

TO CORRESPONDENTS.

J. O., of Phila.—You can introduce your invention as early as you please; we shall have the papers prepared for you to execute very soon.

W. F. O., of Texas.—Gum shellac dissolved in spirits of turpentine, in a close bottle, will make a cement admirably adapted to the purpose for which you require it. \$10 received, which is correct for the number of subscribers you sent.

E. G., of Ohio.—We have received the pamphlet, and will give the substance about the tunnel in our next.

T. H., of Pa.—In the hot-blast the oxygen does not combine with the hot iron of the pipes; if it did, how long would the pipes stand? There is a general mistaken idea that the oxygen of the atmosphere is continually combining with the iron of an exposed red-hot plate, if such were the case, how long would a plate stand before it was oxidized?

E. H., of Mass.—There is a work named "Humphrey's Photography;" also Hunt's, which latter contains full instructions. There is no way to obtain a good and complete knowledge of making philosophical instruments, except by model and reading the works that have been published on the same, which are very extensive in their range. We like your ideas, they are just and sound.

J. C. S., of N. Y.—We have been aware, for a long time, of a mill, driven by water, doing more work by night, in a given time, than during the day, and this information we have published before. Fires burn better during night than day. The article would be acceptable, you know the rule—short, clear, crisp, and sticking full of facts.

A. F., of Mass.—There is nothing new in the spiral bucket wheel you have described; they are old and well known.

W. S. T., of N. Y.—Neither of your plans are, in our judgment, practicable; aerial navigation is an airy scheme and requires a great stretch of the imagination to bring the mind up to even a reasonable hope of success; this has resulted from the failure of every plan to accomplish useful results; at present the system is fraught with much more pleasure than profit; we have no faith whatever in any plan yet proposed. The paddle wheels are old and well known.

W. J., of Ala.—We would allow 16 cubic feet per second for the 45 feet fall, and 15 cubic feet for the 50 feet fall; this is a little more (not quite a cubic foot) than by actual rule is allowed, and it makes allowance for the common deduction of one-third for loss; the rule for exact calculation is to multiply the power of wheel wanted, say 60 horse-power, by 33,000 (a horse-power), and divide this by your fall, fifty feet high, then divide by 62 1-2, to bring the pound to cubic feet in one minute, and by 60 for the cubic feet per second, and add one-third for the usual loss.

J. R. B., of N. Y.—The quantity of water being the same, we can see no difference in the two wheels (8 and 14 feet) except in the height of the fall—the ratio then is in proportion to this. The ratio of power, by this mode of estimating effect, will be the same by doubling the diameter of each wheel, but recollect that the power of the water is as the quantity and the fall; we cannot view the question in any other light.

A. N. Piper, of Athens, Geo., wants information about the price of a lathe for turning bobbins. Some of our readers may be able to inform him.

J. O., of N. Y.—Will you be pleased to send us a few more articles before we commence their publication. This will be the best way for us both.

J. K. L., of D. C.—We see nothing patentable in the sketches you have sent us. Whenever you correspond with this office again you must sign your name in full or no attention will be paid to your requests.

J. B. B., of Ark.—It is quite difficult to obtain in a single book a general knowledge of mechanism. We have sent you the "Hand Book of the Useful Arts," which we hope will please you.

R. G., of N. Y.—You are right about the steam engine; no person that we are aware of entertains a different opinion. The valves of steamboat engines are worked by inclined planes and by cams, so as to cut off suddenly. We cannot give you any information about those who are now applicants for patents. If you look on page 296, Vol. 4, Scientific American you will find a water-wheel that acts upon the same principle as yours, but not in the same manner.

W. J. McA., of N. Y.—We have not received the number, but have read it in another. We are aware of the truth of the criticism, and when you were removed we stigmatized the acceptance of the office as a mere trick.

G. W. S., of O.; W. H. B., of N. Y.; E. B., of Miss.; G. H., of Texas, and N. B. D., of S. C.—We have obeyed your instructions in forwarding a stereotype plate of the Crystal Palace by the different routes designated by each.

Money received on account of Patent Office business for the week ending Saturday, Dec. 11:—

A. L., of N. J., \$30; J. O., of Pa., \$40; G. L. W., of Md., \$30; N. C. T., of N. Y., \$30; W. R. G., of N. Y., \$30; C. R., of N. Y., \$40; G. N. L. D., of N. Y., \$30; G. B. D., of Mass., \$25; D. & B., of N. Y., \$100; J. S. Van G., of Tenn., \$30; J. C., of N. Y., \$20.

Specifications and drawings belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, Dec. 11:

T. A., of N. Y.; H. & McL., of Ga.; M. & E., of N. Y.; C. & R., of N. Y.

A Chapter of Suggestions, &c.

PATENT LAWS, AND GUIDE TO INVENTORS.—We publish, and have for sale, the Patent Laws of the United States. The pamphlet contains not only the laws but all information touching the rules and regulation of the Patent Office. Price 12 1-2 cts. per copy.

FOREIGN SUBSCRIBERS.—Our Canada and Nova Scotia patrons are solicited to compete with our citizens for the valuable prizes offered on the present Volume. [It is important that all who reside out of the States should remember to send fifty cents additional to the published rates for each yearly subscriber; that amount we are obliged to pre-pay on postage.]

PATENT CLAIMS.—Persons desiring the claims of any invention which has been patented within fourteen years, can obtain a copy by addressing a letter to this office—stating the name of the patentee, and enclosing one dollar as fee for copying.

ADVERTISEMENTS.

Terms of Advertising.

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Advertisements exceeding 16 lines cannot be admitted; neither can engravings be inserted in the advertising columns at any price.

All advertisements must be paid for before inserting.

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 special 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.

WILL BE SOLD.—On Thursday, Dec. 29, 1852, at Public Auction, if not previously disposed of at private sale, the SALUDA COTTON FACTORY, situated on Saluda River, three miles from Columbia, where the Greenville and Charlotte Railroads connect with the South Carolina Railroad. The building is of granite, built in the best manner, 200 feet long, five stories high, containing thirty-six 30 inch cards; 120 looms, 40 spinning frames, three mules, with speeders, warping machines, dressing frames, and reelers, with every thing necessary for running the mill. The machinery is in complete order. There are one hundred and sixty acres of land situated on both sides of Saluda River, furnishing water power sufficient to drive 100,000 spindles. The cottages for operatives are in good order; and the situation a very healthy one. The establishment, independent of the negroes, cost the present Company upwards of \$100,000. Persons desirous of treating privately for it, will apply to R. W. GIBBES, President. Columbia, S. C., Nov. 24. 13 3

NEWELL'S PATENT SAFETY LAMP AND LAMP FEEDER.—Warranted to prevent all accidents from the use of Burning Fluid, Camphene, and other explosive compounds used for the production of light. This invention is applied to Solar and Camphene Lamps. For sale, wholesale and retail, by Newell & CO., Sole Manufacturers, No. 8 Winter street, Boston, and New York by G. W. McREARY, 426 Broadway.

CERTIFICATE.—College of Physicians and Surgeons, New York, Oct. 17, 1852. We have examined the Patent Safety Lamp and Lamp Feeder, of Mr. John Newell, of Boston, and are fully convinced, from the experiments we have made with them, that he has obtained the great desideratum of preventing the risk of explosive action in the use of burning fluids in Lamps and Feeders. In this respect we entirely concur in the opinion of Prof. Silliman, and Drs. Hayes and Jackson. JOHN TORREY, Prof. of Chemistry, 13 4* WM H. ELLET, Prof. of Chemistry.

WEICK & WIECK, Publishers, 195 Chestnut st., Philadelphia, has issued F. Ahn's new, practical, and easy Method of Learning the German Language, with a pronunciation arranged according to J. C. Oehlschlager's recently published Pronouncing German Dictionary. First and Second Course, bound; price 37 1-2 cents. Also a Pronouncing German Dictionary: German and English and English and German Pocket Dictionary, with a pronunciation of the German part in English characters and English sounds; 850 pages, 18mo; bound, embossed backs; price \$1. The trade furnished at a discount. 13 4*

UNITED STATES STANDARD RULES.—Manufactured by JOS. R. BROWN, Providence, R. I. Agents: A. J. Wilkinson, No. 2 Washington st., Boston; J. N. D. Wyckhoff, 152 Broadway, and Sibenmann & Quartier, 15 John st., N. Y.; Homer Foot & Co., Springfield, Mass.; John S. Gray, Hartford, and J. G. & F. H. Brown, New Haven, Conn.; W. F. Dominick & Co., Chicago. 12 4*

CHURCH CLOCKS.—One new and improved principle, warranted perfect time-keepers, and easily kept in repair. Prices from one to three hundred dollars. Old clocks regulated on a new principle, and warranted to keep perfect time. Address, CHAS. FRED. JOHNSON, Owego, Tioga Co., N. Y. 13 4*

BLISS' IMPROVED MORTISING MACHINE.—Illustrated on page 220, Vol. 3, Sci. Am. These machines are made by J. W. BLISS, Hartford, Ct., and on the receipt of \$25 will be boxed in good order and sent by Express to any part of the country. 12 4*

THE SATURDAY EVENING POST.—The Leading Literary Weekly.—Over thirty-one years have elapsed since the Saturday Evening Post was commenced; its circulation being now greater than at any former period. The publishers design giving, during the coming year, with other original matter, the following novelets: "Clara Moreland," by Emerson Bennett; "Miss Thusa's Spinning Wheel," by Mrs. Lee Hentz; "A Stray Patch from Aunt Hannah's Quilt," by Mrs. Frances D. Gage, of Ohio; "The Lost Heiress, a Story of Howlet Hall," by Mrs. E. D. E. N. Southworth, author of "The Deserted Wife," etc., together with Agricultural Articles, General News, Engravings, Miscellaneous matter, Humorous Sketches, Foreign Letters, &c. Terms (cash in advance): Single copy, per annum, \$2; 4 copies, \$5; 9 copies, \$10; 14 copies, \$15; 21 copies, \$20. Address DEACON & PETERSON, No. 66 South 3d st., Philadelphia. Sample numbers sent when requested. 12 3*

STEAM ENGINES FOR SALE.—We offer for sale two Engines and Boilers, as follows: one 8 horse, horizontal, cylinder 7 inches bore, 16 inch stroke, on a cast-iron bed, fly wheel, driving pulley, governor, pump, pipes, etc.; has never been used. The Boiler has been used by the maker about one year. It is cylinder, horizontal, 16 feet long, 30 inch diameter, has a steam chamber, try-cocks, check and safety valves; price, \$600. One 7 horse Horizontal Engine, 6 inch bore, 16 inch stroke, cast iron bed-plate, driving pulley, etc. Boiler horizontal, tubular, and has everything complete for putting it in operation. The engine is new, the boiler has been used, but is in good order. Price \$500. They are rare bargains, and will give satisfaction to the purchaser, being much less than new ones can be obtained. Address MUNN & CO.

COTTON MACHINERY FOR SALE.—Four Filling Frames of 144 spindles each, made in the best manner and nearly new; price \$1 per spindle; other machinery for sale equally low. Apply to E. WHITNEY, New Haven, Conn. 11 6

IRON FOUNDERS MATERIALS.—viz.: American hard white and grey Pig Iron; No. 1 Scotch Pig Iron, Iron and Brass Moulding Sand; Fire Sand and Fire Clay; Core Sand and Flour. English and Scotch patent Fire Bricks—plain, arch, and circulars for cupolas. Pulverized Soapstone and Black Lead, Sea Coal; Anthracite and Charcoal Foundry Facings of approved quality, always on hand and for sale by G. O. ROBERTSON, office 135 Water street, (corner of Pine), N. Y. 11 6*

WOODBURY'S PATENT PLANING MACHINES.—I have recently improved the manufacture of my Patent Planing Machines, making them strong and easy to operate, and am now ready to sell my 24 inch Surfacing Machine for \$700, and 14 inch Surfacing Machine for \$650 each. I will warrant, by a special contract, that one of my aforesaid machines will plane as many boards or plank as two of the Woodworth machines in the same time, and do it better and with less power. I also manufacture a superior Tonguing and Grooving Machine for \$350, which can be either attached to the Planing Machine, or worked separately. JOSEPH P. WOODBURY, Patentee, Border st., East Boston, Mass. 13 6*

HARRISON'S UNEQUALLED FLOUR AND GRAIN MILLS.—Their frames and hopper are cast-iron, and the stones French Burr, 30 inches to four feet diameter. Thirty inch mill grinds 20 bushels an hour, weighs 1400 lbs.; cash price \$200. These mills, constructed upon a new principle, have become widely known, and are producing a revolution in milling. Cash orders promptly supplied, and the mills warranted to work in the best manner. The patentee offers \$500 reward for any mill which will do an equal amount of work with the same power and dressing. Made and for sale at the corner of Court and Union streets, New Haven, Conn., by EDWARD HARRISON. 13 6*

WANTED.—One or two active business mechanics, with \$1500 or \$2000 capital, to invest in a planing, sash, and other machines, to connect with an establishment, consisting of large and commodious buildings, a good and almost new engine and other machinery, already put up in a pleasant, healthy, and flourishing town in the South. References required and given. Inquire at 45 South street between 9 and 10 A. M., or by letter addressed "DE-SALX," care of Munn & Co. 13 2*

FOUNDRY FOR SALE.—The Columbus Foundry, in Columbus, Miss., is offered for sale on the most liberal terms. The Foundry has a 15 horse-power engine and boiler; also a good grist mill, and attached to it the moulding room, 45 by 50 feet; all the tools and patterns will be sold with it. A good stand to do a good business; no foundry near. For further particulars and terms, &c., address A. R. WOLFINGTON, Columbus, Miss. 13 3*

R. W. PARKER'S PORTABLE SAWING MACHINES, driven by his patent method of banding pulleys, as manufactured by C. W. & R. Bemis, of Waltham, Mass., for sale all complete, or with the iron work separately, by HORACE F. FARRINGTON, Nos. 46 and 48 Wooster st., N. Y. 13 4*

EXHIBITION OF WORKS OF AMERICAN INDUSTRY at Washington City.—The first exhibition of the Metropolitan Mechanics' Institute will be opened on Thursday, the 24th of February, 1853, in the new and splendid hall of the east wing of the Patent Office, one of the largest and most magnificent rooms in the United States, being 275 feet long by 70 feet wide. To this exhibition the manufacturers, mechanics, artists, and inventors, from all portions of the Union, are cordially invited to contribute. The hall will be opened for the reception of goods on Monday, the 14th of February, and the exhibition will positively close on or before Thursday night, March 17. Circulars, containing detailed instructions, will be forwarded and any further information given, on application (post-paid) to the Corresponding Secretary, Charles F. Stansbury, to whom all communications on the business of the Institute should be addressed. 8 1/2

THE TROY IRON BRIDGE CO. are prepared to erect Iron Bridges or Roofs, or any kind of bearing trusses, girders, or beams, to span one thousand feet or under, of any required strength, in any part of the country. Their bridges will be subjected to severe tests, and can be built for about the price of good wooden ones. Address BLANCHARD & FELLOWS, Troy, N. Y. 7 20*

1852 TO 1856.—WOODWORTH'S PATENT Planing, Tonguing, Grooving, Rabbeting, and Moulding Machines.—Ninety-nine hundredths of all the planed lumber used in our large cities and towns continues to be dressed with Woodworth's Patent Machines. Price 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. 1amf

BAILEY'S SELF-CENTERING LATHE.—The best in America for Chair Stuff, Wagon Thills, Rake, Fork, Hoe, and Broom Handles. Persons wishing this Lathe, warranted to do twice the work of any other lathe, by applying to L. A. SPALDING, Lockport, N. Y., can be supplied. The following certificate of Birge & Brother, extensive chairman-facturers, at Troy, N. Y., is to the point:—"After making a perfect and thorough trial of Bailey's Self-Centering and Self-Adjusting Lathe, we can cheerfully recommend it as in every way calculated to perform its work in the best manner—as it is the best Lathe we have ever used in our manufactory; and having used many different kinds, we feel safe in asserting that it is probably the best machine of the kind in use. BIRGE & BROTHER, Francis Miller, Lucius Foot, Turners for B. & B. 3 3m*

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 abovesaid foundry—or at his residence No. 764 Broadway; Albany. GEO. W. BEARDSLEE. 25tf

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; Morticing and Tenoning machines; Belting; machinery oil, Beal's patent Cob and Corn mills; Burr mill and Grindstones; Lead and Iron Pipe &c. Letters to be noticed must be post-paid. 13tf

MACHINISTS' & MANUFACTURERS' TOOLS. O. SNOW & CO., Union Works, Meriden, Ct. Having increased their facilities for manufacturing Lathes, Planers, &c., have now on hand, finished and finishing off, Slide Lathes, a variety of sizes and lengths, at prices varying from \$125 to \$800, according to size and finish; also Hand and Power Planers for iron, 2, 3 1-2, 6, and 10 feet beds; also Milling Machines, Hand Lathes with or without iron beds, comprising six different sizes, all of the most approved construction and warranted of the best quality of work. 9 7*

LEONARD'S MACHINERY DEPOT, 109 Pearl-st. and 60 Beaver, N. Y.—Leather Banding Manufactory, N. Y.—Machinists' Tools, a large assortment from the "Lowell Machine Shop," and other celebrated makers. Also a general supply of mechanics' and manufacturers' articles, and a superior quality of oak-tanned Leather Belting. 7tf P. A. LEONARD.

PATENT CAR AXLE LATHE.—I am now manufacturing, and have for sale, the above lathes; weight, 5,500 lbs., price \$680. 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. 39 26*

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. 1tf

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 setting up. Address (post-paid) MUNN & CO. At this Office.

DRAWING BOARDS.—Patent; 23 by 29 inches, with extensive Scales and Sheet Fastener. Descriptive Circulars sent on application; \$10 for Board and T Rule. Sent by Express Address, post-paid, CHAMBERLIN & CO., Pittsfield, Mass. 50tf

WOODWORTH PLANING MACHINES, on hand and manufactured to order, of superior quality, at reduced prices, waranted perfect. Also steam engines and other machinery, by JOHN H. LESTER, 57 Pearl street, Brooklyn, L. I. 12 4*

FALES & GRAY (Successors to TRACY & FALES), RAILROAD CAR MANUFACTURERS—Grove Works, Hartford, Connecticut. Passenger, freight, and all other descriptions of railroad cars and locomotive tenders made to order promptly. 1tf

SHINGLES, SHINGLES, SHINGLES.—WOOD'S latest improvement in Shingle Machines is becoming more generally used than any other ever invented, and is unquestionably the best machine now in use; it produces shingles from all kinds of timber in a very perfect and rapid manner. Machines and rights for sale. Apply to JAMES D. JOHNSON, Bridgeport, Ct. 9tf

C. B. HUTCHINSON'S PATENT STAVE Cutting Machines, the best in use, and applicable alike to thick or thin staves; also his Head Cutting and Turning, and Stave Jointing Machines. For machines or territorial rights, apply to C. B. HUTCHINSON & CO., Syracuse, N. Y. 9tf

POSTAGE STAMPS.—Post Office Stamps, of the denomination of 1, 3, or 12 cents, may be had at par by addressing MUNN & CO., Scientific American Office.

NEW HAVEN MANUFACTURING COMPANY, Tool Builders, New Haven, Conn., (successors to Scranton & Parshey) have now on hand \$25,000 worth of Machinists' Tools, consisting of power planers, to plane from 5 to 12 feet; slide lathes from 6 to 18 feet long; 3 size hand lathes, with or without shears; counter shafts, to fit all sizes and kinds of universal chuck gear cutting engines; drill presses, index plates, bolt cutters, and 3 size slide rests. The Co are also manufacturing steam engines: All of the above tools are of the best quality, and are for sale at 25 per cent. less than any other tools in the market. Cuts and list of prices can be had by addressing as above, post-paid. Warehouse No. 12 Platt st., New York, S. C. HILLS, Agent N. H. Man'g Co. 46tf