

Business and Personal.

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For Sale—One No. 2 second-hand Brown & Sharpe Milling machine. Used but very little. Good as new.

Presses & Dies. Ferracuta Mach. Co., Bridgeton, N. J. For best hoisting engine. J. S. Mundy, Newark, N. J. Best 15 in. Shapers, \$245.

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

"How to Keep Boilers Clean." Send your address for free 96 p. book. Jas. C. Hotchkiss, 112 Liberty St., N. Y.

Centrifugal Pumps. Capacity, 100 to 40,000 gals. per minute. All sizes in stock. Irvin Van Wie, Syracuse, N. Y.

Scale removed and prevented in boilers; for each 60 horse, 16 cents a week. Pittsburgh (Pa.) Boiler Scale Resolvent Co.

Guild & Garrison, Brooklyn, N. Y., manufacture steam pumps, vacuum pumps, vacuum apparatus, air pumps, acid blowers, filter press pumps, etc.

No. 1 Universal Miller, with arm, reduced price, \$480 f. o. b. any R.R. depot east of Mississippi. Address Garvin Machine Co., Laight and Canal Sts., 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.

The price of the Brown & Sharpe No. 1 Universal Milling Machine without Overhanging Arm is \$480. Price of the Machine with Overhanging Arm, \$495.

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

Send for new and complete catalogue of Scientific and other Books for sale by Munn & Co., 361 Broadway, New York. Free on application.

Notes & Queries

HINTS TO CORRESPONDENTS.

Names and Address must accompany all letters, or no attention will be paid thereto. This is for our information and not for publication.

References to former articles or answers should give date of paper and page or number of question.

Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and, though we endeavor to reply to all either by letter or in this department, each must take his turn.

Special Written Information on matters of personal rather than general interest cannot be expected without remuneration.

Scientific American Supplements referred to may be had at the office. Price 10 cents each.

Books referred to promptly supplied on receipt of price.

Minerals sent for examination should be distinctly marked and labeled.

(3601) M. S. writes: 1. I wish to run a 40r 6 candle incandescent lamp for from five minutes to half an hour at a time, lamp to be 40 feet from battery.

(3602) E. N. A.—1. For a full description of luminous paints we refer you to our SUPPLEMENT, Nos. 229, 249, 497, and 539.

(3603) H. W. S. writes: In paper of October 10, 1891, in Notes and Queries column, No. 3446, W. E. V. asks how to straighten lance wood which is bent or crooked.

(3604) A. C. asks if it would be dangerous to connect the exhaust pipe of a gas motor with the sewer.

(3605) G. W. S. writes: 1. I wish to make an induction coil like that described in "Experimental Science."

(3606) H. W. L. asks the best way to protect nickel plating on a bicycle, put away for the winter, from rusting.

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(3607) W. V. L. asks (1) how to make type metal or the composition of same.

(3608) G. A. H. asks: 1. Would you kindly inform me the best style of galvanometer to use for field work in the open air with rough usage.

(3609) F. A. M. asks how to clean sea and similar shells and make them look nice.

(3610) J. H. D. asks what will make a paste to hold gold braid to silk ribbon.

(3611) C. T. H. writes: I am using a one-sixth horse power Edison slow-speed, series-wound motor to run my polishing and turning lathe.

lathe sits on a table; the motor is in a compartment underneath; the speed is one right for polishing, but very much too high for turning.

(3612) J. B. R. asks what size to make a balloon that would lift about three hundred pounds.

(3613) P. C. E. asks the elements and solution which when used as an ink will disappear after a certain length of time (about a day).

(3614) J. A. asks: 1. How can poison be detected in mushrooms? A. There is no way of doing this.

(3615) B. F. W. asks: How much does iron shrink to the foot? Does the size change the amount of shrinkage?

(3616) L. C. M. says: 1. Will you please inform a much interested reader of your valuable paper (through its columns or otherwise) what quantity of water will flow through 3,000 feet of one inch pipe, with a 6 foot head.

(3617) D. D. W. asks for a receipt for making cotton, etc., waterproof, by putting it in a solution of alum and lead acetate.

(3618) C. M. E.—1. The mould on the leaves sent is mycelium of a fungus belonging to the order Perisporiacei.

(3619) S. J. S. writes: I wish to connect a bell with my telephone so as to get the calls in another room.

(3620) H. T. C. asks: 1. In a medium sized induction coil, what should be the ratio between the sizes of the wires in the primary and secondary coils.

paint insoluble in alcohol? If so, what kind? A. The majority of paints are insoluble in alcohol.

(3621) S. A. D. asks if there is any acid that will act on lead or stereotype, and which will not touch beeswax.

(3622) T. L. asks for any substance that will remove the sheet gutta percha from cloth without disfiguring the colors.

(3623) L. R. C. writes: I have a large carbon battery plate (6x10) which is broken; can you tell me a method by which the pieces may be united.

(3624) F. W. B.—The powder sent is potassium nitrate. Mixed with sulphuric acid for a depolarizer in a battery.

(3625) G. I. H. asks if there is a rule for finding the radius of a circle when the arc and its chord, with distance (at greatest width) from arc to chord (versed sine), are given.

TO INVENTORS.

An experience of forty years, and the preparation of more than one hundred thousand applications for patents at home and abroad.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

October 27, 1891,

AND EACH BEARING THAT DATE.

[See note at end of list about copies of these patents.]

Table listing various inventions and their patent numbers, including items like Adjustable chair, Air brake, Air moistening apparatus, Ash arrester, Auger bit, Automatic gate, Automatic regulator, Automatic ventilator, Axle and bearing, Axle, wagon, Baby jumper, Bag fastener, Bag fastener, Ball bending machine, Baking powder, Basin and overflow pipe, Bath tubs, Battery, Belt, bodice, Bicycle support, Binding, book, Bit, Blind fastening, Block shaping machine, Board, Boat, Boiler feeder, Bolt extracting device, Bolt machine, Book, check, Boot, M. Neuberger, Bottle, drenching, Bottle stopper, Box, Brake, Brick drying apparatus, Brick kiln, Brick, manufacture of enameled, Bridge gate, Brush, rotary, Buggy gear, Burette clamp, Burner, Butter worker, Button clasp, Button fastener, Cable conduit covering, Camera, Candle, sulphur, Moss & Bourne, Cane mill housing, Canopy frame, Car brake, electric, Car coupling, Car coupling, Car coupling, Car railway, Car railway hand, Car replacer, Car, vestibule, Car wheel, Cars or other vehicles, Cars, trolley for electric, Card, flat, Cards, machine for treating, Car's or similar articles, machine for applying metallic leaf to, Carpet sweeper, Carving machine, Case, See Display case, Cash indicator and register, Cash register and indicator, Casting steel wheels, Chair, See Adjustable chair.

