

MINERALS, ETC.—Specimens have been received from the following correspondents, and examined, with the results stated:

A. J. H.—Package labelled No. 1 contained a quantity of fine sandstone, a crystal of carbonate of lime, calcite, and a specimen of marcasite or white iron pyrites. They are of little value. Package No. 2 has not been received.—M. J. D.—No. 1 is mica schist in sandstone. No. 2 is principally magnetite. No. 3 is agate imbedded in quartz. No. 4 is quartz. No. 5 is hematite. No. 6 is hornblende and mica. No. 7 is aragonite. No. 8 is fine white sandstone. No. 9 is sandstone. No. 10 is a variety of light colored shale. No. 11 is dark limestone. No. 12 is decomposed slate. No. 13 is sandstone. The Indian arrowhead is of flint.—S. D. M.—Your communication in regard to formations on specimens of coal sent by you will be answered in full shortly.—J. W. C.—These insects are not described in our works on entomology. We would require more of them for further investigation, as these were few in number and much mutilated.—N. B. W.—No. 1 does not contain silver; it consists chiefly of galena. No. 2 is principally marcasite. No. 3 is baric sulphate. No. 4. The amount of alumina is too large for it to rank with other analyses of kaolin. No. 5 is sulphide of iron.—G. B. McE.—They are of no value. The bright metallic appearance is due to mica.

E. P. says: I have a surveyor's steel chain, the links of which are not soldered or brazed. Can you inform me of the simplest method by which it can be done? C. B. L. asks: How can I color and polish the sections of walnuts to make them look like jet?

COMMUNICATIONS RECEIVED.

The Editor of the SCIENTIFIC AMERICAN acknowledges, with much pleasure, the receipt of original papers and contributions upon the following subjects:

- On Apparitions. By J.
On Hammocks. By J. M. C.
On Steam Cars. By F. G. W.
On Vegetable Sponges. By W. H. C.
On Colliery Races. By C.
On Mining Cables. By C. T. S.
On the Science of Geometry. By F. G. C.
On Modern Science. By H. B. C.
On Death by Strychnin. By S. J. P.
On the Grasshopper Plague. By G. P. Z.

Also inquiries and answers from the following: G. P.—N. C. Jr.—N. J. N.—A. E. B.—R. J. T.—S. K. O.—W. E. S.—J. R.—L. C. J.

HINTS TO CORRESPONDENTS.

Correspondents whose inquiries fail to appear should repeat them. If not then published, they may conclude that, for good reasons, the Editor declines them. The address of the writer should always be given.

Enquiries relating to patents, or to the patentability of inventions, assignments, etc., will not be published here. All such questions, when initials only are given, are thrown into the waste basket, as it would fill half of our paper to print them all; but we generally take pleasure in answering briefly by mail, if the writer's address is given.

Hundreds of inquiries analogous to the following are sent: "Who sells aneroid barometers? Who sells steel, hard enough to cut glass? Who manufactures the so-called fish guano? Who publishes books on aeronautics?" All such personal inquiries are printed, as will be observed, in the column of "Business and Personal," which is specially set apart for that purpose, subject to the charge mentioned at the head of that column. Almost any desired information can in this way be expeditiously obtained.

[OFFICIAL.]

INDEX OF INVENTIONS

FOR WHICH

Letters Patent of the United States were

Granted in the Week ending

July 20, 1875,

AND EACH BEARING THAT DATE.

[Those marked (r) are reissued patents.]

Table listing inventions with patent numbers, including items like Air ship, Alarm, burglar, Auger, Baking stand, Barrel head, Bed lounge, Bell, door, Blower, rotary, Bobbin winder, Bolt work for doors, Bosom form, Box dressing machine, Brake shoe, Bridle bit, Brush, Buckle, Butter pail, Cigar box, Clock calendar, Cloth dryer, Clothes line reel, Coad hod, Cock, stop, Commode or stand, Corn drill, Corn sheller, Cracker machine, Crackers, device for glazing, Cribs, etc., screen supporter, Crucible, J. Felix, Curtain roller, Cutter head, Cyclophore, Dental forceps, Dental plugger, Dental plunger, Dial, sun, W. H. McCoy, Door, W. C. Hurd, Door check, Dredging box, Drill, expansion, M. C. Bullock, Drilling machine, Dryer for paint, Egg tester, Engine, governor, Engine lubricator, steam, Engine, rotary, W. Weyhe, Engine, steam, W. Read, Engines, carriage for portable, Engines, valve and gearing for steam, Envelope, document, Fare register, Felly plate, Fences, making tabs for wire, Fences, tightening wire, Fertilizer distributor, Fire arm, breech-loading, Fire escape, Fishing and similar floats, Floor, lint room, Fountains, ornamental jet for, Furnace grate, Furnace, hot air, Furnace, steam boiler, Gage, taper, C. B. Hunt, Gas and water regulator, Gas, apparatus for purifying, Gas machines, pressure blower, Gas retorts, supplying oil, Gases, apparatus for hydrating, Gate, L. S. Cohn, Gate, automatic, Gate, farm, A. Callahan, Gate, farm, m. H. Hillson, Gems, setting, T. W. Fry, Governor, steam, Grain tally, W. Schnebly, Grating roller, Hand rest, accountant's, Harrow, Chamberlain & Seiple, Harrow, S. G. Jones, Harrow, W. H. Parlin, Hatters, sizing plank for, Hay knife, K. Kellogg, Hay loader, Heater, etc., for boilers, Heater for rollers, Hemp and flax machine, Hose spanner, Ice hook, Ice pick and can opener, Inhaler, pocket, Injector, Iron, compound for coating, Jack, lifting, Journal bearings, heat indicator for, Key holder, F. W. Coleman, Kiln, brick, Knife, hay, Lamp, J. B. Godwin, Lamp car, Lamps, etc., extension fixture for, Leather dressing, Leather, manufacturing, Leather, tanning, Lever, safety pinion, Lime kiln, Lime fastener, Liquid mixer, Lock, time, Loom shuttle, Looms, wire heddle for, Lubricator, Davis and Du Bois, Lubricator, Richter and Merkel, Lubricator, steam engine, Mantel, iron, T. F. Baker, Metal bending machine, Milk strainer, Mill, flour, Mill, rolling, I. Hahn, Mirror, window, Molding machine, Molding machine, Frank and Spire, Molding machine, A. S. Gear, Motor, hydraulic, Nail plate feeder, Newspaper forms, Nut lock, Ore stamp feeder, Oven for firing pottery, Padlock, H. S. Lockwood, Paper bag machine, Paper barrel and box, Paper collar machine, Paper stock, grinding, Pavement, wood, J. J. Schroyer, Pavement, wood, Paving block, Peg cutting machine, Pen and pencil case, Photometer, O. Schuette, Pianoforte case, Piano, joiner's, Picture frame, Picture holder, stereoscopic, Pipe stem, H. C. Fritz, Pipes, forming sockets on,

Table listing inventions with patent numbers, including items like Carriage poles, bending, Cart saddle, P. McFadden, Chair and step ladder, Chair base, Chair, folding rocking, Chair spring attachment, Cheese cutter, Chisel for stone cutting, Chlorine, manufacture of, Churn rotary, Cigar box, Clock calendar, Cloth dryer, Clothes line reel, Coad hod, Cock, stop, Commode or stand, Corn drill, Corn sheller, Cracker machine, Crackers, device for glazing, Cribs, etc., screen supporter, Crucible, J. Felix, Curtain roller, Cutter head, Cyclophore, Dental forceps, Dental plugger, Dental plunger, Dial, sun, W. H. McCoy, Door, W. C. Hurd, Door check, Dredging box, Drill, expansion, M. C. Bullock, Drilling machine, Dryer for paint, Egg tester, Engine, governor, Engine lubricator, steam, Engine, rotary, W. Weyhe, Engine, steam, W. Read, Engines, carriage for portable, Engines, valve and gearing for steam, Envelope, document, Fare register, Felly plate, Fences, making tabs for wire, Fences, tightening wire, Fertilizer distributor, Fire arm, breech-loading, Fire escape, Fishing and similar floats, Floor, lint room, Fountains, ornamental jet for, Furnace grate, Furnace, hot air, Furnace, steam boiler, Gage, taper, C. B. Hunt, Gas and water regulator, Gas, apparatus for purifying, Gas machines, pressure blower, Gas retorts, supplying oil, Gases, apparatus for hydrating, Gate, L. S. Cohn, Gate, automatic, Gate, farm, A. Callahan, Gate, farm, m. H. Hillson, Gems, setting, T. W. Fry, Governor, steam, Grain tally, W. Schnebly, Grating roller, Hand rest, accountant's, Harrow, Chamberlain & Seiple, Harrow, S. G. Jones, Harrow, W. H. Parlin, Hatters, sizing plank for, Hay knife, K. Kellogg, Hay loader, Heater, etc., for boilers, Heater for rollers, Hemp and flax machine, Hose spanner, Ice hook, Ice pick and can opener, Inhaler, pocket, Injector, Iron, compound for coating, Jack, lifting, Journal bearings, heat indicator for, Key holder, F. W. Coleman, Kiln, brick, Knife, hay, Lamp, J. B. Godwin, Lamp car, Lamps, etc., extension fixture for, Leather dressing, Leather, manufacturing, Leather, tanning, Lever, safety pinion, Lime kiln, Lime fastener, Liquid mixer, Lock, time, Loom shuttle, Looms, wire heddle for, Lubricator, Davis and Du Bois, Lubricator, Richter and Merkel, Lubricator, steam engine, Mantel, iron, T. F. Baker, Metal bending machine, Milk strainer, Mill, flour, Mill, rolling, I. Hahn, Mirror, window, Molding machine, Molding machine, Frank and Spire, Molding machine, A. S. Gear, Motor, hydraulic, Nail plate feeder, Newspaper forms, Nut lock, Ore stamp feeder, Oven for firing pottery, Padlock, H. S. Lockwood, Paper bag machine, Paper barrel and box, Paper collar machine, Paper stock, grinding, Pavement, wood, J. J. Schroyer, Pavement, wood, Paving block, Peg cutting machine, Pen and pencil case, Photometer, O. Schuette, Pianoforte case, Piano, joiner's, Picture frame, Picture holder, stereoscopic, Pipe stem, H. C. Fritz, Pipes, forming sockets on,

Table listing inventions with patent numbers, including items like Plane, bench, C. Bridges, Plane, bench, H. Shogren, Planter, corn, Plow, W. K. Allen, Plow, J. R. Sample, Plow, O. P. Sanford, Plow, G. and T. Wiard, Plow, gang, E. P. Pulliam, Plow point, reversible, Pocket book, C. Arms, Pocket book safety attachment, Press, hydraulic, Printers' leads, cutting, Printing plates, numbering, Printing press, rotary, Pump, double acting, Punch, conductor's, Railway, elevated, Railway rail chair, Railway switch signal, Range, portable, Ranges, boiler for, Refrigerator, ice cream, Refrigerator, show case, Register and ventilator, Register, ventilating, Retorts, apparatus for charging, Rifles, sharpening, Roller, land, J. A. Keeler, Roof, metallic, Rule, registering board, Sad iron, Harris and O'Neill, Sandpapering machine, Sash holder, P. Mullaney, Sash holder, O. Rock, Saw, drag, H. H. Miller, Sawing machine, hoop, Sawing machine, scroll, J. H. Roberts, Scrapper, rotary road, Screw driver, W. F. Patterson, Sewing machine, J. Carter, Sewing machine, C. S. Cushman, Sewing machine, A. F. Johnson, Shafting, loose pulley for, Sheet iron barrel, Shingling gale, C. Schneider, Sketching and photographic case, Slate, school, Spark arrester, J. Dubois, Spark arrester, Wiser and Schmieders, Spoke-tensioning machine, Stone-cutting, chisel for, Stove, coal, L. B. Sprout, Stove pipe joint, Stove polish, J. M. Watson, Strainer, milk, F. L. Oliver, Table, ironing, E. S. Heath, Table, ironing, J. N. Wunderlich, Telegraph, transmitter for music, Thermometer, G. Gano, Ticket stamp, L. J. Blades, Tile, illuminating, T. Hyatt, Time check, H. Greene, Tool, T. Hagerty, Transl. S. Holton, Tree protector, Trunks, etc., fastening, T-squares to boards, Valve gear, reversible, Valve relief, G. H. Clemens, Vessel for removing foul water, Vessels, making of irregular, Vessels, shoal indicator for, Wagon jack, J. Sawyer, Wagon rack, J. F. Cass, Washing machine, T. A. Erick, Washing machine, M. Loughran, Washing machine, P. Markley, Washing machine, O. V. Roe, Watch, M. G. Cole, Watch escapement, Watch, stem-winding, Watches, barrel arbor for, Watchmaker's box, Water meter, Wells, removing drills from, Windmill, E. Dewald, Windmill, R. N. Rockwell, Wood, preserving, Wrench, R. S. Battles, Wrench, pipe, L. Glynn, Wringer, M. A. Richardson, Yarn beam, J. A. Gould, Yarn to set the twist, treating, D. Wright

Table listing inventions with patent numbers, including items like 4,990.—W. H. McMillan, Philadelphia, Pa., U. S. Fire plug, July 15, 1875. 4,991.—C. R. Patterson, Pittston, Pa., U. S. Planing machine, July 15, 1875. 4,992.—E. Dallaire, St. Sebastien, P. Q. Auger boring machine, July 15, 1875. 4,993.—J. Matthews, Lyden, Ont. Pump plunger, July 15, 1875. 4,994.—G. Collins, Kingfield, Me., U. S. Saw buck, July 15, 1875. 4,995.—R. Cahue, Toulouse, Haute Garonne France. Mining powder, July 15, 1875. 4,996.—A. Higley, Cleveland, Ohio, U. S. Car axle box, July 15, 1875. 4,997.—G. P. Farmer, Brooklyn, N. Y., U. S. Yarn bundle, July 15, 1875. 4,998.—J. James, Township Bosanquet, Ont. Bag holder, July 15, 1875. 4,999.—F. Doucet, Yarmouth, N. S. Knife cleaner, July 17, 1875. 5,000.—A. E. Mitchell, Sweetsburgh, P. Q. Churn, July 17, 1875. 5,001.—A. E. Peters, Moncton, N. B. Combination lock, July 17, 1875. 5,002.—R. W. Drew, Albany, N. Y., U. S., et al. Automatic lubricator, July 17, 1875. 5,003.—C. L. Holland et al., Ipswich, Mass., U. S. Laundry polish, July 22, 1875. 5,004.—E. Farnsworth, Punxatawney, Pa., U. S. Stump and stone elevator, July 20, 1875. 5,005.—W. H. Seaman, New York city, U. S. Testing the purity of dye in silk, July 20, 1875. 5,006.—H. A. Stearns, Lincoln, R. I., U. S. Churn dasher, July 22, 1875. 5,007.—F. S. Berry et al., New Sharon, Me., U. S. Thill loop, July 22, 1875. 5,008.—G. S. McConkey, Toronto, Ont. Cigar-stamping machine, July 22, 1875. 5,009.—L. Dague, Sherwood, Mich., U. S. Seeder, plaster sower, and harrow, July 22, 1875. 5,010.—P. H. Cowper et al., Montreal, P. Q. Belt-making machine, July 22, 1875. 5,011.—F. L. Pope, Elizabeth, N. J., U. S. Electric signals, July 22, 1875. 5,012.—W. G. Swartz, Fairview, Ill., U. S. Insect-gathering machine, July 24, 1875. 5,013.—W. H. Martin, Mobile, Ala., U. S. Toy gun, July 24, 1875. 5,014.—A. S. Chamberlin et al., Franklin, N. Y., U. S. Stove pipe sheet, July 24, 1875. 5,015.—J. V. Taylor, La Cygne, Kan., U. S. Bed bottom, July 24, 1875. 5,016.—J. Greenebaum, San Francisco, Cal., U. S. Pocket-fastened pants, July 24, 1875.

Advertisements.

Back Page . . . . . \$1.00 a line. Inside Page . . . . . 75 cents a line. Engravings may head advertisements at the same rate per line, by measurement, as the letter press. Advertisements must be received at publication office as early as Friday morning to appear in next issue.

THE TRADE ENGINE. Noiseless in operation—Perfect in workmanship—all light parts of Cast Steel. Every Engine indicated, and valve corrected to give the highest attainable results. Warranted superior to any semi-portable Engine in the market. Send for Price List and Circular. HERRMAN & HERCHEL, ROBE M'G. CO., Dayton, Ohio.

PIANO STOOL SCREWS—with perfect cut thread, in both screw and nut. Prices very low. Address T. SHRIVER & CO., 333 E. 56th St., New York.

FOR SALE—In Danbury, Conn., a Lumber Yard, Planing and Moulding Mill, with Steam Power and Machinery, now manufacturing Sash, Doors, Blinds, Mouldings, Wood Turning, Band and Circular Sawing. Business is of 20 years' successful operation. Location unsurpassed. Is a rare chance for a good business. Terms easy, and inducements good. For other particulars, address D. STEVENS, Box 45, Danbury, Conn.

MECHANICAL ENGINEER AND SUPERINTENDENT, experienced in Compound and Low Pressure Engines, &c. for Marine, Corporation pumping, and other purposes, will be disengaged. References: MECHANICAL ENGINEER, 121 E. 128th St., N. Y. \$1.00 PER HBL. for Cement direct from Manufacturer, on board cars or boat, 100 miles from N. Y. City. PRINCE'S CEMENT WORKS, Lehigh Gap, Pa.

Ladies Can make \$5 a day in their own City or Town. Address ELLIS M'F'G CO., Waltham, Mass.

STRANGE'S CYLINDER SAW AND MACHINE COMPANY, TAUNTON, MASS., Manufacturers of Cast Steel Cylinder Saws, Hoghead, Barrel, and Nail Keg Stave Machines, and the Champion Combination Foot Lathe. Send for Price List.

JUST PUBLISHED. PYROLOGY, OR FIRE CHEMISTRY; a Science interesting to the general philosopher, and an Art of infinite importance to the Chemist, Mineralogist, Metallurgist, Geologist, Agriculturist, Engineer (Mining, Civil, and Military), &c., &c. By WM. ALEXANDER BOSS. Crown 8vo, cloth, 346 pp., 4 colored plates and numerous engravings. Price \$15.00. PROCEEDINGS OF THE ASSOCIATION of Municipal and Sanitary Engineers and Surveyors. Volume 1. 1873-4. Edited by LEWIS ANGELL. 8vo, cloth. Price \$4.25. E. & F. N. SPON, 446 Broome Street, N. Y.

Model Steam Engines, FROM 50 CTS. UPWARDS, FROM GEORGE PARR'S UNEQUALLED MODELS OF Steam Cranes, Circular Saws, Steam Lathes, Horizontal Engines, Portable Engines, Steam Pumps, Beam Engines, Steam Winches, Electric Engines (requiring no fuel). Engines to run with Kerosene Oil or Gas, for domestic purposes. Upright Engines. Also, Celebrated Amateur's Lathes, Tools and Fittings of every description. Inimitable Castings, for \$1.00 per set and upwards, by means of which numbers of the above Steam Engines, Lathes, &c., have been successfully made by Amateurs. Thousands prove the unparalleled success of the above models and castings. For full description and prices of the above, together with the requisite tools, see "Parr's Technical Guide," containing over 400 illustrations, with all necessary information, how to buy, how to use, and how to make model engines. Post free, 25 cents. Address GEORGE PARR, Buffalo, N. Y.