

movements of the moon and the planets, his catalogue of a thousand stars, and his observations of comets, which were the means of refuting Aristotle's opinion that these bodies belonged to our atmosphere. Considerable space is devoted to Tycho's work in astrology, to which he gave much attention, and in which his faith, though not as enthusiastic as that of some men, was never abandoned. Altogether, Professor Dreyer's work is worthy of its theme, and will hold an honorable place among biographies of scientific men.

*Introduction to the Study of Federal Government.* By ALBERT BUSHNELL HART. (Harvard Historical Monographs, No. 2). Boston, Ginn. 8°. \$1 net.

WE noticed the first of these monographs a short time since, and we are now glad to receive the second. It is only an introductory work, forming a pamphlet of two hundred pages, and the author tells us in his preface that it is to be followed in due time by an extended treatise on the same subject; yet it is of real value in itself. Professor Hart opens his work with a discussion of the nature of federation and of the various types of federal government that are known in history, — a discussion that shows a clear view of the questions involved, and considerable power of philosophic thought. He next proceeds to a brief but very clear account of the ancient and mediæval confederations from the first conception of the federal idea among the Greeks to the Holy Roman Empire, then gives a description of the four great existing federations, — those of the United States, Switzerland, Germany, and Canada, — and closes with a short chapter on the Latin-American federations, in which he has no great confidence. The monograph is written in a good style, and shows throughout not only a careful study of the facts, but also the fruits of thought and meditation, which are not always found in American historical writings. Besides the text of the work, there is a long and elaborate appendix, containing a conspectus of the four chief ex-

isting federations mentioned above, arranged in parallel form, and giving the provisions of each of the four constitutions on every important point. This appendix thus presents a large amount of information in a form convenient for reference; and there is also another appendix containing a bibliography of federal government. Altogether, the pamphlet is a creditable one; and historical writers in our other universities will have to do better than they have done heretofore if their work is to rank on a level with these Harvard monographs.

#### AMONG THE PUBLISHERS.

THE latest number of the "Proceedings of the United States Naval Institute" opens with an interesting article on the protection of the hulls of vessels by lacquer, detailing the results of experiments on several Japanese men-of-war. The experiments seem to prove that lacquer is a perfect protection against the action of sea-water so long as the coat remains unbroken.

—Norman W. Henley & Co., publishers and importers of scientific and technical books (150 Nassau Street, this city), announce for immediate publication "Rubber Hand-Stamp Making and the Manipulation of Rubber," by T. O'Connor Sloane, A.M.; and "Arithmetic of Electricity," by the same author. They have also in preparation the "Manufacturers', Mechanics', and Business Men's Assistant," by Benjamin Franklin, LL.B.

—Among the principal articles in the *Journal of the Military Service Institution* for January are the following: "A Practical Scheme for Training the Regular Army in Field Duties for War" (a prize essay), by Lieut. Read; "A Proposed Change in Artillery School Methods," by Lieut. Hunter; "Modern Bobadilism," by Capt. Chester; "Strategy, Tactics, and Policy" (a summary), by Lieut. Bush; "The Gyroscope and 'Drift,'" by Lieut. Richmond; "Practical Education of the Soldier," by Lieut. Parkhurst; and "The Battle of Plattsburg," by Gen. Macomb.

# Dyspepsia

## Horsford's Acid Phosphate.

In dyspepsia the stomach fails to assimilate the food. The Acid Phosphate assists the weakened stomach, making the process of digestion natural and easy.

Dr. R. S. McComb, Philadelphia, says: "Used it in nervous dyspepsia, with success."

Dr. W. S. Leonard, Hinsdale, N. H., says:

"The best remedy for dyspepsia that has ever come under my notice."

Dr. T. H. Andrews, Jefferson Medical College, Philadelphia, says:

"A wonderful remedy which gave me most gratifying results in the worst forms of dyspepsia."

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.

Publications received at Editor's Office, Jan. 5-10.

- OPTICIAN, The. Vol. I. No. 1. m. New York, Frederick Boger. 16 p. 8°. 50 cents per year.
- SCUDDER, H. E. Fables and Folk Stories. Part II. (Riverside Literature Series, No. 48.) Boston and New York, Houghton, Mifflin, & Co. 200 p. 16°. 15 cents.
- SZCZEPANSKI, F. v., ed. Bibliotheca Polytechnica. Directory of Technical Literature. New York, Internat. News Co. 80 p. 12°.
- U. S. GEOLOGICAL SURVEY, Ninth Annual Report of the, to the Secretary of the Interior, 1887-88. Washington, Government. 717 p. 4°.
- UPHAM, W. Report of Exploration of the Glacial Lake Agassiz in Manitoba. Montreal, W. F. Brown & Co. 156 p. 8°. 25 cents.
- VOOGDES, A. W. A Bibliography of Paleozoic Crustacea from 1698 to 1889. Washington, Government. 177 p. 8°.
- WATKINS, J. E. Report on the Section of Transportation and Engineering in the U. S. National Museum, 1888. Washington, Government. 5 p. 8°.
- WEED, W. H. The Formation of Travertine and Siliceous Sinter by the Vegetation of Hot Springs. Washington, Government. 62 p. 12°.
- WILSON, T. A Study of Prehistoric Anthropology.—Hand-Book for Beginners. Washington, Government. 75 p. 8°.
- Results of an Inquiry as to the Existence of Man in North America during the Paleolithic Period of the Stone Age. Washington, Government. 26 p. 8°.
- WRIGHT, G. F. The Glacial Boundary in Western Pennsylvania, Ohio, Kentucky, Indiana, and Illinois. (Bull. U. S. Geol. Surv., No. 58.) Washington, Government. 112 p. 8°.

### AMERICAN HERO-MYTHS.

**A Study in the Native Religions of the Western Continent.**

By D. G. BRINTON, M.D. 8°. \$1.75.

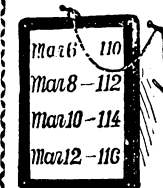
**The Cradle of the Semites.**

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

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

### Old and Rare Books.

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



**GAIN  
ONE POUND  
A Day.**

A GAIN OF A POUND A DAY IN THE CASE OF A MAN WHO HAS BECOME "ALL RUN DOWN," AND HAS BEGUN TO TAKE THAT REMARKABLE FLESH PRODUCER,

**SCOTT'S  
EMULSION**

**OF PURE COD LIVER OIL WITH Hypophosphites of Lime & Soda** IS NOTHING UNUSUAL. THIS FEAT HAS BEEN PERFORMED OVER AND OVER AGAIN. PALATABLE AS MILK. ENDORSED BY PHYSICIANS. SOLD BY ALL DRUGGISTS. AVOID SUBSTITUTIONS AND IMITATIONS.

FOR SALE.—

Scribner's 9th Edition of the

**"ENCYCLOPÆDIA BRITANNICA"**

(24 vols.), \$72.

The price does not include express charges.

**SCIENCE BOOK AGENCY**

47 Lafayette Place, New York.

## CALENDAR OF SOCIETIES.

## Anthropological Society, Washington.

Jan. 6.—Thomas Wilson, Stone Implements of Curious Forms from Breonio, Italy; W. Woodville Rockhill, Laws, Customs, and Superstitions of Korea.

## Appalachian Mountain Club, Boston.

Jan. 14.—Frank O. Carpenter, The Stratford Mountains, New Hampshire; Frank W. Freeborn, Adirondack Paths.

## New York Academy of Sciences.

Jan. 12.—John I. Northrop, The Results of a Recent Collecting Trip to the Bahamas (illustrated with specimens).

Jan. 19.—A. J. Du Bois, Science and Miracle.

## PROTOPLASM AND LIFE.

By C. F. COX. 12°.

"To be commended to those who are not special ists."—*Christian Union*.

"Physicians will enjoy their reading, and find in them much food for thought."—*St. Louis Medical and Surgical Journal*.

"Mr. Cox reviews the history of his subject with knowledge and skill."—*Open Court*.

"It is of extreme interest."—*Medical Age*.

"Worthy of a careful perusal."—*Indiana Medical Journal*.

"We have never read an abler essay on the subject."—*People's Health Journal*.

"An interesting and popular account of the tendencies of modern biological thought."—*Popular Science News*.

"All interested in biological questions will find the book fascinating."—*Pharmaceutical Era*.

"The author displays a very comprehensive grasp of his subject."—*Public Opinion*.

"Deserves the attention of students of natural science."—*Critic*.

Price, postpaid, 75 cents.

## THE WINNIPEG COUNTRY;

OR,

## ROUGHING IT WITH AN ECLIPSE PARTY.

BY

A. ROCHESTER FELLOW.

(S. H. SCUDDER.)

With thirty-two Illustrations and a Map. 12°. \$1.50.

"The story is a piquant, good-humored, entertaining narrative of a canoe voyage. A neater, prettier book is seldom seen."—*Literary World*.

"This is a sprightly narrative of personal incident. The book will be a pleasant reminder to many of rough experiences on a frontier which is rapidly receding."—*Boston Transcript*.

"The picture of our desolate North-western territory twenty-five years ago, in contrast with its civilized aspect to-day, and the pleasant features of the writer's style, constitute the claims of his little book to present attention."—*The Dial*.

## HANDBOOK OF METEOROLOGICAL TABLES.

By ASST. PROF. H. A. HAZEN.

127 pp. 8°.

Professor Waldo says: "I heartily recommend them to all workers in meteorology, and do not see how any of our American meteorologists can afford to be without a copy."

Professor Symons of London says: "They are unquestionably valuable helps, which must be kept handy, and replaced when worn out."

Price, postpaid, \$1.

N. D. C. HODGES,

47 Lafayette Place, N. Y.

## 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.

## Wants.

Any person seeking a position for which he is qualified by his scientific attainments, or any person seeking some one to fill a position of this character, be it that of a teacher of science, chemist, draughtsman, or what not, may have the 'Want' inserted under this head FREE OF COST, if he satisfies the publisher of the suitable character of his application. Any person seeking information on any scientific question, the address of any scientific man, or who can in any way use this column for a purpose consonant with the nature of the paper, is cordially invited to do so.

WANTED.—A situation in a scientific house by a graduate of the scientific department of the Jersey City High School as Geologist, Mineralogist or as assistant teacher in Physics or assistant to a chemist. Best of references. E. W. PERRY, 582 Third Street, Jersey City, N. J.

A UNIVERSITY GRADUATE IN SCIENCE, at present a junior student in medicine at the University of Michigan, desires a position as teacher or laboratory assistant. Special preparation in Zoology, Histology, Physiology and Human Anatomy. Will also teach, if desired, Physics, Chemistry, Botany, Entomology, Embryology, Bacteriology and Sanitary Science. References and full particulars on application. H. B., 26 East Jefferson St., Ann Arbor, Mich.

WANTED.—A young man wishes a position as instructor in the sciences in some school or college. Chemistry a specialty. Would like to hear of some position with a private or manufacturing chemist, in which his knowledge of chemistry would help him. Address E. E. TOWNE, B.A., 272 Worthington St., Springfield, Mass.

WANTED.—There being a considerable annual income for the purchase of books for the Museum Reference Library of Iowa College, it is desirable to have at hand any and all circulars, specimen sheets, catalogues, etc., of all works on Natural History in general, both foreign and domestic. Circulars of museum supplies, apparatus, etc., etc., desired also. State terms. Address ERWIN H. BARBOUR, Box 1333, Grinnell, Iowa.

WANTED.—A situation as Analytical Chemist is desired by the assistant of the late noted scientist, Dr. Cook, during his 15 years survey of the State of New Jersey. Highest testimonials furnished. Address Prof. EDWIN H. BOGARDUS, New Brunswick, P. O. Box 224, care Prof. F. C. Van Dyck.

COULD some one inform me what the ingredients and origin of asphalt as used for street-paving and gathered at Trinidad are? Also how gathered and shipped by natives, and mode of refining by the Warren-Scharf Co. of New York and the Barber Co. of Washington? G. KNIPIER, 28 Gunn Block, Grand Rapids, Mich.

## Exchanges.

[Free of charge to all, if of satisfactory character. Address N. D. C. Hodges, 47 Lafayette Place, New York.]

I would like to exchange first six vols. Roscoe and Schorlemmer's Chemistry, and Vols. II. and III. of "Education" for American Naturalist for 1889 and 1890, or works on Zoology. C. Dwight Marsh, Kipon College, Ripon, Wis.

I have a good supply of Eastern Coleoptera which I wish to exchange for species not in my collection. Melandryid and Oedemerid especially desired. Joe C. Thompson, Rosebank P. O., Box 73, S. I.

I wish to exchange Eastern Lepidoptera for those that I do not have, particularly those found in the South. Jos. F. Crandall, Honesdale, Wayne Co., Pa.

To exchange, 1890 Seeger and Guernsey Cyclopaedia, containing a complete list of the manufactures and products of the U. S., and address of first hands, cost \$6. David R. Lewis, Saybrook, Ill.

For exchange—Nice specimens of Unio alatus, trigonus, parvus, occidens, anadontoides gibbosus, rectus, verucosus, gracilis, coccineus, ventricatus, multiplicatus and plicatus comutus. Margaritana confregosa, complanata, rugosa. Anadonta edentula, decora, corpulenta, and about 300 of the beautiful Ana. suborbiculata. Wanted: Unios from all parts of the world, and sea-shells. Address Dr. W. S. Strodé, Bernadotte, Ill.

"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 \$20.00 (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.

BOOKS: How to Sell them. Send a list, stating condition, edition, etc., to Science Book Agency, 47 Lafayette Place, New York.

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.

## A TEMPORARY BINDER

for Science is now ready, and will be mailed postpaid on receipt of 75 cents.



This binder is strong, durable and elegant, has gilt side-title, and allows the opening of the pages perfectly flat. Any number can be taken out or replaced without disturbing the others, and the papers are not mutilated for subsequent permanent binding. Filed in this binder, Science is always convenient for reference.

Temporary binders of the same description but without side title, to fit any paper or periodical of ordinary size, will be mailed postpaid on receipt of price as given below. In ordering, be sure to give the name of paper or periodical and style of binder.

8 to 12 inches long, cloth, \$0.50; leather, \$0.60.					
12 " 14 " " " 60 " 75.					
14 " 17 " " " 75 " 1.00.					
17 " 19 " " " 1.00 " 1.25.					

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