

TO CORRESPONDENTS.

A. L., of N. Y.—Every steam boiler is a vacuum pan, it may be said; the only air that is in one is that of the water; your plan would save nothing.

B. M., of R. I.—A long time prior to the establishment of galvanism as a science, it had been observed that if two different metals were placed in contact, under water, they were subject to a rapid oxidation, though the water had no perceptible action upon them when they were alone.

S. W., of Texas.—It would be impossible for us to accomplish all you desire for the want of time and facilities to attend to it; parties from this section would not be willing to undertake such a risk without positive assurance of success.

J. L. O., of Lynn.—We think your plan of spring bedstead new and patentable, and request you to send a model; as to whether it will pay or not depends upon contingencies not properly within our province to decide upon.

T. C., of Va.—We have not time to write you a full receipt about the Chromatype. The supply pipe for your water ram is not material, but as your discharge pipe is five inch dia. (a very large size, truly) it will require a fall of 12 feet to raise all the water 12 feet, or a 6 feet fall to raise half the water, or 4 feet to raise one-third the supply of water; this is not counting a little loss by friction; you can therefore judge what size of supply pipe you require.

W. J. J., of Mass.—We have none of the numbers of Vol. 4 that you ordered.

S. H., of Ind.—The idea of applying steam directly to the periphery of a wheel to act by its expansive force to propel it, is well known to those familiar with the history of the rotary engine.

W. B. H., of Ohio.—You say you are poor; we are honest. We could not obtain a patent for your invention, much as you think of it, and we therefore would not wish you to lose your money. We would say the same to a rich man. No power can be gained from a lever, as you know. The old revolving buckets and rollers, we think, are preferable to your plan, because the weight of the water is applied nearly vertically, but there are mechanical difficulties in the way of your plan, as in the old bucket plan.

W. J., of Pa.—The best material you can use for the floats, is India rubber; it is the dearest, but there is nothing like it for air-tightness. The Goodyear India Rubber Warehouse, this city, will furnish you with what you want, but perhaps you can find one of them in the India Rubber Company stores in Philadelphia.

F. H. M., of N. Y.—When the application for the patent is filed, it is policy, usually, to substitute new claims, although you can retain such as were made in the caveat, if you prefer.

G. K., of O.—Minife's Drawing Book is probably the best work you could procure as a text book:—price \$3; postage by mail, 64c, which must be prepaid.

C. F., of N. Y.—The copy of the Sci Am., that we sent you, will be convincing proof, we think, that your invention is very old.

W. S., of S. C.—Dr. Reid resides in Rochester, N. Y., and could doubtless afford you such information about the sumac as you desire, and we think you would do well to communicate with him upon the subject. It would certainly afford us much pleasure to do so were it possible.

G. B., of Ark.—We should be pleased to see your drawings, but probably could not publish them during this Volume. The series of papers on Hydraulics, which were published in last Volume, will satisfy for the present.

G. M. C., of Me.—If you can use his machine just as he pleases after getting a patent; he may sell or not, as he likes. No one has a right to make or sell his machine. If he took more than two years to perfect his machine, he has no right to use it in any shape. If he has had it in public use for more than two years before applying for a patent, he will, in all likelihood, lose all the advantages of it. It is his duty to apply for a patent or file a caveat before the two years expire.

K. E., of N. Y.—Your plan for whitening sugar by creating a vacuum under the drainer, is a very good and practicable plan, but it will not refine sugar so fast as the new Centrifugal Machines, which can be made to work with greater rapidity.

Money received on account of Patent Office business for the week ending November 24.

N. A., of Ct., \$30; S. M. P., of N. Y., \$20; E. L. N., of Mass., \$32; W. M., of N. Y., \$35; J. H. C., of Ohio, \$30; A. S., of Pa., \$10; G. F. F., of Mo., \$50.

J. W. M., J. V. H., F. H. M., and J. C. E.—Your papers have been sent to the Patent Office.

Sending Receipts.—Postage on Books. The Post Office Laws do not allow publishers to enclose receipts; when the paper comes regular subscribers may consider their money as received.

Subscribers ordering books or pamphlets are particularly requested to remit sufficient to pay postage.

An Important Paragraph.

To preclude subscribers the necessity of writing for back numbers of the Scientific American, we shall forward all the back numbers of Volume 7, dating their subscriptions from the commencement unless they instruct to the contrary. We shall send the back numbers issued on this Volume until No. 13, after that time the names will be entered from

the date of the reception of orders, unless the writer expresses a wish to receive the back numbers.

Whenever our friends order numbers they have missed—we always send them if we have them on hand. We make this statement to save time and trouble, to which we are subjected in replying when the numbers called for cannot be supplied.

Back Numbers and Volumes.

In reply to many interrogatories as to what back numbers and volumes of the Scientific American can be furnished, we make the following statement:

- Of Volumes 1, 2 and 3—none.
Of Volume 4, about 20 Nos.; price 50 cts.
Of Volume 5, all; price, in sheets, \$2; bound, \$2.75.
Of Volume 6, all price in sheets, \$2; bound, \$2.75.

ADVERTISEMENTS.

Terms of Advertising.

- One square of 8 lines, 50 cents for each insertion.
" 12 lines, 75 cts., " "
" 16 lines, \$1.00, " "

Advertisements should not exceed 16 lines, and cuts cannot be inserted in connection with them at any price.

American and Foreign Patent Agency

IMPORTANT TO INVENTORS.—The undersigned having for several years been extensively engaged in procuring Letters Patent for new mechanical and chemical inventions, offer their services to inventors upon the most reasonable terms. All business entrusted to their charge is strictly confidential. Private consultations are held with inventors at their office from 9 A. M., until 4 P. M. Inventors, however, need not incur the expense of attending in person, as the preliminaries can all be arranged by letter. Models can be sent with safety by express or any other convenient medium. They should not be over 1 foot square in size, if possible. Having Agents located in the chief cities of Europe, our facilities for obtaining Foreign Patents are unequalled. This branch of our business receives the especial attention of one of the members of the firm, who is prepared to advise with inventors and manufacturers at all times, relating to Foreign Patents. MUNN & CO., Scientific American Office, 128 Fulton street, New York.

LOGAN VAIL & CO., No. 9 Gold street, New York, agents for George Vail & Co., Speedwell Iron Works, have constantly on hand Saw Mill and Grist Mill Irons, Press Screws, Bogardus' Horse-Powers, and will take orders of Machinery of any kind, of iron and brass; Portable Saw-mills and Steam Engines, Saw Gummets of approved and cheap kind, &c. Gearing, Shafting, large and small, cast or of wrought iron. 11f

WANTED.—By a middle-aged man, a situation where he could make himself generally useful by book-keeping, drawing machinery and architecture, with a house or engine builder, or railroad constructor, or in a factory of any description; and could teach drawing and French. Has no objection going to any part of the Union. Direct answer to E. B. French, Chatham Square Post Office, N. Y. 11 3\*

THE SUBSCRIBER has on hand several improved Steam Engines of superior quality, and made of the best materials, particularly adapted to manufacturing, saw mills, flour mills, &c. He will also make to order, at the shortest notice, engines and boilers of from 2 to 50 horse power, with all their appendages; prices reduced. Also, shafting, mill gearing, saw mills, presses, drills, &c. He has also facilities for furnishing lathes, planes, and scroll chucks, of the most approved styles and patterns, at short notice. Chain pumps always on hand, wholesale and retail, at No. 4 Howard st., New Haven, Ct. 10 7\* AARON KILBORN.

TWO STEAM ENGINES FOR SALE.—Of 3 and 6 horse-power (new); price \$150 and \$200; also, now finishing, 1 1/2 doz., more of those superior 8 feet Slide and Screw Cutting Lathes; price, including countershaft, hangers, pulleys, and full set of gearing, \$250. Inquire of CARPENTER & PLASS, corner of Hester and Elizabeth streets, N. Y. 10 2\*

THE SATURDAY EVENING POST, THE Leading Literary Weekly in the Union.—The proprietors think it unnecessary to dwell upon the distinguishing features of the "Post," whose brilliant success, during an existence of thirty years, is a sure guarantee of the future. For the coming year we have made arrangements for the following novelties:—"Boline, or Magnolia Vale," by Mrs. Caroline Lee Hentz, author of Linda, Rena, &c.; "Trial and Triumph," by T. S. Arthur, author of The Iron Hand, Temperance Tales, &c. &c. The "Post" will also contain, weekly, choice selections, news, bank note list, state of markets, &c. Terms—Single copy, \$2 per year, or three years for \$5, in advance. Clubs (to be sent to one P. O.), 4 copies, \$5; 9 copies, \$10; 14 copies, \$15; 21 copies, \$20, in advance. Address always post-paid. DEACON & PETERSON; 68 south 3rd st., Philadelphia. A copy of the "Post" will be sent as a specimen to anyone. 10 5

JOHNSON'S UNEQUALLED SAW GUMMER for gumming out the teeth of saws, an article indispensable for saw mill owners. This article has been thoroughly tried and well approved, for sale by G. A. KIRTLAND, 205 South street, New York. 9 4\*

MCCORMICK'S PATENT REAPERS AND MOWERS.—1700 of these machines, for which the great Medal of the World's Fair was awarded, are being manufactured at Chicago, Ill., with the intention of supplying the South-eastern States for the next harvest. The gold medal of the Chicago Institute was recently awarded for this Reaper and Mower, tested against two other mowers, in cutting prairie grass; and the first premium of the State Agricultural Societies of Wisconsin, Michigan and Pennsylvania, were also awarded at their late Fairs. Price \$120 at Chicago, and \$122 delivered at Philadelphia; terms otherwise accommodating. 9f

BALLOONS.—I am prepared to manufacture Hydrogen Balloons of from 1 pound to 5,000 lbs. ascending power to order. Balloons capable of carrying up one or two persons always on hand. The Balloons will be of the most perfect construction, so that any person can, with certainty and safety ascend with them. Instructions to insure success given to purchasers gratis. JOHN WISE, Lancaster, Pa. 9 10\*

TRAUTWINE ON RAILROAD CURVES.

By John C. Trautwine, Civil Engineer, Philadelphia; just published and for sale by WM HAMILTON, Actuary of the Franklin Institute. Price \$1. "This is a really good work, and we heartily recommend it to our civil engineers."—[Scientific Am. "We have carefully examined this work, and regard it as the best that has yet appeared on the subject," &c.—[Am. Railroad Jour. 8 10\*

POST'S PATENT SLIDING DOOR FRONTS

For Stores and Public Buildings; a new, cheap, and simple fixture for securing store fronts, which renders them fire and burglar proof, has been invented and patented by the subscriber, who is now prepared to sell rights. Messrs. Quarterman & Son, 114 John st., N. Y., are general agents. Address (post paid) Wm. POST, Architect, Flushing, L. I. 6 3m

TILTON'S Patent Violin.

The undersigned having patented his Violin Improvement, is prepared to exhibit to the public. Being now in New York, he may be found at No. 18 Park Place (Mr. J. Wiley's), where he will be pleased to see such gentlemen as take an interest in his invention. All communications addressed "Wm. B. Tilton & Co.," as above, or at Carrollton, Pickens Co., Ala. 3 12\* WM. B. TILTON.

LEWIS & BLODGETT'S PATENT ROTARY SEWING MACHINE.

The undersigned, having purchased the right to use, sell, and manufacture these machines for the States of Alabama and Mississippi, and their other business engagements preventing them from giving their personal attention, they are disposed to sell out their right to the above-mentioned States, or counties in them, if preferred, upon favorable terms. To an energetic and industrious man we will sell upon such terms as will insure a large and handsome profit. Apply to Mr. W. SCRUGGS, of the firm of Messrs. Scruggs, Drake & Co., Charleston, S. C., or to WM. MAILLER, Decatur, Ala. 4 8\*

PROFESSOR ALEX. C. BARRY'S TRICOPHEROUS OR MEDICATED COMPOUND.

Professor Barry does not hesitate to put his Tricopherous, for the two grand requisites of efficacy and cheapness, against any preparation for cleansing, renewing, preserving, and strengthening the Hair, that has ever been advertised or offered for sale. He challenges the associated skill and science of the medical world to produce, at any price, an embrocation that will reduce external irritation, cure ordinary cutaneous diseases and severe cuts, sprains, pains, &c. Sold in large bottles, price 25 cents, at the principal office, 137 Broadway, New York, and by the principal merchants and druggists throughout the United States, Canada, Mexico, West Indies, Great Britain, France, &c. 4 12\*

CLOCKS FOR CHURCHES, PUBLIC BUILDINGS, RAILROAD STATIONS, &c., and REGULATORS FOR JEWELLERS.

The undersigned having succeeded in counteracting effectually the influence of the changes of the temperature upon the pendulum, and introduced other important improvements in the construction of clocks, are prepared to furnish an article superior in every respect (the highest quality) to any made in the United States. Ample opportunity will be afforded to test their qualities. Glass (illuminated) dials of the most beautiful description furnished. Address SHERRY & BYRAM, Oakland Works, Sag Harbor, Long Island, N. Y. "At the Oakland Works of Sherry & Byram there are made some of the finest clocks in the world."—[Scientific American. "Mr. Byram is a rare mechanical genius."—[Jour. of Commerce. 5 10

PATENT CAR AXLE LATHE—I am now manufacturing, and have for sale, the above lathes; weight, 5,600 pounds, price \$600. I will furnish a man with each lathe, who will turn and finish axles for 50 cents each, if desired. I have also for sale my patent engine screw lathe, for turning and chucking tapers, cutting screws and all kinds of common job work, weight 1,500 lbs., price \$225. The above lathe warranted to give good satisfaction. J. D. WHITE, Hartford, Ct. 7 6m\*

MACHINERY FOR SALE.—Four dead spindle filling frames, 1-16 strand speeder, 1 warper, 1 lapper, &c. Also turbine water wheels, 6 ft. diameter, of most approved patterns, at \$275 each; a breast wheel, &c.; 20 feet long, and an iron under-shot water-wheel. ELI WHITNEY. 7 6\*

IRON FOUNDERS MATERIALS.—viz.: fine ground and Bolted Sea Coal; Charcoal, Lehigh, Soapstone and Black Lead Facing. Iron and brass moulding sand; Fire Clay, Fire sand and Kaolin; also English, Scotch and Welsh Fire Bricks—plain arch, circular and tower cupola—for sale by G. O. ROBERTSON Liberty place, between 57 and 59 Liberty-st. (near the Post Office) N. Y. 7 12\*

A CARD.—The undersigned begs leave to draw the attention of architects, engineers, machinists, opticians, watchmakers, jewellers and manufacturers of all kinds of instruments, to his new and extensive assortment of fine English (Stubs) and Swiss Files and Tools; also his imported and own manufactured Mathematical Drawing Instruments of Swiss and English style—which he offers at very reasonable prices. Orders for any kind of instruments will be promptly executed by F. A. SIBENMANN Importer of Watchmakers' and Jewellers' Files and Tools and manufacturer of Mathematical Instruments 154 Fulton st. 6 9\*

BROOM MACHINERY.—The most improved and durable machinery for the manufacture of Brooms, for sale by JACOB GRAY, Scotia, Schenectady Co., N. Y. Address post-paid. 4 8\*

PALMER'S ARTIFICIAL LEGS.

Manufactured at Springfield, Mass., and 376 Chestnut-st. Philadelphia, by Messrs. Palmer & Co.—All orders from New York and New England must be made to Palmer & Co. Springfield, Mass.—"I have examined carefully the Artificial Leg, invented by Mr. B. F. Palmer; its construction is simple and its execution beautiful; and what is most important, those who have the misfortune to require a substitute for a natural limb and the good fortune to use it—all concur in bearing practical testimony to its superiority in comfort and utility. VALENTINE MOTT. New York, Jan. 29, '51. 39 6meow\*

1851 TO 1856.—WOODWORTH'S PATENT Planing Machines.

Ninety-nine hundredths of all the planed lumber used in our large cities and towns continues to be dressed with Woodworth's Machine. Price of the machine from \$150 to \$760. For rights in the unoccupied towns and counties of New York and Northern Pennsylvania, apply to JOHN GIBSON, Planing Mills, Albany, N. Y. 9 10\*

SCRANTON & PARSHLEY, Tool Builders,

New Haven, Conn., have on hand six 12 ft. slide lathes, 28 in. swing; also four 8 ft. do.; 21 in. swing, with back and screw gearing, with all the fixtures; one 5 ft. power planer; 12 drill presses, 4 bolt cutting machines, 30 small slide rests; 5 back geared hand lathes, 21 in. swing; 15 do. not geared; 8 do. 17 in. swing on shears 5 1/2 feet; 25 ditto with and without shears, 13 in. swing; counter shafts, all hung if wanted suitable to the lathes. Scroll chucks on hand; also index plates for gear cutting. Cuts of the above can be had by addressing as above, post-paid. 9f

BEARDSLEE'S PATENT PLANING MACHINE,

for Planing, Tonguing and Grooving Boards and Plank.—This recently patented machine is now in successful operation at the Machine shop and Foundry of Messrs. F. & T. Townsend, Albany N. Y.; where it can be seen. It produces work superior to any mode of planing before known. The number of plank or boards fed into it is the only limit to the amount it will plane. For rights to this machine apply to the patentee at the above-named foundry—or at his residence No. 764 Broadway, Albany. GEO. W. BEARDSLEE. 5f

WATTS & BELCHER, Manufacturers of Steam Engines, Lathes, Planing Machines, Power Presses, and Mechanics' Tools of all descriptions.

Orders respectfully solicited and punctually attended to. Washington Factory, Newark, N. J. 7 20\*

PAINTS, &c. &c.—American Atomic Drier, Graining Colors, Anti-friction Paste, Gold Size, Zinc Drier, and Stove Polish.

QUARTERMAN & SON, 114 John st., Painters and Chemists. 9f

MACHINERY.—S. C. HILLS, No. 12 Platt-st. N. Y.

dealer in Steam Engines, Boilers, Iron Planers, Lathes, Universal Chucks, Drills; Kase's, Von Schmidt's and other Pumps; Johnson's Shingle Machines; Woodworth's, Daniel's and Law's Planing machines; Dick's Presses, Punches and Shears; Mortising and Tenoning machines; Belting; machinery Beal's patent Cob and Corn mills; Burr mill and Grindstones; Lead and Iron Pipe &c. Letters to be noticed must be post-paid. 1f

LAP-WELDED WROUGHT IRON TUBES

for Tubular Boilers—from 1 1/4 to 7 inches in diameter. The only Tubes of the same quality and manufacture as those so extensively used in England Scotland, France and Germany—for Locomotive Marine and other steam Engine Boilers. THOS. PROSSER & SON, Patentees, 1f 28 Platt-st. N. Y.

LATHES FOR BROOM HANDLES, &c.—We continue to sell Alcott's Concentric Lathe, which is adapted to turning Windsor Chair Legs, Pillars, Rods and Rounds; Hoe Handles, Fork Handles and Broom Handles.

This Lathe is capable of turning under two inches diameter with only the trouble of changing the dies and pattern to the size required. It will turn smooth over swells or depressions of 3/4 to the inch and work as smoothly as on a straight line—and does excellent work. Sold without frames for the low price of \$25—boxed and shipped with directions for use. THOS. PROSSER & SON, At this Office. 1f

MALLEABLE IRON FOUNDRY, EASTON, Mass.

The subscriber continues to manufacture castings of every variety, for machinery and other purposes, of the best quality, at the above establishment, we have facilities for making castings 5 1/2 feet in length. Persons wishing castings can send patterns to Easton Express, Boston, Mass. All letters will be promptly attended to. 8 10\* DANIEL BELCHER.

WOOD'S IMPROVED SHINGLE MACHINE

Patented January 8th 1850, is without doubt the most valuable improvement ever made in this branch of labor-saving machinery. It has been thoroughly tested upon all kinds of timber and so great was the favor with which this machine was held at the last Fair of the American Institute that an unbought premium was awarded to it in preference to any other on exhibition. Persons wishing for rights can address (post-paid) JAMES D. JOHNSON, New Haven, Ct.; or WM. WOOD, Westport, Ct. All letters will be promptly attended to. 3f

LEONARD'S MACHINERY DEPOT, 109 Pearl-st. 60 Beaver N. Y.

The subscriber is constantly receiving and offers for sale a great variety of articles connected with the mechanical and manufacturing interest, viz.: Machinists' Tools—engines and hand lathes; iron planing and vertical drilling machines; cutting engines, slotting machines; bolt cutters; slide rests; universal chucks &c. Carpenters' Tools—mortising and tenoning machines; wood planing machines &c. Steam Engines and Boilers from 5 to 100 horse power. Mill Gearing—wrought iron shafting; brass and iron castings made to order. Cotton and Woolen machinery furnished from the best makers. Cotton Gins; hand and power presses. Leather Banding of all widths made in a superior manner; manufacturers' Findings of every description. P. A. LEONARD. 10f

MANUFACTURE OF PATENT WIRE Ropes and Cables—

for inclined planes, suspension bridges, standing rigging, mines, cranes, derrick, tilters &c.; by JOHN A. ROEBLING; Civil Engineer—Trenton N. J. 47 1y\*

RAILROAD CAR MANUFACTORY.—TRAUCY & FALES, Grove Works, Hartford, Conn.

Passage, Freight and all other descriptions of railroad Cars, as well as Locomotive Tenders, made to order promptly. The above is the largest Car Factory in the Union. In quality of material and in workmanship, beauty, and good taste, as well as strength and durability, we are determined our work shall not be surpassed. JOHN R. TRACY, THOMAS J. FALES. 39f

BEST CAST STEEL AXLES AND TYRES, (a new article), for Railroad Carriages and Locomotives.

The quality of this steel is sufficiently attested in the announcement that it has carried off the first prizes awarded at the World's competition of 1851, in London. The axles are in general use on the Continent, and are now offered in competition with any other that can be produced; and to be tested in any way that may be desired by the engineers of the United States, either by impact or by torsion. This steel is manufactured by Fried Krupp, Esq., of Essen, in Rhenish Prussia, represented in the United States by THOS. PROSSER & SON, 28 Platt st., N. Y. 2f

TO ENGINEERS.—A new Work on the Marine Boilers of the United States, prepared from authentic Drawings and Illustrated by 70 Engravings—among which are those of the fastest and best steamers in the country—has just been published by B. H. BARTOL, Engineer, and is for sale at the stor of D. APPLETON & CO., 200 Broadway. 1 12\*