

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. "Illustrated History of Progress made in Wood-working Machinery," sent free.

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.

Carbon Plates. 48 Railroad Ave., Jersey City, N. J.

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. The Messrs. Fairbanks are running their factory evenings, and are melting 22 tons of iron daily.

For Sale, very low.—24 dismantled 20 lb. Parrott Guns, in good order. "Relics of the late war." Suitable for corner posts or ornaments for parks or cemeteries. Address R. W. Dugan, No. 323 N. 3d St., St. Louis, Mo.

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. Also manufacturers of Solomon's Parallel Vise. Taylor, Stiles & Co., Riegelsville, N. J.

Park Benjamin's Expert Office, Box 1009, N. Y. Recipes and information on all industrial processes.

Jig Saw Machines. P. Pribil, 467 W. 40th St., N. Y. For Palley Blocks, write Block Works, Lockport, 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. is equal in effectiveness as a non-conductor of heat to double the quantity of any other cements or filling. Be sure and get the genuine. H. W. Johns Manufacturing Company, sole manufacturers, 87 Maiden Lane.

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. D. Frisbie & Co., New Haven, Conn.

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

The Secret Key to Health.—The Science of Life, or Self-Preservation, 300 pages. Price, only \$1. Contains fifty valuable prescriptions, either one of which is worth more than ten times the price of the book. Illustrated sample sent on receipt of 6 cents for postage. Address Dr. W. H. Parker, 4 Bulfinch St., Boston, Mass.

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.

Presses, Dies, and Tools for working Sheet Metal, etc. Fruit & other can tools. Bliss & Williams, B'klyn, N. Y.

Hydraulic Presses and Jacks, new and second hand. Lathes and Machinery for Polishing and Buffing Metals. E. Lyon & Co., 470 Grand St., N. Y.

Steam Excavators. J. Souther & Co., 12 P. O. Sq. Boston.

Bradley's cushioned helve hammers. See illus. ad. p. 302.

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. T. Shaw, 915 Ridge Avenue, Philadelphia, Pa.

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. Buy that only. The best is the cheapest. New York Belting and Packing Company, 37 and 38 Park Row, N. Y.

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. D. Gilbert & Son, 212 Chester St., Philadelphia, Pa.

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. Send stamp for 80 page Illustrated Catalogue. Centennial medal. McAllister, 49 Nassau St., New York.

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. Circulars free. Pittsburg Steel Casting Company, Pittsburg, Pa.

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. A. Dissolve best glue in warm acetic acid, q. s. See p. 2510, No. 157, SCIENTIFIC AMERICAN SUPPLEMENT.

(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. 2. Will sprouts of wine melt salmon skin, or the isinglass that is sold for clearing coffee, and would it mix with the wax afterwards? Do you think that would answer, or is there something else better and inexpensive? A. Yes, if somewhat diluted with water and warmed. It would not mix with the wax as you suggest.

(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? I want to use it on a concentration table. A. Plate glass might satisfy your requirements. We know of no coating likely to withstand the wear.

(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. Will you give me a receipt, and what time will it take before it will be ready for use? A. Phosphorus is very soluble in carbonic sulphide, and to some extent also in ether. It cannot be dissolved in spirits of wine, as proposed.

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. A. Use a good corn starch paste, well rubbed in; moisten (sponge) lightly with solution of 3 parts egg albumen and 1 part of gum arabic, dissolved in 5 parts strong ammonia water and 2 parts soft cold water, before ironing. The perfection of gloss is only developed by heavy pressure and friction.

(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. What can I do to soften them? They have been washed thoroughly. A. Remove all fragments of flesh with the knife, with care not to cut or bruise the inner skin; dry with towels, lay the skin flat on a board, and scrub the flesh side thoroughly with a stiff brush, soft soap, and hot water. Then sprinkle and scrub it with 2 oz. of cream of tartar, and 1 oz. ammonia, and dry with sawdust; when dry soak it for 2 days in the following pickle: 1 lb. oatmeal, 8 oz. corrosive sublimate (mercuric chloride), 4 oz. saltpeper, and 1 gall. vinegar; stir and dissolve in the hot vinegar and cool before using. When taken out of the pickle strain it tightly over a stretcher until quite dry—(which usually requires about a week). Comb out the wool while drying. 2. I have several articles of stamped tinware that need new tinning, nothing being worn except the tin. Can you tell me a good way to retin, so that they can be used for cooking? A. Better discard them and purchase new ones.

(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. Would I do better to get galvanized iron pipe, or can I coat it on the inside with anything to protect it? A. The remedy is to use a better anthracite fuel, or to cap your chimney with a weather cap—probably the latter. Painting or galvanizing is useless. See that you get good planished iron in your pipe, clean out the soot, and keep in a dry place when not in use.

(11) D. L. D. asks for a receipt for the cure of sumac poison. A. Salt water and diluted ammonia are commonly used. Sulphate of zinc and glycerine has also been used (externally of course) with success.

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. It contains nothing of value. Other than the attraction of gravitation, which acts alike between all bodies, there exists no attractive influence between the metals and peach tree limbs (or limbs of other trees). The diving rod is not a scientific instrument, and aside from its employment in sensational tales, its wonderful attributes, like those of the philosopher's stone, are merely delusive fancies.—F. S.'s and P. P. G.'s minerals have not been received.—J. F. Y.—No. 1 is coral replaced by siliceous. No. 2 is enclinitic; No. 3 is cyathophylloid coral; No. 4 is millepore coral, and No. 5 is an imperfect fossil.—W. 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. The former is used for adulterating white lead.—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, blende, wolfram, etc. The present price of tin in New York is from 22 to 24 cents per pound.

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.]

Table listing inventions and their patent numbers, including Aerobat, Air exhaust apparatus, Automatic brakes, Axle lubricator, Bale band bender, etc.

Table listing inventions and their patent numbers, including Boot and shoe cleaning and polishing machine, J. T. Schultz, Boot and shoe machine, Boot and shoe uppers, machinery for lasting, Hatch (r), Bracelet, C. Hein (r), etc.