

two countries in the civilized world which are not metric are the British Empire and the United States; yet even British and American measures are not the same. For instance, our quart is 20 per cent smaller than the British quart. For that reason, in exporting

to Canada special markings of goods is sometimes necessary, since Canada refuses to allow the importation of goods in containers marked in pints or quarts or gallons. Such liquid exports to Canada must be labeled according to weight.

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## BOOK NOTICES AND REVIEWS.

*The Effects of Ions in Colloidal Systems.* By Dr. Leonor Michaelis, University of Berlin; at present Professor of Biochemistry at the Aichi Medical University in Nagoya, Japan. Published by Williams and Wilkins Company, Baltimore, Md., 1925. Price \$2.50.

In this short monograph Michaelis discusses the parts played by ions in the various phenomena exhibited by colloidal systems. He explains the various modes of formation of the double layer: appositional adsorption, dissociation of the colloid, and a group in which neither of these causes accounts for the charge. In this last group comes charcoal, to which a chapter is devoted. The Donnan equilibrium is also taken up as a means of explaining the formation of a surface potential. This is followed by a discussion of the discharge of the particles in adsorption and flocculation. The last two chapters are devoted to the effects of electrolytes on the swelling of agar and kon-yaku, and a brief description of some "antagonism" phenomena in mixtures of electrolytes.

In this not too comprehensive discussion of some of the more important effects of ions on the behavior of colloidal systems, the author has pointed out the necessity of a study of these phenomena as a means of interpreting biological changes in terms of the laws of chemistry and physics. The work is up-to-date and of special interest to biologists.

F. P. NABENHAUER.

*Parry's Cyclopaedia of Perfumery.* A Handbook on the raw materials used by the Perfumer, their origin, properties, characters and analysis; and on other subjects of theoretical and scientific interest to the User of Perfume Materials, and to those who have to examine and value such materials. By Ernest J. Parry, B.Sc., F.I.C., F.C.S. Two Volumes. Price, \$10.00. Philadelphia: P. Blakiston's Son & Co. 1925.

The author states that the need for a scien-

tific work of reference devoted to perfumery and its raw materials has long been felt. He has very successfully supplied the want; formulas for finished perfumes are not dealt with—the reasons assigned are that really good formulas are rarely published and the best of these are merely an index to the perfumer.

As far as the subject matter is concerned the author has given comprehensive information; for example, about thirty pages deal with oil of lavender. About the same number of pages are devoted to "Perfume in the Plant." Under this head the author speaks of the genesis and functions of perfumes in plants, admitting, of course, that this branch of physiological botany is still but little understood. A paragraph of this discussion will be of interest.

"Whilst it may be true that the essential oils which constitute the perfume material of plants are, so to speak, by-products of the metabolic processes of cell life, and as such to be classed with alkaloids, tannins, and coloring matters, it is impossible to overlook the enormous importance of the perfume in the plant economy in attracting insects for the purpose of fertilizing the flower. It is, of course, true that some flowers are odorless whilst the green leaves are highly odorous—as in the geranium; and also that the essential oil is frequently to be found in almost all parts of the plant, including the root. But in the former case the insect will be attracted by the perfume of the leaf, and so brought within range of the colored flower which he will then visit; and in the latter case, it may frequently be that the oil is being manufactured by steps in the plant, and its presence in parts of the plant remote from the flower merely indicates one of the steps of its evolution, since the oils from different parts of the same plant are usually different in character."

The materials are treated in alphabetical order in about 900 pages; as indicated, some of the subjects are discussed at length, others are dismissed with a few lines only, according

to their importance in the perfume industry. The work displaces other books, because great progress has been made in the industry; it will, accordingly, be welcomed by manufacturers of perfumes, dealers in such materials and scientists, and as a reference book in libraries of manufacturers, universities and technical institutions.

E. G. E.

*Vorschriften-Buch für Apotheker, Drogisten, Chemische Fabriken und Verwandte Gewerbebetriebe.* Von Karl F. Töllner. 2. Auflage. Octavo 158 pp. \$1.11. Leipzig, Dr. Max Janecke, Verlagsbuchhandlung.

Many are the books on pharmaceutical and technical formulas, but few, very few, contain reliable and practical receipts. For this very reason the A. PH. A. Receipt Book was created! The book before us was written by a practical manufacturing pharmacist and chemist, Karl F. Töllner in Bremen. It is from the practice for the practice! What a large variety of formulas are included can be seen from the following few titles: Aluminum Solder, Aqua Cerasorum, Arnica Jelly, Balsanum Sulphuris, Blue Ink, Champagne Essence, Dutch Drops, Eau de Gotat, Electurarium Phosphoratum, Erasmus Wilson's Hairwash, Extraits Triples, Fluoroform, Fruit Wines, Glycerin and Cucumber Jelly, Hematogen, Hufland's Snuff, Ichthyol Dusting Powder, Kefir, Lacca Bibliopogonium, Listerine, Macassar Oil, Mel Foeniculi, Oleum Hyperici, Pasta Depilatoria, Powdere de Riz, Pulvis Equorum, Roob Juniperi, Sachets, Syrupus Coffeae, Tinctura Indica, Toiler Vinegar, Ung. Sabadillae, Vaselineum Camphoratum, Vienna Tooth Powder, Ylang Ylang Extract and Zapon Varnish.

What a variety of subjects and formulas! The present, second edition, has been thoroughly revised and brought up-to-date. The author asks for constructive criticism from all users of his work.

*Formulary of the Peking Union Medical College.* Second Edition. P. U. M. C. Press, 1924.

With the compliments of John Cameron, Pharmacist, P. U. M. C., this formula book, comes to us from the antipodes. It contains chiefly a list of drugs and preparations selected as official for use in their hospital. It has been published with the objects in mind, first, to promote the teaching of rational drug therapy within the institution, and second, to secure the greatest degree of economy compatible with the welfare of the patients in the hospital.

It is quite a satisfaction to note that a great

many U. S. P. and N. F. drugs and preparations are included together with our Latin titles and even abbreviations. The metric system is used throughout the Formulary.

*Unsere Heilpflanzen, ihre Geschichte und ihre Stellung in der Volkskunde. Ethnobotanische Streifzuege.* Von Dr. Heinrich Marzell. Mit 38 Abbildungen. Octavo, 240 pp. Gold-Mk 5. Verlag von Theodor Fisher, Freiburg in Breisgau.

The well-known Bavarian author, whose larger work "Illustriertes Kräuterbuch" (Illustrated Herb Book) is a recognized standard on this subject, herewith presents another text on Medicinal Plants, their History and Folklore.

How thorough and deep the author dived into this interesting subject can be seen from the quoted literature which occupies four closely printed pages and includes such old reliable works as, Albertus Magnus: De Vegetabilibus; Otho Brunfels: Contrafayt Kreuterbuch; Dioscorides: De Materia Medica; Ernst Meyer: Geschichte der Botanik; Plinius Sicundus: Naturalis Historia; Theophrastus; Historia Plantarum; A. Tschirch: Handbuch der Pharmakognosie; H. Zornig: Arzneidrogen.

The monograph on *Aspidium* occupies 9 pages and its origin and history is traced back to the "Pteris of Dioscorides." The one on *Hyoscyamus* comprises 6 pages and contains a mine of historical notes, tracing the plant back to Babylonia, India and China. The subject of *folklore* is highly interesting and was carefully compiled from references throughout the world. The book is adorned with 38 illustrations which are reproductions of drawings of plants by such old, reliable botanists as Fuchs, Tragus, Brunfels, etc.

This is a highly interesting book! Pharmacists and students who wish to become better acquainted with the history of drugs, a valuable asset to their education, as well as their commercial life, will do well to consult the work, quite especially as its statements are authentic.

OTTO RAUBENHEIMER, PH.M.

*Adulteration of Drugs.* A reprint of an article in *Archiv der Pharmazie und Berichte der Deutschen Pharmazeutischen Gesellschaft.* By Prof. Dr. H. Zörnig. Nearly 100 drugs are reported on. Not only does the author present his investigations but cites a valuable list of references. The author's usual careful investigation is evident throughout.