

summer it occurred to me to verify his conclusions.

In the Anthropological Building was a large collection of "totem poles," carved implements, and drawn figures from Alaska, also from California, Mexico, Central America, and Peru, as well as from other parts of the Americas. In many places Japan was largely represented.

There is a most striking difference between the arts of the western coast and the interior of America. They have something of the grotesqueness of Japan, but not much other likeness. They are akin to those of ancient Mexico, and would indicate that the arts and the people of the western coast were of like origin; that the "totems" and other figures of Alaska and Vancouver are survivals of the arts of Central America and ancient Mexico.

P. J. FARNSWORTH.

Clinton, Iowa, Nov. 12, 1893.

ON THE SYSTEMATIC POSITION OF THE DIPTERA.

As a student of diptera, I have been interested in the recent letters by Professors Packard, Smith and Riley in *Science*, on the systematic position of this order of insects, and wish to express my entire concurrence in the views presented by these gentlemen. That the diptera, or some of them, are the most specialized of insects—that they depart most from the primitive type of insects—seems to be almost without argument; but that they therefore hold the highest position among insects by no means follows. Even the advocates of the supreme rank of the order have never ventured to carry their conclusions to the logical ultimatum, and give to the sheep-tick, or, better yet, the wingless, eyeless bat-tick, the highest rank. That the bat-tick is the most specialized among diptera admits of no question; that it is one of the most degraded of flies is equally certain. The whale and the bat are more highly specialized animals than is the dog; but, nevertheless, they have a very inferior rank.

I have collected flies for years, and have necessarily observed their habits somewhat closely, but I have never

seen anything in them that might be called intelligence. Man's claims to preëminence in the animal kingdom rest almost wholly upon his intelligence: for the same reason, preëminence among insects must be conceded to the hymenoptera.

S. W. WILLISTON.

BOOK-REVIEWS.

Lecons de Chimie, a l'usage des Eleves de Mathematiques speciales. Par HENRI GAUTIER, ET GEORGES CHARPY. Paris, Gauthier-Villars et fils, Quai des Grands-Augustins 55 471p., Ill., 1892, 9Fr.

WE take pleasure in announcing to students of chemistry in this country the above able work of MM. Gautier and Charpy, which while designed, according to its title, particularly for students of mathematics is of highest interest to all chemists. The title is misleading to American readers as the book is in no sense a volume of difficult and complex mathematical theories as one might suppose but an extraordinarily clear exposition of the ground work or base of chemical science, mathematical in its exact and succinct statements. It is not wished to imply that chemists should avoid mathematical because they are such even though they may deal with chemical theory, but it is nevertheless a fact that the mathematical training in many of our colleges (we speak of special courses in chemistry) has been pushed to the wall. There is a reason for this, a doubtful one however, in the shortness of the collegiate course which necessarily prevents more than an introductory knowledge of chemistry even when this subject is taken alone. The main difficulty rests in the confusion of college and university and in the effort to complete one's education in the four years following the "high school" graduation.

The authors aim to present the subject to students, not as a mass of facts and recipes, but as a science which while it may be as yet more or less imperfect is already far advanced in definite form. This is particularly the purpose of the first part of the book, which deals

SOFTLY STEALS THE LIGHT OF DAY

when filtered through windows covered with

CRYSTOGRAPHS,

a substitute for Stained Glass that is inexpensive, beautiful, and easily applied.

80c. per square foot. Samples and catalogue, 10c.

CRYSTOGRAPH CO.,

316 North Broad St., Philadelphia.

THE

PSYCHIC FACTORS OF CIVILIZATION

By LESTER F. WARD.

AUTHOR OF "DYNAMIC SOCIOLOGY."

8vo. Cloth. xxi 369 pages. By mail, postpaid, \$2.00.

THIS work is an original contribution to both psychology and sociology, and is, in fact, a combination of these two departments of science. It is the first attempt that has been made to show in a systematic and fundamental way the workings of mind in social phenomena. It has hitherto been customary with those who recognize the operations of law in human affairs to compare them with the taking place under the dominion of vital forces. Sociology has been made a department of biology. Society has been treated as a living organism, and the laws of production, distribution, and consumption have been likened to the processes of nutrition, circulation, and assimilation. Political economy has thus gained the name of "the dismal science" because it has been treated as mindless and soulless. Over against this purely physiological economy we now have fully set forth in this book a psychological economy, a philosophy of mind as the primary motive power of the world in all things above the level of animal life.

N. D. C. HODGES, 874 Broadway, New York.

PISO'S CURE FOR
CURES WHERE ALL ELSE FAILS.
Best Cough Syrup. Tastes Good. Use in time. Sold by druggists.
CONSUMPTION

ABOUT
MAGIC LANTERNS
ASK US
WE MAKE THEM.
J. B. COLT & CO.
16 BEEKMAN ST. 189 LA SALLE ST.
NEW YORK CHICAGO, ILL.

BUILDING BOOKS.

DRAWING INSTRUMENTS.

1893 Catalogue

of Books on Building, Painting, and Decorating, also Catalogue of Drawing Instruments and Materials, sent free on application to

Wm. T. Comstock,
23 Warren St., New York.

TEN BOOKS FOR PRICE OF ONE SEND FOR A CATALOGUE OF THE HUMBOLDT LIBRARY OF SCIENCE.

Containing the works of the foremost scientific writers of the age.—The Great Classics of Modern Thought.—Strong meat for them that are of full age. Single numbers 15 cents. Double numbers 30 cents. Address:—THE HUMBOLDT PUBLISHING CO., 19 Astor Place, New York.

Every reader of "Science" should subscribe for the

AMERICAN ARCHITECT, THE OLDEST AND BEST

Architectural publication in the country. Interesting articles on architecture, Sanitation, Archaeology, Decoration, etc., by the ablest writers. Richly illustrated. Issued weekly. Send stamp for specimen copy to the publishers,

Ticknor & Co., 211 Tremont St., Boston.

THE AMERICAN RACE.

By DANIEL G. BRINTON, M.D.

"The book is one of unusual interest and value."—*Inter Ocean.*

"Dr. Daniel G. Brinton writes as the acknowledged authority of the subject."—*Philadelphia Press.*

"The work will be of genuine value to all who wish to know the substance of what has been found out about the indigenous Americans."—*Nature.*

"A masterly discussion, and an example of the successful education of the powers of observation."—*Philadelphia Ledger.*

Price, postpaid, \$2.

N. D. C. HODGES,

874 BROADWAY, NEW YORK.

with generalities and seeks to separate facts from principles acquired by hypothetical speculations as well as to define precisely the meaning of terms employed. A methodical and rapid presentment is made of the laws of combination, of chemical equivalence, the atomic theory, of crystallographic laws, and of thermo-chemistry. It is shown that the atomic theory, a beautiful structure in itself, might still be done away with without in any degree undermining the laws of chemical equivalents. Great pains have been taken with the second part of the book, which deals with the metalloids as is evidenced in the exactness of the facts recorded. Original memoirs have in each case been consulted and when there has been doubt or contradiction the authors have verified their decision by actual experiment. So also with those portions treating of industrial chemical processes, modern and practical usage have alone been given passing over former processes in a few words as of historic interest only. This is a relief from the custom of many authors who through lamentable ignorance deceive the student with descriptions of processes as impossible as they are false. In short the features of the work are, an eminently successful departure from accepted notions of chemical text-books, a suppression of old and hoary errors which have descended through these same text-books from our ancestors to the present day, new methods of treatment and new illustrations. Some of the French scientific periodicals have predicted for the "Lecons de Chimie" "a place among the classics which will be as lasting as it is well merited" and such praise we feel confident will be accorded by all who peruse the work.

CHARLES PLATT.

NOTES AND NEWS.

ACCORDING to the State Board of Health of Michigan, the statistics of sickness have demonstrated the law that generally influenza (la grippe) is quantitatively related to the atmospheric ozone—the more ozone the more influenza; and the law that remittent fever is inversely related—the more ozone the less remittent fever. The unusual amount of ozone, the increase of influenza and the falling off of remittent fever shown in the State Board of Health Bulletin for the week ending November 18 illustrate these general laws.

—Bulletin No. 48 of the National Museum contains the collected writings upon Myriapods by the late Chas. H. Bollman. The volume is edited by Dr. Underwood, who also contributes an excellent list of the literature of the N. A. species. The writings of Mr. Bollman are given in their order as published in *Entomologica Americana*, Proc. of United States National Museum, and other publications, and include also many articles which were ready for the printer at the time of Mr. Bollman's death. These latter will be especially valuable to the student of N. A. Myriapods, as they include articles upon the "Classification of the Myriapoda" and a catalogue of the N. A. species. Mr. Bollman described sixty-five species new to N. A., nearly all of which will stand, and when we consider that he was not yet twenty-one years of age at the time of his death we can but regret that he was not spared for further work. The volume just published by the Museum is by far the best work on N. A. Myriapods that has appeared since Wood's paper in 1865.

Indigestion

Horsford's Acid Phosphate

Is the most effective and agreeable remedy in existence for preventing indigestion, and relieving those diseases arising from a disordered stomach.

Dr. W. W. Gardner, Springfield, Mass., says, "I value it as an excellent preventative of indigestion, and a pleasant acidulated drink when properly diluted with water, and sweetened."

Descriptive pamphlet free on application to
RUMFORD CHEMICAL WORKS, PROVIDENCE, R. I.
Beware of Substitutes and Imitations.

For sale by all Druggists.

EXCHANGES.

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

For Sale.—A very fine telescope, length extended, twenty-five inches, closed, seven inches. Power twenty-five times. Good as new. Cost \$25.00. Will sell for the best cash offer. B. S. Bowditch, Box 165, Phelps, N. Y.

For Sale or Exchange for last editions of Standard Works on Vegetable Anatomy or Physiology: Practical Zoology, Marshall & Hurst; Elements of Embryology, Foster & Balfour; Zoology, Macalister; Guide to the Study of Insects, Packard; Geological Studies and Shall We Teach Geology, Winchell. Also have duplicates of Experiment Station publications which would like to exchange for any not in my file. L. R. Jones, Burlington, Vt.

For exchange.—Skins of *Aegialites nivosa*, *Ereunetes occidentalis*, *Aunnodramus Ardingi*, *A. rostratus*, *Chamara rasciata henshawi*, etc., for native or foreign skins with full data. Send lists. A. W. Anthony, 2042 Albatross st., San Diego, California.

I have a Beck New National monocular microscope, accessories, microtome, mounting material and a large number of fine slides. Will exchange the whole or in part for a first class type-writer or photograph outfit. A. C. Gruhlke, Waterloo, Ind.

Offered sidebloom eggs of *Bulimus oblongus* and exotic land and freshwater shells in exchange for Helices not in collection. Send lists to G. K. Gude, 5 Gresbach Road, upper Holloway, London, England.

Would like to exchange 100 specimens of Canadian Indian Relics for a photo outfit. E. J. Waters, 33 Hoffman St., Auburn, N. Y.

Wants.

A GEOLOGIST thoroughly conversant with the geology of the Southern States desires an engagement. Has complete knowledge of the economic geology of Iron, Coal, Lignite, as well as Clay and Kiesel. Five years' experience with Geological Surveys. Address K., 509 West Sixth Street, Austin, Texas.

WANTED.—Tuckerman's Geneva Lichenum and Carpenter on the Microscope, Wiley's Introduction to the Study of Lichens. State price and other particulars. Richard Lees, Brampton, Ont.

WANTED.—Icones Muscorum by W. D. Sullivan, with or without Supplement, but both preferred. Address, stating price and condition of books, Dr. G. N. Best, Rosemont, N. J.

WANTED.—A copy of Mascart & Joubert's Lessons in Electricity and Magnetism, Vol. I. Address R. W. Clawson, Vanderbilt University, Nashville, Tennessee.

CHEMIST.—Graduate of a polytechnical school, and studied photographic chemistry in Germany and Austria. Situation teaching or in analytical or experimental laboratory. M. B. Punnett, Rochester, N. Y.

WANTED.—A recent college graduate to assist in editorial work on Science. Those seeking large emoluments need not apply. N. D. C. Hodges, 874 Broadway, New York.