

Business and Personal.

The Charge for Insertion under this head is One Dollar a line for each insertion.

A Book worth having; price only \$2.—The "Artificer's Assistant" is having a very large sale.

To Manufacturers of and Dealers in Toys—Royalties to be had for new and pleasing toys.

Parties engaged in the Manufacture of Iron Bedsteads, will please send circulars to P.O. Box 533, Baltimore, Md.

Teed's Centennial Waterwheel.—The best and cheapest wheel in the market.

Baldwin the Clothier is a patented trade mark, and it is the property of O. S. Baldwin, whose residence is in Brooklyn, N. Y.

For Sale—42 in. x 8 ft. Pond Planer, \$425; combined Punch and Slear for 1/2 in. iron, \$600; 40 in. x 12 ft. Screw Cutting Lathe, \$225; at Shearman's, 132 N. 3d St., Philadelphia, Pa.

Wanted—A 15 Horse Power Engine and Boiler (stationary), either new or second-hand.

Saws are filed with great ease by everybody. New machine; \$2.50. Send for illustrated circulars, etc., to E. Roth & Bro., New Oxford, Pa.

Steam Launches for sale, 32 x 8 and 40 x 9. Address R. A. Morgan, Steam Yacht and Launch Builder, Noank, Conn.

Fine Taps and Dies for Jeweler's, Dentist's, and Machinist's use, in cases. Pratt & Whitney, Hartford, Ct.

For Amateur Photographic Apparatus. Outfits with complete instructions. Price, from \$5 to \$30.

For the best Gate Valves of all kinds, apply to D. Kennedy & Co., 88 John St., N. Y.

Carpenters and Mechanics expert with tools, can make from \$5 to \$10 per day in their own neighborhood.

Plumbers—Address Bailey, Farrell & Co., Pittsburgh, Pa., for the best and cheapest iron case street hydrants.

Magic Lanterns and Stereopticons of all prices. Views illustrating every subject for public exhibitions.

"Little All Right," the smallest and most perfect revolver in the world. Radically new both in principle and operation.

For Solid Wrought Iron Beams, etc., see advertisement. Address Union Iron Mills, Pittsburgh, Pa., for lithograph, etc.

Shaw's Noise-Quitting Nozzles for Escape Pipes of Locomotives, Steamboats, etc.

John T. Noye & Son, Buffalo, N. Y., are Manufacturers of Burr Mill Stones and Flour Mill Machinery of all kinds, and dealers in Dufour & Co.'s Bolting Cloth.

Power & Foot Presses, Ferracute Co., Bridgeton, N. J.

For Best Presses, Dies, and Fruit Can Tools, Bliss & Williams, cor. of Plymouth and Jay Sts., Brooklyn, N. Y.

Hydraulic Presses and Jacks, new and second hand. Lathes and Machinery for Polishing and Buffing metals.

Solid Emery Vulcanite Wheels—The Solid Original Emery Wheel—other kinds imitations and inferior. Caution.—Our name is stamped in full on all our best Standard Belting, Packing, and Hose.

Steel Castings from one lb. to five thousand lbs. Invaluable for strength and durability.

Skinner Portable Engine Improved, 2 1/2 to 10 H. P. Skinner & Wood, Erie, Pa.

Improved Wood-working Machinery made by Walker Bros., 73 and 75 Laurel St., Philadelphia, Pa.

Split-Pulleys and Split-Collars of same price, strength and appearance as Whole-Pulleys and Whole-Collars.

Baxter's Adjustable Wrenches fit peculiar corners. Manuf. by Greene, Tweed & Co., 18 Park Place, N. Y.

Have you seen the Briggs Lathe? Mounted on iron stand with walnut top and 21 inch driving wheel, with 3 speeds.

Polishing Supplies for all kinds of Metals. Greene, Tweed & Co., 18 Park Place, N. Y.

More than twelve thousand crank shafts made by Chester Steel Castings Co. now running; 8 years constant use prove them stronger and more durable than wrought iron.

Emery Grinders, Emery Wheels, Best and Cheapest, Hardened surfaces planed or turned to order.

Machine Diamonds, J. Dickinson, 64 Nassau St., N. Y.

Notes & Queries

- (1) A. L. B. asks if there is any way of making paper soluble in water? A. No.
(2) A. H. asks how to neutralize the bad effect of gas in a room where plants are kept?
(3) R. P. T. asks for a flavoring for cigars? A. Cinnamon and tonka beans may be bruised and macerated in rum and the tobacco sprinkled with the spirit.

(4) W. P. P. says he is using an aniline ink with rubber stamps, but it fades, and asks if there is a remedy? A. The fading cannot be avoided where exposed to light.

(5) S. A. H. asks how to make a Leyden jar? A. An ordinary candy jar, free from cracks and flaws, will answer; line inside and out to within 4 inches of the top with tinfoil, heat so as to drive off all moisture; give the glass above the foil, inside and out, several coats of shellac varnish, and use a cork carefully fitted, dried and baked in an oven, and varnished.

(6) G. R. asks: 1. What size of wire should be used in winding the cores of an electro-magnet, and with how many layers should each core be wound, each core being 36 inches long by 3 1/4 inches diameter? A. You may use 9 spools on each core, each spool having about 16 layers of No. 12 covered copper wire.

(7) O. H. W. asks: 1. Will a frosted window give more or a better distributed light than a plain one of the same size? A. It aids the diffusion of light but decreases the intensity.

(8) C. A. K. asks: 1. What effect has Paris green on the system? A. It is an irritant poison, its action on the system being very nearly that of arsenic alone. It inordinately increases the secretions and diminishes the contractility of the voluntary muscles.

(9) E. C. H. asks for a simple rule how to place the weight from the fulcrum or pin of a safety valve, to produce 50 lbs. pressure. Weight of valve being 1/4 lb., area of valve .78. Weight of beam 3/4 lb.; center of gravity of beam 6 inches from pin or fulcrum.

(10) A. M. R. asks: 1. For a recipe for making ink suitable for use in post offices for cancelling with hand stamp? A. A fine grade of printing ink is ordinarily employed. A good ink may be made as follows: Balsam of copaiba (pure), 9 ozs.; lampblack, 3 ozs.;

(11) L. B. B. asks: 1. How does a night glass differ from a common glass? A. The instrument sometimes called by seamen a night glass is composed of a convex object glass, and a concave eye lens placed at a distance equal to the difference of their focal lengths, the magnifying power being as the focal length of the object glass is to that of the eye lens.

(12) H. F. S. asks how Japanese lacquer is made? A. Melt 50 lbs. of Naples asphaltum and 8 lbs. dark gum anime, boil for about two hours in 12 gallons linseed oil; then melt 10 lbs. of dark gum amber and boil it with two gallons linseed oil; add this to the other and add dryers.

(13) D. J. T. asks for a cement for an aquarium that will not crack or peel from glass or galvanized iron? A. Take, by measure, 10 parts of litharge, 10 parts of plaster of Paris, 10 parts of fine dry white sand, and 1 part finely powdered resin.

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

E. P. C.—It is hornblende rock containing sulphides of iron and a little copper sulphide. The crystals are garnets.—E. T.—It is quartzite—composed of minute crystals of quartz.—G. M. L.—It is iron pyrites.—H. B. L.—The sand contains quartz, porphyry, felspar, fluor-spar, lime carbonate, pyrites, and possibly a little gold.—W. R. P.—It is a piece of agate.—O. B.—It is axinite, composed of silicates of lime, alumina, iron, manganese and boron.

COMMUNICATIONS RECEIVED.

The Editor of the SCIENTIFIC AMERICAN acknowledges, with much pleasure, the receipt of original papers and contributions upon the following subjects: On What is Electricity. By J. H. R. On Science against Homeopathy. By J. W. C.

On the Liverpool Engineering Society. By W. W. On Aerial Navigation. By W. J. L. Also inquiries and answers from the following: I. B.—C. F. P.—P. McN.—J. F. & S.—H. B. L.—D. D. B.—J. R. E.—J. W. D.—J. E. M.

HINTS TO CORRESPONDENTS.

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 fail to appear should repeat them. If not then published, they may conclude that, for good reasons, the Editor declines them.

OFFICIAL.

INDEX OF INVENTIONS

FOR WHICH Letters Patent of the United States were Granted in the Week Ending September 4, 1877, AND EACH BEARING THAT DATE.

A complete copy of any patent in the annexed list including both the specifications and drawings, will be furnished from this office for one dollar. In ordering, please state the number and date of the patent desired, and remit to Munn & Co., 37 Park Row, New York city.

Table listing inventions such as Aerial currents, apparatus for, P. Mihan; Alarm register, Moffett & Dean; Atmospheric exhauster, A. B. Brown; Axes, machine for making, C. W. Cardot; Baker, altar bread or wafer, R. B. Daley; Baker, L. Drew (r); Bale tie, J. P. Verree; Baling press, Brooks & Jordan; Ballot box, L. Van Alstyne; Bath structure, Despoix & Reboul; Bed bottom, B. Essig; Bed bottom, G. Luciani; Bed bottom, H. Winger; Bed mat, child's, O. A. Lirette; Beeswax, bleaching, H. T. Yarian; Belting, H. Royer; Bevel, carpenter's, J. A. Traut; Boot sole pressing machine, J. T. & T. M. Gifford; Boots, manufacture of, H. Sauer bier; Bottle stopper, F. J. Seybold; Bottle stopper, D. H. Murphy; Brake lever, W. F. Osborn; Brick machine, Selden & McLean; Brick machine, H. L. Oliver; Building frame, Morris & Slanser; Burglar alarm, W. H. Reiff; Button, J. John; Can oil, W. Y. Horne; Can lock, W. L. Marshall; Candle holder, V. Walker; Car awning, street, F. P. McIntyre; Car axle box, S. A. Bemis; Car coupling, J. W. Eckman; Car coupling, T. C. Lord; Car coupling, D. V. B. Smart; Car coupling, D. Ziegler; Car mover, G. W. Leek; Car wheel and axle, I. H. Randall; Car window, I. H. Randall; Cars, unloading coal, W. D. Beebe; Carpenter's scribing tool, C. E. Billings; Carpet lining, etc., D. G. Rollin; Carriage, W. H. Hancock; Carriage pole tip, G. W. Hobbs; Chalk holder, tailors', E. S. Bartram; Chimney cap, ventilator, P. Mihan; Churn, N. W. Cone; Churn, E. Rhoades; Churn, W. H. Stearns; Churn, Goff & Hardick; Cigarette machine, W. Davies; Cigarette machine, J. Pollak; Cigars, manufacture of, G. W. Writner; Clamp, joiner's, W. H. Lilly; Cold drawing rods, etc., G. H. Billings (r); Condenser for distillation, F. M. Young; Corn fodder machine, D. F. Hull; Corset, T. S. Gilbert; Cotton gin attachment, M. M. Massey; Cuff fastener, J. H. Myers; Curry comb, C. E. L. Holmes; Curtain fixture, D. S. Van Etten; Dental engine, E. T. Starr; Doorhanger, T. J. Jones; Egg carrier, M. A. Howell, Jr.; Electro-magnetic alarm bell, P. Seiler; Fare register, W. H. Hornum; Files in hardening, straightening, W. S. Birks; Fire and marine escape, L. Living; Fire and waterproof composition, A. Jamieson; Flying machine, J. J. Pennington; Fog signal, G. Swannor; Fruit dryer, W. W. Ferguson; Funnell, J. N. Berg; Furnace door, R. Hill; Furnace for roasting ores, Green & Halsey; Furniture, device for securing legs to, C. Hass; Garden sprinkler, M. Hermes; Gas burner, T. F. McGann; Gas generating apparatus, J. S. Wood; Gas furnace regulator, G. M. Hopkins; Gate, A. A. Brooks;

Table listing inventions such as Gate, A. Hyre; Gate, L. T. Mason; Gate, K. E. Rudd; Grain binder, J. F. Gordon; Grain separator, T. Kenny; Graining wood, W. A. Wiles; Handcuff, O. C. Phelps (r); Harrow, G. D. Miles; Harvester, J. S. Marsh (r); Harvester, cotton, F. Van Dorn; Harvester cotton, Watkins & Sale; Harvester reel, C. Denton; Hoes, manufacture of, J. C. Smith; Hoop machine, J. A. Peoples; Hoop skirt former, C. A. Sprague; Horseshoe, C. H. Perkins; Horseshoe blanks, machine for, J. H. Snyder; Horseshoe nail blanks, machine for, J. Ferguson; Horseshoe nail plate, J. Ferguson; Horseshoe nail machine, J. Ferguson; Hydrant, H. Flint; Hydrant testing machine, W. C. Allison; Knee protector, M. C. Hiester; Lamp burner, E. Blackman; Lamps, etc., filler for, C. Chinnock; Lamps, heating attachment for, C. I. Payne; Last block fastener, W. Miller; Latch and handle, C. B. Rose; Latch for doors, etc., C. H. Smith; Leather rolling machine, A. Hawver; Leather scouring and dressing, T. L. Dabney; Leather-scrubbing cylinder, A. Hawver; Lifting jack, W. G. Cline; Lifting jack, J. S. Kirkwood; Liquid measures, C. C. Redmond; Lock and electric burglar alarm, P. Seiler; Looms, shuttle box motion for, R. B. Goodyear; Mask, toilet, N. S. E. French; Milk cooler, E. W. Hoag; Molding plastic material, D. C. Lockwood; Mortising machine, W. W. Green, Jr.; Mosquito bar, M. Petrie; Nursing bottle, I. Bullard; Nutmeg grater, J. H. H. Wilson; Oil tank, T. Shaw; Ore separator, A. Work; Ore washer, J. S. Duncan; Packing box, G. Robinson, Jr.; Padlock, Smith & Egge; Padlock case, Smith & Egge; Paints, stripping tool for, L. Homann; Pendulum balls, regulating, H. C. Jacot; Pipe elbow machine, C. H. Amann (r); Pitcher, S. W. Babbitt; Planter, corn, G. E. Baites; Planter, corn, Gillett & Poole; Plow, Caldwell & Herren; Plow, ditching, S. Furnas; Plow, wheel, L. Chapman; Post office box, B. H. & W. H. Camp; Potato bug catcher, Corbin & Moseley; Printing press, M. Hainque; Propelling vessels, W. F. Morrison; Pump, G. W. Robaugh; Rag engine, E. D. Jones; Railroad switch, J. W. Harding; Railway gate, W. I. French; Railway truck and track, J. W. Eckman; Refrigerator, E. Zahring; Refrigerator ship, J. F. Baldwin (r); Sand pump, W. Forker; Sash fastener, Clark & Smith; Sash fastener, O. S. Sperry; Sash holder, A. W. Judd; Sawing machine, A. T. Nichols (r); Scaffolding, H. J. Caswell; Screw-swaging machine, M. D. Leuhrs; Seeding machine, C. E. Patric (r); Semaphore, electrical, U. Juston; Sewing machine, J. Tripp; Sewing machine for bags, etc., K. C. Atwood; Shackle and step, R. Doty; Sheep shears, J. C. Wightman; Sheet metal elbows, F. Hoeltge; Shingle, metallic roofing, C. Comstock; Shingle sawing machine, M. Prillaman; Shoemaker's pounding iron, F. Damos; Shutter fastener, R. Hayden; Slate frame attachment, F. S. Allen; Spinning frames, L. Coburn; Splints, D. Ahl; Stables, hatchway for, N. Smalley; Stamp canceller and postmarker, G. F. Almy; Steam boiler furnaces, R. K. McMurray; Stock feeder, Hayden & Knowles; Stone, surfacing, J. M. Poole; Stove, cooking, R. J. King; Stove, lamp, B. G. Lofstedt; Thrashing machine, J. & H. Kolling; Time lock, M. A. Dalton; Tobacco, preparing plug, G. B. Okell; Valve for steam cylinders, S. L. Wainshaw; Vapor burner, A. W. Johnson; Ventilator, C. L. Garfield; Vermin, process for destroying, T. S. Church; Wagon axle box, C. J. Valentine; Wash bench, G. W. Lengfield; Washing machine, Fager & Godwin; Watch key, G. Havell; Water elevator, W. Doty; Water gage for steam boilers, D. A. Woodbury; Water power, M. L. King; Water wheel, J. W. DeHaven; Windmill, M. L. Howard; Windmill, I. H. Palmer; Wood, preservig, I. Hayford; Wool polisher, G. Zimmer; Work stand, E. G. Gollner;

DESIGNS PATENTED.

- 10,173 to 10,194.—CARPETS.—J. L. Folsom, Brooklyn, N. Y.
10,195 to 10,203.—CARPETS.—O. Heinigke, New Utrecht, N. Y.
10,204 to 10,217.—CARPETS.—H. Horan, East Orange, N. J.
10,218.—CARPETS.—H. Nordman, New York city.
10,219 and 10,220.—CARPETS.—G. W. Piggott, New York city.
10,221 to 10,223.—CARPETS.—J. E. Rollings, New York city.
10,224.—CARPETS.—J. H. Smith, Enfield, Conn.
10,225 to 10,228.—CARPETS.—W. H. Smith, Enfield, Conn.
10,229.—CIGAR BOX.—J. Stratton & G. Storm, Bay Side, N. Y.
10,230.—EASY CHAIR.—F. Krayl, Chicago, Ill.
10,231.—PRINTED AND WOVEN FABRIC.—W. Morris, London, England.
10,232.—HANDLES FOR TABLE WARE.—J. A. Whalen, New York city.

[A copy of any one of the above patents may be had by remitting one dollar to MUNN & Co., 37 Park Row, New York city.]