

TO CORRESPONDENTS.

J. H. C., of Pa.—The snapping noise which you hear when steam is let into cold pipes, is caused by the expansion of the metal.

T. A. R., of —. We did not understand your question about the india rubber balls; they are molded in two sections, then joined together at the edges, by heating them and pressing them together before they are vulcanized.

R. W., of Pa.—Wash your castings after they are treated with acid, in warm water, in which a little soda has been dissolved. You can dissolve the salt of soda in warm water, then pour it into the tub; if the castings are afterwards allowed to remain exposed to the air in a wet state they will oxidize.

H. S., of Penn.—We do not know any other persons than those you have named, who have machines for making bungs. Isinglass can be dissolved in water.

H. Strauch, of Pottsville, Pa., wishes to know where he can purchase a machine for making bungs for casks, &c.

J. S. H., of N. Y.—Direct your letter to the President of the University; he will get it. The cammon gauge in use here is Ashcroft's.

N. K., of N. Y.—Arsenic is the best substance for preserving specimens of birds.

W. H. W., of Tenn.—There is no work that we are acquainted with peculiarly devoted to slide valve engines. Any good work on the steam engine treats on slide valves, especially Clarke's work on Locomotives, which is sold by Blackie & Son, Fulton street, this city.

J. H. B., of Pa.—The liquid gallon, U. S., contains 231 cubic inches. The stand pipe, as we understand it, would neither be a loss nor gain of power.

J. C. B., of Phila.—Parties in this city are desirous of procuring an interest in your invention; we will furnish you with their names on application.

R. J. N., of Geo.—We believe your pencil is patentable. The fee of the Patent Office is \$30; we prepare full specifications.

E. B. M., of Ind.—Dip your paper in a weak solution of boiled logwood, and submit it to a stream of steam for a second, and see if it does not restore the writing; it should color the rest of the paper a light gray, but where the writing was it should appear black.

J. M. T., of Pa.—It would be well if the subject to which you allude was more thoroughly investigated; but you know we are devoted to the laws of physics.

J. G., of R. I.—We believe the cast steel is run into the cast-iron in a mold; we do not know any other mode of uniting the two properly together.

F. B., of N. Y.—You can file a caveat for your plan, but it must contain a full description of the improvement; we have little confidence in Ruthven's method. The fee for an American patent is \$30. The fees for foreign countries vary from \$100 up to \$500.

J. D. B., of Phila.—We agree with your remarks.

S. K. L., of N. Y.—Although you have sent us some very useful information, your letter is so long, and the useful mixed with that which is of no use, we cannot afford time to correct and condense it.

E. C. H., of N. H.—We have personally given the same subject—cotton mixed with woolen yarn—a good deal of attention.

D. A. W., of Vt.—H. C. Baird, of Philadelphia, is publisher of the Chemistry of Dyeing. You must dye the cotton last, not first, and then you will be successful.

W. B., of Ct.—We have not had an opportunity of examining the globes to which you refer, and we did not wish to speak of them until we did so.

H. M., of Ohio—One ounce of copper to one pound of tin are proportions of the metal to which you refer. The greatest square in a circle is the easiest thing in the world to obtain; draw two diagonals through the circle, join their extremities, and you have it. Write to Jarvis Case, of Selma, in your State, and he will give you the proper information on about the pumice rollers.

R. B. B., of R. I.—All hydraulic rams may be said to be operated by back-water; it requires a well spring with some fall to work a water ram.

W. F., of Mass.—We cannot publish your communications.

W. O., of N. Y.—We would submit the clothes to the action of steam, if they were cotton; the plan we have heard of as being best for woolen clothes is to bury them for a few days in earth; steaming, however, is the best plan.

O. M., of Mass.—We will devote a chapter to the subject on some future occasion, and use your balloon.

W. H. H., of N. J.—No advantage could accrue to you from pumping back the water to be used over again. We do not see any novelty in the plan.

W. A., of Ill.—You want a full description of the mode of constructing the telescope. You should get a work on optical instruments, as we have not space at present to give you a proper description.

E. B. Q., of Mass.—There are many water engines now in operation, and are useful for high falls, but we would never recommend them for low falls; a water-wheel is better. Yours will operate, but we are convinced that much friction must attend its working.

W. B., of Mass.—An elastic diaphragm in the air chamber, to accomplish the same object, has been used, which we think is better than the piston. A patent would be doubtful: you will give the communication attention.

E. J. U., of Pa.—Your idea of forcing water by means of a screw is not a patentable device, and we cannot advise an application; we do not discover in the arrangement any advantageous feature not already embraced by other devices for the same purpose.

O. W., of —.—Your gauge for buzz saws new, and we think a patent can be secured for it. When you write us again, don't, we entreat of you, omit to inform us where you reside: your letter bears neither date, town, county, nor State, therefore we could not address you by letter.

O. C. C. & Co., of Mass.—Almost the same kind of a machine for scouring knives as the one you describe, is extensively sold in this market: you cannot secure a patent on it.

G. Y., of Md.—Your plan for preventing boiler explosions does not appear to possess any patentable novelty: in Vol. 2 Sci. Am. is illustrated a device embodying the same distinctive features.

A. D. H., of Miss.—Boil your cotton awnings in some bark liquor or sumac, and some alum, then wash them well and dry thoroughly.

C. J. H., of N. Y.—We would choose the narrow deep bucket in preference to the long narrow one.

G. P., of La.—We do not know any substance to remove the lime from your copper pipes, that will not affect iron.

L. B. M., of Ind.—You may rest assured that none of your plans will operate economically as the common water wheel—over-shot or re-action—You cannot raise water with a ram to work an over-shot wheel. If you can double the effect of the water ram you will be able to secure a patent, if the plan is new. A hydraulic ram cannot raise water out of a dead pool.

T. R. B. & Son, of N. Y.—Send us a model and description of your bed pin machine, and we will carefully examine it. We are pleased to learn that black varnish receipt proves good.

Money received on account of Patent Office business for the week ending Saturday, March 18:—

T. H. P., of Me., \$30; W. C., of N. Y., \$30; M. & E., of N. Y., \$30; D. D., of N. Y., \$30; J. H. S., of Md., \$25; G. L., of Pa., \$50; E. H., III., \$30; W. K., of O., \$30; N. K., of Pa., \$30; J. B. M., of Ga., \$30; J. C. D., of N. Y., \$30; L. L. P., & Co., of Ct., \$30; C. F. P., of Ct., \$30; R. M., of N. Y., \$30; J. S. P., of Ct., \$25; E. W., of N. Y., \$30; J. C. B., of Ct., \$15; W. Mc., of N. Y., \$45; M. C. B., of N. H., \$15; J. W. Mc G., of Pa., \$50; T. J. H. Jr., of N. Y., \$20; E. D. C., of Ct., \$20.

Specifications and drawings belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, March 18:—

J. H. S., of Md.; J. W. Mc G., of Pa. (2 cases); R. B. of N. Y.; T. J. H. Jr., of N. Y.; J. S. P., of Ct.; M. C. B., N. H.; D. W., of Mo.; E. D. C., of Ct.; P. R., of N. Y.; E. & H., of Liverpool, Eng. (3 cases)

ADVERTISEMENTS.

Table with 3 columns: Lines, Rate, Total. 4 lines for each insertion, 75 cts; 8 lines, \$1.50; 12 lines, \$2.25; 16 lines, \$3.00.

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 by 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.

EUROPEAN PATENTS.—MESSRS. MUNN & CO. pay especial attention to the procuring of Patents in foreign countries, and are prepared to secure patents in all nations where Patents are granted. We have our own special agents in the chief European cities; this enables us to communicate directly with Patent Departments, and to save much time and expense to applicants.

SUPERIOR MACHINISTS' TOOLS.—CARPENTER & PLASS, corner of Hester and Elizabeth sts., and 46 Eldridge, are now finishing a lot of their superior tools, and can furnish, at short notice, lathes of 8, 10, 12, 16, or 21 feet lengths, and swinging from 14 to 26 inches diameter. Also upright Drills, suitable for any size hole less than one foot; also on hand one hand lathe with slide rest and wood shears, 20 feet long, swing 25 inches, nearly new; price \$300. Also one patent toggle joint binder's Standing Press, \$200; also one upright Engine, 8 inch bore, 14 inch stroke, new and improved style. 1*

TO MANUFACTURERS.—To Let, at the South Ferry, Brooklyn, several lots of unusual size and convenience, with steam power and every facility for manufacturing purposes. They are more than usually well lighted, warmed by gas, and amply provided with water; a desirable location for almost any manufacturing business. Rent low to a good tenant. Apply to 30 South William street, New York.

WANTED.—The situation of Foreman in a Railroad or other machine shop, by one who has had much experience in designing and constructing machinery, especially locomotive and stationary engines. 28 4*

PARTNER WANTED.—With \$500 or \$1000.—A celebrated Chemist, formerly Professor of Chemistry in Germany, where he has made many practical inventions, for which a ready market can be obtained in this country, is desirous of associating himself with some gentleman of business habits for the purpose of establishing a chemical manufactory. References given and required. Address P. BUTZ, Stapleton, Staten Island, or O. A. DREAE & CO., 49 Broadway, N. Y. 1

METALIC LETTERS AND FIGURES.—To put on Patterns, Roman style. Size, 5-16, 3 cents; 3-8, 3 cts; 1-2, 4 cts; 5-8, 4 cts; 3-4, 5 cts; 1 inch, 6 cts; 1-1/4, 7 cts; 1-1/2, 8 cts; 2 inch, 10 cts; they can be sent to all parts of the Union, either by mail or Express, we weigh all packages, and send them the cheapest way; we also manufacture several sizes of Lift and Force Pumps expressly for railroad water stations, mills, &c., a superior and well-finished article, and warranted the best in market. Address, COWING & Co., Seneca Falls, N. Y. 28 1

SUBMARINE ARMOR.—Pumps and all necessary apparatus, with improvements on Teba's (London) and Gwyn's (American) Armors and Pumps. One suit of Armor, with a three-cylinder air pump, for sale; has been used sufficiently to prove its utility and safety and ease to the operator. Superior Bank Note or Copper-plate Presses always on hand. Transfer Presses and Rolls, with other machines used by engravers; superior machinists' tools; shearing machines for prints, carpets, and other goods; spirals and ledgers furnished for other machines; bonnet and hat presses always on hand; these machines are in general use in this and other cities. Traverse card grinders, buckram molds for tips and bands, made to any shape. The machines enumerated above are made in the best manner; their reputation can be ascertained by inquiry of parties using them in this and other cities. Address GEO. C. HOWARD, 12th street, below Market, Philadelphia. 28 2*

WROUGHT IRON DIRECT FROM THE ORE.—The owners of James Renton's Patent are now prepared to sell rights for this most valuable invention. Apply to JAMES RENTON, Cleveland, Ohio, or to A. H. BROWN, 107 Market st., Newark, N. J. 27 10*

UNITED STATES PATENT OFFICE.

Washington, February 13, 1854.

ON THE PETITION of John N. Vrooman, of Niskayuna, New York, praying for the extension of a patent granted to him on the 15th day of April, 1850, for an improvement in floating swing bridges, for seven years from the expiration of said patent, which takes place on the fifteenth day of April, eighteen hundred and fifty four, (1854)—

It is ordered that the said petition be heard at the Patent Office on Friday, the 14th of April next, at 10 o'clock, A. M., and persons are notified to appear and show cause, if any they have, why said petition ought not to be granted.

Persons opposing the extension are required to file in the Patent Office their objections, specially set forth in writing, at least twenty days before the day of hearing; and the hearing must be taken and transmitted in accordance with the rules of the office, which will be furnished on application.

Ordered, also, that this notice be published in the Union, Intelligencer, and Evening Star, Washington, D. C.; Pennsylvania, Philadelphia, Pa.; Scientific American, New York; Post, Boston, Massachusetts and Enquirer, Cincinnati, Ohio, once a week for three successive weeks previous to the 14th day of April next, the day of hearing.

CHARLES MASON, Commissioner of Patents.

P. S.—Editors of the above papers will please copy and send their bills to the Patent Office, with a paper containing this notice. 25 3

SCREW CUTTING MACHINES, with P. W. Gates' Patent Dies.—The subscribers keep constantly on hand three sizes of the above-named machines, to wit:—No. 1 machine, 10 sets dies and taps from one-half to two inches, \$350; No. 2 sets dies and taps, one-half to one and a half inches, \$250; No. 3 sets dies and taps, three-eighths to one inch, \$150. Cash on delivery at shop. P. W. GATES & CO., Chicago, Ill. 27 13

HUDSON MACHINERY WORKS and Iron Foundry at Hudson City, N. Y., are prepared to contract for castings for railroads, bridges, buildings, gas pipes and pipes, steam engines and boilers, high and low pressure, sugar mills, Cornish lifting and forcing pumps for mines; stamps, mortars, and mining machinery; also superior hydraulic pumps and presses, and superior machinists' tools made to order. Especial attention given to the making of water-tight castings. Orders by mail will receive prompt attention. New York Office No. 18 Exchange Place. FREDERIC COOK & CO., 27 11

F. COOK, H. McCLELLAND, 27 11

CLINTON FOUNDRY.—502 and 504 Water street, N. Y. A large and valuable collection of pulley and machinery Patents; also loan and dry sand Castings, such as Steam Engines, Boilers, Sugar Pans, Kettles, Vats, Curbs, Rollers, Pipes, &c. A general assortment of Pulleys always on hand. REANEY & MCKINLEY, 26 6*

THE HAND BOOK FOR THE ARTISAN, MECHANIC AND ENGINEER.—By the well-known Mechanical author, OLIVER BYRNE, is this day published by T. K. Collins, Jr., No. 8 North Sixth street, Philadelphia, Pa. It will maintain its place among the most numerous and justly valued works of this author. The work contains the arts of Polishing, Lacking, Grinding, Japanning, Staining, and Burnishing, as well as the arts of perfecting engine works and mechanical designs; the ornamenting of wood, stone, marble, glass, diamonds, iron, steel, and works in all sorts of metals and alloys, and the various abrasive processes that effect what cannot be done by cutting tools. To which is added a dictionary of apparatus, materials, and processes employed in the mechanical and useful arts, for Grinding, Polishing, and Ornamenting. This work contains 483 pages, seven eleven large plates, and 128 wood engravings. Price \$5. It will be sent by mail free of postage on receipt of \$6. 25 5

BAKER'S IMPROVED BOILER FURNACE.—Bakers used at the Crystal Palace; orders received for Stationary, Marine, Locomotive Furnaces on this plan; and also for the rights for towns, counties, or States; certificates can be shown of furnaces in use for stationary, marine, and locomotive furnaces, with savings from 30 to 50 per cent. in fuel. J. AMORY, 26 11 General Agent, 25 State st., Boston, Mass.

J. A. FAY & CO., Worcester, Mass., Builders of Daniel's Pliers, &c., and all kinds of Patent and Matching Machines with carriage, to joint and match parallel or taper. 25 4*

NORCROSS' ROTARY PLANING MACHINE.—It has been affirmed by a decision of the Supreme Court of the U. S. that the Norcross Patent does not infringe the Woodworth machine. Having obtained the same decision in my favor, I now offer to the public my machines and the right to use them. And I have no hesitation in saying that they are much superior to any other planing machine in use. I obtained medals at the Fair in Boston, and at the American Institute in New York, for the best planing in competition with the best Woodworth machines. And now that the question of infringement is settled by the highest authority, the public can have them at a fair price. They are not only the best machines ever invented, but the safest—the life of the operator is not endangered as with other machines, which consideration alone is worth four-fold what I ask for the right to use them. N. G. NORCROSS, 24 6* Lowell, Mass., Feb. 11th, 1854.

MATHEMATICAL AND OPTICAL INSTRUMENTS.—The subscriber begs leave to bring to the notice of the professional community his new and extensive assortment of the above instruments, which he partly imported direct from the most celebrated makers in Europe, and partly had manufactured under his own personal supervision. The undersigned would particularly invite attention to his very large and complete assortment of the justly celebrated Swiss Mathematical Drawing Instruments, for the sale of which, in this country, he has the sole agency, and which he can furnish at from \$5 to \$200 per case. Those Drawing Instruments received the prize medal at the London and New York exhibitions. Orders for any part of the Union promptly executed, and price list sent if required. C. T. AMSLER, 21 6eow 224 Chestnut st., Philadelphia, Pa.

MACHINERY.—S. C. HILLS, No. 12 Platt-st., N. Y. Dealer in Steam Engines, Boilers, Iron Planers Lathes, Universal Chucks, Drills, Kases, Von Schmidt's and other Pumps; Johnson's Shingle Machines; Woodworth's Planers and Lathes; Blasting Machines; Dick's Presses, Punches, and Shears; Mordanting and Pennington's Machines; Belling's Machinery Oil, Neal's Patent Cob and Corn Mills; Burr Mill and Grindstones; Lead and Iron Pipe, &c. Letters, to be noticed, must be post-paid. 18 6eow

1854. WOODWORTH'S PATENT PLANING, Grooving, Grooving, Rebeting, and Moulding machine.—Ninety-nine hundredths of all the planing machines used in our cities and towns continue to be dressed with Woodworth's Patent Machines. Price from \$150 to \$500. Two machines are at the Crystal Palace. For rights in all parts of New York and Northern Pennsylvania, apply to JOHN GIBSON, Planing Mills, Albany, N. Y. 18 6eow

IRON FOUNDRY'S MATERIALS, viz: Pulverized Sea Coal, Black Lead, Soapstone, Anthracite and Charcoal Facings. Also, best imported Fire Bricks, Fire Clay, Fire Sand, and Moulding Sand, for sale by JOHN GIBSON, 13 13eow 135 Water street, corner of Pine.

CLOCKS FOR CHURCHES, COURT HOUSES, &c.—The subscriber has for sale, at his establishment, also Time Pieces for Session Rooms, Railroad Stations, Offices, &c., which for accuracy of time and durability have proved it is believed equal to any made in Europe or this country. Glass Dials for Illumination and other kinds furnished. Address SHERRY & BYRAM, Oakland Works, Sag Harbor, N. Y. 18 6eow

\$500 REWARD.—For an Invention to Prevent the Alteration of Bank Notes. To Chemists and others. In order to prevent the annoyance occasioned by the ALTERATION of Bank Notes either by changing the name of the Bank, or the denomination of the Bill, as practiced by counterfeiters, and to procure an effectual barrier to such practices, by encouraging the invention of materials, such as Ink and paper, of a nature to afford in either or in any combination of them, the desired protection—the Executive Committee of the Association of Banks for the Suppression of Counterfeiting, will pay the sum of Five Hundred Dollars to any person who shall invent the best mode, in the opinion of the Committee, of accomplishing the object named. All plans to be submitted to the undersigned or before the 25th day of March next, and to be accompanied with such explanations of the materials and processes as the party applying may be willing to disclose. Each applicant to lodge with the Treasurer of the Association, Henry M. Holbrook, Esq., for the term of three months, the sum of one hundred dollars, which shall be paid to any person who shall, during that time, alter, by removing and printing anew, any material portion of a bill or note prepared in accordance with the plan submitted, in such a manner that the alteration would, in the judgment of the Committee, be likely to pass unsuspected, and if, at the end of said three months, no one has been able to effect such alteration, and the Committee are satisfied that the materials proposed will stand all the tests which the present knowledge of chemistry affords, then the hundred dollars will be returned, and the reward paid over to the successful applicant, and the hundred dollars deposited by each of the other applicants to be returned to them respectively. Per order of the Executive Committee, J. M. GORDON, Secretary, Columbian Bank, Boston, Mass., Jan 24, 1854. 27 7

NEW HAVEN MANUFACTURING COMPANY.—New Haven, Conn., (successors to Scranton & Parshey) have on hand Power Planers, to plane from 3 to 12 feet; slide lathes from 6 to 18 feet long; 3 sizes of hand lathes, with and without shears; and counter shafts; universal chucks; drill presses, index plates, bolt cutters, and slide rests, of the H. & S. pattern; also have the right for Harrison's patent Flour and Grist Mill for the term of five years, and are prepared to furnish these superior mills at short notice. They are unequalled by any other mill, and will grind from 20 to 30 bushels per hour, and will run without heating, being self-cooling. They weigh about 1400 lbs. are of the best French burr stone, 36 inches in diameter, and singly packed in a cast-iron frame, price of mill \$350, packing \$5. For cuts, prices, and further particulars apply Post-paid, as above, or to S. C. HILLS, agent N. H. M. Co., 13 Platt st., N. Y. 27 7

PORTABLE STEAM ENGINES.—GEORGE VAIL & CO., Speedwell Iron Works, Morristown, N. J., LOGAN VAIL & CO., No. 9 Gold st., N. Y., are prepared to furnish Portable Steam Engines from four to eight horse power, with locomotive boilers. These engines are recommended for their simplicity, durability, and economy, being made from the best materials and designed for practical use. They are placed on wheels convenient to be moved from place to place, and are shipped in working order; for plantation use, machinists, or others wanting small power, these engines will be found superior to any others in use. A medal was awarded at the late Fair of the American Institute, and a premium in cash of \$100 at the Maryland State Fair, held at Baltimore in October last. Persons writing us by mail will be particular to give their address in full. 21 38*

JOHN PARSLEY, No. 5 and 7 Howard st., New Haven, Ct., manufacturer of Machinists' Tools, and Steam Engines, has now finishing off 25 Engine Lathes, 6 feet shears, 4 feet between centers, 15 inches swing, and weighs about 1100 lbs. These lathes have back and screw gear, jib rest with screw feed, and the rest is so arranged that the tool can be adjusted to any point the work may require, without unfastening the tool, hence they possess all the good qualities of the jib and the weight lathes; they are of the best workmanship. Price of lathes with count shaft and pulleys, \$150 each. Cuts, with full description of the lathes, can be had by addressing as above, post-paid. Also four 30 horse power vertical Steam Engines with two cylinders. Price of engine with pump and heater, \$800 cash. For particulars address as above. 19 17

C. B. HUTCHINSON'S PATENT STAVE CUTTING MACHINES.—The best in use, and applicable alike to thick and thin staves, for barrels, hogheads, &c., also his Head Cutting and Turning, and Stave Jointing and Cruising Machines. This machine reduces the expense of manufacturing at least 25 per cent. For machines or territorial rights, apply to C. B. HUTCHINSON & CO., Syracuse, N. Y. 27 17

ENGINEERING.—The undersigned is prepared to furnish specifications, estimates, plans in general or detail of steamships, steamboats, propellers, high and low pressure engines, boilers and machinery of every description. Broker in steam vessels, machinery, boilers, &c. General Agent for Ashcroft's Scales and Weights, Gauges, Allen & Noyes' Metallic Self-adjusting Conical Packing, Faber's Water Gauge, Sewell's Saltimeters, Dudgeon's Hydraulic Lifting Press, Rooking's Patent Wire Rope for hoisting and steering purposes, &c., &c. CHARLES W. COLELAND, 30 17 Consulting Engineer, 84 Broadway.

PLANING, TONGUING, AND GROOVING.—BEARDSLEE'S PATENT.—Practical operation of these Machines throughout every portion of the United States in working all kinds of wood, and producing them to be superior to any and all others. The work they produce cannot be equalled by the hand plane. They work from 100 to 300 feet, lineal measure, per minute. One machine has planed over twenty millions of feet during the last two years, another more than twelve millions of feet Spruce planed in ten months; and the work can be seen at the Crystal Palace, where further information can be obtained, or of the patentee at Albany, N. Y. 27 17 GEO. W. BEARDSLEE.

MINING MACHINERY.—Of most approved construction, furnished by FREDERIC COOK & CO., Hudson Machine Works, Hudson, N. Y. 15 6m

SHINGLE MACHINES.—Wood's patented improvement in Shingle Machines, is unquestionably the best ever offered to the public. The undersigned is now at the West, offering rights in this machine for sale. It is a rare opportunity for a safe and profitable investment in a machine without a rival, for the purpose to which it is applied. Parties wishing to purchase, with me can do so by addressing J. D. JOHNSON, 21 17 Bridgeport, Ct.

A. H. ELY, Counsellor at Law, 53 Washington street, Boston, will give particular attention to Patent Cases. Refers to Messrs Munn & Co., Scientific American. 18 17*

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. P. A. LEONARD, 11*

MULLISTER & BROTHER.—Opticians and Dealers in mathematical and optical instruments, No. 8 Chestnut st., Philadelphia, Pa.—at the old stand established in 1796 by John Mullister, Senr. Mathematical instruments separate and in cases, Tube Measures, Spectacles, Eye Glasses, Microscopes, Thermometers, Salometers, Hydrometers, Magic Lanterns, &c., &c. Our illustrated and priced catalogue will be furnished on application, and will be sent by mail free of charge. 18 25*

NORRIS WORKS, Norristown, Pa. The subscribers build and send to any part of the United States, Pumping, Hoisting, Stamping, and Portable Engines, and Mining Machinery of every description. 4 17* THOMAS, GORSON & WEST.