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DECEASED SINCE NOVEMBER 18, 1916.

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BOOK NOTICES AND REVIEWS.

The National Standard Dispensatory. Hobart Amory Hare, B.Sc., M.D., Charles Caspari, Jr., Ph.G., Phar.D., Henry H. Rusby, M.D. Third edition, enlarged and thoroughly revised. Publishers: Lea & Febiger, Philadelphia and New York.

The Ninth Decennial Revision of the Pharmacopoeia of the United States and the recent revisions of the German, French and English Pharmacopoeias necessitated a revised edition of this commentary. The intent of the authors, as set forth in their preface, is to present in this single volume "encyclopaedic information concerning all substances used in pharmacy and medicine at the present day." In the publishers' note the reader is likewise assured that "the aim has been to make the National Standard Dispensatory a reference work of the highest authority upon the entire range of *Materia Medica*, Pharmacy, and Therapeutics."

These are most laudable purposes, and it is with sincere regret that a critical review from the view-point of a pharmacist, who esteemed the good points of its predecessor *The National Dispensatory* and always admired the exactness of knowledge pharmaceutical, chemical and pharmacognostical displayed by his teacher and friend the late John M. Maisch, does not permit of the conclusion that these have been attained in the present edition. As this review is purely pharmaceutical no comments, whatever, on the therapeutics are submitted, and it is the hope that, in that respect, the work may well serve the purpose of the authors.

With the possible exceptions of binding, prefatory pages and index, the U. S. P. IX is

embodied practically in its entirety in this revised work and even the lists and tables of the Pharmacopoeia are incorporated. One is somewhat at a loss to understand why in a modern work statements of temperature, weight, volume or dimension must be followed by bracketted equivalents; as examples: "25° C. (77° F.)," "10 to 20 grains (0.60 to 1.30 Gm.)," "20 minims (1.3 mils.)," "25 mm. (0.98 In.)," "12 Cm. (5 In.)." Since the official tables of equivalents have been republished in the volume, this appears to be useless.

We note that the pharmacopoeial adoption of "mil" as a distinct noun has not been accepted and throughout it is used as an abbreviation, thus "Mil." and "Mils." The pharmacopoeial chemical formulas are quite frequently not followed and the official order of stating the elements is not observed. It should not be necessary to add after HCN "old style HCY." Specific gravities are generally stated at 15° C. instead of at the temperature officially adopted 25° C.; at times, these are given at both temperatures.

If the use of the metric system of weights and measures is ever to become the common practice in America, the commentaries must cease to transpose official formulas and statements into the denominations of the apothecaries' system. In the volume before us, this has been persisted in throughout and can be viewed only as another discouragement of, and postponement of, the adoption of the metric system.

The treatment of the botanical and pharmacognostical subjects is concise, accurate and commendably practical. Botanical descrip-

tions of drug-yielding plants have been introduced only in the cases of those likely to be met with by the general reader, or when the information is desirable for some special reason. Examples of such exceptions are noted in *Baptisia*, *Berberis aquifolia* and *Cascara Sagrada*. Very little space is devoted to descriptions of the histology or to the microscopical characteristics of the powdered drugs. The illustrations are intended to represent the drugs of commerce. In very few instances pictures of sections as appearing under the microscope are presented.

Many of the minor drugs are treated under their botanical classifications, each of the families containing medicinal plants being discussed in a short chapter. Under Labiatae, the authors have followed the plan of the systematic botanist and present a key for the recognition of the medicinal plants of that family. We are at a loss to understand why the genus *Ceanothus* (family *Rhamnaceae*) should be discussed under *Krameria*.

Some of the mistakes that have crept into the volume may be attributed to the desire to complete the publication at an early date and the acceptance of "advance information" instead of awaiting the positive knowledge obtainable only from the published revisions of the U. S. P. and the N. F. Diluted Metaphosphoric Acid is attributed to the N. F. although deleted from that work. The transfer of *Vanilla* to the N. F. is not noted and *Arnica Root*, *Cetraria* and *Thea* are wrongly credited to the N. F. The transfer of *Conium* from the U. S. P. to the N. F. is recognized in the title, but the assay process of the U. S. P. VIII is given instead of the present legal method of the N. F. IV. The statement is made that the N. F. requirement for *Rennin* is that "it should be capable of coagulating not less than 12,500 times its weight of normal fresh cow's milk," which is just one-half of the N. F. standard.

It is in the pharmacy and chemistry of the volume that we are compelled to note much that is faulty. The errors of omission and commission are too numerous to enumerate in detail within the limits of this review, and these are very largely traceable to the unexplainable ignoring of the fourth edition of the National Formulary. Since twenty-nine pages have been devoted to the consideration of the Federal Food and Drugs Act of June 30, 1906, the Rules and Regulations for

its enforcement and the Food Inspection Decisions thereunder, the authors cannot be unaware of the fact that Sections 6 and 7 of that Act specifically name the National Formulary as one of the two legal authorities of equal standing for prescribing the standards for drugs.

The United States Pharmacopoeia IX fully recognizes the equal authority of the National Formulary under the law. A drug or a preparation transferred from the U. S. P. to the N. F. must comply with the latter authority and changes made in the standard or formula must be complied with. It is surprising to note the numerous instances where the revised National Standard Dispensatory has failed to recognize this principle and the changes made.

Acetum Aromaticum N. F. is ignored and the formula of the German Pharmacopoeia is given. *Acetum Opii* N. F. is not mentioned. *Acidum Formicicum* of the German Pharmacopoeia is described and its tests translated, but the legal standard of the N. F. for *Acidum Formicicum* and for the spirit of same is ignored. For *Acetic Ether* the definition of the British Pharmacopoeia and the tests laid down in the German and British Pharmacopoeias are given and the legal standard and tests for identity and purity laid down in the N. F. is not referred to. *Bromauric Acid* and *Ammonium Hypophosphite* and *Calcium Lactophosphate*, all N. F., are nowhere mentioned. The *Aluminum Chloride* and *Aluminum Sulphate* described are not the legal standards of the N. F. The *Ammonium Phosphate* described is not that standardized in the N. F. While *Antimony Oxide* N. F. is the title, the tests and assay of the N. F. are omitted. *Antimonii Sulphuratum* is the British Pharmacopoeia standard and not the N. F. The standard stated for *Bromine* varies from that of the N. F.

That *Cataplasm of Kaolin* and *Cerate of Lead Subacetate* are now N. F. formulas and that changes have been made in these appear not to have been observed. For *Confection of Rose* and *Confection of Senna*, the formulas of the British Pharmacopoeia are given and not the legal formulas of the N. F. despite the fact that these formulas were transferred from the U. S. P. and that the latter varies in composition from that of the British Pharmacopoeia.

The National Formulary contains formulas for nearly eighty elixirs, many of which are

exceedingly popular and daily prescribed and some of these assuredly deserve some consideration in an encyclopedic commentary on "substances used in pharmacy and medicine at the present day." Only three elixirs are considered under these titles, namely, the U. S. P. Aromatic Elixir and Elixir Glycyrrhizae and the German pharmacopoeial formula for Compound Elixir of Bitter Orange. In the latter, no reference is made to the fact that the N. F. has a formula under this title and varying somewhat from that of the German.

The Emplastra, Emulsa and Extracta of the N. F. receive no better treatment than that accorded the elixirs.

The National Formulary IV supplies the legal standards for ninety fluidextracts, thirty-one of these titles having been transferred from the U. S. P. VIII. Of this entire group, only a few are even incidentally mentioned. It is certainly more important to place before the reader and student, either medical or pharmaceutical, information concerning the legal standards for fluidextracts used in American practice, such as those of Berberis, Cotton Root, Echinacea, Valerian, Zea, etc., than to present formulas from the foreign pharmacopoeias that are little known or used here, such as the fluidextracts of Belae and Picrorhizae. It is misleading to give the formulas of the German, French and Swiss pharmacopoeias for Fluidextract of Condurango and not mention that the N. F. supplies the official American standard and that this legal formula directs a different menstruum.

The fact that the N. F. has supplied legal standards for Saccharated Iron Oxide, Iron Glycerophosphate, Iron Hypophosphite, Iron Lactate, Iron Pyrophosphate, Lithium Salicylate, Manganese Citrate Soluble, Manganese Sulphate, Oils of Orange Flower, Bitter Orange, Bergamot, and Sherry Wine, is overlooked along with a host of similar oversights. We are pleased to note that N. F. is added to the title of Oil of Bay, but for some reason the statements of the physical characters of the N. F. are deviated from. The Swiss Pharmacopoeia is quoted in Empyreumatic Oil of Birch and the legal standard for Rectified Oil of Birch Tar N. F. is ignored.

We find the British formulas for glycerites of alum and borax, but one looks in vain for the formula for Glycerite of Bismuth N. F. The Glycerite of Pepsin of the Br. P. has first place although the text admits that the N. F. preparation is "slightly stronger in digestive power."

Antiseptic Solution, Alkaline Antiseptic Solution, Dobell's Solution, Clemen's Arsenic Solution, Solution of Gold and Arsenic Bromides, all popular N. F. formulas are omitted.

The statement that the N. F. directs that infused oils be made with "a mixture of lard oil and cotton seed oil" is incorrect as the N. F. now directs sesame oil for that purpose.

In the Tinctures, we find that very few of the N. F. titles are mentioned and as a result such tinctures as Bryonia, Cactus Grandiflora, Capsicum and Myrrh, Cocculus Indicus, Larkspur, Ferri Citro-Chloride, Ignatia, etc., are not discussed and important information that should be presented on nearly fifty, more or less used preparations of this important class of galenicals, is omitted.

The treatment of the other important groups of preparations such as Pills, Syrups, Wines, Troches and Ointments, is similar to that accorded to the fluidextracts and tinctures.

Presumably, this dispensatory was prepared for the use and guidance of American practitioners and not especially for those of foreign lands. Yet, singularly, its abstracts and comments on the formulas and standards of the foreign pharmacopoeias are, as a rule, quite accurate, while, as necessarily pointed out, its ignoring, at times, of American standards and its numerous inaccuracies in the statements regarding these must detract very materially from its value. The value of such commentaries depends entirely on the correctness of the information they attempt to impart. If the information is erroneous or misleading, as occurs in many instances in the present volume, it becomes not only a misleading guide, but also one that would prove dangerous because of the fallacies in the practice of pharmacy and the false standards it may inculcate. Another revision of this third edition should be promptly made so as to correct the numerous errors, types of which have been pointed out.

G. M. B.