

Business and Personal.

Charge for insertion under this head is \$1 a line.

Old Battery Zinc Bought—7c. per pound paid for old zinc battery plates...

Annealer Wanted—To take charge of the furnaces in a malleable iron foundry...

Lathes, screw-cutting, back geared, turn 12 in. dia. and 3 ft long...

Wanted—The address of manufacturers in Ohio who will manufacture and sell...

Manufacturers of small steel wares, wishing to estimate on a new article...

To Engine Builders and Boiler Makers—A practical Boiler Maker desires a location for a small shop...

For Sale, Cheap—One 18 in. Engine Lathe, 12 ft. bed, nearly new...

Lyman's Universal Screw Cutting Table, with rule for Compound Gearing...

A Situation wanted as Foreman of a Boiler Shop, by a man of 12 years' experience...

H. Beloe, Sacramento, Cal., wishes to communicate with makers of knife sharpeners...

Inventors! I want a small sawable machine, or article of metal. Will buy the Patent or manufacture on a royalty...

Safe Investment.—For Sale—Big Muddy Coal, Timber, and Farm Lands...

For Best Process for Seasoning Wood, apply to Barbaroux & Co., Louisville, Ky.

Mineralogical Cabinet for Sale—A systematically arranged collection of 2,000 specimens...

Deane's Patent Steam Pump—for all purposes—Strictly first class and reliable...

For Sale—The Patent Right of Sinclair's Double-acting Ratchet Drill...

Models of all kinds made to order. All kinds of light metal work...

Electric Bells for Dwellings, Hotels, &c.—Most reliable and cheapest Hotel Annunciator...

For Sale, Cheap—Second hand Machinist's Tools. D. Frisbie & Co., New Haven, Conn.

Spinning Rings of a Superior Quality—Whitinsville Spinning Ring Co., Whitinsville, Mass.

Diamonds and Carbon turned and shaped for scientific purposes; also, Glaziers' Diamonds...

Wanted—The Manufacture of "Specialties" made mostly of Wood. Sayer & Co., Meadville, Pa.

I am now furnishing Iron Roofing, coated with the best Metallic Paint...

The Pickering Governor, Portland, Conn. Portable Engines 2d hand, thoroughly overhauled...

The Improved Hoadley Cut-off Engine—The Cheapest, Best, and Most Economical steam-power in the United States...

Mechanical Expert in Patent Cases. T. D. Stetson, 23 Murray St., New York.

Gas and Water Pipe, Wrought Iron. Send for price list to Bailey, Farrell & Co., Pittsburgh, Pa.

Forges—(Fan Blast), Portable and Stationary. Keystone Portable Forge Co., Philadelphia, Pa.

Boilers and Engines, Second Hand. Egbert P. Watson, 42 Cliff St., New York.

For Surface Planers, small size, and for Box Corner Grooving Machines, send to A. Davis, Lowell, Mass.

The "Scientific American" Office, New York, is fitted with the Miniature Electric Telegraph...

All Fruit-can Tools, Ferracite, Bridgeton, N.J. Brown's Coalyard Quarry & Contractor's Apparatus...

For Solid Emery Wheels and Machinery, send to the Union Stone Co., Boston, Mass., for circular.

Lathes, Planers, Drills, Milling and Index Machines. Geo. S. Lincoln & Co., Hartford, Conn.

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

Hydraulic Presses and Jacks, new and second hand. E. Lyon, 470 Grand Street, New York.

Peck's Patent Drop Press. For circulars, address Milo, Peck & Co., New Haven, Conn.

Small Tools and Gear Wheels for Models. List free. Goodnow & Wightman, 25 Cornhill, Boston, Ms.

The French Files of Limet & Co. are pronounced superior to all other brands...

Mining, Wrecking, Pumping, Drainage, or Irrigating Machinery, for sale or rent. See advertisement. Andrew's Patent, inside page.

Automatic Wire Rope R. R. conveys Coal Ore, &c., without Trestle Work. No. 34 Dey street, N.Y.

A. F. Havens Lights Towns, Factories, Hotels, and Dwellings with Gas. 34 Dey street, New York.

Best Philadelphia Oak Belting and Monitor Stitches. C. W. Army, Manufacturer, 301 & 303 Cherry St., Philadelphia, Pa. Send for circular.

Temples & Oilcans, Draper, Hopedale, Mass.

Buy Boulton's Paneling, Moulding, and Dovetailing Machine. Send for circular and sample of work. B. C. Machy's Co., Battle Creek, Mich. Box 227.

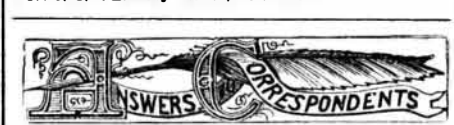
Engines, Boilers, Pumps, Portable Engines. Machinists Tools. L. B. Shearman, 45 Cortlandt St., N.Y.

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

Hand Fire Engines, Lift and Force Pumps for fire and all other purposes. Address Rumsey & Co., Seneca Falls, N. Y. U. S. A.

Price only three dollars—The Tom Thumb Electric Telegraph. A compact working Telegraph apparatus, for sending messages, making magnets, the electric light, giving alarms...

Rue's "Little Giant" Injectors, Cheapest and Best Boiler Feeder in the market. W. L. Chase & Co., 95 & 97 Liberty Street, New York.



E. T. C. can remove rust stains from calico by the process described on p. 148, vol. 27. G. F. can fine his ale by the recipe given on p. 75, vol. 31. G. W. P. will find directions for making a good black ink on p. 203, vol. 29. M. will find details of a millstone cement on p. 316, vol. 30. S. will find directions for making gutta percha varnish on p. 379, vol. 30. J. M. W. does not forward any description of the invention on which he asks an opinion...

S. T. B. says: A French chemist says: "By fabricating coke, nitrogen can be made." What is the meaning of fabricating coke? A. It means the making of coke by expelling from coal the principal gaseous and liquid matters that it contains...

F. B. C. asks: What are ochre and amber? A. Ochre is a variety of fine clay containing iron. The common colors are yellow and red, the latter being colored by sesquioxide of iron...

J. C. W. asks: 1. When a person is writing several hours every day, inhaling the air from ink which is drying so near him, does he receive into the lungs and the blood anything from the ink which may have a deleterious effect upon the heart or any other organ? A. Not from any of the common inks...

P. H. S. asks: Can a calcium light be made so as to be carried in the hand on a foggy day? A. It has not, nor ever can be until some simpler form of apparatus is invented, which will combine the advantage of compactness with the ability to furnish cheaply the continuous flow of gases necessary...

How can a pattern of a pot be drawn, the bottom to be 7 inches in diameter, the top 3 3/8 inches across, and the pot 7 inches high? A. This question is somewhat confused. See Warner's "Sheet Metal Worker's Assistant."

Can colored candles be made to burn with a flame of the same color? For instance, for red, nitrate of strontium might be dissolved in boiling alcohol and the wick soaked in it. Boracic acid might be used for green. Can the colors be intensified in any way? A. We doubt very much as to whether the object desired can be accomplished...

How can I deposit a thin coat of platinum on metal by a plating process? Can I put it on as a wash, after dissolving in nitro-muriatic acid? A. Your best method would be that of electroplating; the best solution to employ is the nitro-muriatic, to which sufficient soda is added to render it neutral...

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positive pole of the battery is placed so as to dip into the solution; the object to be platinated is placed by a wire in connection with the zinc or negative pole...

W. H. C. Sr. says: There is a man in our neighborhood who says that, if a boiler with both heads out were set up on end in a body of water...

D. K. S. says, in answer to J. J. K.'s question in regard to the British man of war sunk at Hell Gate about 1747: I would state that it has been visited by divers for several successive years...

J. O'D. asks: I have often felt the want of ventilation in railway cars, and I have wondered why the companies did not do something towards remedying the evil. But I am not surprised now, having read your article on the subject in a recent number...

J. H. McD. asks: The follower on a steam engine of 32 inches diameter (of a condensing engine on a steam boat), pulled off the follower bolts, nuts, and fastenings with it, and broke the cylinder...

S. F. R. asks: If there is a certain quantity of water in a boiler, and that amount of water be converted into steam, would there be the same amount of water when condensed if there were no means of escape?

H. L. K. asks: 1. Is an artesian well sunk in the same way and by the same apparatus as a common drive well? A. Not generally. Artesian wells are usually of such depth as to require the hole to be bored by a boring designed for the purpose...

W. H. K. Jr. asks: What ought be the thickness at top and at bottom of two square brick stacks, respectively 100 feet and 140 feet high...

A. L. D. M. asks: I have a boiler 56 inches long and of 28 inches diameter, with 20 tubes of two inches diameter; the dome is 16x20 inches, of iron 1/4 inch thick...

M. H. R. says: To become a surveyor, is it necessary to study at a university? If not, what should I do to become one? A. It would be better for you to obtain some instruction at a good engineering school...

H. C. T. asks: I wish to supply a tank, situated on top of a levee, with water from a river, the tank being 100 feet from the river, the levee sloping at an angle of 45 degrees...

F. G. H. asks: If a toy balloon were cut loose to go whither it would be blown, what would be the result? Will balloons burst if they rise as high as possible? A. Yes; but they seldom reach a sufficiently high altitude, because of the loss of gas.

R. K. asks: The lightning rod on my house runs underground several feet. Would it be any advantage to put a wheelbarrow full of wrought or cast iron turnings at the end of the rod, letting it bed itself in them?

J. J. S. asks: Is magnetic iron sand worked practically at any place in the United States? In Vermont we could obtain large quantities daily. Being very pure, it would be an inducement to establish works.

E. C. M. asks: Would a boiler be subject to damage by having a slight blast underneath? If so, to what extent? The blast is to be used for the purpose of smelting ore...

You again write to us without giving your name and address.

M. P. S. says: Your repeated cautions in regard to lightning rods lead me to ask your advice through your columns upon the following points: I have erected at my country residence a water tank and fixtures of rather novel construction...

J. E. J. asks: Will acid dissolve resin without destroying its natural qualities? If so, what kind of acid? If not, what will? A. Rosin, or colophony, is a mixture of several resinous acids, namely, phenic, sylic, colophonic, and sometimes also pinic acid. It is soluble in nitric acid, but in dissolving suffers decomposition...

S. C. J. asks: In your book of instructions for obtaining patents, there is a recipe for making marine glue: Take 3 parts gum shellac, 1 part caoutchouc, dissolve in separate vessels in ether free from alcohol, applying a gentle heat...

C. D. F. asks: 1. Why is it that, when I adjust a telegraph sander so that, when the circuit is closed, the armature touches the magnet, it (the armature) will still stick to the magnet when I break the circuit? A. Because of the residuary magnetism in the soft iron cores...

S. F. says: I wish to suggest a form of balloon which may be worth experimenting on, and which I believe has not yet been proposed. I have frequently observed that metallic shell ware, and all descriptions of sheet metal work constructed with a view to lightness and strength, are dependent upon the use of curved, duted, or corrugated surfaces for their power to sustain pressure...

E. C. M. asks: Would a boiler be subject to damage by having a slight blast underneath? If so, to what extent? The blast is to be used for the purpose of smelting ore. A. It is not usual to employ a blast in this manner; generally the blast is employed to clean off the bottom of the boilers...

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