

TO CORRESPONDENTS.

J. M. of Ill.—We made no allusion to the blue and yellow calicoes; there is no necessity for giving them any chlorine; but all light clear blues should be bleached before they are dyed, or they will have a muddy appearance.

W. Y. G., of Ky.—If you propose using a gate saw attached to a crank on the main shaft by all means, muleys saws are, however, much the best, and these latter are often judiciously run with a belt.

W. S. F., of Ohio—Your press will operate, but it is of no value inasmuch as you never can obtain any more pressure than can be derived from the weight of the article to be pressed.

W. B. N., of N. Y.—We should suppose that your discovery is a valuable one, for the present pictures are all negative.

A. H. of Me.—There is not the slightest patentable novelty in your force pump. We presume it would operate well, but no better than some others.

O. C. C., of N. Y.—If you wish to procure a good double force pump, apply to Messrs. Cowing & Co., at Seneca Falls, N. Y.; they are large and very reputable manufacturers.

J. G. P., of Ohio—The brake which you describe appears to be different in some respects from any thing which we have ever seen, but we fear it is too complicated ever to become a successful competitor of the simple plan now in use.

F. W. C., of Ohio—A pen having a hollowholder to be used as a reservoir for ink, which is fed to the pen by means of a tube, is an old device. Fountain pens of various construction have been employed to a very limited extent.

W. R. S., of N. Y.—We have frequently seen a table and a settee combined in one piece of furniture. The plan which you describe embraces no new or patentable feature.

N. K., of Pa.—Adoor fastener no larger than a very small tobacco box is patented by Mr. Kittle, of Buffalo, N. Y. If you will send us one we can better advise you in regard to its novelty.

E. T. M., of N. Y.—Such a life preserver as you describe is not new. Experiments were made in this city some three years ago with Ralston's Preserver, which operated as a perfect and positive protection to the body of the wearer; the expense of the article is the only reason we can give why it has not been introduced into general use.

J. H., of Ind.—We cannot furnish the information which you seek in regard to the Geological Alphabets. We do not know who sells them.

S. W., of Ct.—The volume of Newton's Journal which you want cannot be furnished by any one that we know of.

H. T. K., of Ohio—A band or clutch for clamping carriage hubs, secured by means of a screw bolt could not be patented. Such clasps are well known for other purposes, and their adaptation to this would not constitute a patentable feature.

G. E., of Wis.—We do not discover anything in your alleged improvement in drills which could be patented.

E. M., of N. Y.—Pumps having buckets secured to an endless chain for raising water are old and well known, See Ewbanks' Hydraulics, or any other work upon the subject. We find nothing new in your proposed plan.

M. M. G., of Ky.—The application of glass tubes to boilers for indicating the height of water therein is not new.

D. B., of Ct.—Perhaps the burnish is finished by hard rubbing with a buff leather finisher.

P. R., of I. I.—It appears to us that it would have the same effect if the steam was up or off; but how are you then to apply it.

H. S., of Ind.—You may depend upon it, that your plan will not operate.

C. A. C., of Mass.—Get Clarke's work on Locomotives; it is now publishing in numbers at 2 1/2 cents each, by Blackie & Son, 117 Fulton st., this city.

J. D. L., of Pa.—You can render linseed oil capable of drying easily by boiling it for some time, and adding about 1 lb. of the sulphate of zinc to the gallon.

T. M., of Mass.—Theogotype is now practiced in one office in this city; you could not obtain a patent.

R. J. N., of Ga.—You will never be able to obtain any useful or valuable power from permanent magnets.

J. M., of N. Y.—The subject passed from our recollection, but the new plan is not a good one.

S. W. D., of Ohio—If your plan for magnifying and reproducing objects on a magic lantern is new, then you can obtain a patent, not otherwise. The person who makes an improvement on yours, cannot use your plan when patented.

W. F., of Liverpool—We have marked your subscription up to Jan. 1st, 1855. After deducting the amount of your subscription up to the above date, we find there remains your due \$3.64.

C. G., of N. Y.—A machine (Foster's patent) for picking up stones was exhibited at the Crystal Palace; but it was incapable of doing what you claim for yours;—send us a model.

O. W. C., of Wis.—Arnot's Gothic Architecture, published by Appleton & Co., of this city will answer your purpose.

M. C., of La.—We have carefully read your specification of an improved process for tanning hides. A patent was obtained in England thirty years ago by Knowles & Dusenbury, for the same process, viz., extracting the air from skins in an air-tight vessel.

A. H. R., of Pa.—Your specification and drawings had been sent to the Patent Office before your letter of the 4th reached us, but we think the former was incorrect as submitted.

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

F. M. H., of O. \$30; C. & J., of R. I. \$35; J. S. G., of Md. \$30; J. R. Jr., of Mich. \$25; M. & B., of N. Y. \$25; T. B. S., of N. Y. \$5; C. A. W., of Mass. \$50; F. C. & S., of N. Y. \$275; G. B., of N. Y. \$250; V. & K., of N. J. \$25; P. M., of N. Y. \$25; B. S. W., of R. I. \$110; S. H., of N. Y. \$5; A. H., of N. Y. \$10; J. V. S., of Ohio, \$25; S. H. D., of Mich. \$30; W. W. & Co., of N. Y. \$55; G. VanZ., of N. Y. \$30; J. M., of Ct. \$25; W. G., Jr., of N. Y. \$15; H. T., of Ct. \$30; A. P., 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, Feb. 11—

M. & B., of N. Y.; J. R., Jr., of Mich.; V. & K., of N. J. G. W. F., of O.; A. P., of N. Y.; S. H., of N. Y.; R. E. T., of N. C.; H. W. A., of N. Y.; J. V. S., of Ohio.

A Chapter of Suggestions, &c

PATENT LAWS—The seventh edition of the American Patent Laws and Guide to the Patent Office, published by us, having been exhausted, we shall not be able to furnish orders under ten days or two weeks. Those who have remitted money for copies will be supplied immediately on the issuing of a new edition.

PATENT CLAIMS—Persons desiring the claim 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 \$1 for fees for copying.

PATENTERS—Remember we are always willing to execute and publish engravings of your inventions, providing they are of interesting subjects, and have never appeared in any other publication. No engravings are inserted in our columns that have appeared in any other journal in this country, and we must be permitted to have the engravings executed to suit our own columns in size and style. Barely the expense of the engraving is charged by us, and the wood-cut may be claimed by the inventor, and subsequently used to advantage in other journals.

TO CORRESPONDENTS—Condense your ideas into as brief space as possible, and write them out legibly, always remembering to add your name to the communication, anonymous letters receive no attention at this office. If you have questions to ask, do it in as few words as possible, and if you have some invention to describe come right to the business at the commencement of your letter, and not fill up the best part of your sheet in making apologies for having the presumption to address us. We are always willing to impart information if we have the kind solicited.

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 Vols. 1, 2, 3, and 4—none. Of Vol. 5, all but six numbers, price, in sheets, \$1; bound, \$1.75. Of Vol. 6, all; price in sheets, \$2; bound, \$2.75. Of Vol. 7, all; price, in sheets, \$2; bound, \$2.75. Of Vol. 8, none complete, but about 30 numbers in sheets, which will be sold at 50 cents per set; of Vol. 9, none previous to Jan. 1st, 1854.

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 post-office is located.

RECEIPTS—When money is paid at the office for subscriptions, a receipt for it will always be given, but when subscribers remit their money by mail, they may consider the arrival of the first paper a bonafide acknowledgment of the receipt of their funds.

ADVERTISEMENTS.

Terms of Advertising.

Table with 2 columns: Lines for each insertion, Price per line. 4 lines, each insertion, 75 cts; 8 lines, each insertion, \$1.50; 12 lines, each insertion, \$2.25; 16 lines, each insertion, \$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 Patent Laws exist. 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.

THE WATER-CURE JOURNAL AND HERALD OF REFORMS.—Devoted to Hydropathy, its Philosophy and Practice, to Physiology and Anatomy, with Illustrative Engravings, to Dietetics, Exercise, Clothing, Occupations, Amusements, and those Laws which govern Life and Health. Published monthly, in convenient form for binding, at one dollar a year in advance, by Fowler & Wells. "Every man, woman, and child who loves health,—who desires happiness, its direct result,—who wants to live while he does live; 'livethill he dies,' and really live instead of being a mere walking corpse, should become at once a reader of this Journal, and practice its precepts."—Fountain Journal.

THE AMERICAN PHRENOLOGICAL JOURNAL.—A Repository of Science, Literature, and General Intelligence; devoted to Phrenology, Physiology, Education, Psychology, Agriculture, Horticulture, Architecture, the Arts, and Sciences, and to all those Progressive Measures which are calculated to reform, elevate, and improve mankind. Illustrated with numerous portraits and other engravings. A beautiful quarto. Published at \$1 a year in advance, by Fowlers & Wells, 131 Nassau st., New York.

"A Journal containing such a mass of interesting matter, devoted to the highest happiness and interests of man, written in the clear and lively style of its practiced editors, and afforded at the 'ridiculously low price' of one dollar a year, must succeed in running up its present large circulation (50,000 copies) to a much higher figure."—N. Y. Tribune.

TO LET—A Room 91 by 25, in a brick building with or without the use of a six horse engine, and blacksmith's shop. D. PRETLOVE, manufacturer of embossing machines, River street, East Brooklyn, opposite the Myrtle Avenue Stage Depot.

WANTED—The first 8 Volumes of the Scientific American, or Vol. 1 only. DAVID DAVIDSON, 109 Nassau, N. Y.

1000 BOOK AGENTS WANTED.—To sell Pictorial and Useful Works for the Year 1854, \$1,000 a year! Wanted, in every county of the United States, active, energetic men, to engage in the sale of some of the best books published in the country. To men of good address, possessing a small capital of from \$25 to \$100, such inducements will be offered as to enable them to make from \$3 to \$5 a day profit. The books published by us are all useful in their character, extremely popular, and command largesales wherever they are offered. For further particulars address, post paid, ROBERT SEARS, Publisher, 181 William st., New York.

GREAT IMPROVEMENT IN STEAM ENGINES.—Tramper's Patent Spherical Governor & Fuel Economiser. This Regulator and Economiser will do more work with a given amount of steam than other known mode without expensive cut-off expansion valves or other complicated fixtures, no change of motion to interfere with the most delicate work in any case, and being both a regulator and steam economiser at a nominal expense: warranted to supersede by far all others, or the money returned. JOHN TRAMPER, 23 1/2 Highland Iron Works, Newburgh, N. Y.

\$500 REWARD.—For an Invention to Prevent the Alteration of Bank Notes. To Chemists and others. In order to prevent the loss and 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 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 on 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, either by writing and printing or sawing 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 material 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, GORDON, Secretary, Columbian Bank, Boston, Mass., Jan 24, 1854.

UNITED STATES PATENT OFFICE.

Washington, Jan. 26, 1854. ON THE PETITION of Allen & Wm. A. Crowell, of Salisbury, Conn., praying for the extension of a patent granted to them on the 20th day of June, 1840, for an improvement in Churns, for seven years from the expiration of said patent, which takes place on the 20th day of June, eighteen hundred and fifty-four. It is ordered that the said petition be heard at the Patent Office on Monday, the 29th day of May next, at 12 o'clock, M.; and all persons are notified to appear and show cause, if any they have, why said petition ought not 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. All testimony filed by either party to be used at the said 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; and Enquirer, Cincinnati, Ohio, once a week for three successive weeks previous to the 29th day of May next, the day of hearing.

CHARLES MASON, Commissioner of Patents. P. S.—Editors of the above papers, will please send their bills to the Patent Office, with a paper containing this notice.

FOR SALE.—An Established Steam Planing Mill and Sash Factory in one of the healthiest of our Southern cities. There are Beardslee's, Woodworth's, and Daniel's Planing Machines, of the best make. All of Fay's machines for the manufacture of sashes and blinds. Leaven's Patent Sash Machine, circular saws, &c. The staff of workmen is large and nearly new. One of the proprietors being about to retire from business, the whole or one half will be sold on advantageous terms. Address P. E. HAMM, Esq., City Treasurer's Office, Philadelphia.

TO PIPE MAKERS.—And Iron Founders generally.—G. Peacock's Patent Core Bar, for making all kinds of branches, elbows, curve pieces, or straight pipe of all sizes and sizes. This improvement has been put to the greatest test, never failing to save fifty per cent. Apply to G. PEACOCK, West Troy, N. Y.

FELTING FOR STEAM BOILERS & PIPES.—Manufactured by J. H. Bacon, Winchester, Mass., for sale at W. & J. MORRISON'S, No. 9 Maiden Lane, N. Y., and T. O. BACON & CO'S, corner of Union and North sts, Boston, Mass.

LAWRENCE SCIENTIFIC SCHOOL.—Harvard University. The next term of this Institution will open on the second day of May, 1854, and continue 20 weeks. Instruction by Recitations, Lectures, and Practical Exercises, according to the nature of the study, will be given in Astronomy by Messrs. Bond, Heston by Prof. Gray, Chemistry, analytical and practical, by Prof. Horsford, Comparative Anatomy and Physiology, by Prof. W. H. Murray, Engineering by Prof. E. S. Matthews, Mathematics by Prof. W. H. Miner, Mineralogy by Prof. Cooke, Physics by Prof. Lovering, Zoology and Geology by Prof. Agassiz. For further information concerning the School application may be made to Prof. E. N. HORSFORD, Dean of the Faculty, Cambridge, Mass.

WANTED.—A good permanent situation, either to run a stationary engine or take charge of machinery, where capability and a faithful discharge of duty would meet with a liberal recompense, by a person who is and has been for several years past, running a locomotive on one of the railroads out of New York. Good references given. Address J. C. GORDON, 438 Fourth Avenue. (On parle Francais.)

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 correspond with me can do so by addressing J. D. JOHNSON, 21st Bridgeport, Ct.

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 from any part of the Union promptly executed, and price list sent if required. C. T. AMSLER, 216 Geo. 224 Chestnut st., Philadelphia, Pa.

PIG IRON.—The subscriber has always on hand a stock of the best brands of American and Scotch Pig Iron, for sale at the lowest market price. G. O. ROBERTSON, 135 Water st., cor. Pine, N. Y.

NEW HAVEN MANUFACTURING COMPANY.—New Haven, Conn., (successors to Scranton & Parsley) 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. The N. H. M. Company 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, 30 inches in diameter; are snugly packed in a cast-iron frame, price of mill \$200, packing \$5. For cuts, prices, and further particulars apply post paid, as above, or to E. C. HILLS, agent, N. H. M. Co., 12 Platt st., N. Y.

WEIGHING AND PACKING MACHINE.—This machine is particularly adapted for the weighing and packing of ground spices, coffee, teas, saleratus, cream tartar, British luster, arrowroot, drugs, prepared flour, farina, starch, cocoa, oat meal, yeast powders, seeds, snuff, ground herbs, or any like material, which may require to be put in packages, from ounces to pounds. It advances over the old method of packing by hand, are manifest. One of these machines will, with the aid of one person, weigh accurately, and pack neatly from 4 to 5,000 packages per day. It requires very little power to run it, and is not liable to get out of repair. Having purchased the exclusive right to manufacture and sell throughout the United States, we are prepared to execute orders for the machines, and all sectional rights, on reasonable terms. N. B. HARRIS & Co., Proprietors of the Excelsior Steam Spice Mills, Philadelphia, Pa.

AMERICAN RAILROAD JOURNAL.—This Journal, the oldest in the world devoted to the Railroad interest, will hereafter contain, in addition to its usual contents, a full and comprehensive department of Railway and Mechanical Engineering, prepared under the direction of a practical engineer and mechanic. Improvements in Railways, Railway Equipments, and especially in Locomotives, will be duly described and illustrated. Inventors and improvers will find in the Journal the best advertising medium as it is taken by nearly all Railroad Companies and Engineers in the country. Published every Saturday at No. 9 Spruce st. by JOHN H. SCHULTZ & CO., at \$5 a year in advance.

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 Silver 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.

1854—MICHIGAN CENTRAL R. R. LINE.—D. W. WHITING, Freight Agent for R. R. and the enormous new steamers "Plymouth" and "Western World," and also General Forwarder, will forward freight of any kind, by any mode of conveyance, to any destination, with dispatch and at the lowest rates; has trucks and machinery (having been a practical machinist has all the skill necessary) for the safe and expeditious handling of any machine or heavy article, such as Locomotives, Steam Engines, Boilers, &c. Also, Church Bells, Safes, &c. Mark packages care "D. W. Whiting, Buffalo;" goods thus consigned take precedence with the above boats in all cases.

JOHN PAISHLEY, 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 bed and screw gear, 7 1/2 inch rest, with cast iron bed, and 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 job and the weight lathe; they are of the best workmanship. Price of Lathe with count shaft and pulleys, \$155 cash. Cuts, with full description of the lathes, can be had by addressing as above, post paid. Also, 30 horse power vertical Steam Engines with two cylinders. Price of engine with pump and heater, \$800 cash. For particulars address as above.

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

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 Steam and Vacuum Gauges, Allen & Noyes' Metallic Self-adjusting Conical Packing, Faber's Water Gauge, Sewell's Salinometers, Hudson's Hydraulic Lifting Press, Roehling's Patent Wire Rope for hoisting and steering purposes, &c. etc. CHARLES W. COPELAND, Consulting Engineer, 64 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, has proved 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 200 feet, lineal measure per minute. One machine has done over twenty millions of work in the last two years, another more than twelve millions of feet Spruce flooring in ten months. Working models can be seen at the Crystal Palace, where further information can be obtained, or of the patentee at Albany, N. Y.

MINING MACHINERY.—Of most approved construction, furnished by FRED K. COOK & Co., Hudson Machine Works, Hudson, N. Y.

A. B. ELY, Counsellor at Law, 52 Washington street, Boston, will give particular attention to Patent Cases. Refers to Messrs Munn & Co., Scientific American.

LEONARD'S MACHINERY DEPOT, 109, Pearl st., and 60 Beaver, N. Y.—Leather Banding Manufactory, N. Y.—Machinist's 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.

MCALLISTER & BROTHER.—Opticians and Instrument makers in mathematical and optical instruments, No. 45 Chesnut st., Philadelphia, Pa.—the old stand established in 1796 by John McAllister, Senr. Mathematical instruments separate and in cases, Tape Measures, Spectacles, Spy Glasses, Microscopes, Thermometers, Salometers, Hydrometers, Magic Lanterns, &c., &c. Our illustrated and priced catalogue are furnished on application, and will be sent by mail free of charge.

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.