

NEW BOOKS AND PUBLICATIONS.

ELECTRICITY FOR EVERYBODY. Its nature and uses explained. By Philip Atkinson, A.M., Ph.D. New York: The Century Company, 1895. Pp. 240. 12mo. 100 illustrations. Price \$1.50.

This is avowedly a book for popular reading. The author has kept constantly in mind the difficulty of his subject and has striven to divest his book of the confusing technicalities of the science. There is no sacrifice of strict scientific accuracy, but as little detail as possible has been included. Some of the latest applications of electricity, as electrical heating and cooking, are described.

VITRIFIED PAVING BRICK. By H. A. Wheeler E.M. Indianapolis: T. A. Randall & Company, 1895. Pp. 84. 12mo. Price \$1.

This is a timely publication in view of the present active discussion on the subject of good roads, especially as it is devoted to a class of pavements that seem to have a great future in this country. They are now in use in about four hundred cities and towns, yet vitrified brick pavements do not seem to be as well known as their merits deserve. The advantages of this form of pavement are smoothness, ease of traction, freedom from mud, moderate noise, small expense of repairs, and comparatively moderate cost of construction. The book goes into the details of manufacture, testing and paving. The tables are of the utmost value.

COMPEND OF MECHANICAL REFRIGERATION. By J. E. Siebel, Director Zymotechnie Institute, Chicago. Chicago: H. S. Rich & Company, 1895. Pp. 256. 16mo. Price \$2.50.

A comprehensive digest of applied energetics and thermodynamics for the practical use of ice manufacturers, cold storage men, contractors, brewers and others interested in the application of refrigeration. This is a very important contribution to the literature of a subject which until recently has been very inadequately treated. The tables and formulæ are of great practical value, the subject of thermodynamics, refrigeration in general, the ammonia compression system, ice making and storing, cold storage, brewery refrigeration, the absorption system, other compression systems, installation, etc., are treated in turn. In the appendix is a bibliography of literature on thermodynamics, etc., which will prove very valuable. The work deals with the principles involved rather than the features of individual machines.

OLD SOUTH LEAFLETS. Sir Henry Vane's Defense, 1662; A Free Commonwealth. By John Milton; Cromwell's Second Speech, 1654; Pym's Speech against Strafford, 1641; Ship Money Papers, 1654; Sir John Eliot's Apologie for Socrates; Letters of Hooper to Bullinger; The English Bible. Boston: Published by the Directors of the Old South Work, Old South Meeting House. 12mo pamphlets.

THE PRACTICAL APPLICATION OF DYNAMO ELECTRIC MACHINERY. By C. K. MacFadden and W. D. Ray. Chicago: Laird & Lee, 1895. Pp. 167. 16mo. 38 illustrations. Price \$1.

There are many good books on the various branches of electrical work, but they are often of such a technical nature as to bar the uneducated reader from obtaining much benefit from them. The close study of this book will place the average beginner on such a foundation as to make the other more complete electrical books more easily understood. It will prove of particular value to dynamo tenders and motor men.

COMPRESSED AIR. Practical information upon air compression and the transmission and application of compressed air. By Frank Richards. New York: John Wiley & Sons, 1895. Pp. 203. 12mo. 23 illustrations. Price \$1.50.

Owing to the general scarcity of practical information about air compression and the uses of compressed air and the wide diffusion of misinformation and prejudice upon this subject, the work is of special interest. One of the most interesting features of the work is the last chapter, which gives a remarkable list of the various applications of compressed air. The list includes only the direct applications of compressed air to specific uses, and not its employment in an air motor, or where it takes the place or does the work of a steam engine or other power developer. Great attention is paid in this work to economical air compression and the commercial aspect of the use of compressed air.

DICK AND JACK'S ADVENTURES ON SABLE ISLAND. By B. Freeman Ashley. Chicago: Laird & Lee, 1895. Pp. 312. 12mo. Price 50 and 75 cents.

HOW TO DRAIN A HOUSE. By George E. Waring, Jr., C.E. New York: D. Van Nostrand Company, 1895. Pp. 223. 16mo. 33 illustrations. Price \$1.25.

This is the second edition of a book of practical information for householders, with annotations bringing the work up to date. It treats of house drains and health, foundation and cellar, foul drainage, plumbing, the sewer gas question, traps, the soil pipe, sewage disposal, etc. The first edition of the work was very favorably received.

A LABORATORY COURSE IN EXPERIMENTAL PHYSICS. By W. J. Loudon, B.A., and J. C. McLennan, B.A. New York: Macmillan & Company, 1895. Pp. 302. 8vo. 50 illustrations. Price \$1.90.

The book contains a series of elementary experiments specially adapted for students who have had but little

acquaintance with the higher mathematical methods. There is also an advanced course of experimental work in acoustics, heat, and electricity and magnetism which is intended for those who have taken the elementary course. The experiments seemed to be fully explained, but in many cases they are supposed to be tried with the elaborate and expensive apparatus of Koenig and other makers—apparatus which the student does not always have at hand.

LADD'S DISCOUNT BOOK. Compiled and edited by William J. Ladd. Unpagged. 8vo. Price \$3. Double indexed edition \$4.

This book contains more than one hundred thousand calculations. The tables will be found very complete and will prove of value for finding the net cost of goods and for making lists for specified discounts and for making discounts for specified lists, also for comparing prices, etc. A few days' use by buyer, price clerk, or manufacturer, or any one who has to handle the unwieldy discounts of to-day, will verify the claim of the compiler that the book is accurate, rapid, and without practical.

THEORY AND PRACTICE OF THE SIZING OF PAPER. New York: The Arabol Manufacturing Company, 1895. Pp. 32. 12mo.

SIMPLE METHODS FOR DETECTING FOOD ADULTERATION. By John A. Bower. London: Society for Promoting Christian Knowledge, 1895. Pp. 118. 16mo. 36 illustrations. Price 80 cents.

The experiments are simple, consisting for the most part of the application of simple chemical and microscopical tests as well as of specific gravity.

TABELLEN UBER DIE BLECHDICKEN UND DURCHMESSER DER FLAMMROHRE VON DAMPFKESSELN. Im Auftrage des Internationalen Verbandes der Dampfkessel-Ueberwachungs-Vereine. Herausgegeben von G. Eckermann. Hamburg: Boysen & Maasch, 1895. Pp. 26. 18mo. Tables. Price 2 marks.

Any of the above books may be purchased through this office. Send for new book catalogue just published. MUNN & Co., 361 Broadway, New York.

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OCTOBER, 1895.—(No. 120.)

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HINTS TO CORRESPONDENTS. Names and Address must accompany all letters, or no attention will be paid thereto. This is for our information and not for publication. References to former articles or answers should give date of paper and page or number of question. Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and, though we endeavor to reply to all either by letter or in this department, each must take his turn. Buyers wishing to purchase any article not advertised in our columns will be furnished with addresses of houses manufacturing or carrying the same. Special Written Information on matters of personal rather than general interest cannot be expected without remuneration. Scientific American Supplements referred to may be had at the office. Price 10 cents each. Books referred to promptly supplied on receipt of price. Minerals sent for examination should be distinctly marked or labeled.

(6655) C. N. R. asks how to prepare brewer's yeast. A Brewer's yeast is prepared as follows: 72 lb. unkilned malt and a handful of hops are gradually stirred in a clean tub containing 7 gal. of water of 170° F.; and to this 5/4 gal. water of 90° is added. The tub is then covered tightly and left quiet. After some time it is cooled rapidly. This is accomplished by setting in cans filled with cold water. When the temperature of the mash has reached 70°, the tub is covered again and allowed to stand for some twelve hours longer, when 1/4 gal. fresh beer yeast are to be stirred in. After another twelve hours have elapsed, pierce a hole in the layer formed by the husks of the malt and dip 3/4 gal. of the liquor beneath, then stir the whole up and dip 1 1/4 gal. from it (husks and liquor). This is the mother leaven, from which yeast can be generated all the year round by using it in the way described instead of the ordinary beer leaven. To the remainder in the tub add 5 gal. wort of 90°, and make use of it within two hours. The mother yeast also must be used the same day for fermenting another portion.

(6656) E. J. B. says: Can you inform me how to preserve plants with their natural colors? A. A recent improved receipt for preserving plants with their natural colors is to dissolve 1 pint salicylic acid in 600 parts alcohol, heat the solution up to boiling point in an evaporating vessel and draw the plants slowly through it. Shake them to get rid of any superfluous moisture and then dry between sheets of blotting paper under pressure in the ordinary manner. Too prolonged immersion discolors violet flowers, and in all cases the blotting paper must be frequently renewed. The novelty appears to be the salicylic acid.

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