

## A PHARMACOPŒIA FOR THE PHYSICIAN AND THE DISPENSING DRUGGIST.

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In my former paper<sup>1</sup> it was shown that the physicians now in actual practice are not reading the Pharmacopœia, an effort was made to show *why* they are not reading it, and arguments were adduced to show that they never will read it in its present form.

Considering the Pharmacopœia as it is now, the work of the physician as it is now and making allowance for the changes in his work that are sure to come in the next few years, it is impossible to believe that its study would have much cultural value for the physician, or that it would make his work in any appreciable degree more safe or more successful. It is equally impossible to see how such study could benefit the retail druggist, by making his work easier, safer, more effective, or more remunerative. One may now well inquire whether it is worth while to make any further attempt to get the physicians to read *the* Pharmacopœia, or to read *a* pharmacopœia. Personal interviews with acquaintances do not give any encouragement to efforts toward securing a wider reading of the present volume, but do give more or less enthusiastic support to the idea of a radical modification of its subject matter. The more recent the schooling, the more indifferent to the Pharmacopœia was my observation on the practitioners whom I interviewed. One who is fresh from Rush did not recognize it as a useful book at all, and gave expression to the idea that it has no place in fundamental education, but expects to read it in later years as part of the finishing process. Another whose fundamental medical education was acquired in Baltimore and New York, with side trips to Germany and Philadelphia, does not believe the present work meets any important want in present day medical education, but is not so shameless about his neglect of it as is the very recent Rush graduate.

Interviews with druggists of the younger and liver (pronounced liver) sort convince me that they are not satisfied with the subject matter of the present Pharmacopœia, and that they would favor any change that would better meet the needs of their work as druggists, or would tend to bring themselves and the practitioners nearer together again. They argue with apparent soundness that reading the same well designed book would do much to promote mutual understanding and mutual helpfulness. The public interest would also be conserved by such a condition of things in the respect that better service would be rendered.

Various schemes have been proposed as tending to correct inadequacies as we now have them, but the medical profession has not had sufficient interest to take a very active part in the discussions. Personally, I should like to place my influence in favor of a multiple pharmacopœia—not the original notion of multiple district or hospital pharmacopœia, with one national one, but multiple pharmacopœias each of which shall be national, and at least one of which should

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<sup>1</sup>JOURNAL for May, 1913, p. 572.

eventually become international. I ask for this on the ground that the material that should go into a pharmacopœia, is so varied and so extensive that one volume cannot well contain it. Also on the ground that its completeness which is essential, would tend in many cases to cover up and obscure the very information any given searcher would want, and hence for this reason, its information should be classified and separated.

Since the U. S. P. is used as a guide in the administration of the various Pure Food and Drugs Laws, it seems important that we have an authoritative book of standards and tests by which to standardize and test the various foods and drugs. Personally, I see no objection to including many articles that are not used as either food or medicines. Fuels, paints, lubricants, and illuminants might very well be included in this book of standards. Eventually all substances whose chemistry has any scientific, economic, or commercial importance would be recognized and standardized in this book, and the book itself would logically become an international one, at least in so far as the substances in common use are concerned.

In this scheme the second pharmacopœia would be the book of chief interest to real pharmacists, since it would have to do only with pharmacy. It should discuss the source, identification, collection, preparation and preservation of medicinal substances. It should be so full and explicit in all the lines mentioned that any competent pharmaceutical chemist could produce as good preparations as any other. We should then hear no more of the 'active principle of calomel,' of the "special potency" of somebody's blue iron (?) or of the superiority of some other man's viburnum, because this particular pharmacopœia would tell every manufacturing pharmacist how to get good calomel and blue iron (?) and would be so minute in its directions about the selection, care, manufacture and preservation of viburnum that all good houses would have products containing whatever merit may be found in the drug at its best. With such a set of pharmacopœias as is here contemplated in actual existence, it would be easier to cut the humbug out of some present day pharmacy and to teach the medical profession to order preparations according to their merit.

The third pharmacopœia should be one designed for the guidance of the physician and the dispenser, and since they both are in relation to the patient, and are supposed mutually to assist and to check each other, this volume should contain the matters necessary for the guidance of both. It should contain little or no information which is to be found in either of the other volumes, for the reason that such information is not of common use to either the physician or the dispensing pharmacist and would only make their particular pharmacopœia cumbersome; e. g., the doctor prescribes and the druggist dispenses morphine sulphate in some combination, and neither of them is interested in the natural history of the poppy or the political history of opium, and neither of them will make any tests to determine whether the stuff dispensed is what was really ordered, *ergo* leave out the natural history and the tests.

I pause here and open the present Pharmacopœia at random,—happening on pages 176 and 177. The article beginning on the left hand page tells how to make Fluidextract of Colchicum Seed and the one beginning on the right hand page tells how to make Fluidextract of Conium. Neither article contains a

single thing of interest to a physician or dispensing pharmacist. Neither of these men will attempt to make either preparation, for neither has the personal skill nor the apparatus.<sup>2</sup> Is it not high time to abandon the erroneous notion that the dispensing druggist does or can manufacture the preparations that he uses? It seems to me that the articles cited above have the same relation to the work of the dispenser that a carefully prepared and scientifically correct article on the preparation of steel and the manufacture of hæmostatic forceps would have to the minor surgery that I undertake. If you agree with me, as I think you must, that the present Pharmacopœia is of almost no use at all to the physician and to his dispensing pharmacist, let us ask what would be of use to them. There are five points concerning each preparation that I think are of vital interest and importance to these men, and I mention them serially but not necessarily in order, for their order of relative importance will vary with the different drugs. They are: 1. Preservation. 2. Incompatibility. 3. Physiological action (including toxicology). 4. Therapy. 5. Synergism.

I. No physician desires his prescriptions compounded with dead or deteriorated drugs, and no self-respecting pharmacist is one whit behind the doctor in his effort for active and accurate preparations. Hence, the importance of directions for the preservation of the preparations and the suggestions of tests, the more obvious the better, whereby one may detect deterioration. 2. Both are alike interested in incompatibility, and their pharmacopœia should mention the chemical and physiological incompatibles. 3. Before one should prescribe or another dispense any drug, he should have an accurate idea of what it will probably accomplish when properly exhibited. The physiological, or toxicological action of a drug, seems to me to be the real focus of its study and should be given large room in the pharmacopœia of the men who are responsible for the application of drugs to patients. It necessarily includes full discussion of the amount, manner, and frequency of the dosage, size, age, sex, and other special conditions of the patient. It is important for the dispenser, because he is supposed to act as a check on the prescriber. Also, (pardon me while I feel gently over a sore spot) the dispenser, who usually prescribes more or less for common and trivial ailments, will do this more safely and successfully if he knows more physiological action. 4. This book should discuss therapy for the reason that this is the end or aim of the whole line of study. The physician will have the greater interest in this part of the book, but the dispensing pharmacist will be a better and safer helper and checker if he, too, reads the section along with the one on physiological action. A little more knowledge on these points would probably steady and mayhap save morally whole the druggist when he is tempted to prescribe for conditions not well understood by him; i. e., a little more learning may be expected to increase his sense of responsibility and lessen his own confidence, thereby making him safer. 5. The synergism of drugs is rarely discussed in any serious or systematic way, but should have due consideration in the doctor's and dispenser's pharmacopœia. If a drug acts more kindly or effectively in combination than alone, say so, and say why. A better disseminated information on this line would save us all from

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<sup>2</sup>The editor can not assent to this as a statement of fact so far as it relates to the fairly qualified pharmacist.

the temptation to try out the wonderful "special" preparations that each house puts out—those whose promise always so far outruns their performance. In practice, the ideas of synergism and correction are often allowed to crystallize into ready made prescriptions, and I suppose every large hospital in the world has its prescriptions mainly made up and carried in stock. For routine work they are made to answer whether they *exactly* fit the case or not. I am not favorable to this sort of thing in private practice, but do think that some study along this line would improve both the prescribing and the dispensing.

Allow me to make some suggestions about how the proposed book should be arranged.

1. The classification should be made on the active portions of the drugs; e. g., there should be a careful article on tannic acid, and under this in smaller type there should be short paragraphs on blackberry, kino, catechu, gambir, etc., giving the special features and uses of each.
2. The arrangement should be alphabetical, the unimportant drugs being mentioned merely to refer to the page of the subsidiary paragraph as indicated above.
3. There should be a long section of the book devoted to therapeutics, in which little or no mention is to be made of any special disease. The classification here should be by *indications* and the arrangement alphabetical. Let me suggest a few topics: To destroy bacteria, on the skin, in the tissues, in the alimentary canal, in the nose and throat, in the dejecta, in a room, etc., to raise blood pressure, to lower blood pressure, to lessen motor excitability, to lessen sensory excitability, to improve nutrition, to lower body temperature, to lessen perspiration, to produce sleep, etc. with perhaps more specific directions for drug combat of a few special bacteria and protozoa like streptococcus pyogenes, bacillus of tuberculosis and the organism of malaria.
4. The substances treated should include all those used in the practice of medicine in the United States. When a preparation is not controlled by tests that guarantee its constancy, say so, and when its chief claim to confidence is its mystery or its advertising, say that.
5. The style of the book throughout should be dogmatic on all matters that are well established and well known. On those well established and not so well known there should be some citation of important or fundamental papers. On matters of importance that are still in doubt there should be considerable of experience quoted and arguments epitomized, so that the reader may be allowed to assist in finding the correct conclusions.

Let me claim in conclusion that this scheme would make everybody happy by giving to each the help and inspiration to thought and growth beyond anything the present pharmacopoeia can do; viz, the chemist would have his authoritative book of standards and tests tending soon to establish a uniform nomenclature, so that "pure white lead," e. g. would be the same everywhere, the manufacturing pharmacist would have in his book the alleged private information that so many houses now claim to keep so carefully guarded, and the physician and the dispensing druggist would have in their book the information that would enable them to work with more certainty and satisfaction to themselves and to give better service to the public.