

TO CORRESPONDENTS.

J. C., of N. Y.—What would you do with the gases of water, if you obtained them by solar heat—which you cannot do by the largest lens you can employ? Hydrogen gas is of no value at all in the arts, except in combination with carbon. Do not expend any money on such a project.

W. F., of Mass.—You have not taken the compressible quality of air into your calculations. The use of one fluid to act upon another, as a propulsive power, will amount to about one half of loss, compression develops its latent heat, then the water condenses it, thus forming a partial vacuum, which will retard the progress of the vessel.

J. A., of O. W.—We do not like the conical stone mill; your wheel is perhaps as good as any of the same nature. There is not much difference between it and others—and as you are acquainted with it, some expense and trouble may be saved by getting another like it. If we were in your place, however, we would get an outside discharge wheel, for the new mill.

R. G., of N. Y.—We cannot properly answer your last inquiry, in regard to getting the rotary files made. There is, we think, a file making establishment at Sing Sing, N. Y., and we advise you to apply to the proprietor for the information desired. His name we do not know.

R. Forman, of West Point, Bath Springs, P.O., Tenn. wishes information in regard to the best plans of saw mills in use; manufacturers will find it to their advantage to send him their business circulars.

F. H. S., of Md.—We have carefully noted the contents of your letter in regard to the rule of the Patent Office. The views are undoubtedly correct, and we hope you will be able to apply them in your own case.

J. Y., of —.—Cheap soap depends on the price of materials, and the work which the soap has to perform. As your materials contain a great deal of grease, you can make a very good soap for your purpose, by dissolving common hard soap by hot water in a barrel, and for every pound of soap add half a pound sal soda, dissolving them all together. A little practice will enable you to use it judiciously according to the amount of grease or dirt in your wool; the free soda dissolves the free grease. Some manufacturers use nothing but weak soda ley for this purpose.

S. H., of Ky.—Your method of straining saws by means of a screw nut connecting the rods is old and very well known; we fail to discover any patentable novelty in your arrangement.

R. A. N., of Tenn.—We discover no new feature in your alleged improvement in grates; substantially the same thing has long been known. We are pleased to learn that your city is fast becoming interested in machine manufacturing, there is no reason why the South and West should not eventually become active competitors for this branch of trade.

J. B. A., of N. Y.—We cannot give you better advice, in re-setting your boilers, than to recommend the building of two or three fire bridges like those represented in No. 18, Vol. 7, Sci. Am.; any mason will set them for you. We are not acquainted with any person particularly devoted to boiler setting.

T. O. W., of Pa.—We have had models almost precisely similar to your sketch in our office. You would not stand the most remote chance of getting a patent; we advise you to abandon the idea of making an application.

G. W. W., of Ind.—We are unable to find any novelty in your description of a reaper and raker. We could not advise you to apply for a patent.

D. P., of Vt.—In July, 1850, Addison Everett, of Middlefield, Mass., secured a patent for a wooden bowl turning machine; an engraving of it was published in No. 52, Vol. 5, Sci. Am.

W. N., of N. J.—“Constructing a saw in the form of an endless belt running round two drums” is not a new invention.

E. B., of N. Y.—We can discover but very little novelty in your machine for crushing; in its construction it closely resembles other machines where balls are used in basins. We think a very limited claim can be secured, but is hardly worth an application.

O. P. S., of Ohio—Your long communications are quite too much for us, therefore you will please to withhold them in future. We have not the necessary time to devote to them.

J. L. F., of Miss.—Fine iron filings made into a paste with sal ammoniac, dissolved in water, is a cement employed for filling the seams of iron vessels, such as boilers, but red and white lead mixed with finesand, some putty, and a little oil, make a very excellent cement.

B. Y., of Pa.—Your communication is placed on file in this office; we do not discover anything useful in the engine, it is too complicated in its construction.

C. W. G., of Ct.—We have never seen a rotary engine constructed in the manner shown in your sketch; you had better try it, as we doubt its goodness.

L. W. H., of N. Y.—An air-tight trunk for re-action water wheels, is not new, and this, as we understand by your letter, is what you claim: such trunks are already covered by a patent.

F. C., of Mass.—Your improvement is new; many times a simple improvement in small tools is useful and valuable to the inventor. Perhaps we are justified in saying that too little attention is paid to this branch of mechanical contrivances.

T. M. J., of Iowa—We have seen a scraper made in the same manner as you describe; the handles, instead of being fastened permanently at the sides, extend forward to the bail, and the scraper allowed to turn on pivots. You cannot secure a patent for it.

J. B. W., of Mich.—Make the body of your emery wheel of cast-iron, and have it truly turned, cover the periphery with copper, and use the emery on this; the emery sinks into the copper. Scott's is the best work on millwrighting in print—a good work, up to the present practice is much wanted.

W. C. D., of Fla.—We thank you for bringing the past to remembrance: we have the copy and hope to give it attention soon.

A. R. H., of Lake Superior—It is not a new thing to smelt iron and ores by the flame of fuel, in a stack apart from the fire chamber. We give the advice freely. You will see a furnace for this purpose, illustrated in our last Volume.

J. J. T., of Ky.—You will find the contents of your cylinder by multiplying half the circumference by half the diameter, and this by the length; the circumference you will find by multiplying the diameter by 3.14159.

T. P. K., of Pa.—You are right about the rule to calculate the lever power, but the toggle gives out the power different from the common levers.

M. S., of N. Y.—The only invention we know of for “burning the wick of a candle,” is to surround it with sperm or stearine. We are not sure that we understand you in respect to the clock, but if we do, the same thing is done in many clocks.

D. McC., of Ky.—Your engine is sufficient for all your purposes, but your boiler is defective, when it cannot supply over 20 lbs. pressure on the square inch. Take it down, and set it over again, the furnace is badly constructed.

G. & Co., of Boston.—We have not been able to obtain correct information of Mr. P. If you direct a letter to J. S. Sloan, of Sloansville, Floydburg, Oldham Co., Ky., he will, we believe, be able to give you the desired information.

W. T. U., of Tenn.—We will soon attend to your request.

J. H., of Ill.—Yours has been received.

F. M. P., of N. Y.—You cannot estimate the horse power of a high pressure engine by the bore of the cylinder and length of stroke. The velocity of piston, and the pressure of steam on the square inch throughout the whole stroke, is the only way to arrive at a knowledge of its power.

Money received on account of Patent Office business for the week ending Saturday, Dec. 31:—

W. A. H., of Halifax, \$50; O. B., of Ind., \$30; J. T. B., of N. Y., \$25; R. S. T., of N. C., \$55; J. W. B., of Ark., \$30; J. L., of O., \$30; D. M. R., of N. H., \$40; J. C. R., of N. Y., \$10; B. V. B., of N. Y., \$30; S. S. H., of N. Y., \$30; G. M. C., of N. Y., \$35; D. B. H., of S. C., \$35; C. & S., of Mass., \$30; J. H. B., of N. Y., \$25; V. & K., of N. J., \$30; S. G. B., of N. Y., \$40.

Specifications and drawings belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, Dec. 31:—

D. M. R., of N. H.; B. F. McL., of O.; C. & S., of Mass.; J. H. B., of N. Y.; S. S. H., of N. Y.; S. G. B., of N. Y.

LITERARY NOTICES.

THE GENESSEE FARMER—This agricultural periodical, published every month at Rochester, N. Y., has no superior in our country. The Editor, Dr. Lee, is an able Agricultural Chemist, and a veteran in agricultural literature. Every number contains 40 royal octavo pages of closely printed matter, and illustrations of agricultural machines &c. Its subscription price is only 50 cents per annum. This magazine commences a new volume (5th) second series, and is to contain one-third more reading matter, and be otherwise much improved. It should have a million of subscribers, for its matter is always good, solid, scientific and practical.

GRAHAM'S MAGAZINE—For January, is received through Messrs. Dewitt & Davenport, of this city. It has a fine engraving of Clark Mill's Explosive Steam of General Jackson, besides others of merit. The contributions are from well known authors. The number throughout is very fine. This Magazine is one of the very best now published and deserves to be well sustained.

PUTNAM for January has been received, it is as usual, full of interesting matter. The publishers seem inclined to enter in the new year with a number which shall give promise of good things for the year to come.

HOT CORN is the title of a new book from the establishment of Messrs. Dewitt & Davenport. It is the republication of an enlarged form of the stories that have from time to time appeared in the N. Y. Tribune, from the pen of Solon Robinson, Esq. The effect of this book cannot be other than good, and we commend it heartily to our readers.

HOUSEHOLD WORDS—This gem of Monthlies makes its regular appearance, freighted with the best of reading. Dickens, Leigh Hunt, and other eminent English writers, are its contributors. McElrath & Barker, American publishers, Spruce st. N. Y.

THE KNICKERBOCKER—This favorite Magazine loses none of its popularity, even though Harper's, Putnam's and Graham's are making so many friends. It is as bright and sparkling as ever and enjoys a host of admiring readers. Samuel Hueston, publisher, 139 Nassau street, N. Y.

AMERICAN AGRICULTURIST—An advertisement of this valuable journal of Practical Agriculture, appears in another column. It is a good publication.

Another number of the “Book of the World,” by Weick & Wieck, Philadelphia, publishers, has been received. The illustrations are superb.

A Chapter of Suggestions, &c

PATENT LAWS, AND GUIDE TO INVENTORS—We publish and have for sale, the Patent Laws of the United States—the pamphlet contains not only the laws but all information touching the rules and regulations of the Patent office. Price 12-13 cents per copy.

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.

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.

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.

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 on interesting subjects, and have never appeared in another 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-cuts may be claimed by the inventor, and subsequently used to advantage in other journals.

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

All advertisements must be paid for before inserting.

American and Foreign Patent Agency.

IMPORTANT TO INVENTORS.—The undersigned having for several years been extensively engaged in procuring Letters Patent for new mechanical and chemical inventions, offer their services to inventors upon the most reasonable terms. All business entrusted to their charge is strictly confidential. Private consultations are held with inventors at their office from 9 A. M. until 4 P. M. Inventors, however, need not incur the expense of attending in person, as the preliminaries can all be arranged by letter. Models can be sent with safety by express, or any other convenient medium. They should not be over 1 foot square in size, if possible.

Having Agents located in the chief cities of Europe, our facilities for obtaining Foreign Patents are unequalled. Inventors of our business are invited to the special attention of one of the members of the firm, who is prepared to advise with inventors and manufacturers of all times, relating to Foreign Patents. MUNN & CO., Scientific American Office, 123 Fulton street, New York.

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, 125 Water st., cor. Pine, N. Y. 12 1/2c

1854.—MICH. CENTRAL RAILROAD for railroads and lines.—D. N. WHITING, Freight Agent for railroads and lines.—Plymouth Rock and Western World.—and also General Forwarder, will forward freight of any kind, by any mode of conveyance, to any destination, with despatch 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 Steam Engines, Boilers, Engines, Lathes, Safes, &c. &c. Mark packages “care of D. N. Whiting, Buffalo.” goods thus consigned take precedence with the above boats in all cases.

LOCOMOTIVES FOR SALE—Two Locomotives, Engines, and Tenders, made to order for live-foot gauge (but which are not required at present as the road is not ready to receive them); 16 inch cylinder by 24 inch stroke; two drivers, one engine 6 feet diameter and the other 5 1/2 feet dia. outside cylinders—have a large proportion of boiler, and are expected to be economical working engines. Will be sold on very favorable terms and are now ready for delivery. For further particulars apply to CHAS. W. COPELAND, No. 64 Broadway, N. Y.

FIFTEENTH VOLUME OF THE AMERICAN AGRICULTURIST—The leading Weekly Agricultural Paper in the United States, containing in each weekly number sixteen large quarto pages, and furnishing a great variety of the earliest, most reliable, and practical information on all subjects connected with Farming, Planting, Gardening, Fruit Growing, Stock-Breeding, &c., including also correct Weekly Reports of the market prices of Stock and Farm Produce, which are invaluable to the Farmer. Terms—To Single Subscribers, \$2 a year (for six months); to clubs of three \$4.87 each; of five, \$10 each; of ten, \$18 each, and of twenty \$1.25 each. N. B.—Specimen Copies always sent free to all forwarding their names and post-office to the Publishers. Responsible Agents wanted in all parts of the Union, to whom good commissions will be paid. Published by ALLEN & CO., 123 Waterst, New York. 1*

DYER—A situation is wanted by an experienced Cotton Dyer, who for ten years has conducted the Skein and Warp Dyeing in some of the most extensive manufacturing companies in America. Can give the best of references. Address letters, post paid, to R. M., this office. 16 2*

EAGLE FOUNDRY—Steam Engine and Millwright Establishment.—The subscriber offers for sale his well-known establishment on Gadsden's Wharf, Charleston, S. C., convenient to the river for steamboat work or shipping and receiving machinery, &c. The workshop, tools, patterns, &c., are in good order and calculated for the manufacture of all kinds of engines, railroad work, and machinery of every description. For terms we will be made easy, and possession given immediately, apply to JAMES MCLEISH, Charleston, S. C. 15*

IRON DRILLS.—Portable drills for drilling iron.—They are the most simple and convenient drill in use, having a newly invented feed motion, simple and efficient in its operation. They are constructed of iron, and weigh 30 lbs. We can recommend them as a first class article. Price \$25. Address MUNN & CO., at this office. 16 2*

TO MANUFACTURERS AND MILLERS—For sale, a valuable Mill Seat, within one mile of the city of Troy, N. Y. It comprises two four-story brick Flouring Mills, each of which have four run of stone, and are capable of doing the best of grinding. Two wood dwelling houses, and one barn, with considerable land adjoining the whole. The stream upon which the above seat is situated is known as the Poestenkill, and has a strong power of 22 feet head, so that the mills could be converted into the purchase of other branches of manufacture. The buildings are well situated, and the facilities a manufacturer would have are very great, owing to the position of Troy as a noted and increasing railroad center, and the accessibility to and from the city, of the property. The object of a sale is for particular uses in the large cities and towns contiguous to the city of Troy. For plans and further particulars apply to A. M. C. BUCKLEY, Troy, N. Y. 14

SAVE YOUR FUEL—And have your Engine regulated at the same time. Trampers' Spiral Over and Steam Economiser can now be furnished to any amount, and of the best materials and manufacture. Orders should be addressed to Newburgh, N. Y., instead of Buffalo, as heretofore, and will be promptly attended to. JOHN TRAMPER, 13 5*

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

IRON FOUNDERS' 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 G. O. ROBERTSON, 13 1/2c 125 Water street, corner of Pine.

EUROPEAN PATENTS.—MESSRS. MUNN & CO. pay special 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.

1853. WOODWORTH'S PATENT PLANING, TONGUING, GROOVING, LABELING, and Moulding Machine.—Nineteen hundred and fifty-three of all the planed lumber used in our large cities and towns continues to be dressed with Woodworth's Patent Machines. Price from \$150 to \$300. 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. 1 amt

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. Its advantages 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 or sale of sectional rights, on reasonable terms. N. B. HARRIS & Co., Proprietors of the Excelsior Steam Spice Mills, Philadelphia, Pa. 12 13

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