

ABSTRACT OF DISCUSSION.

Motion was made by Mr. Gray, conforming to the recommendations of the authors of the paper, to bring the formulas and purposes of the two elixirs discussed in the paper to the attention of the Committee on National Formulary. The motion was duly seconded.

Mr. Thos. D. Elhenie called attention to an elixir formula containing 6 $\frac{1}{4}$ % alcohol, which he used in preparations dispensed for children.

Dr. Arno Viehoever inquired relative to the solvent action of a weak alcoholic elixir. Alcohol, he stated, was not largely used by the Chinese in medicines, but the volume of doses was larger in consequence, so as to bring sufficient active constituents into the preparations.

Chairman Griffith spoke along same lines.

Dr. Bernard Fantus, co-author, stated that the stronger alcoholic elixir is to be used in preparations requiring such solvent. He gave a history of the work presented by the paper.¹ The suggestion of iso-alcoholic elixirs was not accepted with very general approval—placing the responsibility of selecting the alcohol strength for the elixir on the pharmacist. The two elixir formulas were therefore offered, leaving the selection to the prescriber. The author stated that physicians were interested and the inclusion of a non-alcoholic elixir would be a decided step forward.

E. R. Selzer spoke in favor of an elixir of low alcoholic percentage for saline solutions.

B. E. Höckert contended that the elixirs of the National Formulary could be improved; there was no suitable basic elixir suitable for buchu and hyoscyamus containing salines. He had found Compound Tincture of Cardamom useful in preparations containing buchu, belladonna, digitalis, aconite, etc. He also favored saccharin in some elixirs.

R. W. Terry asked relative to the keeping qualities of preparations containing an aqueous elixir or one weak in alcohol. He did not question the keeping qualities of the elixir but of the elixir in which some substance had been dissolved.

He was answered by the authors in saying that prescriptions were rarely kept for a long time; consideration would have to be given to that, the same as with other dispensing problems.

The question was called for and the motion to refer the paper to the Committee on National Formulary carried.

UNIVERSITY OF ILLINOIS,
SCHOOL OF PHARMACY.

OUR ATTITUDE TOWARD EDUCATION.*

BY EDWARD SPEASE.

What is our attitude toward education? This is the question that I am asking myself these days and in this short paper it is the idea to set forth this attitude as nearly as it can be seen from the viewpoint of the writer.

First of all it will be necessary to ascertain just what we mean by education and if we make any distinction between the words "education" and "training." It is true that the modern dictionaries do not set a hard and fast dividing line between the two words but a quotation from Herbert Spencer seems to me to bring out what is meant by education. He says "To prepare us for complete living is the function which education has to discharge."

Webster says that "training is a department of education in which the chief element is exercise or practice for the purpose of imparting facility in any physical or mental operation." Thus it would seem that we might have two types of pharmacists if we will, an educated one and a trained one. It is true that the educated pharmacist might not be one expertly trained in certain operations, and

¹ See also "Elixirs of the U. S. P. and N. F.," pp. 277-283, April Jour. A. Ph. A., 1921. Samples of the elixirs under discussion were exhibited by the authors.

* Read before Section on Education and Legislation, A. Ph. A., Cleveland meeting, 1922.

it is likewise true that we might have a trained pharmacist who does not possess a great deal of education.

We all have different viewpoints as to what education a pharmacist should have and all these different viewpoints are born of certain local conditions which surround the individual who is expressing his opinion. It is also true that some of us do not view the opinions of others of us with much degree of tolerance nor do we look beyond to see what begets the opinions that do not harmonize with our own.

My own attitude toward this question to-day is not to find fault with the individual who does not have the education he should have, but I take violent opposition to the person who feels his education is completed or that he has enough to satisfy the demands of his calling, in his opinion, and does not care for more. He likewise does not wish those who follow him to have more than he has.

Our experience in this state in securing educational standards for pharmacy is perhaps not far removed from what has been found in other states and what is still to be faced by some states. It is the aim of this paper to bring out some of these experiences, if possible, for the benefit of those who still have the journey of prerequisite laws ahead of them.

First of all there is the opinion of the pharmacist who has lived a life of usefulness without having progressed in schooling beyond the grammar grades or perhaps not that far. His opinion must be formed from his own experiences unless he has had more than the usual amount of natural ability and has made the attempt to give himself as much education as is possible by means of good reading and studying, without the aid of systematic instruction such as the schools try to set forth.

His opinion is apt to be "that we need only a certain amount of training and the memorizing of certain pharmaceutical tricks to make us competent to be set free as pharmacists." He is likewise inclined to be the person who has little optimism and who would not recommend to his son or to his neighbor's son that he take up pharmacy. This same type of person is also apt to bring out the old threadbare statement about the poor boy who cannot afford to get the education he should have for this calling. On the other hand, one of the most pleasing features about our fight for higher education for pharmacists in Ohio is the fact that some of our staunchest supporters in the cause have been men to whom the advantages of a broad education have been denied. To my mind this fact alone shows their progressiveness. Another fact worth recording is that those men who opposed our higher standards in the beginning now for the most part see why they were necessary and do not hesitate to say so. This result will be seen in other states as well. It is inevitable. The retail druggist is perfectly willing to be led by the schools, provided the schools show him a valid reason, and provided the school man gives him an opportunity to express his opinions and is willing to receive these opinions and give them their proper weight. The schools, however, must be leaders in this movement, and the question now is, have the schools been farsighted and have they been wise leaders?

Since becoming a member of the A. Ph. A. and a listener in the meetings of the faculties I have always been faced with the proposition that high standards were a consummation devoutly to be wished, but that they must not be hurried. That

old statement of "not yet, do not rush the prerequisite law and high school graduation requirement" is what I have heard for many years, and I have tried to see the reason why and the force of argument behind these statements. It has even been said that if standards were raised to high school graduation there would be no students of pharmacy. My own experience as a teacher would lead me to make the statement that, if high school graduation or even one year of college or more be the preliminary standard and four years of college for pharmacists be required by all states to-morrow, the only falling off in students would be those who should not be admitted to the ranks of pharmacy. It is true that there are and always will be certain special cases of young men who cannot meet requirements who would make good pharmacists, but, still, who can answer how much better they would be if they could secure the preliminary education required and possess it in addition to their natural ability.

It is further true, perhaps, that we have schools that could not exist if high standards prevail because such schools cater to the unfit and untrained and prey upon their ignorance. Such schools are a menace to society and to public health because they make the graduate feel that he himself is fit and the master of his profession.

The fact of course must be recognized that standards can be lifted beyond the reach of the average citizen and beyond all reason, and it is likewise true that it is a question just how far standards may be rightfully carried by statute. The way to decide how far to go is easy for pharmacy because the trail has been blazed ahead of us by medicine and dentistry and in some localities by the profession of law and about all we have to do is to follow. It is also an achievement to be an intelligent follower.

If a school or a school man is to take part in this discussion he will first have to purge himself of all financial connections and approach this subject in a broad way. If he is dependent upon the tuition received from students, then his attitude toward education will be that the standards which will bring him the greatest number of students, and hence the largest income, are the desirable standards to enforce and he will steadfastly set himself against raising standards above this point. If, on the other hand, he can face the thing entirely in an attitude of what is best for the future of pharmacy and the public welfare, then he has placed himself in a position where he can discuss the problem intelligently and arrive at opinions based upon sound judgment.

My own little experience and observation lead me to think that education in America is not self-supporting financially; that if reasonable tuition be charged it will not cover the cost of instruction. Especially is this true in the case of professional education. In our own school the tuition per year is \$200 for each student, and the cost of the instruction is \$400 for each student, and still we are not satisfied with what we are giving the students. We cannot approach this subject from the retail store angle, where overhead must be reduced to secure a profit, for our profit must be in terms of service rendered to the community by turning out educated men and women who are equipped to give proper service to the public.

It is not amiss to advance the thought that high-priced equipment and fine buildings and the time of professors who have spent years securing their education should not be utilized in the attempt to make pharmacists out of poor material.

Would any of you be willing to entrust the use of high-grade tools to a person who is not capable of recognizing their value, or would you let any boy drive your high-priced automobile unless you had ascertained his fitness to do so? Would you expect an aeroplane manufacturer to turn out a high-grade plane from knotty and cracked lumber? Is it not our desire to turn out competent pharmacists and, if so, then should we not select our material in the beginning?

We in Ohio believe it is kindness to a prospective student, as well as justice to him and to the public, to direct him into the channel into which he is best fitted to go. We do not encourage the unfit to come into the school of pharmacy, but we do encourage the fit who have technical shortages to make them up in the right way and prepare themselves to enter pharmacy upon the same basis as all others. It is possible to rob the world of an efficient garbage wagon driver and make a very poor pharmacist of him. The calling of pharmacy never has advanced, nor ever can advance beyond the individuals who are in it. If a boy starts out to enter a profession and, after knocking at the doors of medicine and dentistry, is refused and pharmacy accepts him, then do not expect pharmacy to be on an equal plane nor be so recognized with these sister professions. A stream cannot rise higher than its source, and the sooner we recognize this fact and begin at the bottom the sooner we can succeed in receiving the recognition we think we ought to have.

It is nauseating to hear the things said about the medical profession by some of our pharmacists, when the one who says them is not competent to criticize and when things as severe may be said about us as well. Let us cease to cast reflections upon a sister profession because of special cases within it, and let us try to eliminate these special cases within our own ranks, and we will find our sister professions turning to us in a joint movement for the elimination of such cases in the ranks of all.

It was the hope of this convention committee that the program could be prepared so that the faculties could attend the board meetings and *vice versa*, but we were unable to get the coöperation we desired in this movement; and be it said to the credit of the boards that they, in a majority of cases, expressed themselves as heartily in favor of this plan. One thought was advanced that the boards would no longer meet at the time the faculties did if they were not given two days for meetings regardless of anyone else. This thought could not have been born from a desire to be of service to pharmacy. What is the purpose of the meetings of the boards and the faculties, is it solely for themselves as individuals or for pharmacy? A school or a board that exists for the benefit of the individual in it should be stamped out of existence. If it is total time that is needed, then let us start the meetings earlier or extend them, but let us have them arranged so that we can have free and full discussion of our problems with an ideal of better education for the pharmacist and hence better service to the public. I hope that the next convention committee will succeed in this arrangement.

If this little paper can aid some in suggesting to us to adopt the right attitude toward education, it will have done much. It is not intended to hurt or to harm, but it is intended to bring forcibly home to all of us that if pharmacy is to be a profession or even a successful business of a high order we must select the people who enter it and we must give them education that measures up to what people receive in other professions.