

## ADDRESS OF THE PRESIDENT OF THE AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY.

BY CHARLES H. STOCKING.

Under Canadian skies, at the last Annual Meeting of this Association, and, incidentally, in the year which marked the One Hundredth Anniversary of the birth of its first president, the American Association of Colleges of Pharmacy very graciously bestowed upon the speaker the highest honor at its command.

The privilege of serving as your president has been a most pleasant and worthwhile task and one that has contributed much of value to my fund of information concerning the specific functions of this organization. For your confidence in me, and for your excellent coöperative assistance during the year, I wish to express to you my sincere thanks and deep appreciation. If in any measure of your estimate of my ability I have served the Association acceptably as its executive officer, I am glad.

The year 1932-1933 is historical for pharmaceutical education in America because it is the doorway through which all member colleges of the Association have entered into the realm of the minimum four-year curriculum. For a number of institutions, the four-year requirement for graduation is not an experiment of recent origin. Such a practice, either as the sole method open to matriculants, or as an optional plan, has been in effect in several of the member colleges for a number of years. Other colleges have made this adjustment only with the beginning of the collegiate year just closed. Probably, in certain respects, no less auspicious time could have been selected. College and university budgets have been drastically reduced, making it difficult in many instances to expand the faculties and to purchase needed equipment. Many young men and women have been hampered and even blocked in their attempts to secure an education in pharmacy. In spite of the great increase in the number of graduates from the high schools of the nation, college attendance has declined in many localities, not because of the lack of thirst for knowledge on the part of the youth of the land, but because brains cannot be fed unless the body can be nourished, and the body cannot be nourished on an income reduced to the vanishing point. However, in the face of these handicaps, namely, reduced collegiate budgets and reduced student budgets, the first year of the Association under the minimum four-year curriculum requirement has drawn to a successful close. Some of the member colleges have even reported an increase in attendance. The number that have been operating under discouraging conditions has been exceedingly small. Actually, very few of the colleges have found the beginning of the road really rugged under the "new deal," and it is to be expected



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that the way will be smoothed out for them as time progresses. Therefore, it is worthy of note that such remarkable progress has been made in pharmaceutical education in America in the past decade in building the foundation for the standard college curriculum in pharmacy, and in inaugurating that curriculum into actuality in a year filled with difficulties financial in character for faculties and students alike.

With Dean Leigh, my immediate predecessor in office, I agree that considerable time should elapse before we vote to extend the graduation requirement beyond the four-year limit under which we are now operating. We are all grateful, I am sure, for the advance that has been made and it is evident that we must remain steadfast in the accomplishments of the past years, "holding fast that which is good." No attempt of a retroactive character can be tolerated. On the other hand, in the words of our immediate past-president, "Let us first obtain a firm footing on the prescribed four-year course before we proceed to ascend; which on being interpreted into plain language means that we should first translate our new requirements from paper to almost perfect performance before discussing seriously the question of the inauguration of a two- or three-year pre-pharmacy course; or of recommending that state boards demand that candidates for registration hold at least the Master's degree before being admitted to examination." This, I think all of us will agree, is sound advice. The giraffe *having* acquired its long neck by reaching up for its pabulum has perhaps reached high enough for the present and should proceed to digest and elaborate the pabulum of which it has just come into possession. Let the content of the four-year curriculum and the method of its presentation to students of pharmacy be studied very carefully. Let us even teach English in the *fourth* year instead of in the first year if that would seem to be the thing to do. Let us look to the true cultural training of the future pharmacists without encroaching upon the fundamental fields of pharmacy, chemistry, pharmacognosy, pharmacology and other scientific subjects by so doing. Let us increase our library facilities and teach our students the true worth of books of reference and let us teach them how best to use these books in order to make of them real tools of service. Let us emphasize more than ever before, the necessity of a close acquaintance with the current scientific literature of the time. Let us as teachers instil into the minds of our students a love and respect, not alone for the ancient and honorable profession of pharmacy, but also for a modernized pharmacy, in order that they may revere and learn to practice its Code of Ethics and to stand at all times as proud representatives of the pharmaceutical branch of that large and vastly important group of public servants known popularly as the health professions.

Standards we may have, but standards without a spirit are but dumb creatures indeed. Too long has pharmacy occupied a subservient place in the minds of its devotees. Too long has it carried on its duties to the public in a mechanical, faithless sort of way. Only through the inspiration emanating from the educational group, with the manifold opportunities at its command, can the next generation of pharmacists enter into possession of the proper professional esprit. As members of the various faculties constituting this Association I believe it is our solemn duty to examine ourselves and to so catch the gleam of the ideal toward which we would direct our students that we lose sight for the time being of so many of those things

that have occupied our discussions in recent years, and devote our undivided attention to means and methods of enriching the courses which we are now teaching, vitalizing these courses, not only with new facts where needed, but with facts so presented that they will draw from the students that quickened interest which prompts the thirst for a broader and deeper knowledge of the subject at hand.

It is told of the great Agassiz that he was presented one day with a check for \$1000 and invited to use it to defray the expenses of a trip to Europe. The scholar replied that he was too busy to go to Europe; that the journey was too confined; and because he wished to travel over vaster regions, he proposed to spend the summer in his own back yard. That yard was scarcely more than a few rods square, but Agassiz traveled over it very carefully. In one corner of the yard he found a small stone that held the outline of a mollusk. Nearby was another pebble holding the impression of a broken fern, while other stones were found each of which held its own image and superscription. Three months from the time he started, the scientist reached the other end of his lot. He made a carefully prepared record of his observations and experiences and published them under the title, "The Journeys of a Zoölogist."

The moral of this tale is obvious. Each individual here and each organized unit—school, college, department—has a back yard that will stand examination. Out of the dust of the commonplace can come the knowledge of the centuries and prophesies for the future. Careful examination of internal conditions often reveals faults and imperfections that demand correction. If any faculty member is not living up to the standards that should be set to guide him in his work, he should be the first to discover the fact, and the first to bring into play the necessary corrective measures. If any college of Pharmacy is knowingly deviating from the qualifications established by this Association for membership therein, steps should be taken at once to bring into line every phase of its activities in order that no criticism can obtain either from within or without.

We are convening for this, the thirty-fourth annual meeting of the American Association of Colleges of Pharmacy, in the environs of a great university whose Course in Pharmacy is celebrating this year the Fiftieth Anniversary of its founding. To have survived a half century means little, but to have been known for that period of time as a leading institution of learning and promoter of scientific research is a notable achievement. The faculty here has given to the students who have come to them that vision of the true spirit of learning which is so essential to the art of becoming really educated. As the result of this vital, dynamic force activating the minds of the students in this historic institution, the status of pharmacy in Wisconsin and throughout the nation has been appreciably advanced. From the pharmaceutical research laboratories of this university have come scores of scientific publications to enrich the fund of knowledge concerning pharmacy in its many branches. Graduates from its halls have gone out to inspire countless others to a true appreciation of pharmacy as a life work.

To Dr. Frederick B. Power, who was the first Director and who for a period of nine years served on the pharmacy faculty of this university, and to Dr. Edward Kremers, his successor, who has devoted forty-one years of his life to teaching and research here, great credit is due. The record of achievement that has been established in teaching and in research in the Course in Pharmacy in the University of

Wisconsin is worthy of emulation by those colleges of pharmacy that have been less aggressive along similar lines.

I feel that it would be but a meager tribute on our part if we were to adopt at this convention a resolution extending to Doctor Kremers, the Director of the Course in Pharmacy of the University of Wisconsin, and to his staff, our heartiest congratulations on the remarkable record of the first half-century of the institution, and expressing our faith and confidence in the future developments of pharmaceutical education in Wisconsin as exemplified by the results of the last fifty years.

While the University of Wisconsin is commemorating the Fiftieth Anniversary of the teaching of pharmacy within its halls of learning, the nation is celebrating, in nearby Chicago, A Century of Progress. Among the exhibits that have been prepared to portray the vast changes that have been wrought by the hand of time, visitors to the Exposition are reminded that the last ten decades have brought evolutionary developments, scientific and commercial, to our own time-honored profession. Emphasis is placed upon the United States Pharmacopœia and its companion work, the National Formulary, and the part they play in providing the physician and the pharmacist with formulas and materials for combating disease and preventing its occurrence. Chemistry and its application to the various problems having to do with the health of the public is brought into the limelight. The spirit of science and of education is being immortalized in the minds of all who view the marvelous exhibits. He is daring, indeed, who would attempt to visualize a Century of Progress Exposition one hundred years hence. My only message in that regard is one of hope and admonition that we as progenitors of the pharmacy of the future may leave a heritage that will do credit to the enlightened vision that has been given to us. May this Association be the Arcturus that shall light the pathway of the colleges of pharmacy a century in the future!

That conditions within the Association are constantly passing through an evolutionary process tending toward improved standards is self-evident. A perusal of the catalogs of the member colleges shows an increasing number of the younger faculty members with graduate degrees. The subject of qualifications of faculty members has been discussed on numerous occasions before this body and I feel justified in saying that it is evident that candidates for teaching positions in colleges of pharmacy realize more than ever before the necessity of graduate work as a prerequisite to employment. Furthermore, there is a distinct movement on the part of faculty members to-day to expand their professional training by enrolling in the graduate schools of the various universities in this and other countries for the purpose of specialization along scientific lines. The urge that has been given to this movement in the past is without doubt bearing fruit.

Other evidences of improvement within the colleges are perceivable as one views conditions at the present time in many of the member colleges and compares them with conditions that existed a few years ago. Beginning with the year 1927-1928, the regular triennial visitation trips to member colleges have been made. In most instances I am sure that the institutions visited have been helped in one way or another. No soiled linen has been washed in public, and perhaps not enough laundering has yet been done, but I believe the ultimate results have been worth far more than the cost. One very excellent result has been the amalgamation of the colleges into a closer union through the interchange of ideas and

friendly criticisms between faculty members of the visited institutions and the visitor from another institution. I would urge that the visitation program be continued.

During the year just drawing to a close, the American Council on Pharmaceutical Education has been organized with three members from this Association, three from the AMERICAN PHARMACEUTICAL ASSOCIATION, three from the National Association of Boards of Pharmacy, and one, an advisory member, from the American Council on Education.

I have been informed by Dean DuMez, Secretary of the Council, that the work that has been done up to the present time has been of a preliminary nature in so far as the organization of the Council is concerned. Dr. Robertson, the representative of the American Council on Education, was not appointed to the Council on Pharmaceutical Education until early in the present calendar year. The formation of the group was, therefore, not complete until that time. It then developed that Dr. Robertson felt very strongly that it would be advisable to attempt to secure the coöperation of the colleges outside of the American Association of Colleges of Pharmacy before the work is actually started. Furthermore, it was agreed that the representative of the American Council on Education should make this attempt. These preliminary steps have required time, so much time in fact that the Council has not been able to begin the actual work of outlining its program previous to this meeting. Dr. Robertson expected to be present in Madison to address the Association but found it impossible to do so as he was compelled to go to Europe and will not return until some time in September.

The Fourth Edition of the Pharmaceutical Syllabus which has come from the press since our last meeting is a credit to the Committee which directed the work of preparing it, and especially to Dean J. G. Beard, the Chairman of the Committee. I feel that this Association as a contributing member of the joint Committee should express to Dean Beard its deep appreciation for the untiring effort which he put forth to bring to completion in such a satisfactory manner the work of preparing and publishing the Syllabus, *and I so recommend.*

Two states, namely, Georgia and Wyoming, have enacted laws during the past year raising their standards to college graduation as a prerequisite for registration in pharmacy. Attempts to secure prerequisite legislation in some of the other states were also made, but without success. I regret to report that in Michigan, my own native state, legislative efforts intended to demand in the near future college graduation as a qualification of all candidates for registration met with defeat in the Senate after receiving favorable consideration in the lower branch of the legislature. It is to be hoped that this condition will soon be corrected, not only in Michigan, but in the other states that are now operating on the lower requirement basis. The great states of Massachusetts and Tennessee, as well as several states in which no colleges of pharmacy exist, are operating without the educational requirement. Early in the present year a graduate of the College of Pharmacy of the University of Michigan wrote to Secretary C. C. Glover as follows:

"Will you please fill out the enclosed College Certificate Blank for the Illinois Board of Pharmacy and return same to me? I applied for registration here in Illinois by reciprocity on my Michigan Registered Pharmacist's License, but was refused because I wrote and passed the Michigan Board of Pharmacy Examination prior to graduation from the University."

These two sentences paint a picture which typifies the experiences of countless other candidates who attempt to reciprocate from states operating on the lower requirement basis for registration to those states which demand college graduation as a prerequisite. This young man graduated from the four-year curriculum of the College of Pharmacy of the University of Michigan in June 1927. A year or two previous to graduation he saw fit for one reason or another to write the Board Examination. He was successful. Seven or eight years later he found it necessary to become registered in Illinois, and because the Michigan law did not prohibit him from applying for the privilege of registration previous to graduation, he was rightfully denied the privilege of reciprocity.

Under date of July 24, 1933, the following letter was written to me by a practicing physician in California:

"I wish to call your attention to a great abuse on the pharmacy profession in California. For a number of years any person who had worked three years in some pharmacy and had memorized the answers to certain sets of questions as usually given at the Examination of the Board of Pharmacy of California was allowed to go before this Board, and, if able to answer 75% of the questions, was given a license to function as a druggist!!! Just imagine, allowing such ignorant persons to be given a license and with no training in a school of pharmacy!!! I have met a number of such unprepared 'druggists;' some of whom seem to be worthy of the designation 'moron.'

"The general public knows nothing about the humbug, and the 'druggist' (!!!) fills the prescriptions the best he can!!! I understand that the state of Arizona allows such, non-graduates, to attempt to 'pass' the Arizona Board Examination.

"Is there no way to prevent such untrained men from functioning as druggists, when we know that hundreds of well-trained graduates in pharmacy are walking the streets looking for positions? Here in Santa Rosa we are filled up with such non-graduates. Five minutes' conversation with any of them will convince you in regard to what to do with them. Please help to correct the abuse."

While his information isn't quite up-to-date in so far as the California requirements are concerned, his sentiments are rather forcibly expressed. The very fact that the educational requirements for registration in California and in some of the other states are low, introduces a problem of serious consequence to the colleges of pharmacy located in those states. In order to extend the benefits of reciprocity to all registrants, and to raise the status of the profession of pharmacy to a plane that shall remove it from the unfavorable criticism of the members of the medical profession, and to give every pharmacist in every state the high regard that he should hold for himself and for his fellow pharmacists, state boards of pharmacy and college of pharmacy authorities in all states that are not now requiring graduation as a prerequisite to registration must work together to bring about the necessary legislative changes at the earliest possible date.

I wonder how many of you have read the article in last month's *Outlook*, by Dr. Harold Rypins, Secretary of the New York State Board of Medical Examiners, under the caption, "Toward Professional Guilds." He says in part,

"The United States has more physicians per unit of population than any other country in the world. With a total of 156,440 licensed physicians at the present time, we have one for every 780 persons. England has one doctor per 1490 persons; France, one per 1690; Sweden, one per 2890. The Commission on Medical Education estimates 'that a reasonably complete medical care can be provided in the United States on the basis of one physician to about 1200 persons; that an adequate medical service for the country could probably be provided by about 120,000

active physicians.' According to these figures we have a surplus of approximately 36,000 physicians.

"This town is damnably over-lawyered, what we need is fewer and better lawyers,' declares a *New York Times* editorial. The census of 1930 reports 160,600 lawyers in the United States, an increase in one decade of thirty-one per cent—almost double the rate at which population increased. One law school in a large eastern city, by dint of jamming crowds into a small building, made a fortune on a small investment. There were as many as 500 students in one room, and the course was aimed, not at a high-standard legal training, but straight at the bar examination.

"The over-production of architects is manifest in the report of the Architects' Emergency Committee of New York, in 1931, which states that of the 800 architectural draftsmen who were unemployed, 500 were destitute. There are 3358 architects registered in New York.

"We have approximately 100,000 pharmacists in the United States. On a population basis, they operate six times as many drug stores as are found necessary in Germany, which has well-organized apothecary shops.

"This year, there are 243,830 graduate registered nurses in the country. In some sections it is said that there are ten nurses for every job and a fearful struggle for existence is going on in this hopelessly over-crowded field.

"Concerning teachers, the Biennial Survey of Education reveals that more than 3000 graduates of New York City training schools were qualified for positions in 1930, whereas less than one-third of them could be actually placed on the eligible list. Throughout the nation there are approximately one million teachers. About 166,000 are needed annually to take the places of teachers leaving the profession. Yet, as long ago as 1928, there were 274,348 students in training. What is happening to the enormous surplus of trained teachers? Look behind the counters in the larger metropolitan department stores. It would be interesting to know what percentage of sales-girls in these stores are teachers awaiting appointment, and how many years they have been waiting.

"Of dentists, the nation has 67,000. In certain urban districts, there is one dentist to every 500 people.

"The effects of over-production in the professions, besides unemployment and excessive economic competition, are manifold. 'An over-supply of any branch of learning,' declares Dean Rogers of the University of Colorado College of Law, 'usually results in the development of price-cutting, irregular trade practices and a fringe of casualties, losses and waste at the unsuccessful margin. There will be the temptation to low ethical standards produced by desperation. The public in the end will suffer, as the individual does, from the existence of misfits, failures, wasted energies and frustrated efforts.' In the profession of medicine, over-crowding has increased fee-splitting, unnecessary services, padding of bills, illegal operations and the employment of 'runners.' The compensation rackets have developed to such an extent that physicians are reported to be giving half, and sometimes two-thirds, of their fees to get this business. Corrupt conditions such as these will not encourage students of superior ability and character to enter the profession. 'In law,' Philip J. Wickser, Secretary of the New York Board of Law Examiners, declares, 'there is a dim consciousness that the bar is surely, and not so slowly, being de-professionalized. For this there are many reasons, each of which is aggravated by the undeniable factor of volume.'

"These enormous surpluses make it obvious that admission to the profession must be restricted.

"Criticism of the 'aristocracy' or 'guild idea' in the profession is inevitable. Loudest will be the cry that a trust, or monopoly, may be created. As a matter of fact, the practice of medicine is already a monopoly in the sense that the source of supply of physicians is restricted to those institutions which are recognized by the state for the purposes of medical licensure. The intent of this monopoly is not to create benefits for the medical profession, but to protect the public. Moreover, the special position in society of the doctor, the lawyer, the nurse, the teacher, in itself makes the 'trust' inevitable.

"There is still the democratic fallacy to be disposed of. The irate father of an unsuccessful applicant to a medical school recently voiced the feeling of many in similar circumstances. 'Every American boy who wants to enter a profession,' he said, 'is entitled to have a try at it.' Should a monopoly, then, bar a large number of young men from their inalienable right to become physi-

cians, engineers or dentists? Would not many competent men be kept out of the professions? To this one may say that, taken by and large, the real danger is of loosing incompetent men upon the public by unrestricted training and licensure.

"It becomes clear that because of lack of planning and foresight we have trained professional men and women without any consideration of possible consumer requirements. Even where there has been some restriction through insistence upon high educational standards, no one appears seriously to have contemplated refusing permission to open new professional schools on the grounds that there was no need for them.

"Professions are just beginning to realize that it would be very desirable to train and license only as many architects, nurses, lawyers, teachers, physicians, pharmacists or engineers as the country can employ. As this idea gains wider acceptance it seems inevitable that an aristocracy of professional classes will arise. The selection of a limited number of candidates for each profession, will, for the most part, rest with the professional schools themselves, under the direction of the state licensing authorities. Both the public and the medical profession have already profited by partial restrictions in this field. Dentistry and law are passing through the stages of limitation by increased educational standards which medicine has inaugurated during the past twenty years. A much shorter period will elapse before engineering, architecture, nursing, teaching and the other professions take similar steps toward professional guilds.

"The effect will be revolutionary."

Are we in pharmacy moving toward the professional guild idea? Is this our aim and objective? If so, are we moving rapidly enough? Are we interested in mass production, or in quality within restricted numerical limits? The problem of supplying the demand for graduates without overstocking the market is not one for the colleges alone to solve, but is far more complicated. The coöperation of Boards of Pharmacy and trained pharmacists in every commonwealth must be solicited in order that a unity of effort may be put forth to bring into being the needed changes, legal and otherwise.

Boards of trustees and other bodies who have charge of the financial affairs of the various colleges of pharmacy must be appealed to in no uncertain terms in order that they may realize to the fullest extent the necessity of providing funds adequate to present-day needs. Further financial retrenchment cannot continue without hampering seriously the progress that is being made.

In the thirty-three years of its existence, this Association has had a record of achievement of which it can well be proud. In conjunction with its coöperating organization, the National Association of Boards of Pharmacy, by means of the joint sessions and the District Meetings, many important developments have been made for the benefit of the public and the profession itself. I predict that its future will reveal a record none the less glowing in its accomplishments.

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"Tincture of Stramonium Seed Free from 'Plant Dirt,'" by Ralph Clark and Edward Kremers.<sup>1</sup>—Though richer in alkaloidal content than the leaf, stramonium seed has been replaced almost entirely by the leaf in the making of galenicals. This has been due, in large part, to the high percentage of fatty oil in the seed. True, the seed can be deprived of its fatty oil content before percolation with an alcoholic menstruum, but, even if this precaution be taken, the finished preparation will be highly colored because of the dark pigment in the seed coat. No doubt, there are other disturbing factors. Much, if not all of this "plant dirt," as Lloyd calls it, can be eliminated by mixing the ground seed with freshly slaked lime before extracting it with alcohol in the percolator. The pigment is altered so as to be rendered insoluble. What other changes take place has not yet been ascertained. For this first experiment a defatted seed has been employed.

<sup>1</sup> Abstract of a paper—Scientific Section, A. PH. A.