

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 weekly as Thursday morning to appear in next issue.

\$30,000 cash will be given as a bonus to secure location of satisfactory manufacturing establishment in growing Western town, near good coal and having competing railroads. Address, with references, Western Town, Box 773, New York, stating character of business and present capital.

Mechanics' Watch. \$10. Circul's free. Birch, 38 Dey St., N.Y. Turkey Emery. Star Glue, Pumice, Walrus Leather, Polishers' Supplies. Greene, Tweed & Co., 118 Chambers St., N. Y.

Patent for sale.—G. Neu, 171 W. Liberty St., Cin., O. Davis' Invalid Bed, described in another column, with huck mattress, hair or cotton top, \$25. Rights for sale. Geo. B. Davis, Richmond, Va.

Machinist and Fine Tool Maker wanted. One that has had experience on watch tools and fine model work. Steady employment and pay every week. Wm. Essick & Co., Reading, Pa.

Second-hand Upright Engine, in excellent order, for sale. 6 to 8 H.P. Trump Bros. Mach. Co., Wilmington, Del. Rolled Nickel Anodes, Grain Nickel, Nickel Salts, Platers' Supplies. Greene, Tweed & Co., New York.

Constant Current Electric Generator. Price, \$3. Constant Current Cure Company, 207 Main St., Buffalo, N. Y. Send for circular. See advertisement, p. 253.

For Sale.—A complete set of Patterns, Flasks, and Core Arbors, for making Cast Iron Flanged Pipe, Elbows, Tees, and Greenhouse Fittings. Will be sold low to clean out a branch of a business. Address C, Box 1358, New York.

A pair of 15 x 24 Engines, good as new, for sale cheap, as they must be removed. J. C. Todd, 10 Barclay St., N.Y.

Superintendent wanted.—A man competent to superintend a works employing about 300 hands in building machinery and tools, and in manufacturing goods for a regular trade. None but a first-class man in all respects need apply. Address B, Box 2333, New York.

Ajax Metals for Locomotive Boxes, Journal Bearings, etc. Sold in ingots or castings. See adv., p. 236.

New Comb'd Milling and Gear Cutting Machines, large range. C. A. Condé & Co., Makers, Philadelphia, Pa.

A valuable article on the Treatment of Acute Rheumatism, by Alfred Stillé, M.D., will be found in SCIENTIFIC AMERICAN SUPPLEMENT, No. 238. Anything from the pen of this eminent and experienced physician is interesting and instructive.

Foot Lathes, Fret Saws, 6c. 90 pp. E. Brown, Lowell, Mass.

"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.

Alden Crushers. Westinghouse Mach. Co., Pittsbg, Pa.

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.

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

Cope & Maxwell M'fg Co.'s Pump adv., page 254.

Punching Presses & Shears for Metal-works, Power Drill Presses. \$25 upward. Power & Foot Lathes. Low Prices. Peerless L'unch & Shear Co., 1158 Liberty St., N.Y.

Pure Oak Leather Belting. C. W. Arny & Son, Manufacturers, Philadelphia. Correspondence solicited.

Presses & Dies. Ferracute Mach. Co., Bridgeton, N. J. Split Pulleys at low prices, and of same strength and appearance as Whole Pulleys. Yocom & Son's Shafting Works, Drinker St., Philadelphia, Pa.

Wood-Working Machinery of Improved Design and Workmanship. Cordeman, Egan & Co., Cincinnati, O.

Experts in Patent Causes and Mechanical Counsel. Park Benjamin & Bro. 234 Broadway, New York.

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

Peck's Patent Drop Press. See adv., page 269.

National Steel Tube Cleaner for boiler tubes. Adjustable, durable. Chalmers-Spence Co., 10 Cortlandt St., N.Y.

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

Best Oak Tanned Leather Belting. Wm. F. Forepaugh, Jr. & Bros., 531 Jefferson St., Philadelphia, Pa.

Nickel Plating.—Sole manufacturers cast nickel anodes, pure nickel salts, importers Vienna lime, crocus, etc. Hanson & Van Winkle, Newark, N. J., and 92 and 94 Liberty St., New York.

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

Rollstone Mac. Co.'s Wood Working Mach'y ad. p. 233.

The Sweetland Chuck. See illus. adv., p. 233.

Machine Knives for Wood-working Machinery, Book Binders, and Paper Mills. Also manufacturers of Solomon's Parallel Vise, Taylor, Stiles & Co., Riegelsville, N. J.

Skinner's Chuck. Universal, and Eccentric. See p. 236.

For Machinists' Tools, see Whitcomb's adv., p. 238.

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

Electric Lights.—Thomson Houston System of the Arc type. Estimates given and contracts made. 631 Arch, Phil.

Common Sense Dry Kiln. Adapted to drying all material where kiln, etc., drying houses are used. See p. 254.

4 to 40 H. P. Steam Engines. See adv. p. 254.

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

For best Portable Forges and Blacksmiths' Hand Blowers, address Buffalo Forge Co., Buffalo, N. Y.

Supplee Steam Engine. See adv. p. 270.

Ore Breaker, Crusher, and Pulverizer. Smaller sizes run by horse power. See p. 285. Totten & Co., Pittsburg.

Saw Mill Machinery. Stearns Mfg. Co. See p. 269.

Paragon School Desk Extension Slides. See adv. p. 269.

Brass & Copper in sheets, wire & blanks. See ad. p. 269.

CONSTANT CURRENT CURE COMPANY, 207 Main St., Buffalo, N. Y.

SIRS: I am compelled to say that, contrary to my expectations, the Generator you sent me has performed a miraculous cure in my case. For seven weeks I had been almost distracted with neuralgia in my head. I had tried every prescription and remedy known, but without avail. When your package came by mail, I applied the electrodes with little hope for relief I confess; but in twenty minutes the terrible pain that had been torturing me for seven weeks DISAPPEARED ENTIRELY. I consider it only justice to acquaint you with these facts. R. R. GREER, 270 Leonard St., Brooklyn, E. D.

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 269.

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.

Wren's Patent Grate Bar. See adv. page 269.

Millstone Dressing Diamonds. Simple, effective, and durable. J. Dickinson, 64 Nassau street, New York.

The I. B. Davis Patent Feed Pump. See adv., p. 270.

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

Eagle Anvils, 10 cents per pound. Fully warranted.

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. 269.

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, or tin, 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 270.

For Mill Mach'y & Mill Furnishing, see illus. adv. p. 268.

Magic Lanterns and Stereopticons of all kinds and prices. Views illustrating every subject for public exhibitions, Sunday schools, colleges, and home entertainment. 116 page illustrated catalogue free. McAllister, Manufacturing Optician, 49 Nassau St., New York.

New Economizer Portable Engine. See illus. adv. p. 270.

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 75 Liberty St., N. Y. Wm. Sellers & Co.

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

Don't buy a Steam Pump until you have written Valley Machine Co., Easthampton, Mass.

Improved Skinner Portable Engines. Erie, Pa.



HINTS TO CORRESPONDENTS.

No attention will be paid to communications unless accompanied with the full name and address of the writer.

Names and addresses of correspondents will not be given to inquirers.

We renew our request that correspondents, in referring to former answers or articles, will be kind enough to name the date of the paper and the page, or the number of the question.

Correspondents whose inquiries do not appear after a reasonable time should repeat them. If not then published, they may conclude that, for good reasons, the Editor declines them.

Persons desiring special information which is purely of a personal character, and not of general interest, should remit from \$1 to \$5, according to the subject, as we cannot be expected to spend time and labor to obtain such information without remuneration.

Any numbers of the SCIENTIFIC AMERICAN SUPPLEMENT referred to in these columns may be had at this office. Price 10 cents each.

(1) F. G. asks how to make a good cement for fastening sheets of pasteboard together. It must be waterproof. A. Good pitch and gutta percha (about equal parts) are fused together, and to nine parts of this are added three parts of boiled oil and one-fifth part of litharge; continue the heat with stirring until thorough union of the ingredients is effected. This is applied hot or cooled somewhat, and thinned with a small quantity of benzole or turpentine oil.

(2) A. B. B. asks for a simple and reliable method of testing coal oil. A. Place a small sample of the oil to be tested in a cup partially immersed in a vessel of water, and having placed the bulb of a good thermometer in the oil, heat the water gradually, and as the temperature of the oil rises apply the flame of a burning taper to its surface, and note on the thermometer the degree at which it inflames. This should not occur below 120° Fah. Many of the standard oils inflame only at temperatures 150° or higher.

English Patents Issued to Americans.

From September 13 to September 23, 1881, inclusive. Albumen, manufacture of. W. H. Hillman, N. Y. city. Cigar lighter. C. H. Vibbard et al., Aurora, N. Y. Corset, M. Cohn, New York city. Crayon holder. C. W. Livermore, Providence, R. I. Door knob. C. C. Harrington, Newton, Mass. Dynamo-electric machine (2). T. A. Edison, Menlo Park, N. J. Electric cable. P. B. Delany et al., New York city. Electric lamp. E. M. Fox, New York city. Electric lamp. A. E. Brown, Cleveland, Ohio. Electrical alarm apparatus. H. C. Roome, Jersey City, N. J. Fastening device for dash boards. C. F. Littlejohn et al., New Haven, Conn. Hair pin. Mary T. Foote, Boston, Mass. Heel blank machine. J. W. Brooks, Boston, Mass. Lamp burner, W. Painter, Baltimore, Md. Life boat. G. B. Berrell, Pennsylvania. Needle. R. Crowley, New York city. Paving block. W. Hunt, New York city. Reflector. W. Wheeler, Massachusetts.

Railway signaling apparatus (2). W. W. Gary, Boston, Mass. Sawing machinery. F. Myers, New York city. Sewing machine. F. G. Altman et al., Medina, Mo. Show case. L. G. Blood, New York city. Stitching buttons, Morley Sewing Machine Company, Holyoke, Mass. Telegraph cable. J. B. Henck, Jr., Boston, Mass.

[OFFICIAL.]

INDEX OF INVENTIONS

FOR WHICH

Letters Patent of the United States were Granted in the Week Ending September 27, 1881.

AND EACH BEARING 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., 37 Park Row, 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: Acid, method of and apparatus for volatilizing; Advertising card; Amalgamating apparatus; Amalgamator; Animal and vegetable substances, process of and apparatus for manufacturing and desiccating; Auger, hollow; Axle box, car; Axle box, car; Axle box, car; Axle lubricator; Baby jumper; Bag; Baling hay; Bar; Bath; Bed, sofa or lounge; Bedstead, invalid; Bell, call; Bellows; Blower, rotary; Boiler; Boiler furnace; Boiler furnaces, mud ring; Boot and shoe heel trimming machine; Box; Bracelet; Braid clasp; Bronzing machine; Bronzing machine; Bucket, minnow; Buckle; Buckle, Sweeney & Lowe; Burner; Butter worker; Button and stud, separable; Can; Cap, waterproof; Car coupling; Car coupling; Car coupling; Car coupling; Car draw bar; Car starter; Car, street; Carriage; Carriage reach; Carriage top; Carriage top; Case; Caster; Chair; Check rower; Churn and butter worker; Clamp for securing covers of jars; Clasp; Cleaner; Clocks and watches, repeating apparatus; Clothes rack; Coal tipples; Coffins; Collar, horse; Compass, mariner's; Condenser; Cooling and condensing apparatus; Copper, hardening; Copying press; Corn cutter; Corn cutter; Corn sheller; Corn sheller; Corset; Corset; Corset; Corset; Coupling; Cultivator shovel; Curtain fixture; Cut-off, automatic; Cut-off valve gear; Cylinder, machine for forming threads on sheet metal; Die stamping and surface printing machine; Door securer; Drill; Dropper; Eggs, preserving; Electric machines; Electric regulator; Elevator; Elevator; Elevator bucket.

Table listing inventions and their patent numbers, including: Engine; Evaporator; Exerising machine; Expansion joint; Extractor; Eyeglasses, nose piece; Fare box and register; Fare registers, trip signal; Faucet; Faucet, lock; Fence; Fence, G. W. Gates; Fence, barbed wire; Fence, barbed wire; Fence, metallic; Fence post; Fire escape; Fireplace, grate; Floating elevator; Flood gate; Flour; Fuel feeding apparatus; Furnace; Furnace door; Furnaces, superheating air for puddling and heating; Garter; Gas, apparatus for making illuminating; Gas, apparatus for the manufacture of wood and oil; Gas meter; Gate; Gate hanging; Gate roller and hinge; Gelatinous blank for the manufacture of wall ornaments; Gelatinous sheets to imitate tortoise shell; Gib for connecting rods; Glass, machine for ornamenting; Glue, apparatus for making; Governor; Grain binder; Grain binder; Grain cleaning machine; Grain drill and fertilizer distributor; Grapes, preserving; Grater, nutmeg; Grinding and pulverizing apparatus; Grinding mill; Guard; Gun cleaner; Hair tonic; Harrow or cultivator; Harvester, single drive wheel; Harvesting machine; Hat bodies, apparatus for forming; Hat, napped; Hay elevator and carrier; Hearsable barrow; Heater; Heating buildings, system for; Heating cities, apparatus for; Holder; Horse detacher; Horse power; Horseshoe; Hot air register evaporator; Hub, vehicle; Ice crushing machine; Indicator; Indicators, spiral spring; Ink, manufacture of printing; Jar holder; Joint; Key ring; Ladder brace rod; Lamp burner; Lamp extinguisher; Lamp, safety spout; Lamp shade; Lamp, student; Land roller; Lasting machine; Lathe tool rests; Leather, artificial; Levels, pointer for piano; Lifter; Lock; Locket; Lubricator; Malt turning apparatus; Mangle; Metal shearing machine; Meter; Mill; Mines, device for raising tailings from; Mowing machine; Music stand; Nut lock; Oil can; Oil dropper; Ore concentrator; Ore roasting and calcining furnace; Ore separator; Ore separator; Paddlewheel; Paddlewheel float; Padlock, permutation; Painting barrel heads; Paper bag; Paper, waxed; Passenger register; Pendulums, self-adjusting crutch for; Photographic plate holder; Piano case; Pianos, adjustable pedal guard; Pianos, fall board for upright; Pillow sham holder; Planter and cultivator; Planter and fertilizer distributor; Plastic composition from soluble fiber manufacture; Plate, pie; Plow, sulky; Post; Pot; Power; Power machine; Press; Printing press; Printing press, A. Newbury; Printing presses, interchangeable inking bed for; Propeller, hydraulic.