

TO CORRESPONDENTS.

L. B., of N. Y.—You can get a patent for the peculiar composition of a coating for the matches, but that is all from what you have stated it appears to be new, useful, and patentable.

J. W., of Boston—Razor hones are generally made with three sides of buff leather and one side of a composition of glue and fine emery dust.

T. S., of Ind.—A patent could not be procured for making hats of paper. Pavements constructed of boulder and covered with pitch and gravel, or made entirely of pitch and gravel, are not new.

B. & M., of Havre—The sewing machine to which you refer is the invention of T. J. W. Robertson, of this city; it has already been patented in France and England, and Mr. R. is now in London preparing to bring it out.

J. S. W., of S. C.—The question of anchor ice was discussed somewhat at length in Vol. 7, Scr. Am., and no new light since then has been thrown upon the subject.

A. H., of N. Y.—The government has no exclusive natural right to the soil, it has only the right of possession. You confuse the question by comparing a title to a certain plat of land with that of a power to prevent persons using a machine of their own making.

H. A. R., of N. Y.—If your pump boxes are tight they ought to raise a cylinder full every stroke, but they must be hard to work at the end of eighteen feet rods. If you would use a single tube and a tight piston on a short rod the pump would work much easier.

T. A. M., of Va.—We are not acquainted with the Warren wheel, nor do we know where you can obtain the particular information desired relating to it. The inventor and manufacturers reside at Wareham, Mass.

A. K. A., of N. Y.—We do not know anything about the common opinion as to the cause of the Niagara whirlpool. The objects drawn into it are no doubt also carried out of it into the Lake below.

J. C., of Mich.—You want to elevate water twenty feet high by a ram having a three feet fall. Theoretically it will take about seven times more water, but you must allow at least one-third more for friction.

H. S. A., of N. Y.—When gutta percha is mixed with india rubber it is rendered very elastic. Gutta percha can be obtained in great quantities in this city, but we do not know its price in a purified state, like the sample you have sent.

J. W., of Pa.—The matter to which you refer will be found on another page.

H. F., of —A book giving an account of the method of manufacturing soap, called Morfitt's Applied Chemistry, is published by H. C. Baird, Philadelphia. To make common soft soap, grease is boiled in a strong lye of wood ashes.

D. W. H., of —Emery wheels are made by mixing powdered emery with one-fourth its weight of pulverized stourbridge loam, and a little water, then molding them by pressure in a mold, and allowing them to dry, and afterwards burning them in a close muffle at a temperature just a little below a white heat.

E. S., of Pa.—If the orifice is five feet from the shaft it will be exactly the square root of the fall, which is considered the best proportion. It is best to introduce the water under the arms in the Barker mill, but why in the name of common sense is such a mill used.

I. S., of C. W.—You can obtain a hand lathe for wood work of James Stewart, of this city.

G. M., of C. W.—We are obliged to you for Mr. B.'s essay on the plow. It is not likely that the fees for foreigners will be reduced this session of Congress. The plow is a good one; whatsoever is new is patentable.

S. P. A., of Conn.—If you mean a treatise on Millwrighting, Scott's Millwright and Engineer's Assistant, by Blackie & Son, this city, is the only useful work of the kind in print. It is costly, being about \$24.

J. W., of Pa.—We have had the same kind of marine governor submitted to us at least twenty times. It is an old invention; a patent was refused for it some eight years ago.

C. C. T., of N. Y.—An article on enamelling iron in a recent number of our paper will afford you the information desired.

P. R., of N. Y.—Wrought-iron metal pipes, even if coated with zinc, will soon rust.

J. R. M., of Mo.—We suppose you refer to Mr. Boyden's water wheels; they are patented, and you should write to him, at Lowell, Mass., on the subject.

E. H., of Mass.—We have published several engravings of Fountain Pens in back numbers of our paper. You can examine them and choose for yourself. Shall publish a cut of a newly patented one in the course of three weeks. Cannot say which is the best.

J. G. H., of Ind.—Your "look out" apparatus for indicating the direction of fires in cities would be of no advantage. The present plan is far more serviceable than yours could be.

G. McC., of N. B.—Your bills will be taken. There is no simple device in common use for correcting the equation of time in clocks: such a device would be useful. The bill for revising our patent laws is still before Congress.

J. P., of Pa.—A good disinfecting agent for cesspools is coppers dissolved in water, and thrown into them. Chloride of lime and chloride of zinc are also disinfectants. Pure gin is made by distilling barley, malt, and rye meal mashed together, and giving a flavor with juniper berries.

H. H., of Mass.—Spiral cutters, such as you propose, are very old. Feeding the board by passing it under a roller and a flat surface would interfere with Woodworth's patent. The points you name relative to your specifications are unimportant.

J. H. C., of Ohio.—See Vol. IX, page 396, Scr. Am., for wood sawing machine. You can put up an endless apron to carry away the wood. See Vol. XI, page 62, for box or dovetailing machine. Address the inventors for prices, &c.

R. O., of N. Y.—Burning fluid is composed of alcohol and refined spirits of turpentine. Add about ten per cent of turpentine to the alcohol, cold, and agitate well.

H. L. S., of Mass.—Engravings of several different wind mills have been published in our paper during the past year. Examine and satisfy yourself to which is the best. All of them are good. We have no preference.

J. W. R., of Ohio.—Address the agents of the Goodyear India Rubber Company, N. Y., for information as to elastics.

W. R. W., of Phila.—All that has been published in foreign journals regarding the carmine, we have published. The process does not appear to be an improvement. If the cochineal be first boiled in soft water, and then salts of tin and cream of tartar employed as the precipitating agent a much finer color will be produced.

Platt Merritt, Camden, C. W., wishes to purchase the most approved shingle sawing machine.

C. Weyrick, Carlisle, Pa., wishes to purchase a machine for sawing out fellies for all kinds of carriages.

J. Martin, Rock Island, Ill., is in want of a hand machine for making lucifer matches.

Money received at the Scientific American Office on account of Patent Office business for the week ending Saturday, April 19, 1856.—

J. R., of Pa., \$135; B. & D., of Mich., \$25; S. N., of Tenn., \$25; H. & A., of Ind., \$27; M. & P., of Ky., \$30; J. B., of Ill., \$30; H. C. P., of Tenn., \$30; W. F. C., of N. Y., \$30; D. A. B., of O., \$50; G. C. B., of N. Y., \$25; M. F. G., of N. Y., \$25; J. C., of N. Y., \$30; C. S. C. C., of Mass., \$27; T. J. P., of Ill., \$25; G. P., of La., \$30; J. N. B., of N. J., \$30; H. L., of N. Y., \$25; C. H. & L. C. P., of N. Y., \$60; G. H. T., of Mass., \$10; E. S., of Vt., \$25; E. D. L., of Mass., \$250; W. & C., of Miss., \$1250; W. H., of Wis., \$30; J. McC., of Pa., \$30; J. G. H., of N. J., \$250; F. E., of Pa., \$30; E. A. C., of N. Y., \$20; F. & C., of O., \$55; W. W. M., of Ill., \$35; F. K., 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, April 19:—

T. J. P., of Ill.; S. N., of Tenn.; J. C., of Mich.; J. R., of Pa., (3 cases); M. F. G., of N. Y.; H. L., of N. Y.; C. S. C. C., of Mass.; G. C. B., of N. Y.; K. D. & K., of Pa.; F. K., of N. Y.; J. G. H., of Ind.; J. M. C., of S. C.; W. W. M., of Ill.; E. S., of Vt.; E. E., of Ill.; J. S. S., Sen., of Ind.

Important Items.

TO THE UNFORTUNATE.—We are no longer able to supply the back numbers of the present volume previous to No. 27, except from 1 to 12. Such numbers as we have to furnish, are gratuitously supplied to such subscribers as failed to receive them; and we would take occasion to state, that any person failing to receive their paper regularly, will confer a favor by notifying us of the fact. Missing numbers should be ordered early, to insure their receipt, as an entire edition is often exhausted within ten days after the date of publication.

MODELS.—We shall esteem it a great favor if inventors will always attach their names to such models as they send us. It will save us much trouble, and prevent the liability of their being mislaid.

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 as fees for copying.

Term of Advertising.

Table with 2 columns: Term of Advertising, Price. 4 lines, for each insertion, \$1; 8 " " " " \$2; 12 " " " " \$3; 16 " " " " \$4.

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 insertion.

NOTICE TO CONTRACTORS.—Office of the Long Dock Company, Jersey City, April 15, 1856. Sealed Proposals will be received at this Office until the 5th day of May, prox., at 10 o'clock, A. M., for grading two miles of railroad, including a double track tunnel about 4000 feet long. The tunnel is located in Hudson City, about one mile from the Hudson river, and through a ridge of trap rock known as Bergen Hill. The whole work to be completed on or before the first day of November, 1857.—Specifications, plans, profiles, sections, &c., of this work may be seen at this Office, or at the Office of the New York and Erie Railroad Company, Erie Place, West Street, City of New York. HOMER RAMSDALL, President L. D. Co. 33 3

FOR SALE VERY LOW.—State, County, and Town rights in a rare invention for making money with small means. For particulars address AMSDEN & PHIN, Rochester, N. Y. 1\*

PATENT IMPROVED GLOBE VALVES that can be made perfectly tight when new, and easily re-ground without being removed from the pipes; also Gauge Cocks with the same improvement; also plumber's brass work, steam and gas cocks, oil cups, &c. Rights for sale. McNAB, CARR & CO., 133 Mercer st., New York. 33 6\*50w

TO CAR BUILDERS.—For Sale. One new upright Boring Mill for boring car wheels. Makers price \$600, will be sold for \$400 cash. Address GEO. S. LINCOLN & CO., Hartford, Conn. 33 4

IMPORTANT TO INVENTORS.

THE UNDERSIGNED having had TEN 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, Draughtsmen, and Specification writers are in constant employment, which renders us able to prepare applications on the spot, and while the experience of a long practice, and facilities which few others possess, we are able to give the most correct counsels 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 o'clock until 5. 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 advantages which the long experience and great success of our firm in obtaining patents present to the public, we have been thoroughly tested for a number of years 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 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, 123 Fulton street, New York; 32 Essex Street, London; 29 Boulevard St. Martin, Paris; No. 3 Rue Thiers, Brussels.

PAGES PATENT PERPETUAL LIME KILN, will burn 100 bbls. lime with three cords of wood, every 24 hours, likewise my coal kiln will burn 150 bushels with 1 ton bituminous coal in the same time; coal is not mixed with limestone. Rights for sale. 32 4 C. D. PAIRB, Rochester, N. Y.

LOCOMOTIVE WOOD.—Winter's American Wood Sawyer is particularly adapted for cutting wood for locomotive wood; is capable of cutting 75 to 100 cords in a day. Patented 1854. State and road rights for sale; for particulars address WM. WINTER, Rondout, N. Y. 32 4\*

SMUT MACHINES.—A. NEWBURY & CO., of Windham Center, N. Y., are manufacturing a superior article, having been thoroughly tested for a number of years, they are found inferior to none in cheapness, durability, and in the quality of their work. Price \$50. 32 4\*

CAUTION.—The public are hereby cautioned against purchasing any right for improvement in Horse Shoes. Patented 25th of July, 1854 by W. H. Towers, from Geo. S. Earle or E. B. Strong, as the power of attorney under which such sales may be attempted to be made was revoked some months since. W. H. TOWERS, 32 4\*

W. M. BURDON'S STEAM ENGINE WORKS, 102 Front street, Brooklyn, N. Y.—Engines from 3 to 40 horse power constantly kept on hand, of the latest styles and patterns, with all the modern improvements. Engines from 40 to 200 horse power made to order, high pressure or with condensers. Also portable engines with boilers and vacuum pans, saw mills, grist mills, rice mills, and wood-sawing, circular saw mills, upright engines that take up a very small space for printers' and pumping engines, steam pumps of various sizes, rotary pumps and mining pumps; also quartz mills and stampers for copper and gold; improved hoisting machinery for mines or stone quarries; also sugar machinery, sugar mills, sugar kettles and vacuum pans, saw mills, grist mills, rice mills, rice mills, screw and hydraulic presses, boilers, and castings of every description. The reputation that Wm. Burdon has sustained for the last 20 years, as an engine builder, is a guarantee for his work. Miners and manufacturers will find it to their advantage to patronize his establishment, as not less than one hundred finished engines are kept on hand. With the large lot of boilers, shafting, pumps and hangers kept on hand, orders can be shipped the same day they are received. Also a large number of second hand engines of various sizes for sale. Second hand engines bought or exchanged for new ones or old on commission. The great facilities and perfect system and order carried on in this establishment, enables Mr. Burdon to sell lower than any other establishment in the country for the same or better quality of work. Plans, drawings and specifications made at the shortest notice. 30 4\*

WOODWORTH PATENT Planing, Tonguing and Grooving Machines.—The subscriber is constantly manufacturing and has now for sale the best assortment of these unrivalled machines to be found in the United States. Prices from \$85 to \$1450. Rights for sale in all the unoccupied towns in New York and Northern Pennsylvania. JOHN GIBSON, Albany Planing Mill, Albany, N. Y. 30 12\*

1856.—WOODWORTH'S PATENT Planing, Tonguing and Grooving Machines.—The subscriber is constantly manufacturing and has now for sale the best assortment of these unrivalled machines to be found in the United States. Prices from \$85 to \$1450. Rights for sale in all the unoccupied towns in New York and Northern Pennsylvania. JOHN GIBSON, Planing Mills, Albany, N. Y. 30 3m\*

JAMES HARRISON, JR.'S MANUFACTORY—Second Avenue, corner of 22nd st., New York. 31 4\*

HARRISON'S 30 INCH GRAIN MILLS.—Latest Patent.—A supply constantly on hand. Price \$200. Address New Haven Manufacturing Co., New Haven, Conn. 31 1f

STUB'S AND OTHER Superior Manufacture, Lancashire and Sheffield Files, Dixon's Black Lead Crucibles, Brass and Iron Machine, and Cap Screws, Pattern Letters, from 3-16 to 2 inches, adapted to all descriptions of Casting. Stub's Pliers and Nippers; small Bench Vises; Emery Cloth and Emery Paper materials for Locksmiths and Bell Hangers; Brass and Iron Gimlet Pointed Screws of all sizes, &c. &c. M. ANY, BALDWIN & MANN, Importers and Dealers in Building Hardware, &c., 49 John st., cor. Dutch, N. Y. 31 4\*

THE NEW YORK DAILY SUN.—Is forwarded by the early mails to country subscribers at \$4 per annum, in advance, or \$1 per month, payable in advance. Under the present law is as follows: to any post office in the State of New York, 78 cents per year, payable quarterly in advance. Out of New York State, but within the United States, \$1.50 per year, payable quarterly in advance. MOSES S. BEACH, Publisher. Corner of Fulton and Nassau sts. 4

PORTABLE STEAM ENGINES.—S. C. HILLS, No. 12 Platt st., N. Y., offers for sale these Engines, with Boilers, Pumps, Heaters, etc., all complete, and very compact, from 2 to 10 horse power, suitable for printers, carpenters, farmers, planters, &c. A 2 1/2 horse can be seen in store, it occupies a space 5 by 3 feet, weighs 500 lbs., price \$240; other sizes in proportion. 27 e3w

75 CENTS A YEAR.—Or 16 months for \$1. THE NEW YORK WEEKLY SUN is now sent to subscribers at the following very low rates, payable in advance:—One copy, 3 months, 25 cts.; 6 months, 50 cts.; 1 year, 75 cts.; 16 months, \$1; 3 copies, 1 year, \$2; 8 copies, \$5; 13 copies, \$8; 25 copies \$15—with engravings.—The postage within the State is only 13 cents a year—out of the State 26 cents a year. No traveling agents are employed. Specimen copies sent gratis. Advertisers should be post paid and directed to MOSES S. BEACH, Sun Office, N. Y. 4

CIRCULAR SAWS.—We respectfully call the attention of manufacturers of lumber to the great improvements recently introduced in the manufacture of our Circular Saws. Being sole proprietors of Southwell's patent for grinding saws, we are enabled to grind circular saws from six inches to six feet with the greatest accuracy and precision. The possibility of grinding a saw without leaving it uneven in thickness has always been acknowledged by practical saw makers. This causes the saw to expand as soon as it becomes slightly heated in working. When this takes place the saw loses its stiffness, and will not cut in a direct line. We will warrant our saws to be free from these defects; they are made perfectly even in thickness, or gradually increase in thickness from the edge to the center, as may be desired. As there are no thick or thin places, the friction on the surface of the saw is uniform, consequently it will remain stiff and true, and will require less set and less power. Will saw smooth, save lumber, and will not be liable to become untrue. This is the oldest establishment now in existence for the manufacture of circular saws in the United States, having been established in the year 1830. Orders received at our Warehouse, No. 48 Congress st., Boston. 12 6m\* WELCH & GRIFFITHS.

SCHENCK MACHINERY DEPOT—163 Greenwich street, New York, keeps always on hand Lathes, Planers, Drills, Steam Engines, Woodworth's Patent Planing Machines, Belting, &c., in great Variety. Tools furnished of any size, to order, and of the best quality. 25 16\* A. L. ACKERMAN, Proprietor.

VALE'S CELEBRATED PORTABLE STEAM Engines and Saw Mills, Burdons' Horsepowers, Smut Machines, and Grist Mills, Circular Saw Goggles, Hatchet Drills, &c. Orders for light and heavy forging and castings executed with dispatch. LOGAN & LIDGERWOOD, 13 1y\* 9 Gold st., N. Y.

BOILERS FOR SALE.—Three Cylinder Boilers, 44 inches diameter, 30 feet long, with two 13-inch flues each, with steam drums 30 inches diameter and 5 feet high; and Cross Boiler 36 inches diameter, and 12 feet long; safety and check valves all in complete working order. Also, a new set of Van Sickle's Patent Salamander Grate Bars for a Furnace, 5 feet by 10. Apply to HECKER & BROTHIER, 267 Cherry st., New York. 32 4\*

VERTICAL STEAM ENGINE and Boiler for Sale at a bargain. The Engine is nearly new, and well finished. The cylinder is 9 inches; the fly wheel is a hand wheel 5 feet in diameter, face 14 inches, turned off, weight 1850 lbs. The boiler is 20 feet long, 42 inches diameter, 1 flue 17 inches, well braced wrought-iron heads; it is very strong, and has been in use about six months; is about 15-horse power. Cost \$1200, will be sold for \$675 cash; delivered on ship board. Apply to MUNN & CO., at this office.

MACHINISTS' TOOLS.—Meriden Machine Co. have on hand at their New York Office, 15 Gold street, a great variety of Machinists' Tools, Hand and Power Punching Presses, Forcing Pumps, Machine Belting, &c., all of the best quality. Factory West Meriden, Conn. 32 13\*

CARPENTER'S ROTARY PUMP.—For Pumping Hot or Cold Water, Lard Oil, &c. Is (see good notice on both sides, in this paper, No. 29.) manufactured and for sale by D. C. HENDERSON, Sandusky, Ohio. 31 5\*

THE AMERICAN PLATE GLASS CO. Having erected extensive works in East Brooklyn (foot of North Sixth st.) are now prepared to execute promptly all orders forwarded to them, for Rough Plate Glass, for Sinks, Lights, Floor Lights, Pavements, Deck Lights for Vessels, &c. Also an entirely new article possessing the properties and beauties of Agate, called Chalcedon. This material surpasses Marble, in its superior quality and utility for the purpose of Flooring, Mantel Pieces, Table Tops, and Ornamental Architecture. All orders left at the Office of the Company will receive prompt attention. Office 420 Broadway. Rough Plate Glass in the Sheet at the factory, 1-4 in. 35c.; 3-8 in. 35c.; 1-2 in. 40c.; 5-8 in. 60c.; 3-4 in. 75c.; 7-8 in. 80.; 1 in. 85c.; 1 1/4 in. \$1.25. Terms cash in 30 days. 27 13

BOILER INCrustATIONS.—No scale will form in the boiler when Weissenborn's Patent Incrustation Preventer is used. At the same time the apparatus is the best heater for the boiler. Apply to E. W. SARGENT, Delmonico's Hotel, New York City. 25 12\*

FILMER & CO., Electrotypers, and Manufacturers of Electrotype Materials, 128 Fulton st., N. Y. Molding Presses, Batteries, Cases, Backing Pans, Shaving Machines, Metal Kettles, Planes, Blocks, Building Irons, etc., etc., on hand, or furnished at short notice, and at moderate charges. Adams' Improved batteries and black-lead machines also for sale. 25 1f

LINEN MACHINERY.—JOHN R. McNALLY, Champlain, N. Y., Agent for the sale of linen machinery of every description, new and second hand. Engineers and machinists tools, and linen yarns of every number and quality. 22 13\*

PATENT ALARM WHISTLE.—For Speaking Pipes. The right of a limited number of the Southern States, of this valuable patent, for sale on reasonable terms. Apply to W. OSTRANDER, No. 87 Ann street, N. Y. 29 13

STEAM PUMPS AND FIRE ENGINES.—Steam Pumping Engines for wrecking purposes, Irrigating and Draining Lands, Deep Mining Shafts, Quarries, and Excavations, Railroad Stations, Factories, Public Institutions, Hotels, Gas Works, Steamers, &c. Also a large and improved class of Pumping Engines for supplying Cities, Towns, and Villages. Apply to H. R. WORTHINGTON, 28 Broadway, New York City. 25 13\*

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. United States and Europe. 33 1f

NORCROSS ROTARY PLANING MACHINE.—The Supreme Court of the U. S., at the Term of 1853 and 1854, having decided that the patent granted to Nicholas G. Norcross, of date Feb. 12, 1850, for a Rotary Planing Machine for Planing Boards and Planks is not an infringement of the Woodworth Patent. Rights to use the N. G. Norcross' patented machine can be purchased on application to N. G. NORCROSS, 208 Broadway, New York. Office for sale of rights at 208 Broadway, New York Boston, 27 State street, and Lowell, Mass. 19 6m\*

GRAIN MILLS.—EDWARD HARRISON, of New Haven, Conn., has on hand for sale, and is constantly manufacturing to order, a great variety of his approved Flour and Grain Mills, including Bolting Machinery, Elevators, complete with Mills ready for use. Orders addressed as above to the patentee, who is the exclusive manufacturer, will be supplied with the latest improvements. Cut sent to applications, and all mills warranted to give satisfaction. 29 1f

NEW HAVEN MFG. CO.—Machinists' Tools, Iron 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 cuts giving full description and prices, address, "New Haven Manufacturing Co. New Haven, Conn. 19 1f

AGENCY FOR THE PURCHASE AND SALE of valuable patents and inventions. T. H. LEAVITT, No. 1 Phoenix Buildings, Boston. None but matters of real merit and utility will receive any attention. Circulars containing further information may be had on application. 29 12\*