

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.

EXTRACT FROM COPY.

POST OFFICE DEPARTMENT, Office of the 1st Asst. P. M. General, WASHINGTON, D. C., Oct. 21st, 1879.

POSTMASTER, Rahway, N. J.

SIR: Complaint has been made that you are withholding letters addressed to M. A. Dauphin.

The simple fact that a letter is addressed to M. A. Dauphin does not, under the present ruling of the Department, warrant its detention at the mailing office.

Very respectfully, (Signed) JAMES H. MARR, 1st Asst. P. M. General.

Thomas D. Stetson, 23 Murray St., New York, serves as Expert in Patent Suits.

Engines repaired without loss of time. L. B. Flanders Machine Works, Philadelphia, Pa.

Blake's Belt Studs. The strongest, cheapest, and best fastening for all belts. Greene, Tweed & Co., New York.

Mineral Lands Prospected, Artesian Wells Bored, by Pa. Diamond Drill Co. Box 423, Pottsville, Pa. See p. 235.

For Reliable Emery Wheels and Machines, address The Lehigh Valley Emery Wheel Co., Weissport, Pa.

Planing and Matching Machines, Band and Scroll Saws, Universal Wood-workers, Universal Hand Jointers, Shaping, Sand-papery Machines, etc., manuf'd by Bentel, Margedant & Co., Hamilton, Ohio.

Drawing Instruments. G. S. Woolman, 116 Fulton St., N. Y.

Rubber Belting, Packing, Hose, and all kinds of manufacturers' supplies. Greene, Tweed & Co., 18 Park Pl., N. Y.

The Baker Blower ventilates silver mines 2,000 feet deep. Wilbraham Bros., 2318 Frankford Ave., Phila., Pa.

Fairbanks' Scales.—During the week ending 18th of October, 1,635 scales were shipped from the factory at St. Johnsbury, Vt., leaving then unfilled orders for nearly three thousand scales.

For Sale, very low.—24 dismantled 20 lb. Parrott Guns, in good order. "Relics of the late war."

Circular Saw Tables. P. Pribil, 467 W. 40th St., N. Y.

Machine Knives for Wood-working Machinery, Book Binders, and Paper Mills. Large knife work a specialty.

Jig Saw Machines. P. Pribil, 467 W. 40th St., N. Y.

Patent Steam Boiler Damper Regulator; most reliable and sensitive made. National Iron Works, New Brunswick, N. J.

One inch in thickness of H. W. Johns' Asbestos Cement Filling, applied to hot air and steam pipes, boilers, etc.

To stop leaks in boiler tubes, use Quinn's Patent Ferrules. Address S. M. Co., 80 Newmarket, N. H.

To Capitalists, Steam Fitters, Founders, etc.—Patent right for sale of new Steam Heat Radiator. Address, for particulars, J. N. Farnham, Waltham, Mass.

Books on Applied Science. Catalogue free. E. & F. N. Spon, 416 Broome St., New York.

Steam Traps; best and cheapest in use. No blowing through to start. T. Sault, New Haven, Conn.

Brass or Iron Gears; list free. G. B. Grant, Boston.

The Friction Clutch that is doing work in many places satisfactorily, that has never been done by any other, can be seen at Institute Fair, New York.

Nickel Plating.—Sole manufacturers cast nickel anodes, pure nickel salts, importers Vienna lime, crocus, etc.

The Secret Key to Health.—The Science of Life, or Self-Preservation, 300 pages. Price, only \$1.

The Baker Blower runs the largest sand blast in the world. Wilbraham Bros., 2318 Frankford Ave., Phila., Pa.

Wright's Patent Steam Engine, with automatic cut-off. The best engine made. For prices, address William Wright, Manufacturer, Newburgh, N. Y.

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

H. Prentiss & Co., 14 Dey St., New York, Manufs. Taps, Dies, Screw Plates, Reamers, etc. Send for list.

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

Sheet Metal Presses, Ferracute Co., Bridgeton, N. J.

Band Saws a specialty. F. H. Clement, Rochester, N. Y.

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

Telephones repaired, parts of same for sale. Send stamp for circulars. P. O. Box 205, Jersey City, N. J.

Noise-quieting Nozzles for Locomotives and Steamboats. 50 different varieties, adapted to every class of engine.

Stave, Barrel, Keg, and Hoghead Machinery a specialty, by E. & B. Holmes, Buffalo, N. Y.

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.

The New Economizer, the only Agricultural Engine with return fire boiler in use. See adv. of Porter Mfg. Co., page 270.

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

Special Wood-working Machinery of every variety. Levi Houston, Montgomery, Pa. See ad. page 269.

Silent Injector, Blower, and Exhauster. See adv. p. 302.

Portable Railroad Sugar Mills, Engines and Boilers. Atlantic Steam Engine Works, Brooklyn, N. Y.

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

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

Steam Heat Appa. Superior construction. See illustrated ad. p. 269.

Cut Gears for Models, etc. (list free). Models, working machinery, experimental work, tools, etc., to order.

Millstone Dressing Machine. See adv., page 301.

Holly System of Water Supply and Fire Protection for Cities and Villages. See advertisement in SCIENTIFIC AMERICAN of this week.

The E. Horton & Son Co., Windsor Locks, Conn., manufacture the Sweetland Improved Horton Chuck.

Pays well on small investments; Magic Lanterns and Stereopticons of all kinds and prices; views illustrating every subject for public exhibition and parlor entertainments.

Electro-Bronzing on Iron. Philadelphia Smelting Company, Philadelphia, Pa.

Improved Steel Castings; stiff and durable; as soft and easily worked as wrought iron; tensile strength not less than 65,000 lbs. to sq. in.

Fleetwood and Dexter Scroll Saws, Tool Chests, etc. Send for circular. Jas. T. Pratt & Co., 53 Fulton St., N. Y.

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

Notes & Queries

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.

Were new 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) S. R. R. F. asks for a receipt for liquid glue, suitable for wood, bracket saw work, etc., requiring no heat when to be used.

(2) M. P. H. asks: What is crystallized sulphate of sodium? Does it not go by some other name? A. Commonly called sulphate of soda, cryst. (purified).

(3) T. B. asks: 1. What will toughen white wax for flower making, at the same time look clean and transparent? A. Fuse the wax with about 5 per cent of pale amber or gum copal.

(4) J. C. asks: Can you inform me of any substance that could be put on a wood surface, 4x8 feet, rendering the surface perfectly smooth and impervious to water, that would not wear much with the continual flow of stamped (crushed) quartz ore over it?

(5) N. D. G. asks: Couldn't you give some more common name or recipe for the ink described in a recent number of the SCIENTIFIC AMERICAN? A. Use a nearly saturated aqueous solution of a good aniline blue or violet. Ordinary copying ink will not answer.

(6) J. A. N. writes: I want a clear phosphorus solution, say one half pint of spirits of wine to contain 1-20 of its parts of phosphorus, it must not contain any greasy substance, but be perfectly clear.

The liquid solvents above mentioned are quite volatile; the phosphorus remaining after the liquid has evaporated is in so finely divided a condition as to inflame spontaneously on contact with air; great caution must, therefore, be observed in handling them to avoid accident.

(7) M. H. C. asks for a recipe for starching linen wear so as to produce a high polish.

(8) C. W. G. writes: I have several lamb skins with the wool on, which I have dried in the sun with alum and salt, but the skins are hard.

(9) C. F. S. asks: What can I do with a cedar water bucket to keep water from tasting? A. Scour it occasionally and rinse with solution of sodium sulphite.

(10) J. M. H. asks what to do with a stove-pipe used through the winter with base burner coal stove, to make it last, for it spoils through the summer, and I am obliged to get a new set of pipe every fall.

(11) D. L. D. asks for a receipt for the cure of sumac poison. A. Salt water and diluted ammonia are commonly used.

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

E. B. B.—Teeth of No. 1, *Cayrhina desorii*, No. 2, *Elephas Americanus*, and No. 3, Ichthyosaura. Two specimens in unlabeled needle box: No. 1, chalcopyrite, No. 2, ferruginous clay, No. 3, marcasite.—M. F. C.—It is a variety of infusorial earth. See p. 240, Vol. 35, No. 2 is a micaceous sand from decomposed and disintegrated granitic rock.

H. H.—It contains 85 per cent of metallic lead, and will pay to mine if there is enough of it.—T. H. A.—It is fibrous steatite, soapstone.—P. G.—No. 1 is quartzite; No. 2, ferruginous quartz. We do not find the other specimen spoken of in your letter.—S. A. L.—It consists of heavy spar or sulphate of barytes with oxide of iron.

J. A. B.—It is quartz rock, possibly auriferous. A careful assay would be required to determine this.—W. H. G.—There are many localities in the United States where specimens of tin ore are found, but no genuine tin mines. Tin is usually associated with fluor, apatite, topaz, blues, wolfram, etc.

COMMUNICATION RECEIVED. On an Early Blooming Apple Tree. By E. A. M.

[OFFICIAL.] INDEX OF INVENTIONS FOR WHICH Letters Patent of the United States were Granted in the Week Ending October 14, 1879, AND EACH BEARING THAT DATE.

[Those marked (r) are reissued patents.] Aerobal, J. J. Greenough 220,473 Air exhaust apparatus, J. Murphree 220,641 Automatic brakes, regulating valve for, G. Westinghouse, Jr. 220,556 Axle lubricator, vehicle, J. V. Hinkle 220,617 Bale band bender, L. Miller 220,636 Bale band tightener, L. Miller 220,635 Bale band tying machine, Matthews & Morehead, 220,541 Barrels, etc., with liquids, apparatus for filling, Trautmann & Humphreys 220,509 Bed bottom, spring, L. Wildermuth 220,557 Beer and liquor protector, T. A. Stephan 220,679 Belts or bands, apparatus for testing strain of, J. H. Sawyer 220,668 Billiard cue coloring apparatus, A. Fitzgerald 220,596 Blasting powder, O. B. Hardy 220,534 Bolt heading machine, C. D. Rogers 220,497 Boot and shoe, W. H. Hannaford 220,475

Boot and shoe cleaning and polishing machine, J. T. Schultz 220,671 Boot and shoe, machine sewed, G. W. Day 220,583 Boot and shoe uppers, machinery for lasting, J. W. Hatch (r) 8,927 Bracelet, C. Hein (r) 8,928 Bristles for dyeing, preparing, T. Dost 220,468 Button and stud, A. C. Greene 220,531 Caddy, spice, W. B. Hartley 220,609 Car coupling, M. G. McCarty 220,486 Car coupling, H. T. Rook 220,663 Car coupling, L. Spain 220,678 Car ventilator, C. E. Lucas 220,628 Carboy, Seymour & Thomas 220,499 Carbureting apparatus, J. Weart 220,685 Carriage step, F. A. Sawyer, 2d. 220,666, 220,667 Carriage top prop, H. K. Porter 220,438 Cartridge belt and holder, E. Schaub 220,550 Cartridge primers, anvil for, J. H. Gill 220,472 Caster, sewing machine, J. O. Sloan 220,673 Chain hook, J. E. Studley 220,506 Churn, T. C. Harris 220,611 Churning machine, J. T. Halle 220,474 Cigar box, J. Casey 220,575 Clock, alarm, H. Lorient 220,540 Clutch and brake, friction, W. R. Havens 220,613 Cockle separator, P. M. L. Herse 220,477 Collar frames, die for forming metallic horse, E. Fisher 220,594 Cotton picker, hand, T. W. Ham 220,607 Cuff, J. H. Buss 220,519, 220,573 Cultivator, W. P. Brown 220,571 Dental foil package, R. S. Williams 220,687 Desk, school, J. W. Childs 220,466 Dog power, E. Glendillen 220,608 Doll supporter, J. S. Goye 220,606 Doors, angle plate for, R. C. Morris 220,489 Dough mixer, C. A. Wolff 220,650 Drain and other pipes, J. P. Culver 220,522 Dress adjuster, E. Ebner 220,588 Dye, compound, G. Molt 220,638 Eave trough iron, W. H. & L. Berger 220,515 Electric train signal, J. C. E. Ohlenschlager 220,647 Envelope, H. B. Maxwell 220,485 Fare box for street cars, H. R. Robbins 220,661 Farm gate, G. Johnson 220,628 Faucet, self-closing, W. I. Page 220,652 Feed water heater, J. Argall 220,563 Fence, portable, A. J. Truxell 220,683 Filter press, A. Wegelin 220,686 Fire alarm and fire extinguisher, combined, J. W. Smith 220,674 Firearm, breech-loading, J. Peightal 220,655 Firearm, breech-loading, J. Purdey 220,657 Fire engine, E. Glendillen 220,604 Fire lighter, H. B. Malone 220,484 Fireplace heater, G. W. Hiller 220,615 Fish plate and railway chair, J. D. Shoots 220,672 Flour, machine for making, W. D. Leavitt 220,626 Fluting machine, J. E. Donovan 220,586 Fruit package, Newell & Van Gorder 220,543 Galvanic battery cell, Thomson & Houston 220,507 Gas burner, atmospheric, A. W. Morton 220,490 Gas generator and burner, A. E. Watkins 220,554 Gas regulating burner, J. W. Cloud 220,577 Gate, E. Robins 220,622 Globe holder for gas fixtures, H. B. Stillman 220,504 Globe, time, J. Arkell 220,462 Globe, time, L. P. Juvet 220,480 Gold washer, W. H. Pfillner 220,656 Governor, steam engine, F. W. Robinson 220,660 Grain binders, knot tier for, O. O. Storle 220,551 Grain separator, J. W. Morrison 220,639 Grate, E. Card 220,464 Grinding mill for tortilla, green corn, etc., F. A. Gardner 220,525 Grub or sprout extractor, J. W. Snapp 220,501 Gun, machine, H. Palmcrantz 220,545 Hair, treating non-feltable animal, G. Hamilton 220,532 Hair, treatment of animal, G. Hamilton 220,533 Hair wett, J. R. Krause 220,627 Halter, S. Scott 220,498 Hat band, ornamental, M. Goldberg 220,805 Hats and caps, machine for producing brims on sweat bands for, T. W. Bracher 220,570 Heel, revolving, Massey & Spencer 220,629 Hoes, rakes, etc., detachable handle for, Howell & Wienges 220,618 Horse creeper, J. Forsyth 220,597 Horse toe weight, E. W. Noyes 220,646 Horseshoe, C. J. Carr (r) 8,932 Horseshoe toe weight, S. T. Bane (r) 8,931 Ice elevator, C. J. Atkins 220,564 Injector and ejector, combined, L. B. Fulton 220,471 Ink fountain for printing machines, G. W. Prouty 220,547 Interfering strap, C. B. Dickinson 220,585 Jar for preserving fruits, etc., J. Murphree 220,642 King bolt, clip, H. K. Porter 220,495 Kitchen boilers, attachment for, L. Brandeis 220,517 Knife for cutting hay and cane, H. Fisher 220,469 Lamp, extension, L. Hornberger 220,535 Lamp miner's, J. O. Davies et al. 220,582 Lamp regulator, electric, Thomson & Houston 220,508 Levers, crank arms, etc., self-locking and releasing attachment for, O. O. Storle 220,552 Lift, hydro-pneumatic, Johnson & Bailey 220,479 Lime kilns, draught apparatus for, H. Horst 220,478 Locomotive and other furnaces, H. F. Hayden 220,614 Locomotive main and coupling rod, Crawford & Laird 220,467 Loom, J. D. Cottrell 220,579 Loom shuttle, Roberts & Lyons 220,659 Malt kiln floor, F. W. Wolf 220,513 Marker, land, S. Ryan (r) 8,935 Metal bending machine, E. W. Stewart 220,503 Middlings purifier, L. Gathmann (r) 8,929 Milk, machine for creaming, H. F. Bond 220,516 Millstone driver, R. S. Cathcart (r) 8,933 Mustache guard, V. M. Law 220,538 Necktie, W. A. Laverty (r) 8,934 Neck wear pin, Hart & Gaither 220,610 Nut roaster, Winsor & Hall 220,689 Oatmeal machine, G. H. Cormack 220,578 Oil cabinet, J. M. Thayer 220,682 Oils, apparatus for vaporizing and burning hydrocarbon, J. A. Frey 220,470 Opera chair, folding, T. M. Foote 220,523 Optical instruments made of celluloid and other fibrous plastic compositions, frame for, J. S. Spencer 220,502 Padlock, F. W. Mix 220,637 Paper pouch, J. H. Weaver 220,510 Passenger gate, C. J. Jorgensen 220,624 Patterns to fabrics, transferring, R. Hudson et al. 220,619 Pen, fountain, C. Baur 220,568 Pen, fountain, H. Madeheim 220,483 Pencil attachment, J. W. McGill 220,632 Pencil, lead, J. E. Faber 220,591 Pill box, N. V. Randolph 220,658 Pillow block, adjustable, W. M. Mills 220,487 Pillow sham holder, adjustable, Smith & Fay 220,675