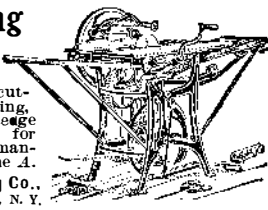


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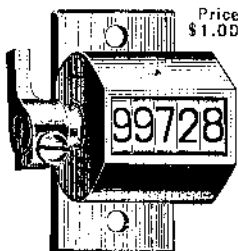
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NEW BOOKS, ETC.

WIRELESS TELEGRAPHY. Its History, Theory, and Practice. A. Frederick Collins. New York: McGraw Publishing Company, 1905. 12mo.; pp. 299; 332 illustrations. Price, \$3.

This is an excellent and very complete work on wireless telegraphy. All phases of the subject are treated with a definite, logical sequence, which brings the state of the art down to the present time. Each subdivision is approached with a brief historical introduction, which is followed by a theoretical discussion, after which the various experiments are outlined, and finally the practical workings are described. This logical method of dealing with the subject renders the work valuable to the student as well as to the trained specialist.

MODERN LIGHTNING CONDUCTORS. An Illustrated Supplement to the Report of the Lightning Research Committee of 1905. With Notes as to the Method of Protection and Specifications. By Killingsworth Hedges, M.I.C.E. and M.I.E.E., Hon. Sec. to the Lightning Research Committee. London: Crosby Lockwood & Son, 1905. New York: D. Van Nostrand Company. 8vo.; pp. 119. Price, \$3.

The chief basis for confidence that the theory of protection from lightning is to be made fairly clear, and the matter of control soon come into an existing practice, lies in the conferences, reports, and numerous other researches on modern lightning conductors, a great deal of which matter has been used for the purposes of this volume. The author deals materially with the Report of the Lightning Research Committee and information supplied by the Observer's Reports of this scientific body, in fact, as the title states, it is their illustrated supplement. Mr. Hedges throws signal ability into the work of facilitating the opening up of a new field of inquiry, made possible by the efforts of Sir Oliver Lodge and other scientists.

In a comprehensive manner the methods most suitable are explained, illustrations of the necessary accessories are given, also a description of arrangements in use on the Continent. He includes the introduction to the L. R. C. report, 1905, by Sir Oliver Lodge, wherein this eminent authority claims, that "it is not so much quality of electricity that has to be attended to, as electrical energy; that this electrical energy is stored between clouds and earth in dangerous amount, and that the object should be to dissipate it, not as quickly, but as quietly as possible." The work is rich in notes on the latest American and Continental practice, specifying that of Holland, Belgium, France, Germany, Hungary, and Italy. A chapter on examples of lightning stroke on protected buildings confirms the meaninglessness of the familiar term, "area of protection." It is full of quotable facts; its seventy-four engravings are an efficient contribution to diagram and pictorial accuracy needed in such cases, and notwithstanding it is somewhat discouraging to be told that the present system of lightning rods, which will protect from one class of flash, may not be able to shield a building from injury by the other class; still the student will find that it sets out clearly the theory of lightning, and the way one can, to a great extent, protect a structure by suitable conductors, and thus dissipate its energy.

PRACTICAL ENGINEER POCKETBOOK FOR 1906. Manchester, England: Technical Publishing Company, Ltd. No date. 24mo.; pp. 598. Price, 60 cents.

Like the Practical Engineer Electrical Pocketbook the Practical Engineer Pocketbook is always a welcome visitor. We can well remember seeing the first edition some eighteen years ago. Now the work has waxed fat and improved both in accuracy and in scope. It is one of the best pocketbooks which we have ever seen, and is unquestionably the most economical as regards its purchase price. It is a book which we can heartily recommend to mechanical engineers.

THE INVESTIGATION OF MINE AIR. Edited by Sir Clement Le Neve Foster, D.Sc., F.R.S., and J. S. Haldane, M.D., F.R.S. London: Charles Griffin & Co., Ltd. Philadelphia: J. B. Lippincott Company, 1905. 12mo.; pp. 191. Price, \$2.

The present book is an account by several authors of the nature, significance, and practical methods of measurement of the impurities met with in the air of collieries and metalliferous mines. No questions receive closer attention from mining engineers at the present time than those relating to the health and safety of the men under their charge, and among all the dangers which threaten the miner or impede his work, none are more real and urgent than those due to impure air. A knowledge of the impurities in mine air, their sources and their effects, has thus become almost a necessity to mining engineers. A number of English and foreign authors collaborated in the production of the present volume, which is unusually complete and is also adequately illustrated.

DIE HEMMUNGEN DER UHREN. Ihre Entwicklung, Konstruktion, Reparatur und Behandlung vor der Replage. By C. Dietzschold. Krems a. Donau, Nied-Osterr, 1905. 8vo.; pp. 234.

The author has presented here a most thorough treatise on watch and clock escapements, from both the mechanical and mathematical standpoints.

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SCHOOL CHEMISTRY. A New Textbook for High Schools and Academies. By Elroy M. Avery, Ph.D., LL.D. New York: American Book Company, n.d. 16mo.; pp. 243. Price, \$1.20.

Clearness and accuracy of statement mark the definitions, directions, and explanations. The experiments are simple and instructive, easily performed, and adapted to the use of inexpensive and easily obtainable apparatus. Unusual space is devoted to chemistry as applied to important industrial processes. In fact, every modern topic pertaining to the science that is worthy of consideration receives its proper treatment; the practical applications of chemistry to the affairs of everyday life, such as the contamination of water, bread making, the fertilization of soils by the action of nitrifying bacteria, etc., are given a great amount of attention.

PRACTICAL PATTERN MAKING. By Paul N. Hasluck. Philadelphia: David McKay, 1905. 16mo.; pp. 160. Price, \$1.

"Practical Pattern Making" contains in a form convenient for everyday use a comprehensive digest of information contributed by experienced craftsmen. The author is too well known as a versatile amateur mechanic to need any introduction to the readers of the SCIENTIFIC AMERICAN. The illustrations, which number 300, are excellent.

APPRECIATION OF PICTURES. A Handbook. By Russell Sturgis, A.M., Ph.D. New York: The Baker-Taylor Company, 1905. 8vo.; pp. 308. Price, \$1.50 net.

The author is a very well-known writer on art topics, and was editor of an important dictionary of architecture. Mr. Sturgis's long experience in art matters gives him an authority in dealing with painting. The present volume, which is handsomely illustrated, has seventy-three well-executed engravings and takes up the Epoch of Primitive Charm; the Epoch of Early Triumph; the Epoch of Achievement; the Epoch of Splendor; the Beginnings of Modern Gloom; Recent Art, Color and Light and Shade; Recent Art, Sentiment and Record; Recent Art, Monumental Effect. The book is one which we can heartily recommend.

ELEMENTS OF DESCRIPTIVE GEOMETRY. By Charles E. Ferris. New York: American Book Company. No date. 8vo.; pp. 127. Price, \$1.25.

Inquiry among the leading draftsmen shows that nearly all their work is done in the third quadrant or angle. It seems reasonable, therefore, to teach the subject of geometry in technical schools as it will be used by graduates. Many years of experience in teaching this subject proves to the author that the student may learn to think with this problem below the horizontal and behind the vertical and perpendicular planes, just as well as above and in front of these planes. A large number of practical examples given in the past were assigned to cadets at the United States Naval Academy, and the author considers that they will serve well to illustrate the principles of descriptive geometry.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Issued for the Week Ending February 27, 1906.

AND EACH BEARING THAT DATE [See note at end of list about copies of these patents.]

Table listing inventions and their patent numbers. Includes items like: Adding machine, J. Pallweber; Adhesive brace, flexible, A. Freschl; Aerial top, A. L. Platt; Air brake coupling, automatic, A. H. Skilling; Airship tower, revolving, S. M. Friede; Alcohol burner, J. H. Ernst; Amalgamator, Draper & Hay; Amusement device, A. Dalton; Animal call, J. Brunner; Annealing or malleableizing oven, Cassidy & Bergman; Annameter, J. A. Watten; Apron or belt guide, automatic, W. J. Asher; Automobile, F. M. Blair; Automobile turn-table, H. R. Stickney; Automobiles, frame for wind shields for, Simm & Olson; Axle box, J. R. Fleming; Axle mechanism, vehicle, H. Hill; Badge, J. A. & J. C. Doran; Bag, T. Manahan; Bag tying machine, P. Rudd; Balers, division block for hay, J. H. Pitkin; Baling press, G. M. Washington; Band cutter and feeder, H. C. Wallace; Barrel stand, C. A. Riek; Basket machine, automatic, S. L. Casella; Bat, baseball, C. H. Buehler; Battery. See Storage battery; Bayonet and telescope, combined, F. W. Stillwell; Beam, combined steel and concrete, J. Kahn; Bearing, antifriction, V. L. Rice; Bearing, automobile wheel, C. S. Lockwood; Bearing, axle, J. K. Gourkin; Bed bottom, adjustable, J. Shepherd; Bed, metal, C. J. Wiegren; Beet digging machine, A. H. Kramer; Beverage carbonator, J. H. Fox; Bicycle brake, G. A. Love; Binder, file, C. R. Nelson; Binder-file, C. R. Nelson; Binder, loose leaf, E. A. Trussell; Binder, loose leaf, W. J. Schultz; Binder, temporary, J. N. Christensen; Biscuit cutting machines, sprinkling granular substances on dough in, T. & J. Vicars, Jr.; Bleaching liquor, apparatus for preparing, F. L. Bartlett; Block system, automatic electric, A. M. Mott; Blower, fireplace and grate, W. F. Lowry.

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ELECTRO MOTOR, SIMPLE, HOW TO MAKE.—By G. M. Hopkins. Description of a small electric motor devised and constructed with a view to assisting amateurs to make a motor which might be driven with advantage by a current derived from a battery, and which would have sufficient power to operate a foot lathe or any machine requiring not over one man power.

Advertisement for JAGER Marine 4-Cycle Engines, featuring an illustration of the engine and text describing its features and manufacturer Chas. J. Jager Co.

Advertisement for "Econo" Emery Wheel Dresser, featuring an illustration of the dresser and text describing its use for dressing emery wheels.

Table listing various mechanical items and their prices, including Boat launching apparatus, Boiler construction, Bolt locking washer, and many others.

Advertisement for BUILD YOUR OWN BOAT BY THE BROOKS SYSTEM, featuring illustrations of a boat and various parts, and text describing the Brooks System for boat building.

Advertisement for KLIP-KLIP "DUO" MANICURE-CIGAR CUTTER, featuring an illustration of the cutter and text describing its features and price.

Advertisement for Telephone Holders, featuring an illustration of a telephone holder and text describing its use and price.

Advertisement for A Sterling Silver Cigar Cutter, featuring an illustration of the cutter and text describing its quality and price.

Advertisement for THE EUREKA CLIP, featuring an illustration of the clip and text describing its use for holding papers.

Advertisement for THE "LEADER" 1 1/2 H.P. Gasoline Auto-Marine Engine, featuring an illustration of the engine and text describing its specifications.

Advertisement for Alco Acetylene Gas Burners, featuring an illustration of a burner and text describing its use for lighting and heating.

Advertisement for STEEL ROLLS, featuring an illustration of a roll of steel and text describing its use for flattening wire.

Advertisement for THE OBER LATHES, featuring an illustration of a lathe and text describing its use for turning various parts.

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They Make Bad Roads Good advertisement for WEED'S TIRE GRIPS, featuring an illustration of a tire and text about its benefits.

MASSAGE advertisement for a mechanical massage device, including an illustration of the device and text about its benefits.

The Benton Valveless Engine advertisement for a valveless engine, featuring an illustration of the engine and text about its features.

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