

would not follow the ways laid out for it. It is not true that the earth curves from a level ten feet in any one mile, as you calculate it to do. The curvature is 8 inches for one mile and 32 inches for two miles. It is true, however, that the surface of the earth is 13 miles nearer the center of the earth at the poles than it is at the equator.

NEW BOOKS, ETC.

LOYD'S REGISTER OF AMERICAN YACHTS. A List of the Yachts, Yacht Clubs, and Yachtsmen of the United States, and the Dominion of Canada, and the West Indies. New York: Lloyd's Register of Shipping, 17 Battery Place. 1908. 8vo.; pp. 454. Price, \$7.50.

The sixth annual volume of Lloyd's Register of American Yachts for 1908 is now ready for delivery to subscribers. The book, which shows a material increase in size over last year, has been thoroughly revised in all particulars; specially in those relating to the engines of the rapidly-growing fleet of cruising launches. There is listed a total of 3,670 yachts, both sail and power, owned in the United States, Canada, and the West Indies, with a total of some 3,500 yacht owners. The color plates give 2,013 private signals of American yachtsmen and the burgees of 365 yacht clubs. One of the most interesting features of the book, as showing the growth of American yachting, is the list of yacht clubs. The first American Yacht List, published in 1874 by the late Neils Olsen, listed a total of 32 yacht clubs, and the greatest number listed prior to the establishment of Lloyd's Register of American Yachts was about 170. Lloyd's club list has grown steadily since 1903 until it has now reached a total of 386 clubs, distributed in all parts of the United States and British North America. Not a few of these clubs have been established during the past winter. This great increase is made up in three ways: first, of yacht clubs established in new localities; second, of new clubs established to meet the recent growth of the sport in localities where many clubs already exist; and the third class of clubs, a large one distributed in all parts of the country, is made up of the so-called "power boat," "motor boat," and "launch" clubs. As many of these clubs are located on narrow inland waters where sailing is out of the question, they appeal to an entirely new class, from which in the future the ranks of American yachtsmen will be largely recruited.

THE CHILDREN'S BOOK OF STARS. By G. E. Mitton. New York: Macmillan & Co., 1908. Small square demy 8vo.; 16 full-page illustrations and 12 diagrams. Price, \$2.

The book which lies before us is a sincere attempt to place before children in the simplest possible form the elementary facts of astronomy. In the main the author has succeeded admirably, although it must be confessed that technical phraseology has not been so thoroughly eliminated as it might have been, largely because of the very nature of the subject. A good chapter on the use of the spectroscope tells with remarkable simplicity "What Stars Are Made Of," and shows that it is possible to present plainly the main facts of one of the most difficult branches of modern astronomy. On page 169 appears an error in describing the spectra of the sun and Sirius, the star Arcturus being incorrectly given instead of Sirius. The general arrangement of the book is that usually adopted in works on astronomy. It proceeds in the order of the earth, moon, planets, sun, comets, meteors, constellations, stars, and nebulae.

PRACTICAL PERSPECTIVE. By Frank Richards and Fred H. Colvin. Third edition. New York: The Norman W. Henley Publishing Company, 1908. 12mo.; cloth; 56 pages; 62 illustrations. Price, 50 cents.

Mr. Richards explains the principles of isometric perspective and shows several of its applications to machine work. The other treatise is on the use of isometric paper, written by Mr. Colvin. The scheme of this important little book is to show how to make all kinds of mechanical drawings by the isometric method and adding practical examples of various classes of work.

THE REFRIGERATING ENGINEER'S POCKET MANUAL. An Indispensable Companion for Every Engineer and Student Interested in Mechanical Refrigeration. By Oswald Gueth, M.E., Mem. Am. Soc. Refr. Engrs. New York, 1908. 12mo.; cloth; illustrated; 156 pages. Price, \$1.50.

The practical experience of the author as an engineer has enabled him to give a digest of rules and data of every branch of mechanical refrigeration. In this work he has made use of the opinions held by the leading experts. The field covered comprises Principles and Properties; Refrigerating Machinery; Applications for Mechanical Refrigeration; Operation of Compression Plant; and the Steam Plant. The subdivisions of these parts take the inquirer into a very clear arrangement of subjects which are thoroughly illustrated with diagrams of apparatus, plans, systems, machines, engines, plants, etc., and these are supplied with extensive tables of scales, dimensions, trials, tests, measures, powers, and capacities.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Issued for the Week Ending

August 4, 1908.

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 Abrasive finishing machine, Air compressor, Amusement apparatus, Animal trap, Armature bands, Automatic filter press, etc.

Table listing inventions with patent numbers, including items like Copper, electrodeposition of, S. O. Cowper-Coles, Cotton chopper, A. W. Smith, Current generator, induction, M. Fischer, etc.

Table listing inventions with patent numbers, including items like Iron foundry mixing furnace, Kennedy & Nau, Jar cover, fruit, S. J. Vasaly, Journal box, A. H. Lewis, Labeling machine, Knapp & Blackstone, etc.

Classified Advertisements

Advertising in this column is 75 cents a line. No less than four nor more than ten lines accepted. Count seven words to the line. All orders must be accompanied by a remittance. Further information sent on request.

READ THIS COLUMN CAREFULLY.—You will find inquiries for certain classes of articles numbered in consecutive order. If you manufacture these goods write us at once and we will send you the name and address of the party desiring the information. There is no charge for this service. In every case it is necessary to give the number of the inquiry. Where manufacturers do not respond promptly the inquiry may be repeated.

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BUSINESS OPPORTUNITIES.

SHOE STRING MANUFACTURERS send sample of goods with prices of ten inch white, pure linen, hollow shoe strings, tipped, in 100 gross lots. As smooth a twist of thread as possible to be used in the manufacture. Address W. A. Steinemann, 1615 Michigan Avenue, Los Angeles, Cal.

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A CORPORATION of highest standing having large well equipped factory and selling organization, and ample capital, desires to manufacture and market mechanical inventions of unquestioned merit. Correspondence solicited. Address E. A., Box 773, N. Y. City.

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WEBB'S "HINGE JOINT" BELT HOOKS.—No tool required. Are beaten into belt with a hammer. Send \$1.00 for 500 hooks. Makes 6 feet in width of belt. Webb Hinge Belt Hook Co., Boonton, New Jersey.

Inquiry No. 8628.—Wanted to buy paving block machines for use with partly fluid substances.

PATENTS FOR SALE.

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FOR SALE.—Patent 822,066. Combination tool. Hammer staple puller, wire cutter and screw driver. Just the thing for the farmer. Outright or on royalty. Investigate this. S. Market, #13 Monroe St., Des Moines, Iowa.

Inquiry No. 8650.—Wanted to buy file cutting machinery.

FOR SALE.—Patent No. 887,747. Match-delivering pocket safe. A simple and useful novelty. For full information address E. J. Anderson, 20 Catharine Street, Worcester, Mass.

Inquiry No. 8652.—Wanted address of manufacturer of drop forged wrenches.

WANTED CASH OFFER for U. S. American rights of Ramsay's patent ruler, No. 719,257, 1903. Celluloid, etc. Combines spectax dial, foot rule, set square, pencil case. Cable direct, August, Christchurch, New Zealand.

Inquiry No. 8654.—Wanted addresses of case-hardeners in New York.

A WIRE EYE FASTENER for ladies' sarments that will prevent the sharp point of hook from wearing and tearing the garment. Address Joseph Bischof, 25 Faneuil Hall Square, Boston, Mass.

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FOR SALE.—The Rodick Automatic Trolley Car Fender. For further information address J. Colbert, 323 Warren Street, Boston, Mass.

Inquiry No. 8685.—Wanted to buy 1 1/2 to 2-inch No. 13 to 15 tempered spring steel.

FOR SALE.—Patent No. 883,904 Yard Truck. Also Canadian Patent applied for. A great labor saver in handling lumber around saw mills and lumber yards. H. Paulson, Box 27, Orting, Wash.

WANTED—MISCELLANEOUS.

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LISTS OF MANUFACTURERS.

COMPLETE LISTS of manufacturers in all lines supplied at short notice at the rate of \$15.00 per thousand, in large quantities for big industries and callings. Small and special lists compiled to order at various prices. Thus 100 windmill manufacturers list would cost \$2.50, etc. Certain lists of rare trades are much more expensive. Thus 100 names of oatmeal manufacturers would cost \$15. Estimates should be obtained before remitting. Address A. A. H., Box 773, New York.

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Inquiry No. 8710.—For machinery for carding, spinning and weaving jute.

Inquiry No. 8716.—For manufacturers of flower garden and light frame tools for cultivating, etc.

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Inquiry No. 8721.—Wanted unwelded tubing that is used for structural work.

Inquiry No. 8726.—For parties who make "Yankee Metal Polish."

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Inquiry No. 8735.—For parties making a still for the purpose of extracting alcohol from saw-dust.

Inquiry No. 8736.—For manufacturers of machinery for making matches, also machinery for making purses and hand bags.

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Inquiry No. 8738.—For parties manufacturing casing cement.

Inquiry No. 8742.—For manufacturers of water still, also of thermop-ster tubing.

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Inquiry No. 8751.—For manufacturers of brass, tea, dessert and table spoons for silver plating.

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Inquiry No. 8759.—For a firm to do porcelain enameling of ventilator tops, such as used on the outside of arc lamps.

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Inquiry No. 8765.—For manufacturers of insulating paper linings used in metal covers of electric snap switches; also makers of insulating papers and tools.

Inquiry No. 8766.—For parties making pressed paper goods.

Inquiry No. 8769.—For manufacturers of an appliance to attach to the old style razor blade to make same a safety razor.

Inquiry No. 8770.—For parties who make short link twist chains, links from 1/2 inch up.

Inquiry No. 8771.—Wanted to buy tune sheets for Criterion music boxes.

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Inquiry No. 8778.—For manufacturers of reapers, binders and mowers.

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Inquiry No. 8788.—For manufacturers of music rolls for self-playing pianos and organs; also spring motors for same.

Inquiry No. 8790.—For the manufacturer of "Brooks improved hand pump."

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Inquiry No. 8797.—For manufacturers of fiber.

Inquiry No. 8798.—For manufacturers of micro lens used in small articles such as pencils, charms, etc.

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Inquiry No. 8805.—Wanted to buy outfits and supplies for brazing.

Inquiry No. 8806.—For manufacturers of drawing materials.

Inquiry No. 8807.—For dealers in second-hand cotton machinery.

Inquiry No. 8808.—For manufacturers of machinery for making bungs for barrels.

Inquiry No. 8809.—For the manufacturers of metallized flowers used for hat pins, etc.

Inquiry No. 8810.—For makers or importers of porous water bottles or jars to cool drinking water by evaporation.

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Inquiry No. 8813.—For manufacturer of the "Steel" mixer for mixing food products, etc.

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Inquiry No. 8815.—Wanted to buy carriage and wagon hardware, coal, iron and steel.

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Inquiry No. 8819.—For manufacturers of Excelsior Welding Compound.

Inquiry No. 8820.—Wanted to buy pressed fiber boards 1 foot wide and from 1-16 to 1/4 inch thick.

Inquiry No. 8821.—Wanted to buy machinery for making a rough composition board, something like a straw board.

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Inquiry No. 8827.—For manufacturers of annealed glass.

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Meier, Surgical appliance, W. C. Yates, Suspenders, A. Schad, Swith stand, W. W. Allen, Table, J. A. Tyskling, Table lock, pedestal extension, C. S. Burton, Tack and staple puller, C. H. Miles, Talking machine, M. Samuel, Tap and reamer, collapsible taper thread, W. W. Vosper, Telegraph system, multiplex, A. W. Douglas, Telegraphic and telephonic impulses simultaneously, receiving, I. Kitsee, Telegraphy, P. B. Delany, Telephone system, W. W. Bean, Tension guide and thread cleaner, W. J. English, Theatrical property, M. Fortuny, The plate, M. Sellers, Timepiece compensating controller, F. Ecaubert, Tin and terne plates, automatic plate carrier for use in the manufacture of, T. James, Tire, A. G. Ritchie, Tissues or files and attaching them to boxes, machine for making, A. Kingsbury, Tongue attachment, vehicle, C. D. Williams, Tongue support, N. Kessler, Tool points, means for attaching, Hender shot & Appgar, Tool, pneumatic, T. Donohoe, Torpedoes, groscope steering gear for, F. M. 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Scientific American Supplement 997 contains an article by Spencer Newberry in which practical notes on the proper preparation of concrete are given.

Scientific American Supplements 1568 and 1569 present a helpful account of the making of concrete blocks by Spencer Newberry.

Scientific American Supplement 1534 gives a critical review of the engineering value of reinforced concrete.

Scientific American Supplements 1547 and 1548 give a resume in which the various systems of reinforced concrete construction are discussed and illustrated.

Scientific American Supplement 1564 contains an article by Lewis A. Hicks, in which the merits and defects of reinforced concrete are analyzed.

Scientific American Supplement 1551 contains the principles of reinforced concrete with some practical illustrations by Walter Loring Webb.

Scientific American Supplement 1573 contains an article by Louis H. Gibson on the principles of success in concrete block manufacture, illustrated.

Scientific American Supplement 1574 discusses steel for reinforced concrete.

Scientific American Supplements 1575, 1576, and 1577 contain a paper by Philip L. Wormley, Jr. on cement mortar and concrete, their preparation and use for farm purposes. The paper exhaustively discusses the making of mortar and concrete, depositing of concrete, facing concrete, wood forms, concrete sidewalks, details of construction of reinforced concrete posts.

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