

ica. After the war, on account of the high custom house dues imposed on goods imported from Germany, more supplies were imported from France than from Germany. Now that Germany has joined the League of Nations, the differential tariff has been removed and the custom house dues are the same for all foreign countries, therefore supplies are beginning to come from Germany and soon this country will gain its previous position.

*Exports.*—The country exports practically nothing of pharmaceutical interest; Aleppo nut galls and licorice root are exports of considerable importance. The licorice root is mostly exported to the United States for use in the manufacture of chewing tobacco.

*Pharmaceutical Association.*—No pharmaceutical association proper exists in this country. A Medico-Pharmaceutical Association was organized a few years before the war, discontinued during the war, and started again a few years ago; it includes members of both the medical and pharmaceutical professions. Meetings are held once a month where medical (mostly) and pharmaceutical matters are discussed. A few years ago drug-store owners formed an association called "The Pharmacists Syndicate." The object of this association is the protection of the commercial interests of its members, who must be owners of drug stores.

*Pharmaceutical Periodical.*—No pharmaceutical magazine is published in the country; a medical magazine in the Arabic language, "Medical and Scientific Review," is published in Beirut. It treats mostly of medical subjects and is the official organ of the Medico-Pharmaceutical Association of Beirut.

*Analytical Work.*—In the largest cities of Syria, until recently, most of the analytical work for the medical profession was done by pharmacists who kept laboratories for the purpose in their drug stores; the analytical work included qualitative and quantitative examination of urine, gastric contents, sputa, etc. At present, however, special analytical laboratories are conducted by medical men, making both chemical and bacteriological examinations; they are not practicing medicine, but give all of their time to analytical work.

---

## BETTER MEDICINES.

THE FIRST OF A SERIES OF RADIO TALKS ON "THE PHARMACISTS' RELATION TO THE PUBLIC."\*

BY FREDERICK J. WULLING.

Pharmacists have been made by legislative enactment a social group to which has been given the exclusive privilege of preparing, compounding and dispensing drugs and medicines. Under the Minnesota statutes no persons other than duly registered pharmacists may dispense medicines. Physicians

---

\* At the request of the University of Minnesota, Dean Wulling is broadcasting a series of six pharmaceutical talks. The above was broadcast November 15th. The other talks are scheduled for November 29th, December 6th, 13th and 20th, and January 3rd. The subjects of the six talks are: "Better Medicines," "What the Pharmacists Are Doing for the Public," "The Present Upward Trend of Professional Pharmacy," "What Should Be Known About the U. S. Pharmacopœia," "Patent and Proprietary Medicines vs. Physicians' Prescriptions and Household Remedies," "First Aids by the Pharmacist."

are not prevented by law from dispensing their own prescriptions or administering medicines to their own patients at their offices or at the bedside, but the law regulating the practice of pharmacy does not expect them to do so and most physicians respect the intent of that law. In restricting the practice of pharmacy to a special class and designating the conditions and regulations under which the practice may be carried on and by fixing the minimum educational requirements of the practitioners, the State has only one purpose in mind, namely: the furnishing of a highly efficient and safe pharmaceutical service for those citizens who may require it. In other words the State gives pharmacists special privileges for which it rightly expects a special and competent form of service for its citizens in return. To insure the expected highly qualified service the State has established a Board of Pharmacy whose duty and responsibility is the regulation of the practice and the enforcement of the provisions of the pharmacy laws. The Minnesota law provides that all who desire to practice pharmacy must be duly registered by the State Board of Pharmacy. There are two classes of registered pharmacists, the assistant and the fully registered. To become the latter the applicant must present evidence to the Board of having completed at least two full years of nine months each of the courses of study in colleges of pharmacy carrying membership in the American Association of Colleges of Pharmacy—(an association whose membership is restricted to colleges of the first grade). In addition there is required a minimum of two calendar years of practical experience in drug stores or pharmacies where physicians' prescriptions are regularly compounded and dispensed. Instead of two years of successful college work and two years of practical experience, the applicant may present three or four years of college work and one year of practical experience. Nearly all applicants for registration in this State have now had a minimum of three years of college work and an increasing number four years. If the credentials of the applicants are found by the Board to be satisfactory, he is admitted to examination. The examinations are conducted in the College of Pharmacy of the University of Minnesota by the Board four times a year, in January, April, July and October and extend over the greater part of a week. The examinations are comprehensive and cover general, qualitative and organic chemistry, botany, metrology, pharmacopœial and National Formulary preparations, inorganic pharmacy, organic pharmacy, materia medica, pharmacognosy, bacteriology, physiology, crystallography and mineralogy, inorganic and organic pharmaceutical chemistry, dispensing and incompatibility, U. S. P. assay, some food and drug analysis, volumetric and gravimetric drug analysis, laws and ethics, therapeutics, medical properties and posology. The examination is both theoretical and practical. The assistant's examination is not so comprehensive. The "registered assistants" may practice only as assistants and under the immediate supervision of a fully "registered pharmacist." There is no permanent class of assistants, and most applicants take the full examinations, which alone admit for full practice and proprietorship. Those who pass the rigid State examination receive a license to practice. This license must be renewed annually by the payment of an annual fee of three dollars. The license must be prominently displayed in the holder's place of business. If the license is not renewed, registration ceases at the end of the year for which it is issued. The license may be withdrawn by the Board at any time for cause. The require-

ments for registration are continually being increased. Those which I have stated are the present ones.

It will thus be seen that it is not an easy matter to become a registered pharmacist. The practitioner is a fairly well-trained and educated person and by virtue of his training and the quality of service he renders is a distinct social asset of the State. It should be stated with emphasis that all the restrictions surrounding the practice of pharmacy have been initiated by the pharmacists themselves especially through their State organization, the Minnesota State Pharmaceutical Association, which was organized in 1884 principally for two purposes, the enactment of a State law to regulate pharmacy, and the establishment of a College of Pharmacy as a department of the University. The law was enacted in the late '80's and the College, also by legislative enactment, was created in 1891. Since its organization, the Association has increased its activities along constructional lines, always in the interests of the public and never in its own interests.

The pharmacists are therefore an altruistic group, never thinking of themselves primarily. It may surprise you to know that the pharmacists have done every consistent thing to lessen the use of drugs and medicines. They know the unwise and useless and even deleterious use of drugs a larger part of the public makes and what a useless financial drain the excessive and unnecessary use of medicines entails. They have steadfastly endeavored to diminish the vast and largely useless materia medica and have publicly and privately helped to educate the public against the indiscriminate and especially against the ignorant use of medicines. They have actively called attention to and combated the adulteration of drugs and the use of inferior drugs and have here in Minnesota as well as in all parts of the country, established high standards of pharmaceutical education and practice and have effectively coöperated with and helped physicians toward a more rational and scientific medication. Pharmacists rightly regard pharmacy as a major medical specialty and have accordingly established codes of ethics for their guidance and conduct. Especially have they been active in establishing high standards of quality and purity of drugs and medicines as witnessed by the U. S. Pharmacopœia, that book of standards first compiled in 1820 and revised every ten years since and which standard is recognized the world over as the very foremost and most comprehensive pharmacopœia, and which I will tell about in more detail in a later talk. That standard has been translated into Spanish and, recently, into Chinese and is now the pharmaceutical standard in some of the South American countries and in China. The tenth revision, just completed, was conducted by fifty American experts, mostly pharmacists, and employed the personal work of the fifty chiefs and many assistants for a period of over five years. The period of the present revision began in May 1920 and was completed on January first, 1926. A secondary work of standards is the National Formulary, almost of the size of the Pharmacopœia. This work includes most of the deletions from the Pharmacopœia but for which there is still a limited demand on the part of physicians.

The high standards of pharmaceutical education and practice thus established insure for the public a very high degree of efficiency in pharmaceutical service everywhere. By pharmaceutical service I mean of course that rendered by the professional and ethical pharmacist. There are black sheep in the profession

as there are in every profession. The blame for their existence must be borne largely by that part of the public which supports and encourages them. The pharmacists as a whole are doing what they can to purge their ranks of the unworthy. At a recent meeting of the State association a new and comprehensive code of ethics was adopted for the purpose largely of eliminating from membership those comparatively few members who fail to live up to the best practice.

Many pharmacists engage in commercial side-lines, partly for economic reasons and because of public demand. In most cases this commercial activity does not impair the purely pharmaceutical service. Where it does the pharmacist is not keeping faith with the State which licensed him to give only a professional service. This dual activity, professional and commercial, of the majority of pharmacists, is an advantage, in one respect at least, in that it makes a larger number of drug stores possible, bringing pharmaceutical service into closer proximity to a greater number of homes.

With the development of more exact diagnosis on part of the physician and of pharmaceutical science on part of the pharmacist, more exact and effective medication has become possible with the consequent benefit to the sick, but pharmacists and physicians have long ago recognized the obvious fact that sickness is an effect and that if the cause could be prevented there would be no need for the cure. Modern medical thought and endeavor are directed in an ever increasing measure to the prevention of disease. Much has already been accomplished along these lines but much more needs to be done. Exact medication and prevention have reduced the total of illness, but for the utmost accomplishment everybody must cooperate and especially learn what to do and what not to do in our everyday life and thought. Right living, including proper diet, enough rest, sufficient physical exercise of the right sort, proper ventilation, cleanliness, proper clothing, good personal habits and conduct, a sane and rational philosophy of life, including cheerfulness, highmindedness and morality, and good will to others, and especially right thinking, will do more to keep the body, and the mind as well, healthy and vigorous, than medicines possibly can.

Physicians are prescribing less medicine than ever. The old shot-gun prescription was never scientific. It had to go and is now gone forever, but as yet only comparatively few specifics have taken its place. They are increasing in numbers, however.

Formerly medicines were the only means of curing disease. Now, although still paramount, they are only one of a number of means of cure which are effective. I am not speaking against all medicines but against the thousands of unreliable and inferior ones, which if the public is willing, could be eliminated from a bewildering and mostly useless and in a measure fraudulent materia medica. Some so-called patent medicines are good, but the great bulk of them are from a scientific pharmaceutical and also from a medical viewpoint, without legitimate excuse for existence. Millions of dollars are wasted annually in this way by trusting, unsuspecting and ignorant persons and by those who from a mistaken sense of economy refuse to secure the specific medical and pharmaceutical service fitting their respective cases and which service the State has especially provided for all of its citizens. I cannot too strongly urge all those who depend upon medicines for

their cure, to employ good physicians and pharmacists, who together alone can give the best service yet evolved by medical science and research.

In conclusion let me say that I suppose some of the things I have said have surprised or even possibly offended some of my hearers. I have spoken in sincerity and out of an experience extending over many years and out of knowledge that entitles me to say all I did say.

[EDITOR'S NOTE: The paragraph in which request was made of the radio audience to communicate with the speaker relative to points of the talk is omitted.]

---

## INDIVIDUALISM VERSUS EDUCATION.\*

BY CLAIR ALBERT DYE.

Whether it is an inherited characteristic or the result of environment, the fact remains that whenever a group of pharmacists and pharmaceutical educators get together, sooner or later the ever-present question of the training of the future pharmacists is discussed. Probably this is as it should be, for the question has a most important bearing on the type and character of those who are to direct the policies and ideals of pharmacy in the future. For the most part we feel quite sure both groups have but one end in view, that of not only protecting but also that of advancing the good name and rich heritage that the leaders in pharmacy, in the past, have bequeathed us.

What these ideals and policies shall be is hardly a question to be decided at the moment or as the result of an impulse. Rather should they follow as the result of these serious discussions from which must eventually come, by this refining process, something worth while; something that we may pass to the future generations with the feeling that they will stand the test of time.

If one is interested in studying the historical development of the educational requirements and training of the pharmacist he will find that the subject has long been a bone of contention in the ranks of pharmacy. It is scarcely necessary to recount the widely divergent viewpoints of those concerned with these discussions since they are a matter of record and are to be found in all our journals, reports and proceedings of the meetings. At times these discussions were acrimonious and often threatened to disrupt the associations, but thanks to the wisdom of the men in charge we came through the storms in safety. As a result of these we have gradually developed our present standards, policies and ideals; but even so are they sufficient and in keeping with the educational advances of the other professions?

As might be expected this development has been slow since the process has been largely evolutionary. In consequence some of us have been impatient with the progress we were making. Many of us naturally tried to hasten the process with the result that we were considered revolutionary in our efforts. Be this as it may, life after all is an evolutionary process, wherein Nature as well as all our surrounding contacts, tend to smooth and tone down all our selfish and unreasonable habits and desires. It is well, perhaps, to emphasize the phrase "tend to," for it seems that one of the bad habits which mankind has not yet outgrown is to treat

---

\* Section on Education and Legislation, A. Ph. A., St. Louis meeting, 1927.