

CORRESPONDENTS

R. H. D., of N. C.—Please send us a sketch and description of your machine for cutting out shoe strings from leather scraps, for examination and we will forward you specific directions in regard to an application for a patent.

Isaac Simmons, of Baltimore, Md., wishes to obtain a cheap machine for cutting ditches narrow and wide, shallow and deep. He also wants a machine for bending carriage felloes.

R. W. S., of Ala.—We do not know of any special work to which we can refer you as a guide in the construction of iron verandahs.

S. P., of California—We are much pleased to announce the issue of your Patent, and we hope you have received it before this. Ten dollars received to balance your account.

J. H. W., of Va.—The camera obscura is an instrument employed for copying pictures, landscape scenes or figures. The instrument can be adjusted to reduce the views to any size.

P. E., of Conn.—You should not be too hasty in expressing your opinion of what seems to you to be a neglect on our part. You say "we have not dealt justly by you," when the simple facts are, that when you wrote to us you omitted to sign your name to your letter, and thus we were ignorant of your proper address. This is not an unusual oversight. Such letters often come to us. You can no more patent your proposed improvement than you could claim a patent for plowing by a wheelbarrow. The application is new, but the machine itself is old and very common.

C. C., of Ohio.—We shall soon announce our new prospectus for Vol. 13, and we hope you will be active in getting up a club at your place. We shall offer liberal prizes, as a substitute for traveling agents upon whom the public cannot always rely. The sewing machine improvement you propose cannot be patented. It is the same in principle as one of Singer's Patents.

W. S. McKay, of Lafayette, Ind., informs us in answer to a recent correspondent that he can furnish a set of tools well adapted to Artesian well boring.

W. H. B., of Ill.—We have never heard of any machine being employed for digging out coal in the mines. It appears to us that a machine can be invented for this purpose, and produce good results.

E. S. J., of Wis.—If, as we suppose, your plow turn furrows transverse to the track of the locomotive, there is no novelty in it. On page 401, Vol. 6, of the Scientific American, you will find an engraving of substantially the same arrangement—an English invention.

J. R. G., of Wis.—Your letter, covering \$4, is at hand. We cannot inform you how the linen is prepared on which we make our drawings. It is imported from Europe in long rolls, and is the subject of an English patent.

R. K. V., of N. Y.—We have received a pretty large pile of articles on "the conservation of force," all treating of the nature of gravitation. Yours contains nothing new.

J. T. B., of Conn.—You can obtain permanent magnets of Pike & Sons, Broadway, this city.

C. M., of Mass.—You may add any coloring substance, such as logwood, to the water-proof recipe in No. 20 of this volume, without injuring its property.

J. T., of Md.—The difference between exhausting the steam of a 26 horse power engine into the atmosphere and into a tank of water, depends on the pressure of the column of water. The pressure of the atmosphere is 15 pounds to the square inch, and so is that of a column of water 30 feet high. You have not stated what the amount of pressure in your tank is, but that "it contains a large body of wood." The tank may be made shallow, and the back pressure of the water reduced to a few pounds.

J. H. H., of Md.—To prepare the water-proof cement to which you refer, dissolve the asphaltum and india rubber in turpentine, in about equal parts. Cut the india rubber into fine shreds, and reduce the asphaltum to powder, prior to dissolving them; stir them thoroughly in the turpentine, which must be kept warm, and in a vessel having a close cover.

D. B. R., of Min. Ter.—It is the caustic alkali combined with silica, which renders the glass soluble.

E. W. D., of Mass.—Your electro-magnetic engine, composed of a series of thickly set radial armatures on a hollow shaft, to be actuated by four horse shoe electro-magnets—one set at each corner of the engine frame—is not a good arrangement.

N. N. McL., of Iowa—Your lightning rod insulator appears to be a new, useful and patentable improvement.

H. L., of N. Y.—It has often excited our surprise that team has not already superseded horse power on canals. By constructing a double railroad track on the banks of the Erie Canal, and using different locomotives for different levels, we are positive that twice the amount of towage, at one-half the expense now entailed, could be performed.

S. T. R., of Mass.—Do not deceive yourself in making gas from water, expecting to set Boston in a blaze with Cocchitate. There is nothing new in producing light, and a good light too, from the gases of water, but the process is dangerous, being subject to explosions; and besides it is very expensive.

Money received at the Scientific American Office on account of Patent Office business for the week ending Saturday, July 3, 1857:—

J. McC., of N. Y., \$35; G. C. G., of —, \$20; C. C. S., of Vt., \$30; A. L., of N. Y., \$20; J. M., of N. Y., \$10; E. C., of Pa., \$100; S. R. H., of N. Y., \$25; F. & M., of Mass., \$50; J. P., of Ill., \$30; A. W., of N. H., \$30; A. F. W., of L. I., \$30; J. G., of Pa., \$35; S. C., of Va., \$10; N. B., of Ill., \$25; C. E. C., of O., \$22; J. T., of N. Y., \$25.

Specifications and drawings belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, July 3, 1857:

M. & W., of O.; F. & M., of Mass. (2 cases); J. T., of N. Y.; S. R. H., of N. Y.; A. F. W., of Ky.; C. & S., of Ohio; C. E. C., of Ohio; N. B., of Ill.; F. N., of L. I.; B. C. V., of Ohio; G. H. W., of Wis.

Literary Notices.

THE FAMILY CIRCLE GLEE BOOK.—This is a compilation of two hundred popular songs, glees, and choruses, with accompaniments for the piano, seraphine, and melodion, by Elias Howe. It contains some of the best songs in our language. Music in "the family circle" is one of the sweetest and most fascinating influences for rendering it an endeared and attractive spot. How soothing to the feelings, after the toils of the day are over, to listen to or join in a song which fills the heart with ennobling emotions and lifts its aspirations above things that are sordid, trivial, and vain; hence, we welcome such works as the above—their tendency is to make mankind better and happier. Published and sold by Mason & Bros., of this city. Price, \$1.25.

ILLUSTRATED COMMON SCHOOL ASTRONOMY.—This is the title of a very excellent little work, by Professor Brocklesby, of Trinity College, Hartford, Ct., and published by Farmer, Brace & Co., No. 4 Courtland-street, of this city. It is written in a clear and simple style, eminently adapted for teaching the outlines of this science. Its aims are to render familiar the important truths and facts of astronomy, avoiding cumbersome details.

BLACKWOOD'S MAGAZINE.—The June number of this excellent Magazine, promptly republished by Messrs. Leonard Scott & Co., contains the concluding part of "The Athelings." An article on American explorations in China and Japan, is a treat. It is a capital number.

Important Items.

COMPLETE SETS OF VOLUME XII EXHAUSTED.—We regret that we are no longer able to furnish complete sets of the present volume. All the back numbers previous to No. 27 are entirely exhausted.

GIVE INTELLIGIBLE DIRECTIONS.—We often receive letters with money enclosed, requesting the paper sent for the amount of the enclosure but no name of State given, and often with the name of the post office also omitted. Persons should be careful to write their names plainly when they address publishers, and to name the post office at which they wish to receive their paper, and the State in which the postoffice is located.

Subscribers to the **SCIENTIFIC AMERICAN** who fail to get their papers regularly will oblige the publishers by stating their complaints in writing. Those who may have missed certain numbers can usually have them supplied by addressing a note to the office of publication.

INFAILLIBLE RULE.—It is an established rule of this office to stop sending the paper when the time for which is was prepaid has expired, and the publishers will not deviate from that standing rule in any instance.

BINDING.—We would suggest to those who desire to have their volumes bound, that they had better send their numbers to this office, and have them executed in a uniform style with their previous volumes. Price of binding 75 cents.

PATENT LAWS AND GUIDE TO INVENTORS.—This pamphlet contains not only the laws but all information touching the rules and regulations of the Patent Office. Price 12 1/2 cents per copy. A Circular, giving instructions to inventors in regard to the size and proper construction of their models with other useful information to an applicant for a patent, is furnished gratis.

INVENTORS SENDING MODELS to our address should always enclose the express receipt, showing that the transit expenses have been prepaid. By observing this rule we are able, in a great majority of cases, to prevent the collection of double charges. Express companies, either through carelessness or design, often neglect to mark their paid packages, and thus, without the receipt to confront them, they mulct their customers at each end of the route. Look out for them.

Terms of Advertising.

Twenty-five cents a line each insertion. We respectfully request that our patrons will make their advertisements as short as possible. Engravings cannot be admitted into the advertising columns.

All advertisements must be paid for before inserting.

IMPORTANT TO INVENTORS.

THE UNDERSIGNED having had ELEVEN years' practical experience in soliciting PATENTS in this and foreign countries, beg to give notice that they continue to offer their services to all who may desire to secure Patents at home or abroad.

Over three thousand Letters Patent have been issued, whose papers were prepared at this Office, and on an average fifteen, or one-third of all the Patents issued each week, are on cases which are prepared at our Agency. An able corps of Engineers, Examiners, Draftsmen, and Specification writers are in constant employment, which renders us able to prepare applications on the shortest notice, while the experience of a long practice, and facilities which few others possess, enable us to give the most correct counsel to inventors in regard to the patentability of inventions placed before us for examination.

Private consultations respecting the patentability of inventions are held free of charge, with inventors, at our office, from 9 A. M., until 4 P. M. Parties residing at a distance are informed that it is generally unnecessary for them to incur the expense of attending in person, as all the steps necessary to secure a patent can be arranged by letter. A rough sketch and description of the improvement should be first forwarded, which we will examine and give an opinion as to patentability, without charge. Models and fees can be sent with safety from any part of the country, by express, in this respect New York is more accessible than any other city in our country.

Circulars of information will be sent free of postage to any one wishing to learn the preliminary steps towards making an application.

In addition to the advantage, which the long experience and great success of our firm in obtaining patents present to inventors, they are informed that all inventions patented through our establishment, are noticed, at the proper time, in the **SCIENTIFIC AMERICAN**. This paper is read by not less than 100,000 persons every week, and enjoys a very wide spread and substantial influence.

Most of the patents obtained by Americans in foreign countries are secured through us; while it is well known that a very large proportion of all the patents applied for in the U. S., go through our agency.

MUNN & CO.
American and Foreign Patent Attorneys, Principal Office 128 Fulton street, New York.

1000 AGENTS.—For new, sure, unparalleled inducements. Send stamp to M. J. COOK, Detroit, Mich.

E. G. CUSHING'S Unequalled Straw and Stalk Cutter. For finished work, or the right of territory, address the inventor, Dryden, Tompkins county, N. Y.

L. D. GOODWIN'S celebrated Patent Central Vent Water Wheel. For wheels or the right of territory address J. W. DWIGHT, Dryden, N. Y., or E. C. BRAMHALL, 190 Fulton, N. Y.

STEAM ENGINES FOR SALE.—One of 8, one of 12, and one of 18 horse-power. H. A. CRANE, cor. 29th and 11th ave.

WANTED.—300 Active Young Men, at a salary of \$100 per month. A capital of only \$5 required. Full particulars given to all who enclose a stamp and address N. R. GARDNER, Peace Dale, R. I.

NEW PATENT ARRANGEMENT for Cutting Bolts and Screws for sale, apply to F. SCHAEFER, 67 Canal-st., N. Y.

FIRST CLASS Family Journals.—Life Illustrated, a first class pictorial paper, weekly. \$2 a year, \$1 for half a year. Water-Cure Journal, devoted to the laws of life and health. \$1 a year. Phrenological Journal, devoted to the improvement of mankind. \$1 a year. The three journals sent one year for \$3. Address FOWLER AND WELLS, 303 Broadway, N. Y.

SPOKE LATHES.—Blanchard's patent. Power Hub Mortising Machines, Hub Hewing Machines, Hub Boring Machines, Turning Lathes, Scroll Saws, Wagon and Coach Makers' machinery in general. We are also agents for the proprietors of the Blanchard patent. LANE & BODLEY, Cincinnati, O.

WATER WHEELS.—Mr. J. H. Best—Dear Sir: The wheel you put in my woolen factory, of six sets, with eleven feet head, has had a severe trial—running under 8 feet of water with only five feet head, while the Parker, Tripp, and other wheels (about 200 on this stream) were stopped. We can now run to speed with 300 inches of water, and before we had two wheels using 1,200 inches. You have secured a good reputation here, and can draw on me for as good a recommendation as desired for your wheel. Yours truly, Amos King. The above is one of Vandewater's celebrated improved Jonval Turbines, and can be had of H. VANDEWATER & CO., Albany, N. Y., or of JACOB H. BEST, Springfield, Ohio, who will furnish wheels for any of the Western States.

TO CAPITALISTS.—The right of a new \$10 machine will be sold. It is the best machine in use. For city or State rights apply to GEORGE RAY, No. 7 Chrystie-st., New York.

SENT POST PAID FOR \$1 IN GOLD.—Fishermen would do well by getting Gardner's new, sure and easy way of catching all kinds of fish. Address N. R. GARDNER, Peace Dale, R. I.

TO MILLERS AND MILLWRIGHTS.—Patent rights of our Grain Feeder to Millstones for sale on moderate terms. See illustration in No. 43, this Vol. Scientific American. M. & C. PAINTER, Owings' Mills, Baltimore co., Md.

THE AMERICAN ROCK DRILL CO. invite attention to their superior machines for Artesian Wells and heavy rock excavations. Circulars and information sent on application to T. H. LEAVITT, Agent, No. 1 Phoenix Building, Boston. A few responsible agents wanted in the Middle and Western States.

DR. D. BREED, late Assistant and acting Chief Examiner in the U. S. Patent Office, has established at Washington, D. C., a chemical laboratory for the purpose of manufacturing, and mechanical devices employed in the chemical arts, and to procure and defend patent rights. After many years devoted to chemistry (having studied in the German laboratories) Dr. Breed feels confident in offering his services as a practical chemist to inventors and others interested in the chemical arts and manufactures.

HUGHES' ATMOSPHERIC FORGE AND TRIPOD HAMMER.—These hammers have been in successful operation for more than two years, and have acquired a reputation of decided superiority over all others. I am now prepared to furnish them of all sizes. I will warrant them to give satisfaction to purchasers, and that they will require no repairs for one year from their delivery. Orders addressed to me will receive prompt attention. B. HUGHES, Rochester, N. Y.

CAST STEEL WIRE DRAWING at the Union Works, Paterson, N. J. Orders solicited and carefully filled by CHAMBERLIN & CO.

STEAM ENGINES FOR SALE.—Two 5-horse power and one 30-horse power, with or without the boilers. Address J. R. JONES, Novelty Iron Works, Harrisburgh, Pa.

FIVE HAND LATHES, JUST FINISHED.—FOR SALE.—Five feet slide, 10-inch swing, suitable for jewelers' work, drilling, polishing or wood turning. Price, including counter, hangers and rollers, \$50. Address O. C. CRANE & CO., New England Village, Mass.

SPOKE TURNING MACHINES of Superior quality. Apply to WM. F. REED & CO., 56 Gold-st.

COMMERCIAL AGENTS, able and honest men from New England or New York. A. W. HARRISON, Philadelphia, Pa.

READ ALL YE THAT ARE FOND OF FISH.—I will send for \$1 a secret art of catching fish as fast as you can pull them out. This is no humbug. Address N. R. GARDNER, Peace Dale, R. I.

MACHINISTS' TOOLS.—LEONARD & CLARK, 11 Platt-st., New York, manufacturers of Lathes and Planers, and dealers in Steam Engines, Boilers, Wood Tools, Belting, &c. Awarded the gold medal 1855 and 36 of the American Institute, and bronze medal of the World's Fair 1853, for the best lathes on exhibition. Machine shop at Woodbury, Orange co., N. Y.

MACHINISTS' TOOLS.—CARPENTER & PLASS, 479 First-ave., New York, have constantly on hand and make to order all kinds of machinists' tools of superior quality, particularly adapted for railway companies, steam engine builders, &c., whose orders are respectfully solicited, and shipped at short notice—terms moderate. Also a few second-hand tools, 12 1/2 ft. and one 8 ft. iron planer, two slide lathes, 12 1/2 ft. and one 8 ft. face lathe.

WANTED.—Old Steam Boilers, 36 to 48 inches diameter, ten in number, or in all, 20 feet in length. Apply to E. WHITNEY, New Haven, Conn.

INGERSOLL'S IMPROVED HAY PRESS.—The best portable Hand Power Press in use for the purposes of Baling Hay, Straw, Broom Corn, Hops, Hair, Hides, Moss, Hemp, Rags, Wool, Cotton, &c. Prices from \$30 to \$250. Also an improved press for straw and composition work. Price \$50 and \$65. Also Ingersoll's Patent Tree Saw, for sawing down trees. This is a perfectly portable machine, and has been thoroughly tested during the past winter. Price \$75. All orders filled promptly. Also State and County rights for sale. Circulars containing full information sent on application to the FARMER & MERCHANT'S MANUFACTURING CO., Green Point, Kings co., L. I.

L. A. ORCUTT'S Foundry Furnishing Mill, Albany, N. Y. Foundry Facings and foundry materials of every description. Charcoal \$2.25 per barrel, sea coal per bbl. \$1.75, soapstone per bbl. \$1.50. Also Rectifying Coal, and Russell's Patent Roofing Materials.

HARRISON'S GRIST MILLS.—20, 30, 36 and 48 inches diameter, at \$100, \$200, \$300, and \$400, with all the modern improvements. Also Portable and Stationary Steam Engines of all sizes, suitable for said Mills. Also Bolters, Elevators, Belting, &c. Apply to 29 E 3rd-st. S. C. HILLS, 12 Platt-st., N. Y.

MACHINERY.—S. C. HILLS, No. 12 Platt street, N. Y., dealer in Steam Engines, Boilers, Planers, Lathes, Chucks, Drills, Pumps, Mortising, Tenoning, and Sash Machines, Woodworth's and Daniel's Planers; Dick's Punches, Presses, and Shears; Cob and Corn Mills; Harrison's Grist Mills; Johnson's Shingle Mills; Belting, Oil, &c.

PUMPS.—BURNAP'S Patent Excelsior Pumps are acknowledged to be the best and most durable force pump in use, and are fast taking the place of all others for steamers, factories, breweries, &c. See engraving in No. 34, this Vol. Scientific American. Address BURNAP & BRISTOL, Albany, N. Y.

WOODWORTH'S PATENT PLANING MACHINES of every kind and all prices. A large assortment on hand, and I am prepared to construct any machine to order from ten days to two weeks, and guarantee each machine to be perfect in its construction, and give purchasers entire satisfaction. The patent has expired, and will not be renewed. I make this business exclusive, manufacturing nothing but the Woodworth Machines, and for that reason can make a better article for less money; and with my fifteen years' experience I fully guarantee each machine to come up to what I am willing to recommend, that is, that each machine shall be more than equal to any other manufactured for the same price. JOHN H. LESTER, 67 Pearl-st., Brooklyn, N. Y., three blocks above Fulton street.

STEAM PUMPS, Boiler Feed Pumps, Stop Valves, Oil Cups, Cocks, Steam and Water Gauges, sold by JAMES O. MORSE & CO., No. 79 John street, New York.

BOILER FLUES.—All sizes, and any length desired, promptly furnished, by JAMES O. MORSE & CO., No. 79 John street, New York.

WROUGHT IRON PIPE.—Plain and galvanized sold at wholesale, by JAMES O. MORSE & CO., No. 79 John street, New York.

ENGRAVING ON WOOD AND MECHANICAL DRAWING, by RICHARD TEN EyCK, Jr., 123 Fulton street, N. Y., Engraver to the Scientific American.

TWO INVENTORS AND MANUFACTURERS.—Rooms with power, for the exhibition of machinery, can be had in the Depot Buildings, corner of Elm and Franklin-sts. The location is extremely desirable for its prominence and convenience to the business part of the city. Apply to T. BENNETT, on the premises.

MACHINE-BELTING, Steam Packing, Engines, Hose. The superiority of these articles manufactured of vulcanized rubber is established. Every belt will be warranted superior to leather, at one-third less price. The Steam Packing is made in every variety, and warranted to stand 300 degs. of heat. The hose never needs oiling, and is warranted to stand any required pressure, together with all varieties of rubber adapted to mechanical purposes. Directions, prices, &c., can be obtained by mail or otherwise, at our warehouse, NEW YORK BELTING AND PACKING COMPANY, John H. Cheever, Treasurer, No. 6 Dey street, N. Y.

BOILER INCrustATIONS PREVENTED.—A simple and cheap condenser manufactured by Wm. Burdon, 102 Front-st., Brooklyn, will take every particle of lime or salt out of the water, rendering it pure as Croton, before entering the boiler. Persons in want of such machines will please state what the bore and stroke of the engines are, and what kind of water is to be used.

FIVE HUNDRED THOUSAND LOOMS in the United States.—Wm. H. Howard's Comb Temples, patented May 26, 1857, are already in successful operation. The principle is new; it measures every pick to an equal length, indicates the number of picks per inch, leaves a smooth and equal selvage, without displacing threads or marking cloth; simple, cheap and durable, and destined to supersede all other self-acting temples. Orders for temples, or inquiries for rights to manufacture will receive immediate attention if addressed to GEO. C. HOWARD, 18th, below Market, Philadelphia.

FORBES & BOND Artists, 80 Nassau-st., N. Y., Mechanical and General Draughtsmen on wood, stone, &c.

LAP-WELDED IRON BOILER TUBES.—Processer's Patent.—Every article necessary to drill the tube-plates, and set the tubes in the best manner.

44 26 THOS. PROSSER & SON, 28 Platt-st., N. Y.

WOODWORTH PLANERS, STEAM ENGINES, &c.—Twenty-seven years' experience enables me to furnish Woodworth Planers for surfacing one or both sides, planing and matching, rabbeting, leading, or for moldings or clapboards, in any variety of beautiful construction and great power. Ample evidence of the superiority of my machines will be furnished from parties that have used my machines in the same mode. Every machine will be accompanied, if desired, with a written warranty. As some parties have been supplied with machines of another make when they supposed they were getting mine, I would advise that purchasers should buy none unless my name is on in full. Matteawan steam engines, machinists' tools, cotton and woolen, sailing and door machinery, leather banding, &c., furnished at the manufactory at Matteawan, N. Y., or at 62 Courtland street, N. Y. S. B. SCHENCK, Agent.

50 STEAM ENGINES.—From 3 to 40-horse power also portable engines and boilers; they are first class engines, and will be sold cheap for cash. WM. BURDON, 102 Front-st., Brooklyn.

THE BEST PLANING MACHINE IN THE WORLD.—Patented Nov. 21, 1854 and Nov. 13, 1855. These patents were obtained for improvements upon the celebrated Woodworth Planing Machine. The celebrated Gold Medal at the last exhibition of the Massachusetts Charitable Mechanics' Association. Machines of all kinds and sizes constantly on hand, which are warranted to give entire satisfaction, and to be superior to any now in use. For further information address the patentee, JAMES A. WOODBURY, No. 1 Scollay's Building, Court-st., Boston, Mass.

GOLD QUARTZ MILLS of the most improved construction; will crush more quartz and do it faster than any machine now in use, and costs much less. W. S. BURDON, 102 Front-st., Brooklyn.

OIL! OIL! OIL!—For railroads, steamers, and for machinery and burning.—Pease's Improved Machinery and Burning Oil will save fifty per cent, and will not gum. This oil possesses qualities vitally essential for lubricating and burning, and found in no other oil. It is offered to the public upon the most reliable, thorough, and practical test. Our most skillful engineers and machinists pronounce it superior and cheaper than any other, and the only oil that is in all cases reliable and will not gum. The Scientific American, after several tests, pronounced it "superior to any other they have ever used for machinery." For sale only by the inventor and manufacturer, P. S. PEASE, 61 Main-st., Buffalo, N. Y.

N. B.—Reliable orders filled for any part of the United States and Europe.

NEW HAVEN MFG. CO.—Machinists' Tools, Lathes, Planers, Engine and Hand Lathes, Drills, Bolt Cutters, Gear Cutters, Chucks, &c., on hand and finishing. These tools are of superior quality, and are for sale low for cash or approved paper. For catalogue giving full description and prices, address, "New Haven Manufacturing Co., New Haven, Conn."

HARRISON'S 30 INCH GRAIN MILLS.—Latest Patent.—A supply constantly on hand. Price \$200. Address New Haven Manufacturing Co., New Haven, Conn.

WOODWORTH'S PATENT PLANING MACHINES.—Patent expires Dec. 27th, 1856. Machines constantly on hand, together with steam engines and boilers of all sizes. Lathes, planers, drills, circular saw mills, belting of leather and rubber of the best quality. Orders respectfully solicited at the Machinery Depot, 163 Greenwich-st., N. Y. A. L. ACKERMAN.