of a word first and the other meanings afterwards, without regard to logical order or historical precedence; as a consequence of which it frequently happens that some special meaning stands first and the general meaning follows. For instance, allegiance is first defined as "the obligation of fidelity and obedience that an individual owes to his government or sovereign, in return for the protection he receives," and then as "the obligation of fidelity in general, as to a superior or to a principle." The reason given for this arrangement is that the most common meaning is the one most frequently sought for, a proposition which as regards the ordinary words of literature we incline to doubt, as most persons who will consult such a dictionary as this are already familiar with the usual meaning of such words, and will turn to the dictionary either for some rarer meaning or to trace the etymology of the word and the logical development of its various significations. For these purposes it is obvious that the arrangement here adopted will not serve, yet experience only can determine which arrangement is better.

The editors are interested in spelling reform, and though they have not attempted to change the established orthography, they have used the alphabet devised by a committee of the American Philological Association to indicate the pronunciation of words, which purpose it serves fairly well, though some of the vowel characters are used in a way that will be strange to the merely English reader. Scientific terms have been defined by experts in the various subjects to which they relate, and we note that the editors have adopted certain changes in the spelling of chemical terms advocated by the chemical section of the American Association for the Advancement of Science. The dictionary is well printed, as, indeed, a dictionary in these times must be, and the illustrations, nearly five thousand in number, add to the usefulness and attractiveness of the work.


This is an admirable little work containing a systematic review of those principles of science which we encounter constantly in our daily life. Familiarity has led us to accept without thought the many details of household routine, but by so doing there is lost to us a vast amount of enjoyment which may be had by a clear understanding of the phenomena we see about us. The laws of nature enter into the most commonplace, and most of us would be surprised to discover how "near home" are chemistry and physics. We are only too apt to look upon these sciences as special studies for university scholars, as something apart from and foreign to our every-day life, while actually we are constantly, as it were, at work in a laboratory applying principles of science and carrying on experiments. Dr. Talmage's work is now in its second and revised edition, having been somewhat altered to better meet the needs of students. The four main divisions are divided into chapters, the subject being treated under the general heads of air and ventilation; heating and lighting; water, its character, impurities, and purification; foods and cookery; cleansing agents; bleaching; poisons and their antidotes. It is safe to say that the students of "Domestic Science" (it has already been adopted in all the district schools of Utah) will gain a vastly greater amount of useful and permanent scientific knowledge than will those who have pursued only the customary textbook course in chemistry and physics.

---

**EXCHANGES.**

[Fees of charge to all, if of satisfactory character.]

**TO EXCHANGE.—Herbarium specimens.** Address, H. P. Chandler, Beaver Dam, Wis.

**TO EXCHANGE.—Karyokinetic figures in mammalian tissues.**—Since the publication of my Preliminary Notes in Science for May 2-2, 1894, many parties have written me asking for permanent preparations showing mitotic figures in nuclei of embryos or insects. A good impression-objective is necessary to make out the figures satisfactorily. Send to cents in stamps. If the slide is not satisfactory, return it, and I will return the money. I do not care to exchange slides. Frank S. Avery, State University, Iowa City, Iowa.

**FOR SALE.—A small collection of bird slides, consisting of 135 specimens of New England species, most of which are in good condition and all have full data.** Nearly all were collected in the Connecticut valley in Massachusetts. Price, $10. Address, H. L. Clark, 300 Fifth Avenue, Pittsburgh, Pa.

**FOR SALE.—A sale of scientific books, equipment, and apparatus, of the following general classes:**

- Botany, Bacteriology, Ophthalmology, etc. Price, $10
- Acme (No. 81), Standing and Webber's Standard Slide-Cabinet. Price, $50
- Greer's Organograph. Price, $20
- Owings' Photographic Slide-Maker, No. 10. Price, $20
- Kellner's Temperature Tables. Price, $3
- Fiske and Oliver's Microscopical Catalogue. Price, $2
- Paper, $3
- Bank and Lamb's Color Plates. Price, $3
- Haemul Phaenostichum Maueri. Price, $3
- Hales, camera lucida. Price, $3
- D. T. Marshall, Metuchen, N. J.

**FOR SALE.—A small collection of bird slides, consisting of 135 specimens of New England species, most of which are in good condition and all have full data.** Nearly all were collected in the Connecticut valley in Massachusetts. Price, $10. Address, H. L. Clark, 305 Fifth Avenue, Pittsburgh, Pa.

**FOR SALE.—A sale of scientific books, equipment, and apparatus, of the following general classes:**

- Botany, Bacteriology, Ophthalmology, etc. Price, $10
- Acme (No. 81), Standing and Webber's Standard Slide-Cabinet. Price, $50
- Greer's Organograph. Price, $20
- Owings' Photographic Slide-Maker, No. 10. Price, $20
- Kellner's Temperature Tables. Price, $3
- Fiske and Oliver's Microscopical Catalogue. Price, $2
- Paper, $3
- Bank and Lamb's Color Plates. Price, $3
- Haemul Phaenostichum Maueri. Price, $3
- Hales, camera lucida. Price, $3
- D. T. Marshall, Metuchen, N. J.

**WANTS.—A young man to canvass for advertisement for Science. The usual remuneration of thirty per cent will be paid. Apply in person at Science Office, 325 Broadway, New York.**

**WANTS.—Double honor graduate in Science and Philosophy desires any suitable work in school of teaching preferred. Address, E. A. Beckett, Trinity College, Toronto, Ontario.**

**WANTS.—The theory of the Earth, by Harms. Price, $5.**

**WANTS.—Second-hand books on entomology, embryology, and comparative anatomy. Send facts, stating condition and cash price. Can offer a few good sets of bird's eggs if desired. R. C. McGregor, Palo Alto, California.**

**WANTS.—We are engaged in a study of the geographical distribution and study of the New American Fox Turtles or Terrapins (Chelodina). Specimens from Georgia, Tennessee, Alabama and the Dakotas are especially desired. Material from other localities would be welcomed. We will gladly pay expenses and return specimens if desirable. Specimens should be enclosed in a small box with but little, paper without address and addressed, W. E. Taylor, Walker Museum, University of Chicago, Chicago, III.**

**WANTS.—Addresses of persons interested in archaeology. Copies of the new archaeological journal in exchange for lists of collectors. A collection of 1500 valuable objects, the results of my nine years' exploration is the Mines and Tombs, published by, Byers, Warren K. Moorehead, Waterloo, Indiana.**

**WANTS.—Offers for Lyell's "Principles of Geology," three volumes, well bound and in good condition. Joseph Brook, Patten's Avenue, Norwalk, N. J.**

---

**BRAIN WORKERS.**

**HORSFORD'S ACID PHOSPHATE is recommended by physicians of all schools, for restoring brain force or nervous energy, in all cases where the nervous system has been reduced below the normal standard by overwork, as found in lawyers, teachers, students and brain-workers generally.**

Descriptive pamphlet free on application to Runford Chemical Works, Providence, R.I.

**FOR SALE BY ALL DRUGGISTS.**

**EXCHANGES.**

[Fees of charge to all, if of satisfactory character.]

**TO EXCHANGE.—Herbarium specimens.** Address, H. P. Chandler, Beaver Dam, Wis.

**TO EXCHANGE.—Karyokinetic figures in mammalian tissues.**—Since the publication of my Preliminary Notes in Science for May 2-2, 1894, many parties have written me asking for permanent preparations showing mitotic figures in nuclei of embryos or insects. A good impression-objective is necessary to make out the figures satisfactorily. Send to cents in stamps. If the slide is not satisfactory, return it, and I will return the money. I do not care to exchange slides. Frank S. Avery, State University, Iowa City, Iowa.

**FOR SALE.—A small collection of bird slides, consisting of 135 specimens of New England species, most of which are in good condition and all have full data.** Nearly all were collected in the Connecticut valley in Massachusetts. Price, $10. Address, H. L. Clark, 305 Fifth Avenue, Pittsburgh, Pa.

**FOR SALE.—A sale of scientific books, equipment, and apparatus, of the following general classes:**

- Botany, Bacteriology, Ophthalmology, etc. Price, $10
- Acme (No. 81), Standing and Webber's Standard Slide-Cabinet. Price, $50
- Greer's Organograph. Price, $20
- Owings' Photographic Slide-Maker, No. 10. Price, $20
- Kellner's Temperature Tables. Price, $3
- Fiske and Oliver's Microscopical Catalogue. Price, $2
- Paper, $3
- Bank and Lamb's Color Plates. Price, $3
- Haemul Phaenostichum Maueri. Price, $3
- Hales, camera lucida. Price, $3
- D. T. Marshall, Metuchen, N. J.

**WANTS.—A young man to canvass for advertisement for Science. The usual remuneration of thirty per cent will be paid. Apply in person at Science Office, 325 Broadway, New York.**

**WANTS.—Double honor graduate in Science and Philosophy desires any suitable work in school of teaching preferred. Address, E. A. Beckett, Trinity College, Toronto, Ontario.**

**WANTS.—The theory of the Earth, by Harms. Price, $5.**

**WANTS.—Second-hand books on entomology, embryology, and comparative anatomy. Send facts, stating condition and cash price. Can offer a few good sets of bird's eggs if desired. R. C. McGregor, Palo Alto, California.**

**WANTS.—We are engaged in a study of the geographical distribution and study of the New American Fox Turtles or Terrapins (Chelodina). Specimens from Georgia, Tennessee, Alabama and the Dakotas are especially desired. Material from other localities would be welcomed. We will gladly pay expenses and return specimens if desirable. Specimens should be enclosed in a small box with but little, paper without address and addressed, W. E. Taylor, Walker Museum, University of Chicago, Chicago, III.**

**WANTS.—Addresses of persons interested in archaeology. Copies of the new archaeological journal in exchange for lists of collectors. A collection of 1500 valuable objects, the results of my nine years' exploration is the Mines and Tombs, published by, Byers, Warren K. Moorehead, Waterloo, Indiana.**

**WANTS.—Offers for Lyell's "Principles of Geology," three volumes, well bound and in good condition. Joseph Brook, Patten's Avenue, Norwalk, N. J.**

---

**BRAIN WORKERS.**

**HORSFORD'S ACID PHOSPHATE is recommended by physicians of all schools, for restoring brain force or nervous energy, in all cases where the nervous system has been reduced below the normal standard by overwork, as found in lawyers, teachers, students and brain-workers generally.**

Descriptive pamphlet free on application to Runford Chemical Works, Providence, R.I.

**FOR SALE BY ALL DRUGGISTS.**
Fact and Theory Papers

I. THE SUPPRESSION OF CONSUMPTION. By G. W. HARRINGTON, M.D. 12°. 40c.

II. THE SOCIETY AND THE "FAD." By APPLETON MORGAN, Esq. 12°. 20 cents.

III. PROTOPLASM AND LIFE. By C. F. COX. 12°. 75 cents.

IV. THE CHEROKEES IN PRE-COLUMBIAN TIMES. By CYRUS THOMAS. 12°. 81.

V. THE TORNADO. By H. A. HENZEN, 12°. $1.

VI. TIME-RELATIONS OF MENTAL PHENOMENA. By JOSSEF JASTROW. 12°. 90c.

VII. HOUSEHOLD HYGIENE. By MARY TAYLOR ARMSTRONG. 12°. 75 cents.

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

Pennsylvania Bedford Springs Mineral Water

For Liver, Kidney and B. A. N. Troubles.
For Gout, Gail Stones, Jaundice.
For Rheumatism, Rheumatism.
For Diabetes, Diabetes.
For Hemorrhoids, Bile.
It has been used medicinally and prescribed by physicians for nearly one hundred years.

DIRECTIONS:-Take one or two glasses about a half-hour before each meal.
Case One Dozen Half-Gallon Bottles, $4.50.
Case Fifty Quarts (Assorted), $2.50.

Philadelphia Office, 2004 Walnut St.

THE WINNIPEG COUNTRY;
OR,
ROUGHING IT WITH AN ECLIPSE PARTY.

BY
A. ROCHESTER FELLOW.
(S. R. SCUDERI.)

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

"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 civilised aspect to-day, and the quaint features of the writer's style, constitute the claims of his little book to present attention."—The Dial.

N. D. C. HODGES, 874 Broadway, N. Y.

THE MODERN MALADY; or, Sufferers from 'Nerves.'

An introduction to public consideration, from a non-medical point of view, of a condition of ill-health which is increasingly prevalent in all ranks of society. In the first part of this work the author dwells on the errors in our mode of treating Neurosis, consequent on the wide ignorance of the subject which still prevails; in the second part, attention is drawn to the principal causes of the malady. The allegory forming the Introduction to Part I., gives a brief history of nervous exhaustion and the modes of treatment which have at various times been thought suitable to this most painful and trying disease.

By CYRIL BENNETT.

12°, 164 pp., $1.50.

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

THE SCIENCE PRESS

(JUST ESTABLISHED)

Is prepared to do all kinds of Book and Job Printing.

SCIENTIFIC WORK
A SPECIALTY.

We shall be glad to give Estimates and think they will be found very satisfactory.

NEW YORK OFFICE, 874 BROADWAY.