NEW BOOKS, ETC.

WIRELESS TELEGRAPHY POPULARLY EXPLAINED. By Richard Kerr. With preface by W. H. Preece. New York: Imported by Charles Scrib-ner's Sens. 1898. Pp. 111. Price 75

In the last two years considerable interest has been manifested in wireless telegraphy, and, so far as we know, this is the first book upon the subject. The experiments of James B. Lindsay, Mr. Preece, Marconi, and Dr. Lodge are given concisely, but the book is confessedly intended

HANDBUCH DER BAUSTOFFLEHRE. Bearbeitet von Richard Krüger. Two volumes with 443 illustrations. Vienna: A. Hartleben. Large octavo. Pp. 887. Price, paper \$8.

Within the last fifteen years artificial building mate rials have become so numerous and have found so wide an application that a book in which they are discussed in detail should be welcomed. In the work now lying before us, the author, besides describing the natural ma terials used in building, such as stone, wood, and the like, also treats of those important artificial substances now so generally employed. In describing the various building stones and woods, the author has made use of his own experience and of the tests made by the German government at its various experiment stations. book is divided into three sections. In the first section. the natural and artificial stones, the earths and metals are discussed. The second section treats of the various mortars, asphaltum, and cement. The third section deals with the making and use of glass, resin, tar, paints, varnishes, caoutchouc, guttapercha, oiled cloths, asbestos fabrics, carpets, ropes, hemp, and moss. In order to fa-cilitate the use of his work, the author has compiled an exhaustive index of the subjects discussed. The book will be a desirable acquisition to the libraries of architects engineers, and manufacturers of building materials.

BUILDING CONSTRUCTION AND SUPERIN-TENDENCE. By F. E. Kidder. Part II. Carpenter's Work. New York: William T. Comstock. 1898. Pp. 544. 524 illustrations. 8vo, cloth. Price \$4.

Mr. Kidder has long been known to the manufacturing profession through his "Architect's and Builder's Pocket book," and in the present volume he deals with the materials employed by the carpenter and joiner, more especially with the details of all forms of wooden construction, from the rough framing of wooden buildings to nicely finished cabinet wood. The work is in every sense what may be called a practical one, while at the same time the reasons for, and advantages of better systems of construction are intelligently pointed out, and also the defects of cheaper and more common forms The book will not only be of value to the carpenter, but will be simply invaluable to the architect. With the aid of clear sections of windows, doors, etc., the architect will not have to spend much time thinking out the proper arrangement of stops, stiles, etc. He will only have to refer to this book to find a large scale section which will give him just the information he wants with the dimensions lettered upon it. Hardware of all kinds is described, and the proper method of applying it is shown. It is one of the most valuable books which ever appeared on the subject in this country and we have no hesitation in recommending it.

THE AMERICAN STREET RAILWAY DIRECTORY AND BUYERS' MANUAL. New York and Chicago: E. L. Powers. 1898. Published quarterly. Price \$3 per annum.

This directory contains a complete list of electric, cable, horse and elevated railways in the United States, with the capital, bonds, names of the officials, mileage gage of the track, number of cars, power plant, names of the makers of the generators, engines and boilers, etc. It also contains some valuable statistics of the worth, mileage, capitalization, and car equipment of street railways in the United States, from which we find that there are at present 909 electric roads out of the 1,074 roads which exist in the United States. In other words, there are at present over eight times as many electric roads as horse roads, and only twenty-one cable roads are now in operation in the entire country. The capital stock of these 1,074 roads amounts to \$975,625,827, and the bonds amounts to \$1,527,970,220, the total mileage 16,466 78, and there are 48,209 cars in use.

Poor's Manual of the Railroads of the United States for 1898. Thirty-first Annual Number. New York: H. V. & H. W. Poer. 1898. 8vo. Pp. 1,600. 70 maps. Price \$7.50.

Poor's Manual is always a welcome visitor. It is simply invaluablet o all who are engaged in any part railroad world. All who are in any way interested in securities will find the book indispensable. Each railroad is taken up in turn. The mileage of all main lines. branch, and leased roads are then given, and in the case of leased lines the annual charge is given. Then comes the history of the road, a detailed account of its rolling stock, floating equipment, operations for the year, capital stock, bonds, equipment trusts, etc. Then comes full information regarding leased roads. From this it will be seen that the book contains information of such a wide range that it is simply invaluable to all who are interested in any way in railroads. The total mileage of railroads of the United States at the end of 1897 was 179.692.57 miles. The total length of track was 236,911.52 miles There were also 35,810 locomotive engines, 25,275 passen. ger cars, 8.133 mail cars, etc., and 1.229,335 freight cars. Total liabilities of the various roads amounted to \$11, 631,711,740. The number of passengers carried was 504, 106,525, and 788,385,448 tons of freight were moved. There are a number of pages with just such statistics which are of importance from an economic point of view. In addition to steam roads, street railways, and miscellaneous corporations, there is also a department of State and municipal indebtedness. The book is well printed and contains a perfect mine of information.

Business and Personal.

The charge for insertion under this head is One Dollar line for each insertion; about eight words to a line Advertisements must be received at publication office as early as Thursday morning to appear in the following week's issue.

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The best book for electricians and beginners in electricity is "Experimental Science," by Geo. M. Hopkins. By mail, \$4. Munn & Co., publishers, 361 Broadway, N. Y.

"Model Engineer and Amateur Electrician," a firstclass paper, published every month. Annual subscription, 75c. Send 8c. for sample number. Agents wanted Spon & Chamberlain, 12 Cortlandt St., New York, U. S. A.



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(7509) X. asks: If a pendulum were hung on a frictionless pivot and placed in a perfect vacuum, would it continue to swing forever, if once set in motion? A. We do not know the answer to this question. There never was a pendulum hung on a frictionless pivot, nor was there ever a perfect vacuum produced, and even if both these conditions were met, there has not been a forever in which to see if the pendulum might not, somehow, after all, stop. All the light which can be thrown on this problem comes from Newton's first law regarding inertia, which is to be found in every text book of physics. We should prefer to devote our time and space to real questions,

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AND EACH BEARING THAT DATE.

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End gate fastening device, C. M. Davis Engine. See Electromagnetic engine. Rotary	611,678	
engine. Thermal expansion engine. Traction engine. Engine, F. O. Ball. Engine, F. W. Ofeldt. Engine tender, traction, W. S. Kelley. Engine sfre extinguisher and blower for traction, J. G. Baxter. Excavator, N. C. Wright. Fastenings, machine for inserting metallic, L. A.	611,853 611,792 611,635	
tion, J. G. Baxter. Excavator, N. C. Wright. Fastenings, machine for inserting metallic, L. A. Casgrain. Feed, water filter for steam boilers, H. B. & J. S.	611,598 611,985 611,990	
Feeder and carrier, cane, Webre & Haydel Feeder, steam boiler, J. A. Sumner.	611,667 611,878 611,871	1
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File for letters, bills, etc., W. H. Stewart, Jr Filtration, system of, Langdon & Brown. Firearm locks, safety attachment for, O. Rose Firearms, cylinder stop for revolving, D. B. & J. H. Wesson.		
Fire escape, Britt & Enns. Fire escape, F. Hafelfinger. Fires in domestic fire grates, appliance for kindling or reviving. J. M. Hollinshead. Flooring of strengthened concrete, system of, F.	611,888 611,734 611,964	
Fluid pressure regulator. J. H. Champ	611,892	
man Fruit, preparation of, W. Forsyth. Funnel, S. A. Hess. Furnace. See Boiler furnace. Furniture joint, A. Peterson.	611,859 611,782 611,962	
Gage. See Pressure gage. Gaging implement, J. E. Goddard. Game apparatus, G. E. Murphy. Game apparatus, H. T. Pycroft. Game, Combined bowling, G. Brown		
Game, combined bowling, G. Brown Game, ring, J. Klauder Garden implement, J. Miller Garment supporter guard, J. M. Anck	611,828 611,915 611,641 611,596	
Game, combined bowning, G. Brown Game, ring, J. Klauder. Garden implement, J. Miler. Garment supporter guard, J. M. Anck. Gas burner, incandescent, O. Kern. Gas burner, multiple incandescent, E. Lindner. Gas generator, acetylene, W. J. Baulieu. Gas generators, regulating cock for acetylene, N. H. Medberry. Gas meter J. Greenall.	611,914 611,756 611,885	
H. Medberry. Gas meter, J. Greenall Gate. See Elevator gate. Tilting gate. Gate. R. Fratt. Jr. Gate. Sayre & Johnson Gate fastener, wire fence. A. Schlapbach. Gear cutting machine. N. A. Wheeler.	611,698 611,626	
Gate, Sayre & Johnson Gate fastener, wire fence, A. Schlapbach Gear cutting machine, N. A. Wheeler Gelatin thread or filament, insoluble, A. Millar	611,741 611,741 611,851 611,814	
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Glass vessels, apparatus for finishing necks of, E. Hoffman. Gold from eres, process of and apparatus for ex- tracting, B. C. Hinman. Governing device, A. Fischer	611,998 611,619 611,729	

lkhead doors, apparatus for automatically closing, W. & A. R. Crawford	
rner. See Gas burner. Prairie burner.	Ins Bac
rner. C. G. Staith. 611.981 tton; H. Wirth. 611.881 tton making machine, J. Hormby. 611.811 tton punch press, W. E. Bennett. 611.988 tton punching machine, W. E. Bennett. 611.988 pt foruning mechanism. Hoffman & Frist. 611.632 r coupling, J. Swihart. 611.856 r fender, Collyer & Bullock 611.877 r mover, P. Wise. 611.477 r mover, P. Wise. 611.477 r mover, P. Wise. 611.477 r trip mechanism, J. R. White. 611.852 rbureter, H. T. Bradley. 611.873 rrier, See Bicycle luggage carrier. rt, folding, H. F. L. Brookmeyer. 611.873 rriage holding attachment for belts, R. C. Langelon. 611.797 see. See Velocipede gear case. iling or wall plate, metallic, L. L. Sagendorph, ains, locking device for connecting bolts of	High T'l wor
rbureter, H. T. Bradley. 611.874 rriage, baby, J. L. Pryor. 611.37 rrier. See Bicycle luggage carrier. rt, felding, H. F. L. Brookmeyer. 611.875 rridge holding attachment for belts, R. C.	tises men rece mor
Langdon. 611,592 se. See Velocipede gear case. iling or wall plate, metallic, L. L. Sagendorph, \$11,797. \$11,798 ains, locking device for connecting bolts of	*
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ck, safety gas, R. Schelble	
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Donovan. See Car coupling. Hose coupling. Thill or pole coupling. Thill or tongue coupling. Tend or pole coupling. Thill or tongue coupling. Gil,836 ates, collapsible, J. Cunningham	wor are man Pric WA
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iil. See Grain drill. 611.947 iilling tool, W. H. Skinner. 611.694 ive and making same, blue, M. Ulrich. 611.683 ive and making same, orange, M. Ulrich. 611.683 ive and making same, violet, H. Hassencamp. 611.630 ive, brown cotton, R. Demuth. 611.507 ive, green blue tetrazo, J. Bammann. 611.507 ive, in eigo blue cetton, R. Demuth. 611.610 ive ing hair or fur, T. C. Stearns. 611.870 ig beater, E. Wishart. 611.70 ig poacher, G. W. Knapp. 611.843 eetric cumeter, S. Evershed 611.822 ettric time switch, F. M. Schmidt et al. 611.822	The
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ster.
Grinding machine, ball, Hunt & Haddow.
Grindstone, D. Shannon.
Handle. See Jar handle.
Hanger. See Coat hanger.
Harvesting and husking machine, corn, D. McMannana.
Hat. G. Wildman.
Hat and cost hanger. O. Wiggi

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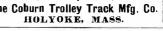
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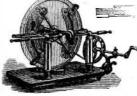


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