PAPERS READ BEFORE THE BRANCHES OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

PHARMACOPOEIAS, PHARMACISTS AND PHYSICIANS.*

BY THOMAS E. SATTERTHWAITE, M.D.

In a recent article[1] I said of the Eighth Edition of our Pharmacopoeia that it failed to recognize some drugs that might be prescribed with advantage, such as adonis vernalis, much used in Switzerland; crataegus, that had been rather a popular remedy in England and Ireland; and sassy bark, or erythrophleum, which had been recommended by a British pharmaceutical conference, while, I added, it had set its seal of approval on some others which I felt should have no place in any national pharmacopoeia, giving strophanthus seeds and the tincture as instances. Since writing the article referred to, the tincture of strophanthus has been standardized by the ouabain test, but not satisfactorily, if we accept the recent verdict of a pharmacologist. (L. W. Rowe, JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION, 5, 1916, p. 1183.)

In the matter of improper dosage, of which I spoke, I referred in particular to that of the mixed glucoside strophanthin, the dose of which, in the Eighth Edition, was put at 1/200 grain. In the Ninth Edition it is put at 1/60 grain. In the former the dose, according to my belief, is too small; in the latter too large; *i. e.*, if the German imported strophanthin is to be used.

I also mentioned that up to that time the tincture of digitalis had not been acceptably standardized. More than this, I held that the tincture of digitalis as then used was of very varying strength; and this statement cannot be refuted. Whether it has now been acceptably standardized I do not know, for I never use it.

But I spoke favorably of some other derivatives of digitalis, no one of which was in the Eighth Edition, nor is any one of them in the Ninth Edition. I then referred and now refer to the various mixed glucosides known under the general name digitalin, some of which are used extensively both in France and Germany.

I also said that without the publications of the various manufacturing houses I could not practice medicine with any proper degree of success.

The fact is, the profession of medicine makes little use of the Pharmacopoeia. It is the official guide for the pharmacist, and is in the main reliable, so far as it tells of drugs and how their derivatives are to be obtained. But its scope is entirely too limited for the physician. If he wants guides, he finds them in dispensatories, or books on materia medica, or the publications of the manufacturing companies. From this point of view we are not as well qualified to discuss the Pharmacopoeia as pharmacists. But it does not represent to us a stable book of reference.

In making the Eighth Edition I counted 121 additions and 243 deletions, all of materia medica. Why the citrate of iron, citrate of iron and quinine, citrate of iron and strychnine, brandy, whiskey and wine of colchicum seeds have been

* Remarks made in opening a discussion on the new Pharmacopoeia, at the meeting of the New York Branch of the American Pharmaceutical Association, held at the College of Pharmacy, Columbia University, May 14, 1917.

[1] "Drug Therapy in Cardiovascular Diseases," *International Clinics*, Vol. 1, Series 26, 1916.

omitted, I do not know. I will continue to use them, and also possibly the two kinds of spirits that have been ruled out. In respect to the latter, I feel sure some others will do likewise.

I believe, however, it was quite proper to drop apocynum and convallaria; they are negligible drugs. On the other hand, hydrastine hydrochloride, the pituitary gland (posterior lobe), cotarnine hydrochloride, phenolphthalein, theobromine sodio-salicylate, emetine, hydrochloride, the sera, and physiological salt solution are excellent additions.

After a more than fifty years' practical experience as a physician with the United States Pharmacopoeias, and after not a little experience with some of the European Pharmacopoeias, I feel that I have qualified myself to speak of them with a fair degree of definiteness. Actually I have had my prescriptions filled according to the requirements of the locality, in England, France, Germany, Belgium, Austria, Switzerland, and Italy, in the course of my travels.

As the opportunity now offers, and I am speaking both to pharmacists and physicians, I wish to emphasize three points on which we should come to an understanding.

First, we need a closer fellowship. We should coöperate and fraternize. We also need to do team work. Each requires the aid of the other. There are tasks that will not be accomplished successfully, or certainly will encounter unnecessary delays, unless we unite our forces to accomplish them. I am referring now more particularly to the solution of problems that are at the moment subjects of legislative inquiry with a view to proper enactments. The problem of drug addiction is one that positively calls for our coöperation. Physicians can not solve it without the aid of drug manufacturers, and *vice versa*. In fact, in so far as the public is concerned, our county and state medical societies should, through their respective committees, meet at suitable times with accredited pharmaceutical associations, with a view to concerted action in these public matters. We should do so in the interest of the public welfare; otherwise the problems will be imperfectly handled, and the results disastrous.

My second point is that the pharmacist should be well informed technically in all the details of his business; should have the requisite pharmaceutical ability; should observe the ethical rules that should prevail between pharmacists and physicians in respect to the laity; and should be faithful to the best interests of the physician. But we on our part should also display requisite knowledge of drugs and their uses; prepare our prescriptions so that they are legible and have no incompatibles; observe the rules of ethics with pharmacists in respect to the laity; and be faithful to the best interests of the pharmacists. In other words, we should observe the same rules with pharmacists as they with us.

My third point is that we should combine in an effort to establish the ethical or first-class drug stores, as apart from the non-ethical or second-class. Or we might endeavor to establish the European *apotheken*, or pharmacies, as apart from the *drogueries*. It is fully time a positive movement was made in this direction, for two reasons: from the pharmacist's position, to sustain the dignity of the profession; from the physician's, to protect his patients from the danger of having his prescriptions improperly filled. We physicians would be greatly benefited by a plain line of distinction between the *pharmacie* and *droguerie*, such as is main-

tained in most of the countries of Europe. Let it not be inferred that I am decrying the *droguerie*. I am not. Each should have its distinct and legitimate sphere, separate from the other, each useful to the practitioner of medicine in any of its branches, and each a dignified undertaking when under the right sort of management.

DIAGNOSTICAL REAGENTS AND CLINICAL TESTS.*

BY JACOB DINER.

In the Preface to the Ninth Revision of the U. S. P. (p. 39) we find the following:

Diagnostical Reagents.—"In recent years diagnosis through the use of Chemical Reagents and Clinical Tests with or without the use of the microscope has become an important factor in determining the presence or nature of disease and in this Pharmacopoeia a chapter on Diagnostical Reagents and Tests has been appended."

Having in mind the thorough manner with which the revision of the Ninth Edition was carried out and the relative absence of error and the careful selection of all other tests applicable to U. S. P. matter, one is struck by the apparent indifference with which this particular chapter of Diagnostical Reagents has been treated.

I am basing my criticisms chiefly on the fact that some antiquated reagents and tests have been incorporated while others, more up-to-date and more satisfactory from the point of view of the laboratory worker, have been omitted.

For Blood Reaction.—The formula prescribes a 2 percent solution of guaiac in dehydrated alcohol to make 100 units. Anyone who has worked with this reagent knows that it deteriorates very rapidly and becomes useless. Nor is there any particular reason why dehydrated alcohol should be used. If one were directed to shake a piece of guaiac in U. S. P. Alcohol until a pinkish solution is obtained and to use it while fresh, positive results will be obtained in every case where blood is present.

For Diazo Reaction.—No attention is called to the fact that the Sodium Nitrite Solution will be converted into a Nitrate Solution on standing and will then give negative results in positive cases. This solution should be freshly prepared when needed, or when kept in well-stoppered bottles, removed from light, may be of service for about a month. I believe that instruction on methods of preservation in this and many other reagents would not be out of place and would materially add to the value of this chapter.

For Sugar Reactions.—The failure to mention Benedict's Solutions, both the qualitative and the quantitative, seems to me a serious omission. The former (qualitative) has all the advantages of Fehling's solution in addition to having better keeping qualities and doing away with the necessity of having two solutions, which may be incorrectly mixed (failure to add enough alkali). The quantitative solution of Benedict is equally efficient and affords a better end-point reaction.

Gastric Contents.—In view of the scarcity of potassium salts it seems to me

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* Read before New York Branch, A. Ph. A., May 14, 1917.