

Business and Personal Wants.

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 your name and address to the party desiring the information. In every case it is necessary to give the number of the inquiry.

- Inquiry No. 617.—For manufacturers of beads. For mining engines. J. S. Mundy, Newark, N. J. Inquiry No. 618.—For wholesale dealers in shells. "U. S." Metal Polish. Indianapolis. Samples free. Inquiry No. 619.—For rotary furnaces similar to those used in heating bolt blanks. WATER WHEELS. Atcott & Co., Mt. Holly, N. J. Inquiry No. 620.—For manufacturers or dealers in horseshoe machinery. Yankee Notions. Waterbury Button Co., Waterbury, Ct. Inquiry No. 621.—For parties to make a patent self opening can. Turbines.—James Lefell & Co., Springfield, Ohio, U.S.A. Inquiry No. 622.—For aluminium castings to be made by a concern near San Francisco. Dies & Special Machinery. Amer. Hdw. Mfg. Co., Ottawa, Ill. Inquiry No. 623.—For manufacturers of small malleable iron castings. Machine chain of all kinds. A. H. Bliss & Co. North Attleboro, Mass. Inquiry No. 624.—For manufacturers of gravers for half-tone finishing. Handle & Spoke Mch. Ober Mfg. Co., 10 Bell St., Chagrin Falls, O. Inquiry No. 625.—For a machine to sow phosphate by horse power. Sheet Metal Stamping: difficult forms a specialty. The Crosby Company, Buffalo, N. Y. Inquiry No. 626.—For a second-hand gasoline motor of about 8, 10 or 12 h. p. Sawmill machinery and outfits manufactured by the Lane Mfg. Co., Box 13, Montpelier, Vt. Inquiry No. 627.—For manufacturers to assemble device having powerful springs attached under tension. Our number 4 Catalogue of Automobile parts, write us, Standard Welding Co., Cleveland Ohio. Inquiry No. 628.—For manufacturers of dairy supplies for city creamery with steam separator, butter, ice cream machines, etc. Rigs that Run. Hydrocarbon system. Write St. Louis Motor Carriage Co., St. Louis, Mo. Inquiry No. 629.—For manufacturers of light springs, such as are used in typewriters. FOR SALE.—Patented invention, "Nut Lock." S. Koralewski, 19 Eagle Block, 20th Street, Pittsburg, Pa. Inquiry No. 630.—For parties engaged in punching and other light machine work. Ten days' trial given on Daus' Tip Top Duplicator. Felix Daus Duplicator Co., 5 Hanover St., N. Y. city. Inquiry No. 631.—For power looms for weaving fine cloth 30 to 40 mesh 48 inches wide. SA WMILLS.—With variable friction feed. Send for Catalogue B. Geo. S. Comstock, Mechanicsburg, Pa. Inquiry No. 632.—For manufacturers of peat-pressing machines, also for parties controlling plants for the manufacture of peat into paper. For Sale. Foundry and Machine Shop, doing a good business, in a fine locality, at a great sacrifice. Address Foundry, Box 773, New York. Inquiry No. 633.—For a double-headed, two-inch bolt cutter with oil pump and counter shaft. Second-hand preferred. Automobiles built to drawings and special work done promptly. The Garvin Machine Co., 149 Varick, cor. Spring Streets, New York. Inquiry No. 634.—For machinery for grinding lawn mowers. The celebrated "Hornsby-Akroyd" Patent Safety Oil Engine is built by the De La Vergne Refrigerating Machine Company. Foot of East 138th Street, New York. Inquiry No. 635.—For parties having facilities for making pens. 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. Inquiry No. 636.—For parties willing to manufacture special machines. Sheet Metal Novelties, Articles and Stampings of all sizes. Tools and dies manufactured on contract. Address Standard Stamping Co. Cor. 7th & Hudson Sts., Buffalo, N. Y. U. S. A. Inquiry No. 637.—For machinery for making back saws. WELL DRILLERS.—St. Landry Oil and Mineral Co., Opelousas, La., will receive proposals until May 20, for drilling oil well. Bond required and usual rights reserved. St. Landry Oil and Mineral Co. Inquiry No. 638.—For complete plant for photo-engraving or half-tone work. WANTED.—An experienced specification writer and patent expert having a thorough knowledge of the patent practice and preferably one competent to handle electrical cases. Munn & Co., Solicitors, Office of SCIENTIFIC AMERICAN, 361 Broadway, New York. Inquiry No. 639.—For ice machinery. Send for new and complete catalogue of Scientific and other Books for sale by Munn & Co., 361 Broadway, New York. Free on application. Inquiry No. 640.—For water swivels and rotaries for drilling rotary oil wells. Inquiry No. 641.—For manufacturers of electric smelters suitable for copper ores. Inquiry No. 642.—For latest improvements and labor-saving devices (except in forgings) in manufacture of pocket cutlery. Inquiry No. 643.—For parties to make table tops of alternate strips of cherry and black walnut, or other suitable hardwood glued together under pressure. Inquiry No. 644.—For machinery to straighten iron pipes warped by fire. Inquiry No. 645.—For quarry stripping machines. Inquiry No. 646.—For a safe process for heating hot water boilers by crude oil. Inquiry No. 647.—For manufacturers of adhesive tacks for hanging pictures. Inquiry No. 648.—For an improved process for extracting the juice out of living India rubber trees. Inquiry No. 649.—For dealers in oxide vanadium, or a salt of the metal. Inquiry No. 650.—For manufacturers of novelties for the mail order business.

- Inquiry No. 651.—For cautery batteries, knives and burners for surgical use. Inquiry No. 652.—For rotary knives. Inquiry No. 653.—For crude oil burners suitable for heating and cooking stoves, also an apparatus for burning crude oil in furnaces and boilers. Inquiry No. 654.—For second-hand pinion cutter for cutting pinions about 2 to 10 inches in diameter. Inquiry No. 655.—For manufacturers of hemlock tanned leather 1/2 inch thick. Inquiry No. 656.—For parties to manufacture a new electrical device that has a balance wheel and hair spring enclosed in a nickel-plated case, with a brass bezel and glass front. Inquiry No. 657.—For a second-hand Otis elevator engine 7-inch cylinders right hand. Inquiry No. 658.—For second-hand 10 horse and 5 horse motors and arc light dynamo of 30 lamps. Inquiry No. 659.—For a 48-inch swing lathe, bed not over 10 feet. Inquiry No. 660.—For manufacturers of electric fans for hotels. Inquiry No. 661.—For bolt header or other inexpensive machine for making pins, etc., 3/4 inch to 1 1/2 inch diameter; also machine for punching 1/2-inch holes through such pins. Inquiry No. 662.—For apparatus for bottling soda pop, and for the necessary bottles. Inquiry No. 663.—Wanted at once from stock soft bright (white) ribbon steel as a substitute for sheet brass, sizes about No. 13, 1/4 inch wide; No. 16, 1/2 inches wide; and No. 20, 3/4 inch wide. Inquiry No. 664.—For dealers in small stamped out articles made of leather, such as tops for umbrellas, mattress tufts, etc. Inquiry No. 665.—For manufacturers of all kinds of ax handle machinery.

Notes & Queries

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.

(8184) F. P. H. asks: Would you, through your information department, tell me why a condenser on an induction coil reduces the sparking at the platinum point of the circuit? A. When the primary circuit of a coil is closed, a current is induced in the primary coil by the rush of the battery current through it, which flows in the opposite direction to the battery current, and thus weakens and retards its effect. When the circuit is broken a current is induced in the primary circuit in the same direction as the primary, or battery current, which thus increases the effect of the battery current. This is called the extra current. It is this which produces the spark at the platinum point, which would be rapidly burned away, were it not for the condenser. When the circuit is broken, the large surface of the condenser is a reservoir, as it were, to receive the rush of the current. As soon as it is full, the condenser discharges itself backward through the primary coil, to which it is connected for this purpose. This discharge, being in the opposite direction to the primary current, demagnetizes the core very rapidly and makes the secondary spark on the break much stronger. The spark at the platinum point is prevented because the current can rush into the condenser easier than to jump the spark gap at the platinum point. This is, however, only one object attained by the condenser. The outrush of this charge makes the secondary spark at break much larger. Indeed, in a coil properly adjusted there is no secondary spark at the closing of the primary circuit, but only at the break of the circuit.

(8185) T. J. Y. asks: 1. What is the difference in the winding of a bridge and series telephone bell? A. The armature of the bridging magneto is wound to a higher resistance than that of the ordinary or series magneto. 2. Can a series bell be rewound so as to make it a bridge bell? If so, how? Can they be rewound and used without rewiring the 'phone? A. The series armature may have from 300 to 650 ohms, while the bridging bell has its armature wound to 1,000 to 1,600. If there is room for the wire, it may be added to the present coil till the proper resistance is reached. Otherwise the old coil should be unwound and replaced with wire which will give the proper resistance. No. 33 wire is commonly used for the coils. 3. Can you recommend some cheap book on telephones and their construction that would give this and other information in full? A. The best book is the cheapest in the end. This is Miller's "American Telephone Practice," price \$3 by mail. It covers the subject.

(8186) M. T. H. asks: I would like to know if malleable iron has as high a permeability as wrought iron or steel, and which is the best? A. Malleable cast iron is intermediate between cast and wrought iron, and mild-annealed steel has very nearly the same permeability as wrought iron. Soft steel is much used for cores of dynamos. Wrought iron or mild steel is the best.

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INDEX OF INVENTIONS

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

May 7, 1901, AND EACH BEARING THAT DATE.

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

- Acetylene generators, carbide package for, W. C. Hughes..... 673,435 Air apparatus, liquid, T. J. Hathaway..... 673,774 Air brake coupling, J. H. Phillips..... 673,560 Apron fastener, U. A. Magnesson..... 673,404 Atomizer, C. F. Strohm..... 673,827 Awning for lawn swings, F. A. Leavitt..... 673,685 Bag, See Chatelaine bag. Bag or envelope, W. N. Brown..... 673,417 Baker, fish, M. Kenney..... 673,436 Basin stepper, J. N. Crabb..... 673,762 Basins, means for cleaning settling, I. H. Jewell..... 673,577 Batteries and connections, terminal and binding screw for electric, W. R. Edwards..... 673,710 Battery cell, storage, Chamberlain & Suthphen..... 673,652 Bayonet, L. D. Murphy..... 673,527 Bearing, ball, Williams & Mitchell..... 673,854 Bearing, railway car axle, G. W. Magee..... 673,502 Bearing, roller, A. Featherstenbaugh..... 673,600 Bearing, thrust, A. T. Brown..... 673,676 Bed, automatic cabinet, C. M. Hamilton..... 673,530 Bedstead locking appliance, metallic, H. 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