

have also their place. The moot question of the terrestrial influences of sunspots is briefly reviewed, and likewise the relation between auroras and solar disturbances. The chapters on the sun discuss the amount of energy which the center of the solar system constantly emanates, as well as its influence upon terrestrial life. In the articles on the stellar universe in general, Prof. Larkin shows what modern astronomers have succeeded in doing with high-power instruments.

How TO MEASURE UP WOODWORK FOR BUILDINGS. By Owen B. Maginnis. New York: Industrial Publication Company. 1903. 18mo. Pp. 79. Price 50 cents.

This little work describes the simplest and most accurate methods to be followed when figuring all the woodwork required for either brick or frame houses. The author is a thoroughly practical man, being an inspector of buildings in the city of New York, and is a well-known writer on building construction. The little volume is an excellent one, and one which we can commend to all architects, contractors, and carpenters.

LOCOMOTIVE BREAKDOWNS, EMERGENCIES AND THEIR REMEDIES. By George L. Fowler, M. E. New York: Norman W. Henly Publishing Company. 1903. 12mo. Pp. 244. Price, \$1.50.

The author is well known from his work on air brakes. The subject is dealt with in a peculiarly lucid manner, and nearly all the ills that locomotives are heir to are dwelt upon in a thoroughly common-sense manner. The popular question and answer system is used, this system serving to keep the writer to his point. Engineers and firemen, and those who aspire to be, will find the book full of good material.

UP-TO-DATE AIR-BRAKE CATECHISM. By Robert H. Blackall. New York: Norman W. Henly & Co. 1903. 12mo. Pp. 305. Two large folding charts. Price, \$2.

The eighteenth revised edition is before us, and we must admit that it is a thoroughly adequate treatise on one of the most important subjects in the railway world. Practice is so constantly changing, that a book on the subject a few years old is obsolete. The popular question and answer system is retained. The diagrams and folding diagrams are excellent, while the colored charts are the most elaborate we have seen, and show both passenger and freight equipment. We commend the book most cordially to all interested.

WIRELESS TELEGRAPHY, ITS ORIGINS, DEVELOPMENT, INVENTIONS AND APPARATUS. By Charles Henry Sewell. New York: D. Van Nostrand Company. 1903. 12mo. Pp. 229. Price \$2 net.

The aim of this book is to present a comprehensive view of wireless telegraphy, its history, principles, systems, and possibilities in theory and practice. It will prove of use both to the student and the general public. The art is in an imperfect state, and any literature which will tend to dissipate the general ignorance and misconception will be welcomed.

ONE HERTZIANE E TELEGRAFO SENZA FILI. By Dott Oreste Murani. Milan: U. Hoepli. 1903. 18mo. Pp. 341. Price, 75 cents.

The excellent little compends called "Manuali Hoepli" are eight hundred in number, and are an extraordinary monument to the ability of the publisher. All works on wireless telegraphy are popular at the present time, and it is to be hoped that this excellent book will soon be translated.

POOR'S MANUAL OF THE RAILROADS OF THE UNITED STATES. Thirty-sixth Annual Number. New York: Poor's Railroad Manual Company. 1903. 8vo. Pp. 1720. Price \$10.

This work is probably among the most useful ever published for investors, and to the railroad official it is indispensable. It deals with the history, mileage lines of road operated, track mileage, water lines, proprietary railroads, capitalization of systems, interests in other railroad systems, rolling stock, profit and loss account, and various other statistics. Poor's Manual has long been a recognized authority upon the subjects which it treats. The length of railroads completed on December 31, 1902, was 203,131 miles; the net increase of all railroads in the United States in the calendar year 1902 was 3,447 miles. The total mileage of track is 274,835 miles. There are 41,626 locomotives, 27,364 passenger cars, 9,726 baggage and mail cars, and 1,503,949 freight cars.

EXPERIMENTAL RESEARCHES ON REINFORCED CONCRETE. By Armand Considère. Translated and arranged by Leon S. Moisseiff, C.E. New York. 1903. 8vo. Pp. 188. Price \$2.00.

We have already had the privilege of reviewing the French edition of the author's work. The highly useful nature of concrete to the engineer is being felt more and more. The older books on concrete did not deal with reinforcing, which was largely brought into use by French and German engineers. The importance of the new material has become such that no civil engineer can well afford to be without a thorough knowledge of its properties, and this knowledge can be gained from this book.

ROOF FRAMING MADE EASY. By Owen B. Maginnis. New York: The Industrial Publication Company. 1903. 12mo. Pp. 164. Price \$1.00.

The carpenter or builder who will study the methods described in this book will realize the constructive value of every piece of timber which enters into a framed roof and will understand how to lay out every piece of timber used without wasting valuable time and material on cutting and trying.

The language used is that of the practical workman; scientific phrases and confusing terms have been avoided where possible; and everything has been made so plain that any one who will faithfully study the book will understand it from beginning to end. In fact, every problem in the book was "tried" on a boy who had no experience in building work, and he understood every problem with a little study. This will show that the book is valuable to the beginner as well as the advanced workman.

HANDY LUMBER TABLES. Containing Board Measure, Plank Measure, Scantlings, Reduced to Board Measure, With Other Useful Data and Memoranda. New York: The Industrial Publication Company. 1903. 18mo. Pp. 24. Price 10 cents.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Issued for the Week Ending January 5, 1904.

AND EACH BEARING THAT DATE

[See note at end of list about copies of these patents.]

Table listing inventions with patent numbers, including items like 'Adding machine, F. Buresh', 'Agricultural implement, J. Downing', 'Air and gas mixing and delivering apparatus, Brown & Trucks', etc.

Table listing inventions with patent numbers, including items like 'Centrifugal machine, electrically driven, H. G. Morris', 'Chart or pattern for crochet work, E. C. Faust', 'Chetaine, R. R. Debacher', etc.

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Perfumes, toilet waters, and sachet powders, Ladd & Coffin	41,834
Pianos, miniature grand, Wm. Knabe & Co. Mfg. Co. of Baltimore City	41,842
Powder, worm, M. W. Savage	41,816
Razors, Mosby & Rahaim	41,830
Remedies for internal use, proprietary, C. Civita	41,812
Ribbons, black, F. Loeser & Co.	41,801
Rice, Columbia Rice Packing Co.	41,826
Rice, Joseph Heap & Sons	41,829
Rubber goods, certain named, Flexible Rubber Goods Co.	41,809
Shoes, leather, J. F. Hartray Shoe Co.	41,807
Silk piece goods, Gilbert Manufacturing Co.	41,837
Soap, Fuchs Manufacturing Co.	41,838
Soap, laundry, F. P. Garretton & Co.	41,838
Soap, toilet, F. M. Coulter	41,836
Stoves or ranges, furnaces, and parts thereof, heating and cooking, Still Stove Works	41,843
Tonics and bitters, Fairchild Bros. & Foster	41,819
Whisky, S. Westheimer	41,821
Wire, John A. Roebling's Sons Co.	41,844
Woolen piece goods, F. Almy	41,803

LABELS.

"American Glory Seven Oils," for medicinal oils, J. D. Drennan	10,659
"American Kid," for cigars, C. B. Henschel Mfg. Co.	10,649
"Aztec Pile Cure," for medicine, Aztec Pile Cure Co.	10,653
"Gold Medal Brand," for olives, Seville Packing Co.	10,647
"Himmalla Tonic," for stomach and blood tonic, C. O. F. Burkstrom	10,652
"Iduna," for medicine, A. Lind	10,655
"Kalo's Ruby Oil," for medicine, Mentho-Jell Co.	10,658
"Kennelworth Flea Killer," for a preparation for cleaning animals, W. N. Seary	10,660
"Klenzene," for washing powder, Jarrell & Turner	10,646
"Lead Seal," for wire, John A. Roebling's Sons Co.	10,645
"Louisiana Beauty New Orleans Molasses," for molasses, C. E. Coe	10,645
"Parker House Coffee," for coffee, Reliable Tea Company	10,651
"Rheumol, The Monarch Cure," for medicine, J. H. De Giorgi	10,654
"San Toy," for cigars, J. Ditz	10,650
"Sun Flower Rock Candy Cough Syrup," for Cough Syrup, Weneker Chemical Co.	10,657
"The Tramp \$2.50," for shoes, May Co.	10,644
"Vaughan's Pink Cream," for medicine, J. C. Vaughan	10,656

PRINTS.

"Daintiness," for fruit syrups and extracts with and without ice cream soda, H. Curiel	877
"Lead Seal," for wire, John A. Roebling's Sons Co.	878
"The Tramp \$2.50," for shoes, May Co.	876
"Victor," for talking machines and accessories, Victor Talking Machine Co.	874
"Wizard Cuff Holder," for cuff holders, Frank & Gutman	875

A printed copy of the specification and drawing of any patent in the foregoing list, or any patent in print issued since 1863, will be furnished from this office for 10 cents, provided the name and number of the patent desired and the date be given. Address Munn & Co., 361 Broadway, New York.

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