

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.

Alden Crushers. Westinghouse Mach. Co., Pittsb'g, Pa. Engines, 10 to 50 H. P., \$250 to \$500. See adv., p. 158. Wanted—A good Patent. B, Box 2635, Boston, Mass. Turkey Emery, Star Glue, Pumice, Walrus Leather, Polishers' Supplies. Green, Tweed & Co., 118 Chambers St., N. Y. Second-hand Machinery for sale. List free. E. Side, 370 South First St., Brooklyn, E. D., N. Y.

If every farmer in the country would examine Boomer & Boscher's Cider Press, they would at once see the advantage of using one to utilize the immense crop of apples so abundant. The price is exceedingly reasonable. New York Office, 15 Park Row.

No. 196,666. Processes for Manufacturing Paper Pulp. Douglas Hickox, Springfield, Ill. Patented October 30, 1877. Has been in constant use since 1876. The most perfect process in use on any kind of stock. Will sell a few States. Would like correspondence with manufacturers of pulping machinery. Address as above.

"How to Keep Boilers Clean," and other information for steam users. Book of sixty-four pages. Published by Jas. F. Hotchkiss, 84 John St., New York, mailed free to any address.

For Sale.—Screw Cutting Engine Lathe, New Haven make, 27 inch swing; will take 18½ feet between centers; second-hand, with three tool rests. Williams, White & Co., Moline, Ill.

Rolled Nickel Anodes, Grain Nickel, Nickel Salts, Platers' Supplies. Greene, Tweed & Co., New York. Supplee Steam Engine. See adv. p. 140.

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

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.

See Bental, Margedant & Co.'s adv., page 157.

List 26.—Description of 2,500 new and second-hand Machines, now ready for distribution. Send stamp for the same. S. C. Forsaith & Co., Manchester, N. H.

Combination Roll and Rubber Co., 27 Barclay St., N. Y. Wrinser Rolls and Moulded Goods Specialties. Silica Paints (not mixed); all shades. 40 Bleecker St., N. Y.

Punching Presses & Shears for Metal-workers, Power Drill Presses. \$25 upward. Power & Foot Lathes. Low Prices. Peerless Punch & Shear Co., 115 S. Liberty St., N. Y. Improved Skinner Portable Engines. Erie, Pa.

The Eureka Mower cuts a six foot swath easier than a side cut mower cuts four feet, and leaves the cut grass standing light and loose, curing in half the time. Send for circular. Eureka Mower Company, Towanda, Pa.

Turbine Wheels; Mill Mach'y. O. J. Bollinger, York, Pa.

Pure Oak Leather Belting. C. W. Army & 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. Cordesman, Egan & Co., Cincinnati, O. Experts in Patent Causes and Mechanical Counsel. Park Benjamin & Bro., 50 Astor House, New York.

Cope & Maxwell M'fg Co.'s Pump adv., page 125.

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

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., Pittsb'g, 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. 4 to 40 H. P. Steam Engines. See adv. p. 126.

Peck's Patent Drop Press. See adv., page 141.

For best Duplex Injector, see Jenks' adv., p. 142.

For Mill Mach'y & Mill Furnishing, see illus. adv. p. 140.

C. B. Rogers & Co., Norwich, Conn., Wood Working Machinery of every kind. See adv., page 141.

Saw Mill Machinery. Stearns Mfg. Co. See p. 142.

Ore Breaker, Crusher, and Pulverizer. Smaller sizes run by horse power. See p. 158. Totten & Co., Pittsburg.

The None-such Turbine. See adv., p. 141.

Machine Diamonds, J. Dickinson, 64 Nassau St., N. Y. Steam Hammers, Improved Hydraulic Jacks, and Tube Expanders. R. Dudgeon, 24 Columbia St., New York.

50,000 Sawyers wanted. Your full address for Emerson's Hand Book of Saws (free). Over 100 illustrations and pages of valuable information. How to straighten saws, etc. Emerson, Smith & Co., Beaver Falls, Pa.

Telegraph, Telephone, Elec. Light Supplies. See p. 156.

For Pat. Safety Elevators, Hoisting Engines. Friction Clutch Pulleys, Cut-off Coupling, see Frisbie's ad. p. 158.

Elevators, Freight and Passenger, Shafting, Pulleys and Hangers. L. S. Graves & Son, Rochester, N. Y.

Gear Wheels for Models (list free); Experimental Work, etc. D. Gilbert & Son, 212 Chester St., Phila., Pa.

Gould & Eberhardt's Machinists' Tools. See adv., p. 157.

Safety Boilers. See Harrison Boiler Works adv., p. 157.

The Medart Pat. Wrought Rim Pulley. See adv., p. 158.

For Heavy Punches, etc., see illustrated advertisement of Hiles & Jones, on page 157.

Barrel, Key, Hogthead, Stave Mach'y. See adv. p. 157. Comb'd Punch & Shears; Universal Lathe Chucks. Lambertville Iron Work, Lambertville, N. J. See ad, p. 157.

Long & Allstatter Co.'s Power Punch. See adv., p. 158.

Cutters for Teeth of Gear Wheels formed entirely by machinery. The Pratt & Whitney Co. Hartford, Conn.

Mineral Lands Prospected, Artesian Wells Bored, by Pa. Diamond Drill Co. Box 423, Pottsville, Pa. See p. 156.

Rollstone Mac. Co.'s Wood Working Mach'y ad. p. 157.

For best low price Planer and Matcher, and latest improved Sash, Door, and Blind Machinery, Send for catalogue to Rowley & Hermance, Williamsport, Pa.

The only economical and practical Gas Engine in the market is the new "Otto" Silent, built by Schleicher. Schumm & Co., Philadelphia, Pa. Send for circular.

The Common Sense Dry Kiln prevents check, warp, or hardened surface. See St. Albans M'fg Co.'s adv. p. 158.

The Porter-Allen High Speed Steam Engine. South-work Foundry & Mach. Co., 430 Washington Av., Phil. 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) N. P. H. asks: Is there a fireproof paint manufactured? If so, of what is it composed, and who makes it? If not, can it be made for outside work, and of what? A. We know of no paint that is absolutely fireproof. Water glass in connection with mineral matters and metallic oxides forms paints that are non-inflammable. See Water-glass, page 16, current volume.

(2) S. C. asks how many purposes olive oil is used for. A. Olive oil is chiefly used as a condiment, as a lubricant for light machinery, and in the manufacture of soap.

(3) M. J. M. asks: Would it be injurious to the health of the occupant of a sleeping room to burn a coal oil stove in the apartment two or three hours daily? A. Yes, if the room is not well ventilated.

(4) R. M. asks how to stain poplar wood in imitation of Spanish cedar for cigar box lumber. A. Kiln-dry the wood and stain it by immersion in nitric acid or in strong nitrate or sulphate of iron solution. Then oil slightly.

(5) M. E. K. asks: What kind of cement is used, and what the process of putting the rubber coating on to the rollers of clothes wringers? A. Use marine glue. See receipt No. 8, under Cements, page 1025, SUPPLEMENT, No. 158.

(6) W. & S. ask: What is the fastest run on record of a locomotive? A. Locomotives have run on straight track at the rate of 70 to 75 miles per hour.

(7) W. G. B. asks: Is galvanized iron pipe fit to be used as a suction pipe for wells or cisterns intended for family uses? Is it poisonous? Which is the most durable, and which would be the best: galvanized or tarred pipe? A. Galvanized iron pipe should not be used for water for domestic purposes. It is likely to poison the water. We should prefer the tarred pipe.

(8) E. H. asks: Why do some chemistries give AmS as a group test and others AmHS? A. The former is according to the older system of nomenclature. Ammonic sulphide should be expressed H.(NH4)S. 2. How much H2S will water absorb under ordinary pressure? A. From three to six times its volume, according to temperature. 3. About what per cent of the gas is absorbed while passing through half a foot of water? A. It depends upon the size of the bubbles, the quantity of gas passed in a given time, the temperature and degree of saturation of the liquid, and the pressure. 4. Does not H2S affect rubber? A. Slightly.

(9) G. W. D. asks for the composition of what is called phosphor brass, and how it is mixed and melted together. A. In preparing phosphor brass, about one-tenth of one per cent of dry phosphorus is introduced into the melted metal (good red brass) in a covered crucible.

(10) G. C. D. asks: How shall I construct a wood building capable of keeping lime from air slaking in hot weather? A. Make the structure as nearly airtight as possible. Good common building paper, well lapped, can be used with advantage for lining wooden sheds. Lime may be kept for an indefinite time unchanged in dry air. Moisture in the air is what occasions the slaking.

(11) C. O. A. asks how to separate the silver from a solution of cyanuret of potassium and nitrate of silver. A. Add to the warm solution hydrochloric acid until a precipitate ceases to form, separate the precipitate by filtration, dry it, mix the dry powder with an equal weight of borax glass (anhydrous borax) and heat all gradually to bright redness in a small covered black lead crucible. Cool, break the crucible, and remove the button of silver which will be found at the bottom if the fusion has been properly carried out. The decomposition of the double cyanide by acid should be accomplished out of doors and with care to avoid inhaling the very poisonous gases given off.

(12) W. G. M. asks: Could a spring weighing apparatus be constructed to accurately show the weight of substances varying from 50 lb. to 2 tons, and how would such an apparatus be affected by the temperature? Could an instrument capable of accomplishing the above be made by use of water pressure, or a gas in a tight cylinder? A. Springs, air or gas, would be affected by change of temperature. It could probably be effected by a column of water, though change of temperature would affect it slightly.

(13) S. S. asks: How can I best extract the oversaltiness and sweeten the flavor of hams and bacon preparatory to smoking them? [Perhaps some of our readers can furnish our correspondent with this information.]

(14) W. W. asks how to clean a white Manila hat. A. Sprinkle with water and expose it to the fumes of burning sulphur in a tight box.

(15) G. E. D. asks: 1. What is used to stain violins? A. See page 74, answer No. 6, vol. xlv. 2. What is used to prevent toilet or shaving soap from shrinking—is it pressed? If so, where can I get a press, and what do they cost? A. The natural shrinking is allowed to take place before pressing. See column of Business and Personal and Hints to Correspondents. 3. Which makes the strongest floor, two one-inch board or two inch plank, where the sleepers are two or two and a half feet apart? A. The boards, if tongued and grooved; otherwise there is little difference, if they are of the same stuff and equally well seasoned.

(16) R. N. asks: How is cotton seed oil made? A. See "The Manufacture of Cotton Seed Oil," page 25, current volume.

[OFFICIAL.]

INDEX OF INVENTIONS

FOR WHICH

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

August 9, 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.

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