

IMPORTANT TO INVENTORS.

PATENTS FOR SEVENTEEN YEARS.

Messrs. MUNN & CO., PROPRIETORS OF THE SCIENTIFIC AMERICAN, continue to solicit patents in the United States and all foreign countries, on the most reasonable terms.



Persons having conceived an idea which they think may be patentable, are advised to make a sketch or model of their invention, and submit it to us, with a full description, for advice.

THE EXAMINATION OF INVENTIONS.

Persons having conceived an idea which they think may be patentable, are advised to make a sketch or model of their invention, and submit it to us, with a full description, for advice.

PRELIMINARY EXAMINATIONS AT THE PATENT OFFICE.

The service we render gratuitously upon examining an invention does not extend to a search at the Patent Office, to see if a like invention has been presented there, but is an opinion based upon what knowledge we may acquire of a similar invention from the records in our Home Office.

HOW TO MAKE AN APPLICATION FOR A PATENT.

Every applicant for a patent must furnish a model of his invention if susceptible of one; or, if the invention is a chemical production, he must furnish samples of the ingredients of which his composition consists, for the Patent Office.

The duration of patents granted under the new act is prolonged to SEVENTEEN years, and the Government fee required on filing an application for a patent is reduced from \$30 down to \$15.

Table listing fees for patent applications: On filing each caveat, \$10; On filing each application for a Patent, except for a design, \$15; On issuing each original Patent, \$20; On appeal to Commissioner of Patents, \$20; On application for Re-issue, \$30; On application for Extension of Patent, \$50; On granting the Extension, \$50; On filing a Disclaimer, \$10; On filing application for Design, three and a half years, \$10; On filing application for Design, seven years, \$15; On filing application for Design, fourteen years, \$30.

The law abolishes discrimination in fees required of foreigners, excepting natives of such countries as discriminate against citizens of the United States—thus allowing Austrian, French, Belgian, English, Russian, Spanish and all other foreigners except the Canadians, to enjoy all the privileges of our patent system.

During the last seventeen years, the business of procuring Patents for new inventions in the United States and all foreign countries has been conducted by Messrs. MUNN & CO., in connection with the publication of the SCIENTIFIC AMERICAN; and as an evidence of the confidence reposed in our Agency by the inventors throughout the country, we would state that we have acted as agents for at least TWENTY THOUSAND inventors!

CAVEATS.

Persons desiring to file a caveat can have the papers prepared in the shortest time by sending a sketch and description of the invention. The Government fee for a caveat, under the new law, is \$10.

ASSIGNMENTS OF PATENTS.

Assignments of patents, and agreements between patentees and manufacturers are carefully prepared and placed upon the records at the Patent Office. Address MUNN & CO., at the Scientific American Patent Agency, No. 37 Park Row New York.

It would require many columns to detail all the ways in which inventors or patentees may be served at our offices. We cordially invite all who have anything to do with Patent property or inventions to call at our extensive offices, No. 37 Park Row, New York, where any questions regarding the rights of patentees will be cheerfully answered.

Communications and remittances by mail, and made by express (prepaid), should be addressed to MUNN & CO., No. 37 Park Row New York.

REJECTED APPLICATIONS.

We are prepared to undertake the investigation and prosecution of rejected cases on reasonable terms. The close proximity of our Washington Agency to the Patent Office affords us rare opportunities for the examination and comparison of references, models, drawings, documents, &c.

All persons having rejected cases which they desire to have prosecuted are invited to correspond with us on the subject, giving a brief story of the case, inclosing the official letters, &c.

FOREIGN PATENTS.

We are very extensively engaged in the preparation and securing of patents in the various European countries. For the transaction of this business we have offices at Nos. 66 Chancery Lane, London; 29 Boulevard St. Martin, Paris; and 26 Rue des Eperonniers, Brussels.

Patentees will do well to bear in mind that the English law does not limit the issue of patents to inventors. Any one can take out a patent there.

Circulars of information concerning the proper course to be pursued in obtaining patents in foreign countries through our Agency, the requirements of different Government Patent Offices, &c., may be had gratis upon application at our principal office, No. 37 Park Row, New York, or any of our branch offices.



E. S., of N. Y.—Tanned sheep-skin or oiled silk is the best material to use for the cushions of electrical machines. Dry baked wood coated with shellac will answer for the pillars of such machines, but glass pillars are preferable.

B. and C., of Pa.—You should address the author of the articles on fermentation and distillation for the information you desire.

H. W., of Pa.—It would be a waste of our space to publish articles on the production of photographic pictures by the "spirits."

C. S. 2d, of Mass.—A small quantity of freshly-slaked lime stirred among hard water will make it soft. About a pint is sufficient for 100 gallons. Stir it among the hard water, then allow it to settle for about an hour and use the clear.

T. M., of Mass.—We would advise you to cease the experiment of flying with artificial wings and turn your attention to sublunary affairs. Some more useful invention would be better appreciated by the public.

R. W., of Md.—We shall be happy to illustrate your machine; send a drawing and description. It will be some time before it will appear, as our columns are engaged for weeks in advance.

L. B., of Maine.—We have examined your model and think it a very good one for the purpose. Send \$15 (Government fee) and we will proceed with the business immediately.

T. H., of Ohio.—To become expert in the construction of gearing, you must understand the first principles of geometry and mathematics.

E. J., of Mass.—The size of the bore of a common barometer is about one-eighth of an inch in diameter. Platinum is the only metal suitable for the mercury cup of a barometer, as it can be soldered to the glass and thus exclude all the air perfectly.

S. G. M., of Pa.—The heat of steam is converted into mechanical power in a steam engine, just as a current of electricity is converted into magnetism by passing through a helix surrounding a piece of soft iron. You propose to economize the heat of exhaust steam from an engine by employing it to warm air with which you design to heat the water and thus perform the work over again.

A. G., of Ill.—We have received your article on boiling water and explosions and will give it due attention.

J. W. M., of Mass.—Inquire for "concentrated lye" in the drug stores. The grocery stores in your city ought to keep it.

J. S. W., of Mass.—The same principle of compensation has been applied to the pendulum in a simpler form than your diagram represents. The compensating rod was arrayed directly behind the pendulum and its lower end attached to a fixed stud and its upper end to the upper end of the pendulum rod.

O. C. H., of Conn.—We do not know of any such work as "Shaw on Metallurgy." You probably refer to Smee's book published by G. Wiley, 56 Wall street New York.

P. W., of Pa.—We have never seen any description of the vessel in question and cannot give you her dimensions.

D. W., of Vt.—The best tool you can use for turning brass is one not very acutely inclined to the working surface; in cutting gun metal, particularly, the keen edge or sharp angle of an ordinary tool would jump in and destroy the work.

38,085.—Machine for pointing and checking Hoop Bolts. A. A. Wilder (assignor to Rufus Brown), Detroit, Mich.:

I claim, first, The cutter wheel, D, formed of two parts, a, a, beveled at their inner sides and provided with the cutters, b, b, in connection with a bolt support or projection, h, fitted in the V-shaped recess between the parts, a, a, all arranged substantially as and for the purpose specified.

Second, The feed table, E, with the bar, F, attached, provided with a half nut, k, in combination with the screw, H, knife, f, on the cutter wheel, D, and the beveled bar, m, and button, G, or their equivalents, as and for the purpose specified.

Third, The combination of the cutter wheel, D, with the cutters, b, b, and knife, f, attached, feed table, E, screw, H, bar, F, provided with the half nut, k, the button, G, and beveled bar, m, all arranged for joint operation, as and for the purpose herein set forth.

[This invention relates to a new and useful machine for pointing the ends of the timber or bolts from which barrel hoops are split, and also for checking the ends of the timber or bolt preparatory to splitting the same into hoops. The invention consists in the employment of a double-beveled rotary cutter wheel in connection with a feed table and checking knife.]

38,086.—Process of copying Writings, Maps, &c.—John Underwood, London, England, assignor to Waldo Maynard and C. R. Thayer, Boston, Mass. Patented in England, April 20, 1857:

I claim, first, The method of printing or obtaining copies of documents, forms, maps, designs, or any other characters or marks which may be produced upon paper, parchment or other similar material, by forming these characters, or marks of a prepared ink and bringing them in contact with prepared paper under pressure, the ink and paper being prepared in such manner that when the two are brought together a chemical action takes place, whereby copies of the said characters or marks are produced, as hereinbefore described.

Second, Preparing copying ink and copying paper, in the manner and for the purposes hereinbefore described.

RE-ISSUES.

1,442.—Method of making Lap Joints of Railway Rails. Aaron Douglass, Paterson, N. J. Patented August 21, 1860:

I claim the process, substantially as herein described, of making and shaping, by means of sawing and swaging combined, the ends of railway bars, which form a lock joint with each other by the end of one rail lapping upon and into the end of the other, substantially as set forth.

I also claim swelling the necks of the ends of rail bars, when lapped upon each other, substantially as described, for the purpose of giving increased strength to the ends of such bars, for the purposes set forth.

1,443.—Friction Bolt for Flour Mills.—L. S. Reynolds, Indianapolis, Ind. Patented March 29, 1859:

I claim, first, The use of the revolving bolting reel frame instead of the central shaft, as the support for the knockers, substantially as set forth.

Second, Causing sliding knockers or weights, when arranged within the reel, to strike upon or near the circumference of the reel in such a manner that the concussion of each knocker separately is felt at the points of striking, substantially as herein described.

Third, The sliding knockers, D, in combination with the shaft, K, ribs, H, and rods, E, when constructed and operated substantially as and for the purposes set forth.

Fourth, The springs, G, in combination with the knockers, D, when operated substantially as and for the purposes set forth.

Fifth, The elastic bridge, L, when used substantially as and for the purposes set forth.

Sixth, Holding the knockers, one or more, in a fixed position on their rods, substantially as and for the purposes described.

1,444.—Apparatus for vulcanizing Rubber, &c.—E. A. L. Roberts (assignee of E. A. L. Roberts and W. J. Demorest), New York City. Patented May 10, 1859:

I claim, first, The general arrangement of the stove, A, and steam-generating and vulcanizing chamber, B, C, substantially as set forth.

Second, Constructing the steam-generating and vulcanizing chamber or chambers in one or in a continuous chamber, substantially as described.

Third, The combination and arrangement of the diaphragms, a, b, c, in connection with the steam-generating and vulcanizing chamber, substantially as and for the purpose set forth.

1,445.—Heating Apparatus.—G. W. Williamson, Gouldsboro' (formerly of Scranton), Pa. Patented January 25, 1859:

I claim the application to stoves, flues of steam boilers, smoke stacks or chimneys, or wherever it is required to arrest heat or sparks, a series of plates with openings for draft, passages alternating as herein described and for the purposes set forth.

DESIGNS.

1,744.—Cook Stove.—Anson Ingraham, Center Cambridge, N. Y., and G. H. Phillips, Troy, N. Y.

1,745.—Floor Oil-cloth.—John Neil, Clinton, Mass., and A. E. Powers (assignors to D., & A. E., & N. B. Powers), Lansingburgh, N. Y.

EXTENSIONS.

Combination of Adjustable Saddle and Winch.—A. G. Polhameus, Nyack, N. Y. Patented March 27, 1849:

I claim the combination of a winch with a movable and adjustable saddle, connected so that the winch moves with the saddle, the whole being constructed, arranged and operating substantially as herein described.

Harvesting Machine.—Jonathan Haines, Pekin, Ill. Patented March 27, 1849. Re-issued Nov. 6, 1855:

I claim, in combination with a frame nearly balanced on its supporting wheels and a tongue hinged to said frame, a lever connected to one end and projecting toward the driver's stand or seat on the other, so that the driver, who is the sole conductor of the machine, may, from said stand or seat, raise or depress the cutters at pleasure during the operation of the machine, for cutting the grain or grass at any suitable height above the ground, or for passing over any intervening obstacles, substantially as described.

I also claim, in combination with the operative parts of a harvesting machine, a conveyer, which first carries the cut grain horizontally across the machine, and then elevates it so as to discharge the grain into the bed of a wagon driven alongside of the machine, when the conveyer frame is connected to the bed by a flexible joint, in manner and for the purpose described.

Magazines and other Publications Received.

TOBACCO CULTURE.—Practical Details on the Cultivation, Harvesting, Curing, &c. Published by Orange Judd, 41 Park-row, New York.

Early in the present year, the proprietors of the American Agriculturist offered prizes for the three best practical treatises on the cultivation of tobacco. Their offer was responded to by no less than eighty different parties, and the fruits of the experience therein described have been published in pamphlet form. All the matter is furnished by persons actually engaged in the cultivation of the vegetable in question, and therefore possesses a practical value which renders it extremely desirable to persons proposing to enter into the production of the "weed." The work is illustrated very fully, and will doubtless be much sought after. Price 25 cents.

Back Numbers and Volumes of the Scientific American VOLUMES I., II., III., IV., V. AND VII. (NEW SERIES) complete (bound or unbound) may be had at this office and from periodical dealers. Price, bound, \$2 25 per volume, by mail, \$3— which include postage. Price, in sheets, \$1 50. Every mechanic, inventor or artisan in the United States should have a complete set of this publication for reference. Subscribers should not fail to preserve their numbers for binding. Nearly all the numbers of VOL. VI. are out of print and cannot be supplied.

A. F. G., of Pa.—It is very generally believed that the Jonval is the best kind of turbine in use. Wheels by different makers have given as high as 90 per cent of the water-power according to reported statements of their performances. A turbine that gives out 75 per cent of the power of the water, we hold to be a good wheel.

J. W. ... Ohio.—The electro-magnetic power developed by ... is just in proportion to the decomposition of the element ... the battery. The principle is the same as the combustion of coal in a furnace raising steam in a boiler to operate an engine. In both cases chemical energy is transformed into mechanical power.

S. M. H., of Washington.—The manufacture of rifles at Enfield, England, is carried on in the same manner as at Springfield, Mass. The system has been copied from that of the United States armory in nearly all its details. Each mechanic works upon a special part of a musket.

H. S. D., of Mass.—We do not think it a reliable plan to test your boiler by the expansion of the water from heat. If you are afraid that your boiler has been weakened by acid in the water you should have it examined by a competent person. Some carbonate of soda and mahogany or oak saw-dust fed, occasionally, into the boiler will prevent incrustations by the use of hard water, but we recommend in preference the use of soft feed-water in all cases where it can be obtained.

G. W. M., of Pa.—The meteorological phenomena of mock suns seen at Dubuque, Iowa, on the 16th ult., a sketch of which you have sent us, is similar to others of the same kind described in Professor Brocklesby's meteorology.

W. N., of Mich.—Vol. VI. (new series) of the SCIENTIFIC AMERICAN is out of print, but perhaps you may be able to obtain one by advertising for it.

C. E. R., of N. H.—An oscillating engine, if well made, is as good as any other. Some of the best steamships are provided with such engines.

T. N. M., of Pa.—Paye's trip hammer was published on page 1, Vol. V. (new series) of the SCIENTIFIC AMERICAN.

M. O., of Conn.—There is no such thing as a self-acting cannon, and we cannot imagine why you so style the gun you refer to. The weapon is loaded and fired by manual power, the same as any other and therefore the term is clearly an absurdity.

J. B., of Mass.—When your water gets too low in the boiler draw the fire immediately and you will then run no risk of burning the plates. If you take proper care no such accident is likely to occur.

T. C., of R. I.—We should be very glad to have you forward your experience with turning tools of different shapes. Never mind the phrasing of the matter; we will attend to that portion of the subject. Try and induce your brother-mechanics to communicate with us on this subject. We are always glad to receive information relating to mechanical subjects.

R. L., of Ky.—We do not know where you can procure the kind of rifle you refer to. Inquire of some practical gunmaker and perhaps he will inform you. It is new to us.

J. H., of N. Y.—If you intend to take out an English patent for your invention, we advise you not to delay the matter. We never suppress the publication of patent claims. We publish an official list and intend that it shall be complete and reliable.

J. K. G., of Iowa.—Your method of making shot seems to be valuable in its results, but before passing an opinion upon its novelty, we shall require a more complete description of it, and would also advise you to send us diagrams showing the particular mechanism employed.

H. W., of Ohio.—You can make a most excellent cement for the joints of leaky tin roofs with white lead, linseed oil, some dry white sand and pipe-clay. It will soon become almost as hard as stone and keep out water perfectly. It should be rendered sufficiently thin to be put on with a brush.

H. T., of N. Y.—The benzole, so-called, of petroleum will dissolve india-rubber and gutta-percha. It is a better solvent for drying quickly than turpentine. Two pieces of cloth coated on their inside surfaces with this varnish, then laid upon one another and run between rollers with the unprepared surfaces outside, form what is called "McIntosh's water-proof cloth."

J. McV., of Ind.—Shellac varnish is made from the gum, lac. Shellac proper is prepared from seed lac by melting and straining it through a cloth and then letting it fall on leaves and smooth stems of trees, so as to form thin scales or plates. You can obtain it at almost any drug store in your town; it is very dear at present.

Money Received

At the Scientific American Office, on account of Patent Office business, from Wednesday, April 1, to Wednesday, April 8, 1863:—

- S. M. S., of Iowa, \$20; P. & E., of Maine, \$46; J. D., of N. Y., \$20; T. R., of N. Y., \$34; K. & M., of N. Y., \$26; W. C. O., of N. Y., \$25; J. M., of Mass., \$16; W. K. M., of Wis., \$25; J. McL., of Ohio, \$12; L. N. L., of Mass., \$32; J. C., of Ohio, \$10; D. C. W., of Ill., \$15; T. W., Mass., \$25; C. W., of Mass., \$16; W. & C., of N. H., \$16; T. E., of N. I., \$16; J. A. H., of Pa., \$15; A. C., of Ill., \$16; M. C. E., of N. Y., \$25; W. D., of Ohio, \$16; J. F. McK., of Pa., \$16; R. R., of Ill., \$20; J. A. R., of N. J., \$20; A. Y. M., of Iowa, \$20; S. F., of N. Y., \$20; A. H., of Iowa, \$15; L. M., of N. Y., \$26; J. B., of Ill., \$25; J. E. D., of Mass., \$15; G. S. M., of Ill., \$55; G. H., of Mass., \$25; R. S. C., of Iowa, \$25; C. M. S., of Pa., \$16; W. D., of N. H., \$16; F. B. W., of Ill., \$25; C. E. S., of Conn., \$25; J. B. T., of N. Y., \$25; D. T. H., of Mass., \$16; H. & S., of Pa., \$15; J. R. B., of Ind., \$25; R. McD., of N. J., \$25; A. H. P., of Iowa, \$25; H. C., of Cal., \$20; A. S. M., of Ill., \$30; E. T. S., of N. Y., \$300; R. W., of N. Y., \$45; I. F. J., of N. Y., \$146; D. C. G., of Pa., \$10; S. J. S., of N. Y., \$61; N. S., of N. Y., \$34; H. L. B., of N. Y., \$25; E. St. J., of N. Y., \$25; D. L. M., of N. J., \$16; S. F. L., of Wis., \$29; F. A., of N. Y., \$16; M. & B., of Ohio, \$25; L. D. B. and others, of Pa., \$16; J. G., of Ill., \$16; C. S., of Ill., \$60; L. C., of Mass., \$25; H. & P., of Cal., \$20; B. & T., of Vt., \$20; W. D. E., of Pa., \$12; J. T., of Wis., \$25; C. C. W., of Ill., \$50; W. F. G., of Ohio, \$10.

Persons having remitted money to this office will please to examine

the above list to see that their initials appear in it, and if they have not received an acknowledgment by mail, and their initials are not to be found in this list, they will please notify us immediately, and inform us the amount, and how it was sent, whether by mail or express.

Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office from Wednesday, April 1, to Wednesday, April 8, 1863:—

- P. and E., of Maine; D. C. G., of Pa.; J. D., of N. Y.; E. T. S., of N. Y. (6 cases); S. J. S., of N. Y.; T. R., of N. Y.; N. S., of N. Y.; K. and M., of N. Y.; L. M., of N. Y.; H. L. B., of N. Y.; W. C. O., of N. Y.; W. F. G., of Ohio; J. B., of Ill.; L. D. C., of Mich.; S. C. S., of Ill.; R. S. C., of Iowa; T. W., of Mass.; G. H., of Mass.; B. F. S., of Iowa; F. P. F., of N. J.; W. K. M., of Wis.; E. St. J., of N. Y.; J. McL., of Ohio; J. R. B., of Ind.; F. H. C. M., of N. Y.; W. D. R., of Mass.; L. C., of Mass.; B. and T. of Vt.; C. W., of Mass.; M. C. E., of N. Y.; R. McD., of N. J.; C. E. S., of Conn.; A. H. P., of Ohio; W. H., of Wis.; J. T., of Wis.; J. B. T., of N. Y.

TO OUR READERS.

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 bona fide acknowledgment of our reception of their funds.

INVARIABLE RULE.—It is an established rule of this office to stop sending the paper when the time for which it was pre-paid has expired.

PATENT CLAIMS.—Persons desiring the claim of any invention which has been patented within thirty years, can obtain a copy by addressing a note to this office, stating the name of the patentee and date of patent, when known, and inclosing \$1 as fee for copying. We can also furnish a sketch of any patented machine issued since 1853, to accompany the claim, on receipt of \$2. Address MUNN & CO., Patent Solicitors, No. 37 Park Row, New York.

Models are required to accompany applications for Patents under the new law, the same as formerly, except on design patents when two good drawings are all that is required to accompany the petition, specification and oath, except the Government fee.

NEW PAMPHLETS IN GERMAN.—We have just issued a revised edition of our pamphlet of Instructions to Inventors, containing a digest of the fees required under the new Patent Law, &c., printed in the German language, which persons can have gratis upon application at this office. Address MUNN & CO., No. 37 Park-row, New York.

Binding the "Scientific American."

It is important that all works of reference should be well bound. The SCIENTIFIC AMERICAN being the only publication in the country which records the doings of its patrons, lawyers and others, for reference. Some complaints have been made that our past mode of binding in cloth is not serviceable, and a wish has been expressed that we would adopt the style of binding used on the old series, i. e., heavy board sides, covered with marble paper and morocco backs and corners.

Believing that the latter style of binding will better please a large portion of our readers, we shall commence on the expiration of this present volume to bind the sheets sent to us for the purpose in heavy board sides, covered with marble paper and leather backs and corners.

The price of binding in the above style will be 75 cents. We shall be unable hereafter to furnish covers to the trade, but will be happy to receive orders for binding at the publication office, 37 Park Row, New York.

RATES OF ADVERTISING.

Twenty-five Cents per line for each and every insertion, payable in advance. To enable all to understand how to compute the amount they must send in when they wish advertisements inserted, we will explain that ten words average one line. Engravings will not be admitted into our advertising columns; and, as heretofore, the publishers reserve to themselves the right to reject any advertisement they may deem objectionable.

PAYE'S PATENT FORGE HAMMER.

This hammer is adapted to both heavy and light forgings; the force of the blow being entirely at the will of the operator, and for all forgings under six inches, both round or square, is the best hammer now in use, and requires but one-half the force of any other hammer to make the same work. For an engraving and description of this hammer see p. 1, Vol. V. (new series) of the SCIENTIFIC AMERICAN; some valuable improvements have, however, been since made. All communications should be addressed to H. M. AMES, Box 422, New York, or Ames Iron Works, Oswego, N. Y.

These hammers may be seen in operation at the Allaire, Neptune, Sector, Delamar, Fletcher & Harrison, Dunceap & Clairmont, Anderson & McLaren, Dohurst & Emerson, Charles T. Porter, Hudson River Railroad Car Shop, all in New York city; Joseph Colwell, Jersey City; Wm. White, Newark, N. J.; Providence (R. I.) Tool Co.; Whiting & Wilcox, Kalkins Point, Phila.; Mallory & Cottrell, Mystic, Conn.; J. Dillon, Readout; James Horner & Co., Sing Sing; Henry Esler & Co., Brooklyn; James B. Eads, St. Louis, Mo.; Franklin Iron Works, Central Railroad Shop, Albany; Burlington, Quincy & Chicago Railroad Shop, Ames Iron Works, Oswego; C. P. & A. Railroad Shop, Cleveland, Ohio.

THE INVENTOR OF SEVERAL VALUABLE IMPROVEMENTS in the construction of iron-plate and other means of war wishes to connect himself with a man of means, for patenting and making the same. One of the most important of the present time. Address S. BRUNNER, 211 East 18th street, New York.

FOR SALE—A SECOND-HAND ENGINE LATHE in good running order—swings 6 feet—distance between centers, 15 feet. Address Post-office Box 781, Albany, N. Y.

FOR SALE.—TEAM ENGINE, 16-INCH BORE, TWO feet stroke, with Judson governor, boiler of sufficient capacity for same with fire-box, chimney pipes and pump complete, but little used. Also a large gear-cutting engine to cut bevel, spur or spiral gear; one compound planer; one shaping machine, a few engine lathes and planers; one slotting machine, all of excellent quality. Also stationary engines 6, 7 and 8 inch bore, 16 inch stroke; 10x20, 12x20, 14x24, and 16x36. Portable engines from 3 to 10 horse-power. Shafting, pulleys, &c., made promptly to order. Address CINCINNATI MACHINE WORKS, corner Trout and Lawrence streets, Cincinnati, Ohio.

ORDNANCE OFFICE,

WAR DEPARTMENT, WASHINGTON, March 3, 1863. PROPOSALS will be received at this office until 4 o'clock P.M. on the 30th of APRIL, 1863, for furnishing six hundred Wrought-Iron Beams for Rails of Chassis of Sea-coast Carriages.

These beams are to be made after the following specifications:—The rail for barbed carriages is a rolled wrought-iron beam, similar in appearance to the "T" shaped beams used in the construction of fire-proof buildings. It is required to be straight, and smooth on its surface, and free from flaws, imperfect welds, blisters and cinder streaks. The outer surfaces of the two flanges are planes, parallel to each other, and at right angles to the web. The web joins the two flanges along their middle line, leaving them to project equally on each side, and must be without bends or corrugations.

- DIMENSIONS OF BEAMS. Length of rail.....171 inches. Depth between outer surfaces of flanges.....15 " Width of flanges.....5 3/8 " Thickness of flange at outer edge.....7 1/2 inch. Thickness of web.....6 1/2 inch. The beams are to be made after the following rules:— 1. They are to be made of good tough well-worked clear iron, the absence of which qualities (generally indicated by roughness of surface, and by checks and more marked roughness along the edges of the flanges), as also flaws, or bad welds, blisters and streaks of cinder will cause their rejection. 2. They are to be of the required dimensions and square at the ends. 3. They are to be straight and free from short bends in the flanges and webs. 4. The outer plane surfaces of the flanges are to be parallel to each other, and in planes perpendicular to that of the web. 5. The webs are not to be bent or troughed, as would result from welding the rails along their whole lengths on the edges of the flanges, which would cause them to bear their weight on the edges of the flanges. 6. The flanges are to be perfectly equal on each side of the web.

- VARIATIONS ALLOWED IN INSPECTING. In length of rail.....50 inch. In depth of rail.....10 inch. In thickness of web.....10 inch. In warp or wind, in depth of flange at extreme end of rail.....10 inch. Difference in distance between outer edges of plane surfaces of flanges on different sides of web at any cross section of rail.....10 inch. A straight edge of equal length with the rail placed on the outer edge of the flange should not depart from it at any point more than.....15 inch. A plane surface placed on the web should not depart from it.....10 inch. A plane surface placed on the plane surface of either flange should not depart from it at any point more than.....10 inch. Departure from square in depth of rail.....15 inch. Specimens of the beams, or drawings of them, can be seen at the United States Arsenal at Fortress Monroe, Va., Bridesburg and Pittsburgh, Pa., and Watertown, Mass.

Bidders will state the number of beams they propose to furnish, the time when they will commence the delivery, which should be as early as possible, and the number they can deliver weekly after commencing delivery, place where they will make them, and the price per pound for which they will deliver them at the point of vessel or railroad shipment nearest to their works.

No bids will be entertained except from persons actually engaged in the manufacture of iron, evidence of which must accompany the bid. Each party obtaining a contract will be required to enter into bonds, with proper sureties for its faithful fulfillment; and the transfer of the contract to another party will cause its entire forfeiture.

The right is reserved to reject all proposals if the prices are deemed too high, or, if for any cause, it is not deemed for the public interest to accept them.

Proposals will be sealed and addressed to "GENERAL J. W. RIPLEY, Chief of Ordnance, Washington, D. C.," and will be indorsed "Proposals for Wrought-Iron Beams." JAS. W. RIPLEY, 163 Brigadier-General, Chief of Ordnance.

LOWENBERG'S PATENT SOLIDIFIED WOOD.—MANUFACTURED by a simple process, at a very trifling expense, from any kind of SAWYER WOOD, including all the various kinds of wood, including rosewood, mahogany, ebony, &c., with all their original beauty, strength and durability, and in many respects and for most purposes greatly superior to natural wood. Pressed into molds it takes the most accurate impressions, and, having no grain, will take a very fine polish with but little labor, and will not warp or crack in any climate. Address W. J. DEMOREST, 473 Broadway, where specimens may be seen. Manufactured in wood of any kind, including furniture, pianos, picture frames, tools, buttons, sign or printing letters, toys, &c., are especially invited to call.

HOW TO GET THE NEW YORK DAILY SUN, WITH the postage paid, for one cent! Get your postmaster or store-keeper to receive 20 cents each from 15 persons, and remit it (\$3), and we will send him 16 copies of The Sun, postage paid, for 20 days. More money will pay for a longer time. MOSES S. BEACH, Proprietor of The Sun, corner of Fulton and Nassau streets, New York. N. B.—The Weekly Sun is only 60 cents a year. 16 4g

DAMPER REGULATORS.—GUARANTEED TO EFFECT a great saving in fuel, and give the most perfect regularity of power. For sale by the subscribers, who have established an exclusive right to manufacture damper regulators, using diaphragms or flexible vessels of any kind. Orders promptly attended to, or information given, by addressing CLARK'S PATENT STEAM AND FIRE REGULATOR COMPANY, 229 Broadway, New York. Responsible agents wanted. 16 26\*

THE "KING MICROSCOPE"—DOUBLE LENS.—Prof. Horsford, of Harvard University, says: "It works very well, and you have got it up very neatly." Magnifies 38 diameters—55 cents. The "BOWEN MICROSCOPE," 28 cents. The "S. WOODWARD MICROSCOPE," 28 cents. Or one each of the three kinds for \$1. All free of postage. Address T. EDWIN KING, Box 330, Boston, Mass. 15 4\*

ONE WHO HAS HAD EXPERIENCE IN DESIGNING and Constructing Machinery, and a Civil Engineer, desires a position as Mechanical Engineer. Address S. W. ROBINSON, Ann Arbor, Mich. 15

TO LEASE OR FOR SALE—THE FOUNDRY KNOWN as the "Newark Machine Co.'s Foundry," situated on High street, in the city of Newark, N. J.—building 80 feet long by 85 feet deep, 30 feet high, slate roof, with molding pit, three melting stacks, three cranes, &c., all in perfect order to carry on the regular foundry business; also large brass furnaces, &c., arranged especially for casting cannon; also, dwelling house adjoining, 30 feet square, and kitchen; also, barn on Boyden street. The whole, with over an acre of land attached, will be leased or sold, together with a valuable water privilege. Address of apply to THOS. B. NORRIS, No. 2 Washington place, Newark, N. J., or ROBERT VAN ARSDALE, Esq., Morris buildings. The foundry building can readily be converted into a three-story factory, and made suitable to other manufacturing business. 16 2\*

FORT WAYNE SPOKE, HUB AND BENDING FACTORY.—We wish to correspond with inventors of machines for bending pipe, and with a view of purchasing a machine and right. OLDS, HANNA & CO. 16 2\*

TO INTRODUCE NEW ARTICLES OR EXTEND YOUR business. A catalogue of the names and address of the dealers in hardware, stoves, tinware and agricultural implements in the United States and British Provinces will be sent by mail (prepaid) on receipt of two dollars. Very important in directing circulars. H. B. LANE, 151 Nassau street, New York.

WANTED—A NEW OR GOOD SECOND-HAND Steam Engine with tubular boiler, about one horse-power, with governor, pump, &c. Also an engine lathe with all modern improvements—track about thirty inches. Any one having either of the above for sale will please address, with full description and price, M. L. BAXTER, Derby Line, Vt. 15