

Business and Personal.

The Charge for Insertion under this head is One Dollar a 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 next issue.

Large Brick Foundry, Machine and Boiler Works, doing good business, for sale. Address J. P. Dennis & Co., Sioux City, Iowa.

Penfield Block Co., Lockport, N. Y., want Florists to send for samples Painted Pot and Tree Labels.

An Electrician, with large experience and the best of references, is open for an engagement. Address "Electrician," 590 Pacific St., Brooklyn, N. Y.

Horizontal Engine, 20 in. cyl. by 48 in. stroke, for sale new. Atlantic Steam Engine Works, Brooklyn, N. Y.

Abbe Bolt Forging Machines and Palmer Power Hammers a specialty. S. C. Forsyth & Co., Manchester, N. H.

I want cheap method of drying 15 tons sawdust per day. Address Allan Sterling, Room 52, 35 Broadway, N. Y.

Machinery for Light Manufacturing, on hand and built to order. E. E. Garvin & Co., 139 Center St., N. Y.

The Newark Filtering Co., of Newark, N. J., are filling orders from cities and manufacturers for their "Multifold Filters."

To Stop Leaks in Boiler Tubes, use Quinn's Pat. Ferrules. Address S. M. Co., So. Newmarket, N. H.

Light and Fine Machinery and Tools to Order. Lathe catalogue for stamp. Edward O. Chase, Newark, N. J.

Malleable and Gray Iron Castings to order, by Capital City Malleable Iron Co., Albany, N. Y.

For Power & Economy, Alcott's Turbine, Mt. Holly, N. J.

Combination Roll and Rubber Co., 27 Barclay St., N. Y. Wringer Rolls and Moulded Goods Specialties.

Send for Pamphlet of Compilation of Tests of Turbine Water Wheels. Barber, Keiser & Co., Allentown, Pa.

Presses & Dies (fruit cans) Ayar Mach. Wks., Salem, N. J.

Latest Improved Diamond Drills. Send for circular to M. C. Bullock, 80 to 88 Market St., Chicago, Ill.

Wood Working Machinery of Improved Design and Workmanship. Cordesman, Egan & Co., Cincinnati, O. "How to Keep Boilers Clean," and other valuable information for steam users and engineers. Book of sixty-four pages, published by Jas. F. Hotchkiss, 84 John St., New York, mailed free to any address.

Peck's Patent Drop Press. See adv., page 94.

Supplement Catalogue.—Persons in pursuit of information on any special engineering, mechanical, or scientific subject, can have catalogue of contents of the SCIENTIFIC AMERICAN SUPPLEMENT sent to them free. THE SUPPLEMENT contains lengthy articles embracing the whole range of engineering, mechanics, and physical science. Address Munn & Co., Publishers, New York.

Split Pulleys at low prices, and of same strength and appearance as Whole Pulleys. Yocum & Son's Shafting Works, Drinker St., Philadelphia, Pa.

Malleable and Gray Iron Castings, all descriptions, by Erie Malleable Iron Company, limited, Erie, Pa.

Presses & Dies. Ferracute Mach. Co., Bridgeton, N. J.

Corrugated Wrought Iron for Tires on Traction Engines, etc. Sole mfrs., H. Lloyd, Son & Co., Pittsburg, Pa.

Supplee Steam Engine. See adv. p. 93.

List 27.—Description of 3,000 new and second-hand machines, now ready for distribution. Send stamp for same. S. C. Forsyth & Co., Manchester, N. H., and N. Y. city.

Presses, Dies, Tools for Working Sheet Metals, etc. Fruit and other Can Tools. E. W. Bliss, Brooklyn, N. Y.

Improved Skinner Portable Engines. Erie, Pa.

Lightning Screw Plates and Labor-saving Tools, p. 93.

Cope & Maxwell Mfg Co.'s Pump adv., page 108.

The Berryman Feed Water Heater and Purifier and Feed Pump. I. B. Davis' Patent. See illus. adv. p. 110.

For Pat. Safety Elevators, Hoisting Engines, Friction Clutch Pulleys, Cut-off Coupling, see Frisbie's ad. p. 108.

Saw Mill Machinery. Stearns Mfg. Co. See p. 93.

Safety Boilers. See Harrison Boiler Works adv., p. 109.

Mineral Lands Prospected, Artesian Wells Bored, by Pa. Diamond Drill Co. Box 423, Pottsville, Pa. See p. 103.

Common Sense Dry Kiln. Adapted to drying of all material where kiln, etc., drying houses are used. See p. 103.

4 to 40 H. P. Steam Engines. See adv. p. 103.

The Brown Automatic Cut-off Engine; unexcelled for workmanship, economy, and durability. Write for information. C. H. Brown & Co., Fitchburg, Mass.

Ball's Variable Cut-off Engine. See adv., page 124.

Paragon School Desk Extension Slides. See adv. p. 125.

Fire Brick, Tile, and Clay Retorts, all shapes. Borgner & O'Brien, Mfrs, 23d St., above Race, Phila., Pa.

Brass & Copper in sheets, wire & blanks. See ad. p. 124.

The Improved Hydraulic Jacks, Punches, and Tube Expanders. R. DuGeon, 24 Columbia St., New York.

Diamond Planers. J. Dickinson, 64 Nassau St., N. Y.

Ajax Metals for Locomotive Boxes, Journal Bearings, etc. Sold in ingots or castings. See adv., p. 125.

Geiser's Patent Grain Thrasher, Peerless, Portable, and Traction Engine. Geiser Mfg. Co., Waynesboro, Pa.

Tight and Slack Barrel machinery a specialty. John Greenwood & Co., Rochester, N. Y. See illus. adv. p. 125.

For the manufacture of metallic shells, cups, ferrules, blanks, and any and all kinds of small press and stamped work in copper, brass, zinc, iron, etc. Address C. J. Godfrey & Son, Union City, Conn. The manufacture of small wares, notions, and novelties in the above line, a specialty. See advertisement on page 126.

Granville Hydraulic Elevator Co., 1193 B'way, N. Y.

For Leather, Rubber, or Cotton Belling, Linen Hose or Rubber Hose, write Greene, Tweed & Co., New York.

Draughtsman's Sensitive Paper, T. H. McCollin, Phila., Pa.

For Mill Mach'y & Mill Furnish'g, see illus. adv. p. 124.

Fine Taps and Dies in Cases for Jewelers, Dentists, Amateurs. The Pratt & Whitney Co., Hartford, Conn.

For Shafts, Pulleys, or Hangers, call and see stock kept at 79 Liberty St., N. Y. Wm. Sellers & Co.

Wm. Sellers & Co., Phila., have introduced a new injector, worked by a single motion of a lever.

For Belt Studs, Belt Hooks, Belt Couplers, Belt Punches, Baxter Wrenches, write Greene, Tweed & Co., N. Y.

The Chester Steel Castings Co., office 407 Library St., Philadelphia, Pa. can prove by 15,000 Crank Shafts, and 10,000 Gear Wheels, now in use, the superiority of their Castings over all others. Circular and price list free.

Skinner's Chuck. Universal, and Eccentric. See p. 126.

[OFFICIAL.]

INDEX OF INVENTIONS

FOR WHICH

Letters Patent of the United States were Granted in the Week Ending

February 7, 1882.

AND EACH HEARING THAT DATE.

[Those marked (r) are reissued patents.]

A printed copy of the specification and drawing of any patent in the annexed list, also of any patent issued since 1866, will be furnished from this office for 25 cents. In ordering please state the number and date of the patent desired and remit to Munn & Co., 261 Broadway, corner of Warren Street, New York city. We also furnish copies of patents granted prior to 1866; but at increased cost, as the specifications not being printed, must be copied by hand.

Table listing inventions and their patent numbers, including items like Alarm, See Fire alarm, Album clasp, A. C. Hafely, Alumina cake, manufacture of, T. S. Harrison, etc.

Table listing inventions and their patent numbers, including items like Cuspidor, W. Westlake, Cutter, See Caramel cutter, Cigar cutter, Hog tendon cutter, Sewing machine thread cutter, etc.

Table listing inventions and their patent numbers, including items like Lubricator, L. Maxfield, Magneto-electric machine, J. Herman, Malt extracts from the refuse of brewers' mash, etc.

