

their close botanical relationship and the fact that we have evidence that European stramonium leaves are many times probably a mixture of these two forms, strengthens the assertion that there is little difference in their therapeutic value.

And so we might continue to take up the various problems of drug cultivation, together with their probable solutions, but space will not permit. In conclusion, therefore, it should be clearly understood that these problems are not simple ones and those undertaking their solution should bear in mind that the cultivation of medicinal plants involves more than merely allowing crops of weeds to grow in spite of themselves, in cutting them down when most convenient, pulling them out by the roots or otherwise, and quickly transferring them to the manufacturer who will be waiting with open hands to receive them at fancy prices. It has seemed advisable, therefore, to recommend to those interested in drug-growing, that they begin on a small scale with a few of the most promising forms, and that they be so situated and equipped that they can carry these through an experimental stage, developing their method of propagation, seeding, harvesting, curing, etc., before attempting any operations upon a commercial scale.

BOTANICAL DEPARTMENT, ELI LILLY & COMPANY, INDIANAPOLIS, IND.

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## CAN THE PHARMACOPŒIA AND THE NATIONAL FORMULARY BE MADE POPULAR WITH PHYSICIANS?

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BERNARD FANTUS, M. D.

Professor of Pharmacology and Therapeutics, College of Medicine of the  
University of Illinois.

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Time and again has the idea been expressed that physicians as a class do not take enough interest in the Pharmacopœia and the National Formulary. As the truth of this proposition is quite generally admitted, it is probably unnecessary to adduce proofs in support of the assertion. All will agree that it is desirable to make these formularies popular with physicians. The question is: Can it be done?

In an article entitled: "Why physicians do not read the Pharmacopœia," Dr. Chambers (1) summarizes the reasons as follows: First, the physician fully trusts the application of its information to the pharmacist without question; and, secondly, the information the physician seeks for practical application by himself is not contained in the book. So little, indeed, of practical value to the physician is to be found in the book, that we might fairly raise the question: Why *should* physicians read the Pharmacopœia? An additional reason for the indifference of the physician toward the Pharmacopœia is the impression forced upon him that the Pharmacopœia is non-progressive; for nearly every mail brings to the doctor cleverly worded advertisements for proprietary medicines, all of which, no matter how varied their nature, agree in one respect, namely in claiming directly or indirectly, that they represent a decided advance or innovation in respect to the Pharmacopœia.

Now what can be done to make the Pharmacopœia more popular with those for whose guidance chiefly the work is published? Should we attempt this by intro-

ducing information on pharmacodynamics and on therapeutics? Assuredly not, for the Pharmacopœia is a book of standards. Or should we introduce into it the latest and the untried; sacrificing its dignified conservatism? Of course not. Though it is a fact that the Pharmacopœia contains only well established and much used drugs and preparations, it is unfortunately also true that doctors do not look upon this book as a guide for the determination of the value of medicaments. It is well known that the Pharmacopœia contains articles of admittedly doubtful utility; and also that, for various reasons, it cannot contain all the medicaments of value. To limit the Pharmacopœia to drugs of undoubted therapeutic value, has been strenuously advocated of late; and, as a principle, the idea appears perfectly sound. Its application would, however, eliminate from the book many drugs that are much used, thereby lessening the value of the Pharmacopœia to the pharmacist; it would offend many of the rank and file of the medical profession, wedded as some of them are to the use of some of these drugs of doubted activity; it would probably not enhance the popularity of the Pharmacopœia, at least not for quite a time to come.

Hence it may seem an almost hopeless task to make the Pharmacopœia popular with physicians. This statement is made without questioning, in the least, the utility, aye the necessity of the Pharmacopœia; that is admitted by all physicians. The Pharmacopœia is as necessary as is our code of laws. Yet our legal statutes do not constitute popular reading, even though they are made for the people.

Nevertheless, it seems, that everything possible ought to be done to acquaint physicians with the forthcoming revision of our formularies. Perhaps one way in which this society might be of help in this direction would be by the publication of a "Commentary upon the U. S. P. and N. F. for Physicians," a booklet that would briefly set forth the facts connected with the new formularies that are of interest and importance to physicians. Of course, nearly all medical publications will give lists of the changes, the additions and the deletions that have occurred; so that a mere dry statement of the facts would not be called for. The book issued by this society might go further. It might state the reasons for the changes, so that physicians might understand why they are asked to inconvenience themselves by departing from accustomed ways of prescribing. Such commentary might perhaps also give brief historical notes in connection with important drugs and preparations; for historical knowledge is eminently calculated to inspire respect or at least an understanding for things as they exist at present. Posology, the study of doses, is a very vital matter for medical men; and the maximum doses of various pharmacopœias, minimum fatal doses wherever available, and possibly children's dosage as given by various authorities might profitably be included in such a book. A brief statement of legal enactments in connection with drugs might also be of interest. There are, no doubt, many other items of information, as, e. g., the form in which various medicaments are best and most commonly prescribed, that might be included, so as to make the book truly worth while for the physician. On the other hand, pharmacists should not presume to offer to the physician information on pharmacodynamics or on therapeutics, as these subjects are decidedly out of the sphere of the pharmacist's study.

That something can be done to popularize the preparations of the U. S. P. and N. F. has been shown by a statistical investigation carried on by the author sev-

eral months ago, by means of a *questionnaire* sent to some of the leading pharmacists of this country. An analysis of 10,000 prescriptions (2) showed that 24% of them contained proprietary medicines, which, though still too high a figure, shows a decided improvement over the figure obtained by Motter (3) in 1906, who as the result of an examination of 5000 prescriptions found 47% calling for proprietaries. This reduction in the use of proprietary medicines by about one-half may, it seems, be justly ascribed to the propaganda in this behalf carried on by the American Medical Association, through its Council on Pharmacy and Chemistry, and by the National Association of Retail Druggists. These figures mean that the preparations of the Pharmacopœia can be made more popular by propaganda. The forthcoming revision of the Pharmacopœia and the National Formulary offers an excellent opportunity for renewing them. Might not this society do its share in advancing the good cause?

## REFERENCES.

<sup>1</sup>Chambers, H. L.: "Why Physicians Do Not Read the Pharmacopœia." *Journal of the American Pharmaceutical Association*, Vol. II, 1913, p. 572.

<sup>2</sup>Fantus, B.: "What Instruction Ought Medical Colleges to Give in Pharmacology and Therapeutics, Part B. of Symposium: the Viewpoint of the Pharmacist." *Quarterly of the Federation of State Medical Boards of the United States*, Vol. 1, No. 4, July, 1914.

<sup>3</sup>Motter, M. G.: *Bulletin American Academy of Medicine*, Vol. IX, No. 1, p. 26.

## ESTIMATION OF CINEOL IN OIL OF EUCALYPTUS.\*

JOSEPH L. TURNER AND RALPH C. HOLMES.

The question of an accurate determination of the quantity of Cineol in Oil of Eucalyptus is still unsettled, notwithstanding the quite considerable amount of research which has been devoted to it, and, judging from its present status, it will not be settled for some time to come. This is to be regretted the more, since it is now established beyond dispute that the value and therapeutic action of eucalyptus oils depend exclusively upon their content of cineol (eucalyptol). Various methods proposed heretofore, without exception, suffer from one shortcoming—gross inaccuracy; either due to the wrong basis of method, or to the instability of those compounds which have been suggested as serviceable for the separation of Cineol.

To the class of methods based on wrong premises belong the "Permanganate Method" proposed by Francis D. Dodge (*Journal Industrial and Engineering Chemistry*, Vol. IV, August, 1912, p. 529), and the "Resorcinol Method" proposed by Schimmel & Co., (*Semi-Annual Report of Schimmel & Co.*, October, 1907); the latter method is now slated for inclusion in the Ninth Revision of the United States Pharmacopœia, and it will thus become responsible for the admission into the pharmaceutical practice of inferior eucalyptus oils, as we propose to show further below.

The methods based on the separation of unstable addition products of cineol, are:—the Phosphoric Acid method and the Hydrobromic Acid method.

The various methods mentioned will be outlined briefly, as it is not our purpose here to enter into a thorough discussion of these. Exhaustive information, both

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