PROPOSED CHANGES IN THE MONOGRAPHS OF SOME VEGETABLE DRUGS FOR THE NEW UNITED STATES PHARMACOPOEIA.*

BY E. N. GATHERCOAL.

A number of influences have been causing for some years past an increasing tendency on the part of the U. S. P. Convention and the Revision Committee to restrict the scope of the Pharmacopoeia, and legalize the monographs contained therein. Certain questions, therefore, present themselves at the very outset of any discussion of the revision of the U. S. P.

Thus—Shall the U. S. P. become exclusively a book of legal standards for medicinal chemicals and vegetable and animal drugs, and the N. F., as its name indicates, be exclusively a book of formulas including all of the galenicals?

Again—Shall the U. S. P. endeavor to satisfy the legal requirements of law enforcement officials or be devised to serve the needs of the physician and pharmacist for simple standards for drugs and medicines?

On the answers to questions of this nature will depend very largely the character of the monographs for vegetable drugs in future revisions of our pharmacopoeia.

It seems self-evident that there is no need for two books of the same legal standing covering the same field. If the Pharmacopoeia is to fill its defined function as a book of authority containing the formulas and methods of preparation of medicines for the use of druggists, then there is no need for a second work of authority, such as the National Formulary, covering the same field. If, however, the definition of our pharmacopoeia is to be changed so as to indicate that it is a book embodying legal standards for drugs and medicinal chemicals, then there *is* need for a second book which shall supply authorized formulas for the medicines used by physicians and pharmacists. There is no question about the tendency for making the Pharmacopoeia more and more the book of standards for drugs and less and less a book of standard formulae. This tendency is evidenced by many recent writings upon this subject, and is very finely expressed in a recent paper by E. H. Gane, read before the New York Branch in March. This much should be said, however, ragarding such a pharmacopoeia; it should contain standards *for all* such articles of materia medica approved by the medical fraternity, this approval to be gaged by the extent to which the articles are used in medicine.

The suggestion that has recently been offered a number of times that the U. S. P. be published in two parts or volumes, one part to include the materia medica standards, the other part the galenical formulas, is also well worth careful consideration. This is a reversion to the old plan of the Pharmacopoeia, used from 1820 to 1870, though both parts were then published in one book.

Likewise the suggestion of Dr. Edward Kremers, that the U. S. P. be issued on cards and thus be in form for continual revision, each card being revised as need arose for such revision, would undoubtedly be practical and desirable, especially if the Pharmacopoeia becomes exclusively a work on materia medica standards, and the revision be placed in the hands of a small committee, possibly Government officials.

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Physicians and retail pharmacists are rather remotely interested, however, in the purely legal standards for the primary drugs and chemicals from which their galenicals are prepared. They will assume that if a department of the National Government prepares these standards, or they are prepared by a small selected committee of experts, as has been suggested, these standards will be all that can be desired. They are, however, very much interested in the galenicals prepared from these drugs and will desire to closely supervise the revision of the standards for such medicines. This means, therefore, that such a U. S. P. would become of decreasing interest to the general medical and pharmaceutical professions, while the N. F. would have increasing popularity.

Keeping in mind the above statements, the following suggestions regarding the vegetable drug monographs are herewith presented:

First: As an exclusive book of standards the U. S. P. should include monographs for every vegetable drug used to a reasonable extend in medical practice in the United States, and especially of all drugs that are imported. The N. F. should be relieved of carrying any drug standards and the U. S. P. should carry standards for all the articles that the revisers of the N. F. might desire to use in any of their formulas. If the U. S. P. and N. F. are both continued as books of standards and formulae, then the standards of the vegetable drugs might well be divided between them as at present. It is of interest to note that in the U. S. P. of 1820 there were named some 225 vegetable drugs not including fixed and volatile oils nor active principles. In the U. S. P. IX and N. F. IV, there are listed 253 vegetable drugs not including the 100 or more fixed and volatile oils, alkaloids, glucosides and other active principles obtained from vegetable drugs.

Second: Drug names and plant names should be changed just as little as possible. Of course, botanical authority must be recognized and the nomenclature made to conform to this authority as far as possible. It is of interest to note that more than 40 of the 225 vegetable drugs named in the first U. S. P. have been carried through the century without any change in the official Latin title.

The criticism of Dr. Rusby, in his very excellent paper published in the JOURNAL OF THE A. PH. A. for March, concerning the change in the title of Cascara Sagrada, is a very just one. To substitute a Spanish common name for the Latin botanical name surely was a mistake. As in many other respects, the U. S. P. should be very conservative regarding changes in nomenclature.

Third: The legal status of the drug definition is resulting in complexity of phrasing that should be minimized as much as possible if the U. S. P. is to continue as a physicians' and druggists' guide. If it is to assume a more legal status, then such a complexity may well be carried as far as lawyers desire. It is suggested that the preservation rubric calling for the use of chloroform or carbon tetrachloride might be included, and perhaps amplified, in Part II, and referred to under all of the drugs to which it might well be applied.

Fourth: While the introduction into the U. S. P. IX of more extensive descriptions of the physical characters of the whole drug, and of the histological characters and the microscopical appearance of the powder, has been very highly and widely appreciated by pharmacognosists, yet it would seem that such descriptions should be limited to those points essential for the identification of the drug and the determination of its purity.

Fifth: The use of tests of precision, such as ash determination, the extractive determinations, the solubilities and chemical or micro-chemical tests for identity, quality, and purity should be encouraged. The mention, even though just by a word in parenthesis or italics, of the adulterant, or the indication of inferior quality sought for by a test, is helpful especially to pharmacists who may not be in close touch with these tests.

Sixth: In case the U. S. P. becomes eventually a book exclusively of materia medica standards, it would be desirable to include among the materia medica such extractions or solutions of drugs and chemicals as are prepared by manufacturing houses and can be definitely standardized as to all of their medicinal constituents by appropriate assays or tests; just as volatile oils, alkaloids and glucosides are now recognized as articles of materia medica rather than preparations.

Examples: Waters—Ammonia, Rose, Peppermint, Spearmint; Solution Hydrogen Dioxide, Spirit of Nitrous Ether, etc.

After this extensive introduction I must now make apologies for not reaching sooner the actual subject of the paper. But as a matter of fact, practically all of the suggestions that I had compiled during the last few years regarding changes in some of the monographs have already been presented in the very excellent papers recently published by Messrs. Rusby, Scoville, Gane, Kraemer, Francis, Farwell, Caldwell, and others.

Dr. Rusby's paper presents a number of criticisms and very valuable suggestions that should certainly have our endorsement, especially his points regarding the definition of Pix Liquida, Taraxacum, Rheum, Asafoetida, etc. Suggestions from numerous authors regarding the admittance of stem, not exceeding a certain thickness, in Belladonnae Folia, Hyoscyamus and Stramonium, should be complied with. The suggestion of Dr. Francis regarding Viburnum Prunifolium, that the definition should be changed back so as to include only the root bark, with a small allowance of stem bark, is approved. In fact, the present description of the drug indicates that only root bark is to be regarded as official, while the definition allows the use of stem bark. Professor Day recently criticised the definition of Resina and Oleum Terebinthinae as follows: As the oil is usually distilled commercially, from the freshly gathered and, therefore, liquid or semi-liquid oleoresin, the definition should not specify that the oil of turpentine and rosin be obtained from the *concrete* oleoresin.

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A NOTE ON THE EXAMINATION OF A COMMERCIAL SAMPLE OF OIL OF PENNYROYAL.*

BY GEORGE M. BERINGER.

On two occasions, recently, samples of what, it was reported, had been sold as Oil of Pennyroyal, were presented to the writer with the request that he determine first, whether the sample was oil of pennyroyal, and secondly, if it was unadulterated. The sample referred to in this note was one of these.

* Read at the meeting of the New Jersey Pharmaceutical Association at Newark, June 9, 1920.