general biology that we can seek the solution of the problems of reproduction, heredity, sex, growth, variation, death, the evoluition of species, and the general economy of nature. All of this phenomena are common alike to the vegetable and the animal world, and for their thorough study it is necessary that the investigator should be strictly a general biologist and not merely a botanist or zoölogist. These investigations are necessarily expensive in character, since they require that the animals and plants experimented upon be kept under specific conditions for long periods of time; but, it is to be believed that the results which may be obtained will amply justify both the labor and the expense. The speaker expressed the hope that some persons who felt generously inclined to aid in scientific work might give support for this line of work, and in concluding expressed the more general hope that those persons of wealth who wish to contribute to science may feel more and more inclined to endow research, for much can be accomplished in this way than in any other for the advancement of science.

Wherever we turn we see scientific work of the highest quality delayed and even stopped for the lack of means. Every one who can rescue these opportunities from being lost, even in part, will deserve well of mankind and the acknowledgments of the association.

#### AMONG THE PUBLISHERS.

—California topics occupy considerable space in the September 'Century. A paper of interest, practically illustrated, is Commander C. F. Goodrich's description of "Our New Naval Guns," detailing the process of manufacture and recounting their remarkable efficiency.

-Thomas Stevens (who went to meet Stanley when the latter was coming from the interior of Africa) speaks of his article on "African River and Lake Systems" in the Septemher Scribner's, as suggested by several interesting discussions of the subject while he was in Zanzibar and Cairo-notably one with Mason Bey, one of the best authorities on African affairs, who with Prout (a name familiar to readers of the magazine) explored the White Nile in 1877. Much of the information which he gained from Mason Bey appears in Mr. Stevens's article. Professor Shaler of Harvard, in his article on "Nature and Man in America," in the same number says: "It seems to me that it is rather to the physical conditions of North America than to any primal incapacity on the part of its indigenous peoples to take on civilization, that we must attribute the failure of indigenous man within its limits to advance beyond the lowest grades of barbarism. The Indian shows us in many ways that he is an able person. We may judge any folk by their greater men, and there can be no doubt that the ablest of our American savages rank high in the intellectual scale. It is, it seems to me, to the ceaseless disturbances of nascent civilization that we owe the failure of this folk to attain to a higher grade." Apropos of railway strikes, James S. Norton, a prominent Western lawyer, says, in the same issue, "If a corporation is held to strict performance of its duty as a public servant, should not its agents, who live upon its business, be held to some account-at least for combinations made to obstruct a public service as a means to satisfy the personal grudge of a few individuals?"

— The September number of *The Forum* will contain a political essay on "Money Interests in Political Affairs," by E. L. Godkin, editor of the New York *Evening Post*, in which Mr. Godkin traces to the growth of protection the enormous and alarming increase of the influence of money in politics, which he regards as the most important political fact of our time. In the same number Senator John T. Morgan of Alabama replies to Senator Chandler's recent article on "The Federal Control of Elections." Other articles in this number will be "The Training of Teachers," by President G. Stanley Hall of Clark University; "The Christianity of the Future." by Professor John S. Blackie of Edinburgh; "The Latest Astronomical News," by Professor Charles A. Young of Princeton;

Publications received at Editor's Office, PRACTICAL BEFORE Aug. 11-23. ELECTRICAL NOTES BEGINNING AND DEFINITIONS. BALLOU, W. R. A Compend of Equine Anatomy and Physiology. Philadelphia, Blakiston. 205 p. SCHOOL For the use of engineering students and practical men by W. P. MAYCOCK, together with Rules and Regulations to be observed in Electrical Installation Work, with diagrams. 130 pages, 32mo, cloth, 60 cts. Physiology. Finaucopana, 2012 12°: \$1 BREWER, W. H. Warren's New Physical Geography. Philadelphia, Cowperthwait. 144 p. f°. CHITTENDEN, E. P. The Pleroma. A Poem of the Christ. New York, Putnam. 347 p. 8° \$2.50. Day, D. T. Mineral Resources of the United States, 1888. Washington, Government. 052 p. 8°. 50 Cents. ADDRESS THE American Book Company, E. & F. N. SPON, 12 Cortlandt St., New York Account Account on the United States, 1888. Washington, Government. 652 p. 8°. 50 cents.
DENTAL Mirror. Vol. I. No. I. m. New York, Dental Publ. Co. 16 p. f°. \$1.
DRAGON Flies vs. Mosquitoes. Can the Mosquito Pest be Mitigated? (The Lamborn Essays, by Working Entomologists.) New York, Appleton. 202 p. 8°. \$1.50.
LITCHFIELD, Mary E. The Nine Worlds: Stories from Morse Mythology. Boston, Ginn. 163 p. 12°.
MARCON J. B. Diblocut. PUBLISHERS OF HANDBOOK OF METEOROLOGICAL TABLES SCHOOL TEXT-BOOKS, BY ASST. PROF. H. A. HAZEN. For its Catalogue, Introductory Price List and Terms for Introduc-127 pp. 8°. Irom Morse Mythology. Boston, Gim. 163 p. 19.
Marcon, J. B. Bibliography of North American Paleontology in the year 1886. Washington, Smithsonian Institution. 57 p. 8°.
PouLIZON, E. B. The Colours of Animals, Their Meaning and Use, Especially Considered in the Case of Insects. New York, Appleton. 360 p. 12°. §1.75.
SCHOFIELD, A. Health at Home Tracts, 1-12. London, Rel. Tract Soc.; New York, Revell. 192 p. 12°. 60 cents.
SMITH, E. F. Electro-Chemical Analysis. Philadelphia, Blakiston. 116 p. 12°. §1.
UNIFORME Rank Argus. (Published in the interests of the Uniformed Rank, Knights of Honor.) Vol. I. No. 1. m. New Orleans, C. H. Ludwig. 4 p. 1°. 50 cents.
WALKER, F. Practical Dynamo-Building for Amateurs. (Science Series.) New York, Van Nostrand. 104 p. 16°. 50 cents. tion. A collection of all the tables needed by a The various books upon the list of the working meteorologist. Several of these Company represent the best established usage in all departments of instruction, and the most progressive of modern methods. The general Price List of the American Book Company will be mailed on request to any tables have never been printed before. Professor Waldo says: "I heartily recommend them to all workers in meteorology, school officer or teacher. Any book upon this list will be sent by mail or express to any part of the United States, without extra charge for transportation, upon receipt of and do not see how any of our American meteorologists can afford to be without a copy." the published price. AMERICAN BOOK COMPANY, Professor Symons of London says: " They NEW YORK: are unquestionably valuable helps, which 806 and 808 Broadway CINCINNATI: CHICAGO must be kept handy, and replaced when Old and Rare Books. 258 & 260 Wabash Avenue. 137 Walnut Street. worn out." Back numbers Atlantic, Century, Harper, and Scribner, to cents per copy, other maga-zines equally low. Send for a catalogue. HEAVEN AND HELL. 416 p., paper. DIVINE LOVE AND WISDOM. 383 p., paper. By EMANUEL SWEDENBORG. Mailed, prepaid, for 14 cents each (or 25 cents for both), by the American Swedenborg P. and P. Society, 20 Cooper Union, N. Y. City. Price, postpaid \$1. A. S. CLARK, Bookseiler, 34 Park Row, New York City. N. D. C. HODGES, **B**ACK NUMBERS and complete sets of leading Mag-azines, *Rates low*, AM, MAG, EXCHANGE, Schoharie, N.Y. BOOKS: How to get them. If there is any 47 Lafayette Place, New York. | book or pamphlet that you want, write to the S Book Agency, 47 Lafayette Place, New York.

"Protection Against Tornadors," by Lieut. John P. Finley; as well as articles by Simon Sterne, Edward Everett Hale, James E. Murdock, M. J. Savage, and Alice E. Ives.

—The Religious Tract Society of London, believing that due care of the body is as much a Christian duty as concern for the soul, makes it an important part of its work to diffuse sound information, in a popular and readable form, in such a way as to lead people to use all the means in their power to preserve their own health and the health of those dependent upon them. With this object in view, the society has issued a neat little volume entitled "Health at Home Tracts," written by Alfred Schofield, M.D. The book is made up of a dozen tracts which had previously been issued separately, and which had been so well received by the public that their publication in the present form was determined upon. Fleming H. Revell of New York and Chicago represents the Tract Society in this country.

- It appears from a publication recently issued by the Government Statistician of New South Wales that many descriptions of gems and gem stones have been discovered in various parts of the Australian colonies, but no systematic search has been made for any but the diamond Diamonds are found in New South Wales, Victoria. and Queensland, but only in the first-named colony have any attempts been made to work the diamond drifts. The principal diamond fields are situated at Bingera, near Inverell, in the New England district The Government of New South Wales has, on various occasions, obtained the services of experts to report upon the fields, as well as the gems which have been from time to time extracted from them, and these reports, it is said, have generally been of an encouraging nature. The number of diamonds found in the colony to the end of 1887 is estimated at 75,000, the largest one being of 5§ carats, or 16.2 grains The diamonds occur in old tertiary river drifts, and in the more recent drifts derived from them. The deposits are extensive, and have not yet been thoroughly prospected. The New South Wales

diamonds are harder and much whiter than the South African diamonds, and are classified on a par with the best Brazilian gems. During the year 1887 the diamond companies at Cope's Creek, near Bingera, produced about 23,000 diamonds, weighing 5,151 carats; but in 1888, owing to the severe drought which occurred, the search for diamonds had to be temporarily abandoned.

--The September number of the New England Magazine will be strong in agricultural articles. James Knapp Reeve tells of the advance of agricultural schools, and traces back the history of agricultural education. Another paper in this series gives an interesting treatment of the present condition of the farmer, while an article with the title "Moses in Massachusetts" cannot fail to stir up interest, especially among the readers of Henry George. The New England Magazine is bent upon honoring the South. The University of Georgia comes second in her series of illustrated articles on the colleges of America, and is presented by Charles Morton Strahan in this number with a series of engravings.

-- In Lippincott's Magazine for September, Rear-Admiral Daniel Ammen, one of the chief promoters of the Nicaragua Canal scheme, contributes an article which gives a history of the inception of the project and the progress made up to date, and indicates the results which will accrue from the construction of the canal. A timely article upon "Current Concentration of Industrial Capital" is contributed by Henry Clews. He inveighs in strong terms against the present "trusts" and "combines," and predicts their speedy downfall. He holds, however, that some form of combination is necessary to all large enterprises, and that existing State laws relating to corporate enterprises need but to be broadened in their scope, and more strictly defined in respect to their safeguards, in order to keep all combinations within proper bounds. Alfred C. Haddon gives some interesting descriptions of various dances he witnessed among the Papuans of Torres Straits, and Charles McIlvaine (Tobe Hoge) has an entertaining article upon " Superstitions about Birds."



# 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. McCомв, Philadelphia, says: ''Used it in nervous dyspepsia, with success.''

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

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.

IMPROVED OIL LIGHT MAGIC LANTERNS. Also Lime and Electric Light Apparatus, and mechanical, plain, and fine colored views. J. B. COLT & CO., Manufacturers,

No 16 BEEKMAN STREET, NEW YORK.

#### FREE.

OUR 100 PP. CATALOGUE OF MINERALS. Illustrated with 57 cuts, and containing (a) Scientific Papers and Notes, 41 pp.; (b) A Classified List of All Mineral Species, giving chemical composition and crystallographic form, 31 pp.; (c) An Alphabetical Index of some 3,000 mineralogical names. Paper-bound copies free to those mentioning this journal; handsome cloth-bound copies, 25 cents, postpaid. GEO L. ENGLISH & CO., Dealers in Minerals, 1512 Chestnut street, Philadelphia; 739 & 741 Broadway, New York.

Have you a friend who, for fashion's sake, submits to physical deformity? Would he or she not be interested in Professor Flower's "Fashion in Deformity?"

Sent postpaid on receipt of 50 cents.

SCIENCE BOOK AGENCY 47 Lafayette Place, New York.

## A New Method of Treating Disease.

HOSPITAL REMEDIES. What are they? There is a new departure in the treatment of disease. It consists in the collection of the specifics used by noted specialists of Europe and America, and bringing them within the reach of all. For instance, the treatment pursued by special physicians who treat indigestion, stomach and liver troubles only, was obtained and prepared. The treatment of other physicians celebrated for curing catarrh was procured, and so on till these incomparable cures now include disease of the lungs, kidneys, female weakness, rheumatism and nervous debility.

bility. This new method of "one remedy for one disease" must appeal to the common sense of all sufferers, many of whom have experienced the ill effects, and thoroughly realize the absurdity of the claims of Patent Mcdicines which are guadanteed to cure every ill out of a single bottle, and the use of which, as statistics prove, *has ruined more stomachs than alcohol*. A circular describing these new remedies is sent free on receipt of stamp to pay postage by Hospital Remedy Company, Toronto, Canada, sole proprietors.

## OF WHAT USE IS THAT PLANT?

SMITH'S "DICTIONARY OF ECONOMIC PLANTS."

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

SCIENCE BOOK AGENCY, 47 Lafayette Place, New York.

ALTHOUGH about 100,000 tons of cheese are made annually in Great Britain and Ireland, nearly an equal quantity is imported from abroad, chiefly from North America and Holland. The foreign imports almost double each ten or fifteen years. In 1850 they received 347,803 hundredweights of foreign cheese; in 1800, 583,288 hundredweights; in 1870, 1,041,281 hundredweights; in 1880, 1,775,997 hundredweights; and last year, 1,908,000 hundredweights.

### CATARRH.

### Catarrhal Deafness-Hay Fever.

A NEW HOME TREATMENT.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N.B.-This treatment is not a snuff or an ointment; both have been discarded by repu-table physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dix-on & Son, 337 and 339 West King Street. Toronto, Canada.—*Christian Advocate.* 

Sufferers from Catarrhal troubles should carefully read the above.

## 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 al-lows the opening of the pages per-fectly flat. Any number can be taken out or replaced without dis-turbing the others, and the papers are not mutilated for subsequent permanent binding. Filed in this permanent binding. Filed in this binder, Science is always convenient

nary size, wil be mailed postpaid on receipt of price as 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.



We offer an Atlas of Sensible Low Cost Houses, a portfolio lix14 inches, containing handsome illustrations, floor plans, and full descriptions of this popular design, and fifty-four others, ranging in cost from \$800 to \$7,200. This specimen design is for a cottage with seven rooms. and costing \$1,100. It combines beauty and comfort has two large porches, and is a popular and practical working design, having been built several times for its estimated cost.

No matter what style of a house you may intend

build, it will pay you to have this book. We will send this Atlas, postpaid, on receipt of price, \$1.-N. D. C. Hodges, 47 Lafayette Place, New York.

### N. D. C. HODGES, 47 Lafayette Pl., New York, Announces as Just Published

### Fact and Theory Papers

### THE SUPPRESSION OF CONSUMPTION.

By Godfrey W. Hambleton, M.D. 12°. 40c

By GODFREY W. HAMBLETON, M.D. 12°. 40c. "The inestimable importance of the subject, the eminence of the author and the novelty of his work all combine to render the little treatise worthy of special consideration. . . We heartily com-mend Dr. Hambleton's booklet and wish there were more such works."-Editorial, Boston Daily Adver-tizer. "The monograph is interesting in style, scholarly, and well worth of careful consideration. It is de-void of technical expressions, and can be easily read and digested."-Pharmaceutical Era. "It is full of facts and wisdom."-Philadelphia Saturday Evening Post. "The book contains much of importance to the medical fraternity, as well as the general populace." -Burlington Hawkeye. "We commend the book to physicians and lay-men."-Herold (German), Milwaukee. THE CONFETY AND THE "FRAD"

THE SOCIETY AND THE "FAD."

By APPLETON MORGAN, Esq. 12°. 20 cents.

By APPLETON MORGAN, Esq. 12°. 20 cents. "Mr. Morgan founds a sensible and interesting address upon a text furnished by a sentence from a young ladies' magazine; namely. 'Browning and lbsen are the only really dramatic authors of their century.''--New York Sun. "In the little book before us the treatment of the subject is dispassionate and logical. The compari-son drawn throughout this monograph is between Shakspeare and Browning, the subject-matter being largely based on the Browning and Shakspearian societies and how they came to exist. A pleasant half-hour or more may be spent over the book, and some useful information derived from it.''-Engle-wood Times. "To say nothing of the dissection of Browning, the vivid side-lights thrown upon Shakspeare's life and work make the reading of this volume at one a s pleasure and a source of instruction.''- Chicago Evening Journal.

### PROTOPLASM AND LIFE.

By C. F. Cox. 12°. 75 cents.

The author of this book was for some years presi-dent of the New York Microscopical Society, and in this volume he sets forth his views on the spontane-ous generation theory and its relation to the general theory of evolution, and on protoplasm and the cell doctrine.

### THE TORNADO.

#### By H. A. HAZEN. 12°. \$1.

By H. A. HAZEN. 12°. \$1. Professor Hazen is one of the prominent meteor-ologists connected with the United States Signal Office. In this work he reviews our present infor-mation as to tornadoes, severely criticising some of the opinions held in regard to them up to this time. No one has given a more careful study to these de-structive storms than has Professor Hazen, and his book will prove a decided contribution to the world's knowledge. In this book will be found a careful discussion of the important question of Tornado Insurance now attracting so much atten-tion. Hundreds of dollars may be saved by people who are thinking of such insurance by following the principles here made plain.

Ready at an early date.

### THE CHEROKEES IN PRE-COLUMBIAN TIMES

By CYRUS THOMAS. 12°. \$1.

By CYRUS THOMAS. 12°. \$1. Dr. Thomas in this work will reverse the usual method of dealing with prehistoric subjects ; that is to say, he will commence with the earliest recorded history of the tribe as a basis, and trace the chain back step by step by the light of the mounds, tradi-tions, and other eridence, as far as possible. He has already presented to the public some reasons for believing the Cherokees were mound-builders, but additional evidence bearing on the subject has been obtained. A more careful study of the Dela-ware tradition respecting the Tallegwi satisfies him that we have in the Bark Record (Walam Olum) itself proof that they were Cherokees. He thinks the mounds enable us to trace back their line of migration even beyond their residence in Ohio to the western bank of the Mississippi. The object is therefore threefold: 1. An illustration of the re-verse method of dealing with prehistoric subjects; 2. Incidental proof that some of the Indians were mound-builders; 3. A study of a single tribe in the light of the mound testimony. This work will be an important contribution to the literature of the Co-lumbian discovery which will doubtless appear during the coming two years. during the coming two years.

**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.

Wants.

Any person seeking a position for which he is quali-fied 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 FREB OF COST, if he satisfies the publisher of the suit-able 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 col-umn for a purpose consonant with the nature of the paper, is cordially invited to do so.

WANTED-Index to Vol. VIII. and a copy of No. 205 of SCIENCE. Ten cents will be paid for a copy of either of these if in good condition. Pub-lisher of SCIENCE. 47 Lafayette Place, New York.

TO PRINCIPALS OR COMMITTEES.—Professor of Classics and Sciences, experienced in adver-tising and building up schools, now employed, de-sires change. WILLIAM, Roslyn, L. I.

WANTED. - A graduate from the Advanced Course of the Framingham State Normal School desires an assistant's position in a high school. An appointment in New England preferred. Address G., Lock Box 4, Framingham. Mass.

H YBRIDS.-A. M. Suchetet, 10 Ruc Alain, Rouen, France, desires to correspond with those pos-sessing hybrids, either living specimens or stuffed, of mammals, birds or other animals.

WANTED.--A Mining Engineer of standing and experience. One having had practical experi-ence in Coal Mining and the manufacture of Coke preferred. Address A., care "SCIENCE."

HEMIST .- A Harvard Graduate and Specialist in Chemistry desires a position with some manufacturing industry, or with a practical chemist. He would make an engagement to take charge of a laboratory and lecture on Chemistry. He has had large experience in the laboratory and school-room, and can give the best of references. Address J., Harvard College, Cambridge, Mass.

WANTED.—A Lady Teacher, at present teaching in England, with 12 years of very successful experience in primary work, desires a similar posi-tion in America. An appointment in the State of Ohio, or the City of New York, preferred. Excellent references, etc. Address in July or August, L. DUN-CAN, Poste Restante, Stainland, Halifax, England.

 $\overline{A}$  States, graduate of mainted, maintal, England.  $\overline{A}$  States, graduate (Ph.D. Freiburg, B.Sc. of an English university) of many years' standing; late Fellow of an English college; late assistant to a German university, professor of Comp. Anatomy; many years a student at two German universities; pupil of Huxley. Kölliker, Semper. Wiedersheim and Weismann; author of many well-known memoirs on Comp. Anatomy and Embryology; thoroughly con-versant with all branches of the subject; fond of teaching, with good testimonials, seeks a Professor-ship. Address "MORPHOLOGIST," Office of SCIENCE. Other information and a few testimonials can be seen at the Office of SCIENCE.

### Exchanges.

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

I wish to exchange Riley's Missouri Reports, either singly or full set, for Proceedings Entomological Society, Philadelphia, vols. 2 to 6 inclusive. Will also exchange Casey's Revision of the *Stenini* of N. A. and Horn's Revision of the *Tenebrionidae*. F. M. Webster, La Fayette, Ind.

I wish to exchange a fresh and complete set of Weiss and Spier's "Necropolis of Ancon" for other books, either new or second-hand, if the latter are in good con-dition. What have you to offer? Address Warren Wat-son, Kansas City, Mo.

1,000 botanical specimens representing 250 genera in exchange for those not in my collection. Send list of duplicates, and receive a similar one to choose from. Address E. E. Bogue, Orwell, Ashta Co., Ohio.

Address E. E. Bogue, Orwell, Ashta Co., Ohio. For exchange—14 volumes (1883-1886) American Jour-nal of Science, 10 volumes (1880-1886) American Natu-ralist, 21 volumes (1870-1890) English Mechanic, all in good condition, for binding; also, Morris Typewiter. Wants first-class microscope, camera, chemical or physi-cal apparatus. Address, with full particulars, E. R. Chadbourn, Lewiston, Maine. Meteorites.—Mr. George F. Kunz, 11 to 15 Union Square, New York, or Hoboken, N. J., will buy or give in exchange for whole or parts of meteorites. Whole ones, undescribed ones, and entire falls especially de-sited.

sized

Wanted-To furnish roots of Dodecatheon Meadia. Sarracenia purpurea, and other wild flowers, native of Southern Wisconsin, in quantities. D. E. Willard, Cu-rator of Museum, Albion Academy, Albion, Wis.

I have a number of duplicates of microscopic slides. mostly botanical, which I would like to exchange for others not now in my collection. Send list of what you have to exchange and get my list. S. R. Thompson, New Wilmington, Pa.

126