

golian. The author does not mean to imply that our Indians are strictly Mongolians, or that America has been populated from Asia, for he says "the American race is, somatologically speaking, not a type, but has characteristics which can only be called Mongoloid."

F. W. HODGE.

Washington City.

Laboratory Calculation and Specific-Gravity Tables. By JOHN S. ADRIANCE, A.M. Second edition. New York, John Wiley & Sons. Interleaved. 114 p.

IN some respects the author has in this second edition given us a new book, having enlarged the original tables and added others of importance. This increase of substance has, too, a value of its own in works such as these, being of far greater importance here than similar additions in general and descriptive works, for not only is the reputation of a book of tables based upon the accuracy of the figures, but also largely upon its completeness. We have all relied more or less upon like works for aid in laboratory calculations, and yet when certain data are found absent, how soon the book will fall into disuse entirely and make its way to the top shelves! Mr. Adriance, however, himself a consulting chemist and fully alive to the necessities of the case, has chosen not only such tables as are in constant use, but also those of frequent or less frequent need, covering extraordinarily well the field of ordinary chemical analysis. Such a work as this is of true assistance, and despite the claim urged by some chemists as to the possible introduction of error when using "ready-made results," we believe the chance of error to be greater when these same results have to be calculated under the strain of physical fatigue, following a long day or night of analytical or experimental work. Naturally all tables of factors, and all data of this kind, should be proven in moments of leisure, and in important cases, notably those involving legal testimony, they should be thrown aside altogether; but for daily use in the laboratory, they are invaluable in the saving of time and mental labor. Not only is the substance of the book "good," but in appearance it is neatness itself, each word and figure is clear-cut and distinct, an element highly important in tabular statements. The book is interleaved

and ample opportunity thus given the chemist for additions and remarks.

C. P.

Chemical Theory for Beginners. By LEONARD DOBBIN, Ph.D., and JAMES WALKER, Ph.D., D. Sc., Assistants in the Chemistry Department, University of Edinburgh. London and New York, Macmillan and Co., 1892. 240 p.

Of the vast number of text-books bearing upon chemistry, we have but few treating of its foundation or theory. The smaller works merely touch upon theoretical discussion, while the larger treatises presuppose an extensive knowledge of the same. It is then a fact that only those students with the advantages of able instruction and scientific associations arrive at a really clear understanding of the ground-work of chemical notation, reaction and law. "Students enter the laboratory at once," is a familiar phrase in many college announcements, and there are excellent arguments for such a custom, provided a thorough study of theory accompanies the practical demonstration. More often, however, in general science courses the theory is disposed of in one or two brief lectures, all effort being concentrated upon a rapid advance into the field of "the elements, their compounds, their characteristics and reactions."

The above work is, we believe, rather unfortunately named, for while it will be easily understood by a beginner, and is a most excellent book for such a one, still it can and will be read advantageously by many advanced students and practical chemists. The wording is smooth and attractive, always interesting, never fatiguing; the student is carried forward, by an easy and natural progression, from the nature of things to a study of chemical action, of combustion, the laws of Boyle, Charles, and Avogadro, of density and of the atomic weights. Chemical notation is not reached until the 12th chapter, where, with the knowledge already gained, its discussion is of value and intelligible to the beginner. The later chapters contain an entirely non-mathematical exposition of the more important principles of general chemistry reviewed in the light of recent research, treating of the kinetic molecular theory, mass action, solution, electrolysis equivalence, the periodic law, etc.

C. P.

Delicious Drink.

Horsford's Acid Phosphate

with water and sugar only, makes a delicious, healthful and invigorating drink.

Allays the thirst, aids digestion, and relieves the lassitude so common in midsummer.

Dr. M. H. Henry, New York, says: "When completely tired out by prolonged wakefulness and overwork, it is of the greatest value to me. As a beverage it possesses charms beyond anything I know of in the form of medicine."

Descriptive pamphlet free.

Rumford Chemical Works, Providence, R. I.

Beware of Substitutes and Imitations.

Exchanges.

[Free of charge to all, if of satisfactory character. Address N. D. C. Hodges, 874 Broadway, New York.]

For sale at low price.—A fine old-fashioned photographic camera, rosewood box, one foot square, lenses, four inches diameter, made by C. C. Harrison. Plateholders, troughs, baths, etc., all in large wooden case, formerly the property of the late President Moore, of Columbia College. This is a fine example of an instrument of the best make for the old wet-process methods, and valuable to any institution or amateur interested in the history of photography in the U. S. Address M. S. Daniel, 286 W. 4th St., New York.

I wish to exchange a collection of 7,000 shells, 1001 species and varieties, American and foreign, land, fluviatile and marine, for a good microscope and accessories. Address, with particulars, Dr. Lorenzo G. Yates, Santa Barbara, California.

For exchange.—I wish to exchange Lepidoptera of South Dakota and other sections, for Lepidoptera of the world. Will purchase species of North America. Correspondence solicited, particularly with collectors in the Rocky Mountains, Pacific coast and Hudson's Bay regions. P. C. Truman, Volga, Brookings county, South Dakota.

For sale.—Wheatstone Bridge wire, made to order, new and unused. Price, \$10. W. A. Kobbe, Fortress Monroe, Va.

For sale or exchange.—One latest complete edition of Watt's Dictionary of Chemistry, in fair condition; one thirty volume edition (9th) of Allen's Encyclopedia Britannica, almost new. Will sell cheap for cash or will exchange for physical or chemical apparatus. Address Prof. W. S. Leavenworth, Ripon College, Ripon, Wis.

Exchange.—One celestial, one terrestrial globe, one lunatellis and charts, celestial maps, diagrams and ephemeris from 1830 to 1893, astronomical works, all in good condition. Will sell cheap or exchange. Make offer. C. H. Van Dorn, 79 Nassau St., New York.

The Rev. A. C. Waghorne, New Harbor, Newfoundland, wishes to sell collections of Newfoundland and Labrador plants, all named by competent botanists. He is going on a missionary journey along the Labrador coast, from the middle of July till October, and in return for much needed aid towards (Episcopal) Church purposes in that region, will be glad to be of service to any botanists who may write to him. Letters posted in the U. S. up to July 1 will reach him at the above address, and if posted later will be forwarded.

Wants.

A GRADUATE of an American Polytechnic institution and of a German university (Göttingen), seeks a position to teach chemistry in a college or similar institution. Five years' experience in teaching chemistry. Address Chemist, 757 Cary St., Brockton, Mass.

A N experienced teacher in general biology wishes a position in a first-class college or university. Three years in post-graduate study. Extensive experience. Strong endorsements. Address E. W. Doran, Ph.D., 1327 G St., N. W., Washington, D. C.

THREE teachers wanted for a male and female seminary in central New York. Typewriting, etc., languages, mathematics, sciences, *et al.* Send stamp with and for particulars. Box 701, Hempstead, L. I.

A ZOOLOGICAL collector and taxidermist of ten years' experience in the field is now open to engagement, for either field or laboratory work. References furnished. Address Taxidermist, Box 75, White Sulphur Springs, West Va.

WANTED.—A set of Allen's Commercial Organic Analysis, 4 vols. Vols. I. and II. particularly desired. Condition not important, all leaves being present and in place. Address Charles Platt, 34 Lewis Block, Buffalo.

WANTED, as principal of a flourishing technical school, a gentleman of education and experience who will be capable of supervising both mechanical and common school instruction. Special familiarity with some technical branch desirable. Address, giving age, qualifications, etc., J. B. Bloomington, Fifty-ninth street and Third avenue, N. Y.

WANTED.—A young man as assistant in our microscopical department. Queen & Co., Philadelphia.

THE undersigned desires specimens of North American Gallinae in the flesh for the study of their ptyriosis. These species are especially desired: *Colinus ridgwayi*, *perdix montezumae*, *deudragapus franklini*, *lagopus velchi*, *tympanuchus cupido* and *pedicocetes phasianellus*. Any persons having alcoholic specimens which they are willing to loan or who can obtain specimens of any of the above are requested to communicate with Hubert Lyman Clark, 3923 Fifth Avenue, Pittsburgh, Pa.