

the cortical cells are derived from the peritoneal epithelium, as stated by Janosik; and the medullary substance from the sympathetic elements, as described by Professor Mitsukuri.

In these various memoirs the authors express their indebtedness to Professors Mitsukuri, Iijima, and Yatabe for aid and advice. The plates are marvels of beautiful lithography, and the drawings are made with that skill and accuracy which characterize all their work.

*Taxidermy and Zoological Collecting.* By WILLIAM T. HORNADAY. New York, Scribner. 8°. \$2.50.

WHO the author of this work is, is certainly well known to most of the readers of *Science*. For years he has been connected with the National Museum as the chief taxidermist, and for a long time previously he was the taxidermist of a prominent natural science establishment. So it is with regret that we learn that Mr. Hornaday is to retire entirely from taxidermy forever. But associated with the chief author of the book was Dr. W. J. Holland, who supplied the chapters on collecting and preserving insects.

The considerable popular interest in zoölogy, and the great numbers of young naturalists coming forward, give reason to suppose that the book will meet with a considerable demand, especially as there is no other book of equal scope available.

The author urges on those who care for the preservation of specimens of many forms of animal life that they must be up and doing. It is already too late to collect wild specimens of the American bison, California elephant seal, West Indian seal, great auk,

and Labrador duck. Very soon it will be impossible to find walrus, manatee, fur seal, prong-horn antelope, elk, moose, mountain sheep, and mountain goat. Then ducks are being rapidly exterminated for market, and numerous birds for the sake of fashion.

The first part of the book is on collecting and preserving. This is by no means an unimportant part of the whole, occupying nearly one hundred pages, and covers every part of the work of collecting zoological specimens, even to birds' eggs and nests.

Taxidermy is treated in the second part, which occupies one hundred and fifty pages. This opens with an account of the worker's laboratory, and closes with hints as to the most effective ways of "making up" the finished specimen, for they must resort to paint as well as some other faded beauties.

There are then a number of pages devoted to the making of plaster casts. This makes the third part of the book, which is followed by the part (IV.) devoted to osteology, or at least so much of it as can be applied in the collecting and mounting of skeletons.

The closing chapters are on insect collecting, by Dr. Holland. The book is liberally illustrated, credit being given by the author to Mr. Frederick A. Lucas for much assistance in this feature.

#### AMONG THE PUBLISHERS.

THE *Chautauquan* for September presents the following among other articles in its table of contents. "Russia and the Russians," by Mrs. C. R. Corson (illustrated); "The American Association for the Advancement of Science," by Marcus Benjamin; "What

## A SYSTEM OF EASY LETTERING.

By J. H. CROMWELL, Ph.B.

Twenty-six different forms of Alphabets. The space to be lettered is divided into squares, and with these as a guide the different letters are drawn and inked. Price, 50 cents, postpaid.

E. & F. N. SPON, 12 Cortlandt Street, New York.

## OF WHAT USE IS THAT PLANT?

You can find the answer in

## SMITH'S "DICTIONARY OF ECONOMIC PLANTS."

Sent postpaid on receipt of \$2.80. Publisher's price, \$3.50.

### SCIENCE BOOK AGENCY,

47 Lafayette Place, New York

THIRD EDITION.

## THE FAULTS OF SPEECH

BY

A. MELVILLE BELL,

Author of "Visible Speech," etc., etc.

The Faults of Speech is a Self-Corrector and Teacher's Manual, for the removal of all Impediments and Defects of Articulation.

60 Cents.

\* \* Sent postpaid on receipt of price,

N. D. C. HODGES, 47 Lafayette Place, N. Y.

**BOOKS: How to Exchange them for others.** Send a postal to the SCIENCE exchange column (insertion free), stating briefly what you want to exchange. SCIENCE, 47 Lafayette Place, New York.

"The Week, one of the ablest papers on the continent."—*Descriptive America.*

## THE WEEK,

A Canadian Journal of Politics, Literature, Science and Art.

PUBLISHED EVERY FRIDAY.

\$3.00 per Year.

\$1.00 for Four Months.

THE WEEK has entered on its EIGHTH year of publication, greatly improved in every respect, rendering it more worthy the cordial support of every one interested in the maintenance of a first-class literary journal.

The independence in politics and criticism which has characterized THE WEEK ever since its first issue will be rigidly maintained; and unceasing efforts will be made to improve its literary character and increase its attractiveness as a journal for the cultured home. Many new and able writers are now, or have promised to become, contributors to its columns, and the constant aim of the Publisher will be to make THE WEEK fully equal to the best literary journals in Britain and the United States.

As heretofore, PROF. GOLDWIN SMITH will, from time to time, contribute articles. London, Paris, Washington and Montreal letters from accomplished correspondents will appear at regular intervals. Special Ottawa Letters will appear during the sessions of Parliament.

THE WEEK being the same size as "Harper's Weekly," is the largest paper of its class on the continent.

SEND FOR FREE SAMPLE COPY.

C. BLACKETT ROBINSON, Publisher,  
5 Jordan St., Toronto, Canada.

## THE AMERICAN GEOLOGIST FOR 1891 AND BIEN'S NEW ATLAS OF THE METROPOLITAN DISTRICT,

will be given to **New Subscribers** to the GEOLOGIST for \$25.00 (which is the regular price of the Atlas alone), if ordered through the GEOLOGIST.

For other premiums see the GEOLOGIST for Nov., Dec., and Jan. Address

THE GEOLOGICAL PUBLISHING COMPANY,  
Minneapolis, Minn.

## THE BOTANICAL GAZETTE.

A monthly illustrated journal of botany in all its departments.

25 cents a number, \$2.50 a year.

Address PUBLISHERS BOTANICAL GAZETTE,  
Crawfordsville, Ind.

Publications of the University of Pennsylvania.

SERIES IN

## Philology, Literature and Archæology.

Vol. I. now ready.

1. Poetic and Verse Criticism of the Reign of Elizabeth. By Felix E. Schelling, A.M., Assistant Professor of English Literature. \$1.00.
2. A Fragment of the Babylonian "Dibbarra" Epic. By Morris Jastrow, Jr., Ph.D., Professor of Arabic. 60 cents.
3. a. *Ilpés* with the Accusative. b. Note on a Pas, sage in the Antigone. By William A. Lamberton A.M., Professor of the Greek Language and Literature. 50 cents.
4. The Gambling Games of the Chinese in America. Fán tán and Pák kóp piá. By Stewart Culin, Secretary of the Museum of Archæology and Palæontology. 40 cents.

In preparation.

The Terrace at Persepolis. By Morton W. Easton, Ph.D., Professor of Comparative Philology.  
An Aztec Manuscript. By Daniel G. Brinton, M.D., Professor of American Archæology and Linguistics.

A Monograph on the Tempest. By Horace Howard Furness, Ph.D., LL.D.

Recent Archæological Explorations in New Jersey. By Charles C. Abbott, M.D., Curator of the American Collections.

Archæological Notes in Northern Morocco. By Talcott Williams, A.M., Secretary of the Museum of Egyptian Antiquities.

a. On the Aristotelian Dative. b. On a Passage in Aristotle's Rhetoric. By William A. Lamberton, A.M., Professor of the Greek Language and Literature.

A Hebrew Bowl Inscription. By Morris Jastrow, Jr., Ph.D., Professor of Arabic.

The Life and Writings of George Gascoigne. By Felix E. Schelling, A.M., Assistant Professor of English Literature.

The Papers of this Series, prepared by Professors and others connected with the University of Pennsylvania, will take the form of Monographs on the subjects of Philology, Literature, and Archæology, whereof about 200 or 250 pages will form a volume.

The price to subscribers to the Series will be \$1.50 per volume; to others than subscribers, \$2.00 per volume.

Each Monograph, however, is complete in itself, and will be sold separately.

It is the intention of the University to issue these Monographs from time to time as they shall be prepared.

Each author assumes the responsibility of his own contribution.

N. D. C. HODGES,

47 Lafayette Place, New York, N. Y.

**BOOKS: How to get them.** If there is any book or pamphlet that you want, write to the Science Book Agency, 47 Lafayette Place, New York.

Shall the Boy Take Hold of?" by Theodore Temple; "Modern Methods of Social Reform," by Lyman Abbott; "The United States as a Publisher of Scientific Books," by J. Howard Gore; "The Hawaiians," by Professor J. N. Ingram; and "Washington a Literary Centre," by Ellen Hardin Walworth.

— W. B. Harison of 3 East 14th Street, New York, announces the fifth edition of "A Manual of Land Surveying," by F. Hodgman and C. F. R. Bellows. This handy pocket volume of nearly five hundred pages contains, besides an elementary course of practice with instruments, a treatise upon the survey of public and private lands, and is adapted to the use of schools as well as of surveyors.

— D. C. Heath & Co., Boston, will issue this month "Folk and Fairy Tales in French for Young or Old Children," selected and edited, with notes and vocabulary, by Professor E. S. Joynes of the University of South Carolina. The edition will contain a number of favorite fairy tales by Perrault, Mme. d'Aulnoy, etc.,

offering easy and entertaining reading, with notes and vocabulary. They will also issue this month Andersen's "Bilderbuch ohne Bilder," an illustrated edition, with notes and vocabulary, by Dr. Wilhelm Bernhardt.

— Ginn & Co. announce "Talks with Young People about the Wonders of the Heavens," by Sir Robert S. Ball, F.R.S., Royal Astronomer of Ireland, illustrated. This book is based upon two courses of Christmas lectures delivered to children at the Royal Institution, Great Britain, and presents the fundamental facts and ideas of astronomy.

— The recently completed fifth edition of Dr. M. Foster's well-known "Text-Book of Physiology" will be followed at once by the appearance of a sixth and cheaper edition of the work, in parts, carefully revised throughout by the author. The addition of much new matter to this edition of the book will permit of taking out a copyright on the American edition, which is to be published by Macmillan & Co., New York.

## Exhaustion

### Horsford's Acid Phosphate.

The phosphates of the system are consumed with every effort, and exhaustion usually indicates a lack of supply. The Acid Phosphate supplies the phosphates, thereby relieving exhaustion, and increasing the capacity for labor. Pleasant to the taste.

Dr. A. N. KROUT, Van Wert, O., says: "Decidedly beneficial in nervous exhaustion."

Dr. S. T. NEWMAN, St. Louis, Mo., says: "A remedy of great service in many forms of exhaustion."

Descriptive pamphlet free.

Rumford Chemical Works, Providence, R. I.

Beware of Substitutes and Imitations.

**CAUTION.**—Be sure the word "Horsford's" is printed on the label. All others are spurious. Never sold in bulk.

#### POPULAR MANUAL OF VISIBLE SPEECH AND VOCAL PHYSIOLOGY.

For use in Colleges and Normal Schools. Price 50 cents Sent free by post by

N. D. C. HODGES, 47 Lafayette Pl., N. Y.

#### PRIZE ESSAYS OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

Practical Sanitary and Economic Cooking Adapted to Persons of Moderate and Small Means. By MRS. MARY HINMAN ABEL. 12mo, 182 pp. Cloth, 40 cents.

No. 1. Healthy Homes and Foods for the Working-Class. By Professor C. Vaughan, M.D. Ann Arbor, Mich. 8vo, 62 pp. Paper, 10 cents.

No. 2. The Sanitary Conditions and Necessities of School-Houses and School-Life. By D. F. Lincoln, M.D., Boston, Mass. 8vo, 38 pp. 5 cents.

No. 3. Disinfection and Individual Prophylaxis against Infectious Diseases. By George M. Sternberg, M.D., Major and Surgeon U.S.A. 8vo, 40 pp. Paper, 5 cents.

No. 4. The Preventable Causes of Disease, Injury, and Death in American Manufactories and Workshops, and the Best Means and Appliances for Preventing and Avoiding Them. By George H. Ireland, Springfield, Mass. 8vo, 20 pp. Paper, 5 cents.

The four essays (Nos. 1, 2, 3, 4) in one volume of nearly two hundred large octavo pages, thoroughly indexed. Cloth, 50 cents.

N. D. C. HODGES, 47 Lafayette Place, New York.



#### Old and Rare Books.

BACK NUMBERS and complete sets of leading Magazines. Rates low. AM. MAG. EXCHANGE. Schoharie N Y

#### Speech Reading and Articulation Teaching.

By A. MELVILLE BELL.

Price, 25 Cents.

Practical Instructions in the Art of Reading Speech from the Mouth; and in the Art of Teaching Articulation to the Deaf.

[This Work—written at the suggestion of Miss Sarah Fuller, Principal of the Horace Mann School for the Deaf, Boston, Mass.—is, so far as known, the first Treatise published on "Speech Reading."]

*From Principals of Institutions for the Deaf.*

"Admirable in its conciseness, clearness and freedom from technicality."

"The simplicity and perfection of this little book."

"Full of exact and helpful observations."

"A very interesting and valuable work."

"The rules are clearly given and will be of great utility."

"Every articulation teacher should study it."

"A model of clearness and simplicity, without having any of the puzzling symbols that trouble the common mind. . . . The exercises given in speech-reading from the lips are especially interesting, and of great importance for the student of phonetics."

— *Modern Language Notes.*

\* \* The above work may be obtained, by order, through any bookseller, or post-free on receipt of price, from

N. D. C. HODGES,

47 Lafayette Place, New York.

#### AMERICAN HERO-MYTHS.

A Study in the Native Religions of the Western Continent.

By D. G. BRINTON, M.D. 8°. \$1.75.

#### THE CRADLE OF THE SEMITES.

By D. G. BRINTON, M.D., and MORRIS JASTROW, JR. Ph.D. 8°. 30 cents.

N. D. C. HODGES, 47 Lafayette Pl., New York.



## DO YOU INTEND TO BUILD?

If you intend to build, it will be a mistake not to send for "SENSIBLE LOW-COST HOUSES," now arranged in three volumes. In them you will find perspective views, floor plans, descriptions, and estimates of cost for 105 tasteful, new designs for houses. They also give prices for complete Working Plans, Details, and Specifications, which enable you to build without delays, mistakes or quarrels with your builder, and which any one can understand. Vol. I. contains 35 copyrighted designs of houses, costing between \$500 and \$1800. Vol. II. contains 35 copyrighted designs, \$1800 to \$3000. Vol. III. contains 35 copyrighted designs, \$3000 to \$9000. Price, by mail, \$1.00 each, or \$3.00 for the set.

"COLONIAL HOUSES," a volume showing Perspectives and Floor Plans of houses arranged in the inimitable style of the Colonial Architecture, and having all modern arrangements for comfort. Price, \$2.00.

"PICTURESQUE HOUSES FOR FOREST AND SHORE":—This shows Perspectives and Floor Plans of new designs for Summer Cottages, which are romantic convenient, and cheap. Price, \$1.00, by mail.

N. D. C. HODGES, 47 Lafayette Place, New York.