any mixture of them, whereas only *S. Kombé* contains strophanthin, which is designated as obtained from that species. *S. hispidus* contains only pseudo-strophanthin.

Turning to digitalis itself, we find a general complaint of its inefficiency and variability in recent years; so much that its use has perceptibly declined, yet I am able to say that there has been no change in the general character of the drug in use from that of the previous decade. It seems clear that this result is due to reliance having been placed upon an untrustworthy test.

McDonald and Schlapp (Quarterly Journal Pharmacy and Pharmacology, for July to September) say that the effect of the digitalis on the brain so modifies its heart action that the cat (he prefers the Hatcher Method) should be subjected to a complicated series of surgical operations to eliminate this influence before the test is applied. But the patient is not placed under this condition when taking the medicine.

Messrs. Haag and Hawkins, in the December number of THIS JOURNAL, refers to the difficulty in the chemical assay of aconite tincture, and therefore approves of the substitution of the biological assay with guinea pigs. They admit, however, that a large number of animals is required for the test. Now comes Dyer, in the December number of the Quarterly Journal of Pharmacy and Pharmacology, and reports a very extended investigation with rats and mice, involving the use of more than 1000 animals, comparing the biological results with those of chemical assay of the ethersoluble alkaloid. He declares that the results are so closely similar as to be called "uncanny." It seems, then, that in this case both methods are accurate, if the operator is qualified, yet our Pharmacopœia has dropped the chemical assay, the appropriate method for the pharmacy laboratory, and has substituted the biological test, which no pharmacist will be in a position to use, even if competent to do so. What we are trying to do is to determine life-saving values by the use of an inconstant and variable unit of measure, and then guessing at the extent of our error. The effect is to prevent the pharmacist from making and testing his own tincture of aconite.

THE GROWING IMPORTANCE OF PROFESSIONAL PHARMACY.*

BY H. C. CHRISTENSEN, PRESIDENT, A. PH. A.

Retail pharmacy has awakened to the fact that the professional aspect is its best asset. During June and July of last year I attended pharmaceutical conventions in ten states and was pleased to find that the keynote of the presidents' addresses, as well as numbers of speeches and papers, placed emphasis on the professional side of pharmacy.

This reversion to type is not strange. What is strange is our temporary wandering away from the path we had trod for ages, and our emulation of certain cigar, sandwich and cut-rate emporiums that we thought had found the quick road to success. We envied them the volume of business they were doing without realizing the loss of prestige incurred. Absentee ownership, as usually practiced by these super-merchandising establishments, has not as yet been proven a success.

What awakened us to the realization of the advantages to be gained by more attention to the professional duties we had been neglecting? The steady loss of public respect and confidence no doubt played a part. Perhaps the joke page helped. Maybe when we read about the person

* Delivered at the Joint Meeting of the Minnesota Pharmaceutical Association and the Northwestern Branch A. PH. A., February 19, 1931, St. Paul, Minnesota.

who had looked all over for a place to buy medicine without finding it, we decided to specialize for him. Or, perhaps, the fact that here and there the outstanding successes of certain individual pharmacists were plainly attributable to the superior service to the public, played a part.

One of the secrets for the success of the individually-owned pharmacy lies in doing for the community those things that the highly commercialized non-resident owned institutions cannot do. Some of these are rather intangible and more or less psychological—an expression of the personality of the owner.

Although I make no pretense of qualifying as an expert on the cure of the ills of retail pharmacy, I have developed some very decided views as the result of 25 years in the retail business for myself, and later in association work, which has given me the opportunity to study and observe. I have no hesitancy in saying that the mistake a large majority of individual pharmacists made was copying the methods pursued by the chain stores at the time these establishments came into vogue, when they should have adopted just the opposite tactics and made their stores expressive of professional pharmacy. As one business expert said, "The successes are not the imitators, but the ones who do things differently, within common sense routes. Basically, the problem is your own store, your own public, your own ability."

I realize that the opportunity for the exclusive prescription pharmacy is limited chiefly to large centers, and that a great majority of the average retail pharmacists must and will continue to merchandise. I do not object to this, but there are limitations as to the types of merchandise that are appropriate. Pharmacy from its very beginning in this country has been dual—the professional coupled with merchandising. But the dignity of the profession should be protected.

Now more particularly with regard to the arrangement and appearance of the retail pharmacy: It goes without saying that stores should be scrupulously clean, sanitary in every respect, and so arranged as to retain a professional appearance. A section or two of the old style shelf bottles containing tinctures, spirits, etc., are well worthy of being put in plain sight for their advertising value. The prescription department should not only be made attractive by a goodly supply of drugs, chemicals, utensils and refrigerator, but in a majority of cases, I believe it an advantage to locate the prescription counter where it can be seen by customers instead of hiding it in the back part of the store. However, whether this is done or not, a wellarranged prescription department, which might also include a chemical laboratory, is a big asset not only with the public, but also with the physicians in your locality. Prescription business is not attracted to the chain drug stores, or for that matter, to any excessively commercialized store. This can only be done by giving your store a professional appearance and gaining the confidence of the community, which incidentally also helps your other lines.

Instead of filling your windows with patent medicines marked at cut-rate prices, pasteboard cartons, and advertising matter from manufacturers, remember that your window display space is one of the best assets of your business, if properly used. Your displays should emphasize the pharmaceutical aspect of your store—crude drugs, utensils, illustration of processes, finished products, first aid equipment, etc., etc., are good examples. If your window is just a copy of hundreds of others, it will attract no attention and the display space is wasted. Select the things that interest you, and you will find the passerby interested as a rule. Don't hide your light under a bushel. Your pharmacy will be remembered the next time there is a prescription to be filled if you have properly advertised the fact that you specialize in this work by window displays emphasizing professional pharmacy.

Several years ago, I made the remark that one of the biggest little mistakes pharmacists had made was to take the characteristic show globes out of their windows. I found myself quoted in a number of state association presidential addresses, then in the magazines, and by now practically everyone in pharmacy has been quoted as approving show globes. I understand that the entire supply in the country is exhausted, and one manufacturer has started making them again. This is a good illustration of the awakening to the growing importance of professional pharmacy. In fact, it has gone so far that even the joke pages have turned professional. One newspaper recently printed a story about a man who was late and gave as his excuse that he was waiting for an hour for the red light at a certain corner to change to green before he discovered it was a pharmacy show globe. So you see our own attitude is important, as we have swung the public attention from sandwich-making to show globes. Cut-rating is governed largely by location and circumstances. Personally, if I were in business opposite a chain store, I would keep accurate account of their advertised prices. I would not display the products on which they are cutting. When called for, I would sell these preparations at the same price the chain advertises. Apologies for a higher price do not interest the customer. When the products are identical, price governs the sale. I would, however, cultivate the acquaintance of my customers and try to gain their confidence. Every time I sold them an advertised article at a cut rate, I would hand out a free sample of a preparation of my own or a U. S. P. or N. F. product, with the comment that I should like to have them try this. I have known several individual pharmacists who have built up an ever increasing business in this way, in some cases, even by parcel post among families who have moved away. Your cost is lower, and the customer does not pay distribution and national advertising campaign costs, and if you put out a good product, you are bound to build up a repeat business. Remember, you have no competition or cut rates to contend with on this business.

The trend toward the professional has, of course, come about largely through the adoption of higher educational requirements and more thorough training demanded of those entering pharmacy. In 1914, only two states required any college of pharmacy training. Not a single state required high school. Now thirty-seven states have college of pharmacy prerequisite requirements, and every state but one requires high school.

The four-year college course in pharmacy becomes effective for matriculation next year— 1932. This gives opportunity not only for more thorough training in the professional side of pharmacy but also in the fundamentals of business. Recognizing, as we must, the dual nature of retail pharmacy, such training is needed.

With the improved conditions in pharmacy, we are regaining the confidence of the physicians in our professional ability and also his appreciation for special services along various lines. The pharmacist well grounded in materia medica will often find opportunity to talk to the physician concerning action, uses, incompatibilities, doses, etc., not only of the newer drugs and preparations but often the older ones. The medical colleges are admitting that they have been somewhat weak in their materia medica courses. A frank and friendly relationship between the physician and the pharmacist will not only prove beneficial to both but will be of great value to the public which they serve.

In several of our larger cities, joint committees of pharmacists and physicians are doing some splendid work by encouraging the use of official products—U. S. P., N. F. and New and Nonofficial Remedies—in preference to trade-marked products, the object being to cut the cost of medical care and minimize harmful self-medication. Physicians realize that by writing prescriptions for proprietaries, they have encouraged the use of patents and proprietaries, which often leads the manufacturer, later, to advertise directly to the public, and thereby encourage dangerous self-medication. The Chicago Medical Society and the Chicago Retail Druggists' Association have a joint committee which is doing a great deal of good in bringing about a better understanding between pharmacists and physicians. The findings are published in the journals of these associations.

This reminds me of the important obligations pharmacists owe to their associations local, state and national, the latter including the AMERICAN PHARMACEUTICAL ASSOCIATION and the National Association of Retail Druggists. These things that you cannot accomplish by yourself, they are accomplishing by group action. If you cannot afford the time to take an active part, you should be glad to lend your support by swelling the membership and paying dues to these bodies; in fact, you should be apologetic that you are not doing more. What would you think of a physician who does not hold membership in the American Medical Association and the state and local medical societies? The same applies to the pharmacist who does not belong to the AMERICAN PHARMACEUTICAL ASSOCIATION and the local branch. Such membership gives you professional prestige, just as membership in a good club gives you social standing. The future holds bright prospects for pharmacy, if we take advantage of the opportunities before us. Joining the associations is one important step.

LABORATORY GROWN ERGOT.

The following report on "Laboratory Grown Ergot" is taken from *Science* of February 13th.

"Ergot, one of the most important drugs used by physicians, may in future be raised artificially in the laboratories of pharmaceutical factories, instead of being harvested in the natural state as at present. Preliminary experiments pointing to this possibility have been carried out by Miss Adelia McCrea in the botanical laboratories of the University of Michigan."

"Miss McCrea grew cultures of the fungus from which the drug is derived on a variety of media, including mashes and jellies made from various kinds of grain, and simpler jellies containing different sugars. She found malt sugar to be the best food for the fungus. To get ergot to grow in a flask or test-tube at all is regarded as a considerable triumph, because under natural conditions it is a parasite, preying only on living plants. She found it to be fairly modest in its food requirements, doing quite as well on a two or three per cent concentration of malt sugar as it did on six or eight per cent, and failing to thrive at all at higher concentrations.

"It was greedy for oxygen, however, growing much faster when a stream of pure oxygen was passed through its tube than when it was given only air. But on a mixture of half oxygen and half carbon dioxide its growth was considerably retarded. It grew best at temperatures between 68 and 77 degrees Fahrenheit. Light had a powerful effect on it. Without the shorterwave visible rays—the blue end of the spectrum—it did not develop the purple color that is its most marked characteristic. Ultra-violet light, however, had no stimulating effect, and in repeated doses even retarded development.

"Miss McCrea made physiological tests of the ergot growths she raised, and found that they produce most of the effects characteristic of natural ergot, though somewhat less powerfully. The reactions averaged from 40 to 75 per cent of those obtained with the same concentrations of natural ergot. In making these tests, however, she had to use the whole vegetative growth of her cultures, for they did not produce the full-grown fruiting bodies which are the only source of commercial ergot at present.

"Miss McCrea also made two attempts to infect growing grain with ergot, with the idea that its field cultivation might be undertaken. At present, commercial ergot is obtained solely by hand-gathering of wild growths on grain, especially rye, and wild grasses. Because of the great amount of hand work involved and the high cost of labor in this country, American production of ergot is unprofitable. However, the field experiments did not yield particularly encouraging results, and Miss McCrea concludes that if it ever becomes desirable or necessary to raise ergot in this country the laboratory method is the more promising. A full technical account of Miss McCrea's work is contained in the current issue of *The American Journal of Botany*,"

Acidity of Parchment Paper.—Some parchment paper when moistened may show a distinct acid reaction. Such paper is not suitable for wrapping powders containing deliquescent salts; waxed paper is preferable for this purpose.

BALTIMORE RETAIL DRUGGISTS' ASSOCIATION ANNUAL BANQUET.

The Baltimore Retail Druggists' Association held its annual banquet, March 12th, at Hotel Rennert. President Samuel Y. Harris presided as toastmaster. Among the invited guests were President H. C. Christensen of the A. PH. A., Mayor Broening, Dr. R. H. Riley, of State Health Department; Dr. C. Hamson Jones, of Baltimore Health Department. The banquet and entertainments were much enjoyed. A number of Washington pharmacists were in attendance.

A presentation was made to President Harris as an expression of esteem of the membership and for his services; Governor Ritchie was honored in a resolution of appreciation and high regard.

The greatest measure of success is possible when all divisions of pharmacy and the drugtrade activities coöperate.