
 Starling Medical College, Columbus.

Columbus Medical College, Columbus.
 Medical Department Ohio University, Columbus.
 Toledo Medical College, Toledo.

PENNSYLVANIA.

Medical Department University of Pennsylvania, Philadelphia.
 Medico-Chirurgical College, Philadelphia.
 Woman's Medical College, Philadelphia.
 Western Pennsylvania Medical College, Pittsburg.

TENNESSEE.

Medical Department University of Nashville, Nashville.
 *Nashville Medical College, (Medical Department University
 of Tennessee), Nashville.
 Medical Department Central Tennessee College, Nashville.
 Tennessee Medical College, Knoxville.
 Chattanooga Medical College, Chattanooga.
 Memphis Hospital Medical College, Memphis.

VIRGINIA.

University College of Medicine, Richmond.

Total 71

A revision of the roster of membership has been ordered and
 will appear in a future issue of the BULLETIN.

*Resigned membership.

CONSTITUTION AND BY-LAWS OF THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES.

CONSTITUTION.

ARTICLE I.

This Association shall be known as the ASSOCIATION OF AMERICAN MEDICAL COLLEGES.

ARTICLE II.

SECTION 1. Colleges adopting and observing the rules of this Association, as herein provided, shall be eligible to membership. Each College shall be entitled to one representative at all the meetings of the Association.

SEC. 2. Colleges desiring membership in this Association shall make written application to the Secretary, officially signed, and pay to the Treasurer of this Association the sum of five dollars (\$5.00) annually, in advance.

ARTICLE III.

SEC. 1. Colleges, members of this Association, shall require of all matriculates an examination as follows: 1. An English composition in the handwriting of the applicant of not less than two hundred words, said composition to include construction, punctuation, and spelling. 2. Arithmetic—fundamental rules, common and decimal fractions, and ratio and proportion. 3. Algebra—through quadratics. 4. Physics—elementary—(Gage). 5. Latin—an amount equal to one year's study as indicated in Harkness' Latin Reader.

SEC. 2. Graduates or matriculates of reputable colleges, or high schools of the first grade, or normal schools established by State authority, or those who may have successfully passed the entrance examination provided by the statutes of the State of New York, may be exempted from the requirements enumerated in Section 1.

SEC. 3. Students conditioned in one or more of the branches enumerated as requirements for matriculation, shall have time until the beginning of the second year to make up such deficiencies; provided, however, that students who fail in any of the required branches in this second examination shall not be admitted to a second course.

SEC. 4. Colleges granting final examination on elementary subjects to junior students, shall not issue certificates of such final examination, nor shall any member of this Association confer the degree of Doctor of Medicine upon any person who has not been first examined upon all the branches of the curriculum by the faculty of the college granting the degree.

Candidates for the degree of M.D. in 1899, or thereafter, shall have pursued the study of medicine for a period of four years, and attended at least four courses of lectures of not less than six months duration each. It is provided, however, that the following classes of students may apply for advanced standing:

- a. Graduates of recognized colleges and universities that have completed the prescribed course in chemistry and biology therein.
- b. Graduates and matriculates of colleges of homeopathy.
- c. Graduates and matriculates of colleges of eclectic medicine.
- d. Graduates and matriculates of colleges of dentistry requiring two or more courses of lectures before conferring the degree of D.D.S. or D.M.D.
- e. Graduates and matriculates of colleges of pharmacy.
- f. Graduates and matriculates of colleges of veterinary medicine.

All students shall be required to comply with the provisions of the entrance examination and prove their fitness to advanced professional standing, by an individual examination upon each branch below the class, he or she may desire to enter.

ARTICLE IV.

Membership.

SEC. 1. Membership in this Association shall be divided into active, associate, and honorary. The active membership shall consist of persons duly appointed to represent the college for the fiscal year. Associate membership shall consist of former delegates, representatives of post-graduate medical colleges, and of State Boards of Medical Examiners. Honorary membership, of distinguished teachers in medicine and surgery.

SEC. 2. Voting power shall be confined to active members in actual attendance. Associate and honorary members may participate in all other proceedings upon invitation of the presiding officer.

ARTICLE V.

Officers.

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 successors.

SEC. 2. The President, or one of the Vice-Presidents in his absence, 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. Of the seven members constituting the Judicial Council, the three whose names appear first on the list of those first elected shall serve three years. Of the remaining four, the two first named shall serve two years, and the two last named shall serve for one year. Vacancies by expiration of term to be filled at the annual election of officers. Vacancies by death or resignation may, if business of importance arise, be filled by the surviving members in the interval between the annual meetings of the Association.

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 day next succeeding that designated for the annual assembling of the American Medical Association.

SEC. 2. A majority of the members shall constitute a quorum.

ARTICLE VII.

This Constitution shall not be altered or amended, except by written notice to all the members at least thirty days previous to a stated meeting, and by a vote of two-thirds of all the delegates 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, no more than twenty-four hours shall have elapsed between the time of the proposition to amend and the final vote thereon.

THE SECRETARY'S TABLE.

THE COMING MEETING OF THE ACADEMY.

The preparations for the next meeting of the Academy are nearly completed and it is hoped that the program can be mailed to the FELLOWS in about ten days. In the mean time let every one, contemplating attending the meeting, notify the secretary at once if they have not already done so. If they desire to make the trip with the special excursion that has been arranged, fill out the blank and send it as well; for should it be found impracticable for one to go after making arrangements, the agreement can be cancelled if notice is received by the secretary as late as Saturday, August 25. It may be well to remember that a cordial invitation is extended to all interested in the program to attend the meeting, and that the excursion as arranged may be taken by others than members of the Academy; the trip itself will make a pleasant vacation jaunt for a party of friends apart from the attraction of the meeting. The secretary urges upon all, the great desirability of promptness in notifying him, for his own convenience if for no higher reason. The following papers have been promised and several of them are already in the hands of the secretary; there may possibly be one or two in addition to these. Most of them, it will be observed, discuss various problems relating to the medico-social relations of the "dependent classes:

"The Retrogressives: What Produces Them; Classification." Bayard Holmes, Chicago.

"Importance of the Study of the Subject to the Profession." Charles McIntire, Easton, Pa.

"The Provident Dispensary in England." H. Webster Jones, London, England.

Title to be announced. J. A. Spalding, Portland, Me.

"Assistance and Care for the Blind." Charles A. Oliver, Philadelphia.

"Prevention of Blindness." Benjamin Lee, Philadelphia.

"Present Status of Legislation for the Prevention of Blindness from Infantile Ophthalmia." Lucien Howe, Buffalo.

"Senile Dementia and Testamentary Capacity." J. N. Whitaker, Cincinnati.

"Prevention of Insanity." Gershom H. Hill, Independence, Iowa.

"What Agencies Conspire to Check Development in the Minds of Children?" J. Madison Taylor, Philadelphia.

"The Medical Service of the U. S. Pension Bureau." P. S. Conner, Cincinnati.

"Physical Training for Delinquents." Helen C. Putnam, Providence, R. I.

"Government Commission Instead of State License." J. D. Kelly, Providence, R. I.

"The Relation of Food Adulterations to the Dependent Classes." Henry Leffmann, Philadelphia.

Title to be announced. G. M. Gould, Philadelphia, President's Address.

Title to be announced. F. H. Gerrish, Portland, Me.

"The Evolution of Surgery." G. G. Hopkins, Brooklyn.

"The Qualification of a Physician." J. M. Myer, Danville, Ky.

"The Work of Our Academy." R. L. Sibbet, Carlisle, Pa.

THE COLLEGE ASSOCIATION.

The good work accomplished at the College Association will be far-reaching in its effect. The adoption of the four years' course will substantially settle the question of medical education in the United States. The minimum of requirements in the future will be compliance with the entrance examination, and an attendance upon at least four courses of lectures of not less than six months duration each, in separate years. The resolutions adopted regarding the admission of students to advanced standing will result in bringing order out of chaos. All students wishing advanced standing will be required to prove their fitness by undergoing an individual examination upon each branch below the class he or she may desire to enter. This will throw the entire responsibility upon the school admitting a student to advanced standing. There are now sixteen states with medical

laws that fail to recognize the diploma. These states include one-half the population of the country. The result of the examinations of our alumni before the different Boards of Examiners will substantially decide the standing of our schools of instruction in the future. It will not be to the interest of any college to give a student advanced standing that is poorly equipped. The embarrassment of refusing to recognize the work of another school is entirely done away with. The student is recognized, not the college from which he comes. Recent statistics, based upon two thousand examinations, reveal the fact that those graduates undergoing an examination before different State Boards, who have taken three courses of lectures were very seldom rejected; while only sixty-six per cent. of the students coming from the schools of the second grade received licenses to practice. The colleges are existing and working under an entirely different environment than in former years. In former years schools seemed to thrive that were lax in their requirements. At present the same schools are rapidly losing in prestige and numbers of students. At present, schools increase in numbers and income with the elevation of the standard of requirements. At present, the student seeks the school possessing the best facilities and a curriculum of work that is most thorough. Only the poorest class of students seek the poorer class of medical colleges. The adoption of the four years' course necessitates increased laboratory facilities and systematic work in clinical instruction. It means fewer schools with larger faculties. The expulsion of a prominent college from membership in the College Association was for violating the provisions of the curriculum of study. Its effect will be far-reaching and salutary.

ACKNOWLEDGMENTS.

BOOKS AND PAMPHLETS.

BUREAU OF EDUCATION, Washington D. C.:

REPORT OF THE COMMISSIONER, 1890-'91.

CIRCULARS OF INFORMATION:

HISTORY OF EDUCATION IN CONNECTICUT.

HISTORY OF EDUCATION IN DELAWARE.

HIGHER EDUCATION IN IOWA.

SHORT-HAND INSTRUCTION AND PRACTICE.

THE SPELLING REFORM.

REPORT OF THE COMMITTEE ON SECONDARY SCHOOL STUDIES.

STATISTICS OF PUBLIC LIBRARIES.

CATALOGUE OF "A. L. A." LIBRARY.

UNIVERSITY OF THE STATE OF NEW YORK :

REGENTS BULLETIN No. 23, REPORT OF EXAMINATION DEPARTMENT, 1893.

REGENTS BULLETIN No. 24, REPORT OF EXTENSION DEPARTMENT, 1893.

REGENTS BULLETIN No. 25, REPORT OF SECRETARY.

REPORT OF THE BOARD OF PUBLIC CHARITIES AND COMMITTEE ON LUNACY OF PENNSYLVANIA, 1892.

REPORT OF THE STATE BOARD OF CHARITIES OF NEW YORK, 1892.

REPORT OF THE STATE COMMISSION OF LUNACY OF NEW YORK, 1892.

REPORT OF THE STATE BOARD OF LUNACY AND CHARITY OF MASSACHUSETTS, 1893.

STATE CHARITIES AID ASSOCIATION OF NEW YORK :

CATALOGUE OF LIBRARY.

TWENTY-FIRST ANNUAL REPORT TO THE STATE BOARD OF CHARITIES.

FIRST ANNUAL REPORT TO THE STATE COMMISSION OF LUNACY.

TRANSACTIONS OF THE INDIANA STATE MEDICAL SOCIETY, 1893.

[In addition to the above a number of reprints of papers pertaining to various subjects of medicine and surgery have been received. The Secretary regrets that the demand on the pages of the BULLETIN makes it possible for him to make mention only of those pamphlets treating of subjects germane to the field of the BULLETIN.]

COLLEGE CATALOGUES, ETC.

[The receipt of all catalogues is acknowledged by a postal card and the insertion in the next issue of the BULLETIN which is sent to the institution sending the catalogue. Colleges may receive the BULLETIN regularly by exchanging it with their college journal.]

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