

tal principle of limiting the production of opium and coca leaf, she will at least back England in the efforts to limit manufacture. Edwin Neville, the American delegate, was not present at a recent private meeting of the experts. Another meeting of the delegates will be held in August in collaboration with the league of nations permanent advisory commission on opium.

THE CRAMTON BILL.

As is generally known the Cramton Bill passed the House and is now on the Senate calendar, therefore, the duty of pharmacists is clear—namely, to voice opposition to the bill in every possible way that promises results. Surely, the Senators should be impressed with the general opposition of the drug industries, and also the Congressmen. And at the proper time, when the next Congress assembles, the press should learn of the general opposition of the drug trade to the measure. State and local associations should take up the matter again, before Congress convenes, so that other efforts may be strongly reinforced by these organizations.

REVIEW OF PROHIBITION ENFORCEMENT.

In a report by Federal Prohibition Commissioner Haynes prohibition enforcement of the past three years is reviewed. A gratifying statement of the report reads:

"One of the most effective measures adopted by the present administration in keeping control of sales of liquor and preventing the forcing of business in liquors was the adoption of a rule to the effect that wholesale druggists will be permitted to procure and sell potable spirits not to exceed an amount equal to ten per cent. of their wholesale drug business during the preceding year. The result of this rule has been to place the wholesale business in liquors in the hands of entirely responsible and reliable druggists, and the majority of the wholesale druggists agree that it is a necessary and salutary measure."

ISOPROPYL ALCOHOL STANDARD.

The Internal Revenue Bureau has announced that the specific gravity of isopropyl alcohol "shall not be more than 0.8224 at 60/60 degrees F.," amending the specification of isopropyl alcohol used as one of the denaturants in several denatured alcohols.

MARYLAND POISON LAW PROSECUTIONS.

Robert L. Swain, deputy food and drug commissioner of the Maryland State Health Department, is looking after Poison Law violators among grocers and general store owners—the law requires that poisons must be sold in original packages, labeled to indicate the manufacturer's name, and records of sales must be kept.

BOOK NOTICES AND REVIEWS.

Kohlenhydrate bearbeitet von Prof. Dr. Geza Zemplen in Budapest und Dr. ing. F. F. Nord in Berlin. Allgemeine und spezielle Methoden zu inrem Nachweis in qualitativer und quantitativer Beziehung. Ihre Isolierung, Aufbau- und Abbaueversuche. 3 Vol. Lexicon. 1101 pp. Urban and Schwarzenberg, Berlin N. 24 and Wien I.

These three volumes constitute Part 5 of the Chemical Methods of that monumental, classic work, "*Handbuch der biologischen Arbeitsmethoden*," by Geh. Med. Rat Prof. Dr. Emil Abderhalden, Director of the Physiological Institute of the University Halle, with the coöperation of about 500 eminent specialists. The University of Halle (est. July 12, 1694) was first made famous by one of its native sons, Dr. Friedrich Hoffmann (1660-1742), professor

of medicine and court physician to King Frederick the Great. Hoffman's name will continue to live in pharmacy and medicine through his Liqueur anodynus mineralis, our present Hoffmann's Drops. The fame of Halle continues with such an eminent authority as Dr. Emil Abderhalden in the chair of physiology. In spite of numerous splendid offers of larger universities, this scholar adheres to Halle and has obtained excellent results in the investigation of metabolism and foodstuffs.

Among his many literary achievements the *Handbuch der biologischen Arbeitsmethoden*, of which he is the editor-in-chief, is unquestionably his master work as can be readily seen from the following outline of the chapter headings: I, Chemical Methods; II, Physical Methods; III, Physical-Chemical Methods; IV, Applied Chem-

ical and Physical Methods; V, Applied Chemical, Physical, Physical-Chemical and Biological Methods; VI, Methods in Experimental Psychology; VII, Methods in Comparative Morphological Research; VIII, Methods in Experimental Morphological Pathology; IX, Methods Applied in Animal Metabolism; X, Methods in Geology, Mineralogy, Palaeobiology and Geography; XI, Methods Applied in Plant Organism; XII, Methods Applied in Uni-cellular Organism; XIII, Methods in Experimental Therapy. It is, of course, understood that each part is again properly divided into subdivisions.

What a variety of subjects! What a comprehensive and systematic arrangement! What a master-work! Truly a credit to the German scholar and his assistants and also to the firm which undertook the publication of such a colossal work! The author states in the preface that the work is a document showing the status of the entire biological sciences at the present time. And right he is, as the work is a practical handbook and an authoritative reference book.

The work before us is entitled, "Carbohydrates. General and Special Methods of Qualitative and Quantitative Analysis. Their Isolation, Synthesis and Analysis." The actual scope of the master-work may be indicated by the following chief chapter headings: Constitution, Classification, General Analytical Methods, Special Analytical Methods, Qualitative and Quantitative Analysis, Manufacture of Natural Carbohydrates, Glucosides and Pentosides, General and Special Methods of Synthesis of Carbohydrates and Glucosides, Bio-chemical Synthesis of Glucosides, Manufacture of Intermediates, Chemical and Biological Methods, Physical and Chemical Properties of Carbohydrates, Glucosides and Pentosides, Glucuronic Acid and Derivatives.

It is a collection of the very best methods of analysis and manufacture, the inferior ones not being mentioned. In this way the work is a real work book, a true handbook. Under the Reduction Methods for Carbohydrates the following are given: Method of Soxhlet and of Kjeldahl, Gravimetric Method of Allihn, Volumetric Method of Bertrand, Titration Method of Pavy and of Bang. The method of Benedict, much used in the United States, has been totally ignored, very likely because it does not possess any superiority. It is

to be regretted that in a number of instances the old title "hydrat" is used in place of the newer proper title "hydroxid" for NaOH, etc. In Vol. 1, pp. 302 and 303, a very simple method is given for the preparation of C. P. Saccharose.

In the chapter on the manufacture of Digitalis Glucosides, 28 pages are devoted to this subject and much-needed light is thrown on these confusing chemicals. The chapter deals with: Qualitative and Quantitative Analysis, Digitalinum verum, Digitalein, Gitalin, Anhydrogitalin, Digitoxin, Schmieberg and Cloëtta, Digitan, Digitophyllin, Digitonin, Gitin and Digin.

Most of the space in Volume III is given up to the description of the Physical and Chemical Properties of Carbohydrates and Glucosides. This chapter is of immense value, not only to the research worker but also to the chemist and dispensing pharmacist. Here again an attempt is made and successfully made to clear up the existing confusion in the Digitalis Glucosides and the following are accurately described physically and chemically: Digitonin Kiliani, Digitonin Schmieberg, Digitsaponin Kraft, Gitin, Digin, Digitophyllin, Digitoxin, Digitalinum verum, Digitalein, Gitonin, and Gitalin or Pseudodigitoxin.

It is perhaps needless to mention that the Handbook, as customary in a scientific book of this type, contains a tremendous number of bibliographic references in the form of footnotes. On p. 1017 under Amygdalin as many as fifteen are enumerated. The literature of the entire world has been consulted and I might mention that the United States has not been forgotten. It is a pleasure to note that among the many investigators the world over we also find a loyal member of the A. Ph. A., namely, Frederick Belding Power, quoted on p. 302 under Preparation of Dibenzoylglycoxylose.

The book before us is a master-work and above all a practical handbook. It should be used by investigators and research workers in all the different parts of the entire world. What has been needed for a long while, Abderhalden has collected and tabulated admirably. He has brought together in one, or better in three volumes, the cream of the entire subject "Carbohydrates." He has created a work which is a library in itself.

OTTO RAUBENHEIMER, PH.M.