

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 revised Patent Law, enacted by Congress on the 2d of March, 1861, are now in full force, and prove to be of great benefit to all parties who are concerned in new inventions.

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 to \$15.

Table listing fees for various patent services: On filing each caveat, \$10; On filing each application for a patent, \$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, \$10; 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!

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.

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.

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.

Invectors 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.

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 models by express (prepaid), should be addressed to MUNN & CO., No. 37 Park Row, New York.



L. M. B., of Mich.—Sulphate of potassa is the best mordant known to us for hair dye—using nitrate of silver as the coloring agent. Gallic acid is a disagreeable mordant. To clean a marble slab first use soap and whitening; then rub off and polish with a piece of leather. Iron stains may be removed from marble with a solution of oxalic acid; but it renders the surface of the marble rough.

W. W. D., of Conn.—The armor plates and turrets of the Rattlesnake weigh over fourteen hundred tons, all of which has to be sustained by the framing of the vessel. The framing, however, is very strong.

R. H., of N. Y.—In making your currant wine, use about one pint of sugar to one quart of the juice of the currants, and watch the progress of the fermentation, daily, so as to check it at the right point. If you allow it to proceed too far, it will acquire a taste like vinegar flavored with smoke.

W. C. T., of N. J.—Some gardeners use a soft brush for removing aphides from rare and delicate plants, in cases where fumigation would be too troublesome. We advise you to try this plan for yours.

H. L. V., of Cuba.—The oscillations of the barometer are more limited in tropical than in northern climates, but they are just as regular. In Cuba a disturbance of the mercury, equal to that which occurs in the North before a slight thunder-storm, is a sure precursor of a terrific hurricane. By close attention to a barometer, you will discover this to be the case.

Note.—At the time of going to press with our last issue we had the usual weekly lot of specifications, drawings and models, packed and ready to send to the Patent Office. But owing to the riotous turmoil raging in the city on that day, we were compelled to withhold the shipment for a day or two, until law and order were restored.

Money Received

At the Scientific American Office, on account of Patent Office business, from Wednesday, July 8, to Wednesday, July 22, 1863:—

- G. A., of Mich., \$26; R. R. B., of N. Y., \$16; R. W., of Conn., \$150; H. P., of Me., \$25; J. S. G., of N. Y., \$16; O. F. O., of Mass., \$25; G. McG., of Ohio, \$16; J. M., of Wis., \$12; P. B., of Ill., \$15; I. H., of Wis., \$26; A. S., of N. Y., \$16; B. and C., of R. I., \$50; N. F. C., of Wis., \$25; W. M., of Mass., \$30; N. B. B., of N. Y., \$16; J. T., of Wis., \$65; W. McK., of Pa., \$25; S. W. P., of Mass., \$16; C. M. L., of N. H., \$20; A. S. M., of Ill., \$20; C. C. S., of Ill., \$30; G. B., of Cal., \$50; J. T. W., of N. J., \$16; J. B. T., of N. Y., \$20; J. W. D., of N. Y., \$36; J. P., of N. J., \$41; J. G., of Ill., \$20; S. S. A., of Mass., \$20; T. R. T., of N. Y., \$55; S. S. and D. C., of Ill., \$20; W. T., of N. Y., \$10; J. C. C., of N. Y., \$314; S. and S., of N. Y., \$16; C. D. S., of N. Y., \$25; W. C. H., of Ohio, \$25; C. D. B., of Mich., \$25; J. W., of Ill., \$40; F. M., of C. W., \$16; J. H. C., of Ky., \$25; M. and S., of Pa., \$25; W. K. S., of Pa., \$25; T. H. B., of Mass., \$16; J. H. R., of Conn., \$12; B. F. H., of N. Y., \$25; H. B., of Pa., \$16; C. D., of Mo., \$25; A. J. A., of Ill., \$15; R. H. L., of Pa., \$20; O. H. K., of Saxony, \$20; J. V. V. B., of N. Y., \$41; C. F. B., of N. Y., \$10; P. P., of N. Y., \$30; A. C. C., of N. Y., \$41; J. McH., of Ohio, \$20; J. P., of N. Y., \$10; S. and M., of Iowa, \$20; H. H. J., of Conn., \$20; M. W. W., of Mo., \$16; J. J. R., of N. Y., \$16; C. T. D., of N. J., \$20; A. B., of N. J., \$41; J. H. M., of Ind., \$20; E. B. R., of N. J., \$20; G. H. S., of Mass., \$25; A. B., of Mich., \$25; J. B. C., of Mass., \$25; M. C. B., of Ill., \$16; S. L. G., of N. Y., \$25; B. L., of

- Vt., \$133; I. E. P., of Conn., \$30; J. K., of Iowa, \$16; J. D., of Ill., \$41; S. H. M., of Cal., \$11; K. C. and R., of Wis., \$10; R. F. W., of N. Y., \$30; J. C., of Maine, \$20; T. L. C., of N. Y., \$25; J. G. R., of Cal., \$33; M. F. W., of Ill., \$26; A. S., of Ill., \$20; J. B., of Ind., \$30; I. L., of N. Y., \$20; O. P., of Vt., \$20; A. and C. K., of N. Y., \$41; F. D. B., of Ind., \$20; J. H., of Cal., \$41; C. R., of Mich., \$20; A. K., of N. Y., \$41; G. G. H., of Conn., \$20; F. W. H., of Canada, \$20; J. C., of Ohio, \$20; L. and B., of Ohio, \$51; A. M. M., of N. Y., \$16; J. C. W., of N. Y., \$20; T. S. T., of Ind., \$20; J. H. L. T., of Ill., \$20; O. A., of N. Y., \$25; B. C. N., of Ill., \$12; A. S., of N. Y., \$15; J. V. V. B., of N. J., \$25; J. P., of N. J., \$25; A. M. M., of N. Y., \$25; W. W. T., of Wis., \$15; J. W. K., of Mass., \$25; H. E., of N. Y., \$20; A. B., of N. Y., \$25; T. B., of N. Y., \$25; J. H. B., of N. Y., \$25; J. T. W., of N. J., \$25; T. R. T., of N. Y., \$55; A. J. S., of Ill., \$16; J. S. G., of N. Y., \$25; A. C. F., of N. Y., \$20; E. O. B., of N. Y., \$25; R. F. W., of N. Y., \$25; A. K., of N. Y., \$25; F. J., of Wis., \$25; J. W., of Iowa, \$31; A. C. B., of N. Y., \$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, July 8, to Wednesday, July 22, 1863:—

- A. and C. K., of N. Y.; A. B., of N. Y.; T. B., of N. Y.; P. M. R., of Cal.; A. S., of N. Y.; A. K., of N. Y.; A. M. M., of N. Y.; F. J., of Wis.; J. T., of Wis. (2 cases); C. D., of Maine; J. G. R., of Colorado Territory; P. S., of Mich.; J. H. K., of Conn.; C. D. S., of N. Y.; A. B., of Mich.; G. H. S., of Mass.; W. C. H., of Ohio; A. and M., of Wis.; I. H., of Wis.; A. C. C., of N. Y.; E. O. B., of N. Y.; B. C. N., of Ill.; J. H. B., of N. Y.; J. V. V. B., of N. J.; J. P., of N. J.; J. W., of Iowa; J. M., of Cal.; W. M., of Mass.; B. F. H., of N. Y.; N. F. C., of Wis.; J. H. C., of Ky.; S. L. G., of N. Y.; W. F. O., of Mass.; J. B. C., of Conn.; J. M., of Ill.; W. R. S., of Pa.; G. A., of Mich.; J. W. D., of N. Y.; O. A., of N. Y.; R. F. W., of N. Y.; J. T. W., of N. J.; T. R. P., of N. Y.; J. W. K., of Mass.; J. S. G., of N. Y.; E. D. B., of N. Y.; M. F. W., of Ill.; W. McK., of Pa.; T. L. C., of N. Y.; R. and H., of Ohio; H. P., of Maine; C. D. B., of Mich.; W. M. B., of Ind.; M. and S., of Pa.; S. H. M., of Ill.

TO OUR READERS.

PATENT CLAIMS.—Persons desiring the claim of any invention which has been patented within thirty years, can obtain 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 1863, 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 are required to accompany the petition, specification and oath, except the Government fee.

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.

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 the United States Patent Office, it is served by a large class 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 commenced on the expiration of Volume VII. 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 is 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, No. 37 Park Row, New York.

Back Numbers and Volumes of the Scientific American.

VOLUMES I., II., III., IV., V., VII. AND VIII. (NEW SERIES) complete (bound) may be had at this office and from periodical dealers. Price, bound, \$2 25 per volume, by mail, \$3—which includes postage. 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. VOL. VI. is out of print and cannot be supplied.

RATES OF ADVERTISING.

Twenty-five Cents per line for each and every insertion, payable in advance. To enable all to understand how to calculate the amount they must send when they wish advertisements published, 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.

A CHEMIST EXPERIENCED IN ALL BRANCHES OF manufacture and science, desires employment in a chemical or dyeing business. Can give the best of references. Address FREDERICK HOFFMAN, 178 Fulton street, New York.

WAIT'S IMPROVED JONVAL TURBINE WATER wheel. The best and cheapest wheel in use. Heavy, strong and durable, adapted to all heads, easily set up and never gets out of order. Circulars sent on application. F. H. WAIT, Handy Hill, N. Y.

A VALUABLE WORK FOR INVENTORS, PATENTEES AND MANUFACTURERS.

The publishers of the SCIENTIFIC AMERICAN have just prepared, with much care, a pamphlet of information about Patents and the Patent Laws, which ought to be in the hands of every inventor and patentee, and also of manufacturers who use patented inventions.

The complete Patent Law Amendment Act of 1861—Practical Instructions to Inventors, how to obtain Letters Patent, also about Models—Designs—Caveats—Trade-marks—Assignments—Revenue Tax—Extensions—Interferences—Infringements—Appeals—Re-issues of Defective Patents—Validity of Patents—Abandonment of Inventions—Best Mode of Introducing them—Importance of the Specification—Who are entitled to Patents—What will prevent the Granting of a Patent—Patents in Canada and European Patents—Schedule of Patent Fees; also a variety of miscellaneous items on patent law questions.

It has been the design of the publishers to not only furnish, in convenient form for preservation, a synopsis of the Patent Law and Patent Office, but also to answer a great variety of questions which have been put to them from time to time during their practice of upwards of seventeen years, which replies are not accessible in any other form. The publishers will promptly forward the pamphlet by mail, on receipt of six cents in postage stamps.

Address MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, No. 37 Park Row, New York.

MAGIC TIME OBSERVERS, THE PERFECTION OF

Mechanism! Being a hunting or open face or lady's or gentleman's watch combined, with patent self-winding improvement.—The New York Times, in its issue of Jan. 10, 1863, on page 147, voluntarily says: "We have been shown a most pleasing novelty, of which the Hubbard Bros., of New York, are the sole importers. It is called the 'Magic Time Observer,' and is a hunting and open face watch combined. One of the prettiest, most convenient, and decidedly the best and cheapest timepieces for general and reliable use ever offered. It has within it and connected with its machinery its own winding attachment, rendering a key entirely unnecessary. The case of this watch are composed of two metals, the outer one being the precious gold. It has the improved ruby action lever movement, and is warranted an accurate timepiece." Price, superbly engraved, per case of half a dozen, \$204. Sample watches, in neat morocco boxes, for those proposing to buy at wholesale, \$36. Sent by mail post paid upon receipt of price. This watch can also be sent by express to any part of the United States with bill payable on delivery. Senders and others in the distant States, or any part thereof, must send cash in advance, as we cannot collect from them. Call upon or address HUBBARD BROS., sole importers, 169 Broadway, New York.

TO MACHINISTS AND BOILER MAKERS.—HAVING

purchased the patent right of Beckwith's Ball and Rivet Cutter, for the State of New York, it is now offered for sale in counties or shoro rights. The patent was granted on March 24, 1863, and the invention is believed to be the best of its kind ever offered for sale. For terms address M. J. VAN DEUSEN, care of HON. ALANSON KNAPP, Alton, Wayne county, N. Y.

WAR DEPARTMENT.

PROVOST MARSHAL GENERAL'S OFFICE, WASHINGTON, July 20, 1863.

Existing laws make a distinction in the matter of pay, bounty and other allowances, between soldiers of African descent and others soldiers in the service of the United States. Men of African descent can, therefore, only be accepted as substitutes for each other under the Enrollment act.

JAMES B. FRY, Provost Marshal General.

AN ENGINEER COMMANDING A LARGE BUSINESS

and some cash capital, is desirous of entering into partnership in a well established machine shop. Address H. G., care of D. R. KENT, 176 Bleecker street, New York.

WHITE'S PATENT GOVERNOR AND CHECK VALVE

—A perfect regulator of steam, and always safe, as it checks the speed of an engine if the governor belt breaks or comes off, which alone is worth the price of it. Territory for sale. For particulars inquire of A. WHITE & CO., proprietors and manufacturers, Genesee, Henry county, Ill.

LABORATORY OF INDUSTRIAL CHEMISTRY.—AD-

vice on chemistry applied to arts and manufactures, agriculture, metallurgy, analyses, and commercial assays of every kind; plans of factories, chemical fabrications, recipes, &c. &c. Address Prof. H. DUSSAUGE, chemist, New Lebanon, N. Y.

RIGHT FOR THE STATE OF NEW YORK FOR SALE.—

Improved Automatic Weighing Scale. This scale operates without the use of weights or springs, is compact, simple and cheap, always reliable, never gets out of order, has every advantage of the spring balance without its disadvantages, and can be adapted to every kind of scale now in use, and is superior to any scale now in use. For terms &c., address as soon as possible L. C. CROWELL, 187 Salem street, Boston, Mass.

WATER WHEELS.—REYNOLD'S PATENT.—THE

best turbine in use; powerful and economical in use of water. Call upon or address us at our office, Works at Oswego. 34 FALLGOTT & UNDERHILL, 482 Broadway, New York.

WOOD-WORKING MACHINES.—A FULL SET

for car and sash and door work. Two Woodworth planers 6 rolls, 14 inches. One Gray & Wood planer 16 by 20, one Daniel's planer, one planer and matcher, two moldering, two tenoning, and two mortising machines, two scroll saws, one boring machine, two saw tables, one circular saw mill, one "Wicks" re-sawing mill, one cut-off saw, one blind cut machine, belt, &c. all in good order and cheap for cash. Address CHARLES H. SMITH, 135 North Third street, Philadelphia, Pa.

MACHINERY.—SLIDE LATHES, IRON PLANERS,

and upright drills, bolt-cutting machines, mangle machines, gear-cutting machines, punchers, mangle, universal chucks, &c. at 135 North Third street, Philadelphia, Pa. CHARLES H. SMITH.

FOR WOODWORTH'S OR DANIEL'S PLANERS AND

Sash Machinery address J. A. FAY & CO., or E. C. TAINTER, succeeding partner, Worcester, Mass. 22 & 25-2 & Vol. 9.

VULCANIZED RUBBER.—

Adapted to mechanical purposes.—MACHINE BELTING, STEAM PACKING, VALVES, HOSE, EMERY VULCANITE WHEELS, &c. &c. Directions, prices, &c., can be obtained on application to the NEW YORK BELTING AND PACKING COMPANY, Nos. 37 and 38 Park Row, New York.

FOR SALE.—THREE NEW STATIONARY ENGINES.—

Cylinder 7 inches bore, 14 inches stroke; fly-wheel 4 feet diameter, 12 inches face; complete, with cocks, pump, &c. Boiler, double return flue, 36 inches diameter, 15 feet long; fitted with valves, cocks and pipes to connect with engine. Also 25 feet iron chimney, and all fixtures required to put the engine in operation. Price \$300 each, securely packed. ALBERTSON & DOUGLASS MACHINE CO., New London, Conn.

THE UNRIVALLED DOUGLASS ARTIFICIAL LIMBS

are adapted and applied to all forms of amputations. Recommended by the leading surgeons; liberally patronized by the U. S. Army and Navy officers. Manufactured by P. DeForest Douglass, Burt's Block, Springfield, Mass.

B. T. BABBITT ON MAKING BREAD, WITH FULL

directions on each package of Salaratus, showing how to make the best of bread from materials that farmers always have on hand. Bread made in this manner contains nothing but flour and common salt and water; it has an agreeable taste, keeps longer than common bread; is more digestible and much less disposed to turn to acid. Common bread, like every thing that has been fermented, ferments again to the great discomfort of many stomachs, and not only so, but acting as a ferment, it communicates to all food in contact with it. The bread being free from all yeasty particles, is more digestible and not so likely to create flatulence or turn acid on weak stomachs as fermented bread is apt to do, and, when of the finest quality, it is beneficial to those who suffer from headache, acidity, flatulence, eruptions, a sense of sinking at the pit of the stomach, distention or pains after meals, and to all who are subject to colic or gravel; it is also useful in many affections of the skin; a saving of 25 pounds of flour per barrel is effected by this process. Be sure and get that with B. T. BABBITT'S name on, or you will not get the recipe with sour milk, nor the quality. For sale by store-keepers generally or at the manufactory, Nos. 64 to 74 Washington street, New York.

TO MANUFACTURERS AND MACHINE BUILDERS.—

The undersigned being engaged in the purchase and sale of machinery, such as steam engines, mill and factory machinery, lathes, tools, and all kinds of manufactured machines and implements, and assisting commission merchants and others in their purchases, and in the manufacture of their machinery or works they may have. Parties introducing new inventions or improvements will find it to their interest to communicate with him, giving such information in regard to their improvements as they deem necessary, which will receive the attention due to their merits. J. E. STEVENSON, Machinery Broker, 200 Broadway, New York. References: Messrs. North, Lester, Works, New York; Franklin Townsend, Albany, N. Y.; Lowell Machine Shop, Lowell, Mass.; Hunsworth, Eakins & Naylor, People's Works, Philadelphia, Pa.

FIBER-CLEANING MACHINE.—THIS VALUABLE

machine, the invention of Eduardo J. y Parrullo, and illustrated on page 366, last volume, SCIENTIFIC AMERICAN, is now on exhibition, where the public are invited to examine it, at the establishment of TODD & RAFFERTY, No. 13 Day street, New York.

WANTED.—SCRAP IRON, OLD BOILERS, AND OLD

Iron Machinery.—The subscribers will pay cash for any quantity of wrought or Cast Scrap Iron, Old Boilers, Old Iron Machinery, delivered at their warehouse, 28, 30, and 32 Terrace street; Buffalo, or at their Rolling Mill and Nail Factory, Black Rock, N. Y. Buffalo, July, 1863. PRATT & CO. 2 18*

\$60 A MONTH! WE WANT AGENTS AT \$60 A

month, expenses paid, to sell our Everlasting Pencils, Orient's Burners, and thirteen other new, useful and curious articles. Fifteen circulars sent free. Address SHAW & CLARK, Bideford, Maine. 21 11*

PECK'S PATENT DROP PRESS.—ALL THE SIZES

used in the manufacture of silver, brass or tinware, lamps, spoons, jewelry, &c.; also for forging purposes, on hand or made to order, by MILO, PECK & CO. New Haven, Conn. 22 13*

HOMAN'S "EXCELSIOR" HORSE HAY RAKE.—

Those wishing rights in the West, either for manufacture or speculation, should apply immediately. New England States already secured. Described in Nos. 22 and 25, Vol. VIII. (new series) of the SCIENTIFIC AMERICAN. Circulars sent free. C. B. HOLMES, Dowagiac, Mich. 25 5*

NERVOUS DISEASES AND PHYSICAL DEBILITY,

arising from Specific causes, in both sexes—new and reliable treatment, in Reports of the Howard Association—sent in sealed letter envelopes, free of charge. Address Dr. J. SKILLIN HOUGHTON, Howard Association, No. 2 South Ninth street, Philadelphia, Pa. 3 4*

BOLTS, NUTS AND WASHERS OF ALL SIZES CON-

stantly on hand for sale by LEACH BROTHERS, 86 Liberty street New York. 1 18*

COTTON GINS! COTTON GINS!! THE NEW YORK

Cotton Gin Company manufacture and offer for sale the Excelsior Roller Gin for Sea Island or long staple cotton; also Brown's celebrated Double-cylinder Saw Gin for upland or short staple. The above Gins are acknowledged to be without their equal; they do more work and produce a better sample than any offered in the market. We also manufacture a large variety of hand Gins, both for long and short staples. Persons intending to order for the coming crop of cotton will do well to do so soon, in order to secure their Gins in season. FRANKLIN H. LUMMUS, General Agent, No. 82 John street, New York. 25 13*

BLACK DIAMOND STEEL WORKS, PITTSBURGH

Pa. PARK, BROTHER & CO., manufacturers of best quality Refined Cast Steel, square, flat and octagonal of all sizes. Warranted equal to any imported or manufactured in this country. Office and Warehouse, Nos. 149 and 151 First street, and 120 and 122 Second street, Pittsburgh, Pa. vol. 8 11 1/2*

LANE'S PATENT LIFTING JACK.—VERY EASILY

operated, compact, simple and cheap. For cut and description see page 405, Vol. VIII. (new series), SCIENTIFIC AMERICAN. State rights for sale. Communications in relation to rights or orders for Jacks may be addressed to J. G. LANE, Washington, N. Y. 1 8

PORTABLE STEAM ENGINES.—COMBINING THE

maximum of efficiency, durability and economy with the minimum of weight and price. They are widely and favorably known, more than 200 being in use. All warranted satisfactory or no sale. A large stock on hand ready for immediate application. Descriptive circulars sent on application. Address J. C. HOADLEY, Lawrence, Mass. 2 13

FOR SALE.—A PATENT GRANTED ON MARCH 17,

1863. Described in the SCIENTIFIC AMERICAN, Vol. VII., No. 20. A spring skate which is light and durable, with an improved revolving heel screw. Samples can be seen at Walton's Skate Emporium No. 67 Warren street, or at the owner's, 178 Water street, New York. 25 10* JOSEPH M. YATES.

FAN BLOWERS.—DIMPPEL'S, ALDEN'S, MCKENZIE'S

and others, for Steamboats, Iron Works, Foundries, Smith Shops, Jewellers, &c., on hand for sale by LEACH BROTHERS, 86 Liberty street, New York. 2 13*

IRON PLANERS, ENGINE LATHES, DRILLS AND

other machinists' tools, of superior quality, on hand and finishing, for sale low. For description and price address NEW HAVEN MANUFACTURING COMPANY, New Haven, Conn. 1 17

PAYE'S PATENT FORGE HAMMER.—ADAPTED TO

both heavy and light forgings, with an adjustable stroke of from one inch to three feet, on hand for sale by LEACH BROTHERS, 86 Liberty street, New York. 1 13*

MACHINERY.—S. C. HILLS, No. 12 PLATT-STREET

New York, dealer in Steam Engines, Boilers, Planers, Lathes, Chucks, Drills, Pumps; Mortising Tenoning and Sash Machines; Woodworth's and Daniel's Planers, Dick's Punches, Presses and Shears; Cob and Corn Mills; Harrison's Grist Mills; Johnson's Shingle Mills; Belting, Oil, &c.

A MESSEURS LES INVENTEURS.—AVIS IMPORT-

ant. Les inventeurs non familiers avec la langue Anglaise, et qui préféreraient nous communiquer leurs inventions en Français, peuvent nous adresser dans leur langue natale. Envoyez nous un dessin et une description concise pour notre examen. Toutes communications ser. en confidence. MUNN & CO., Scientific American office, No. 37 Park Row, New York.

THE CHEAPEST MODE OF INTRODUCING INVENTIONS.

INVENTORS AND CONSTRUCTORS OF NEW AND USEFUL CONTRIVANCES OR MACHINES, of whatever kind, can have their Inventions illustrated and described in the columns of the SCIENTIFIC AMERICAN on payment of a reasonable charge for the engraving.

No charge is made for the publication, and the cuts are furnished to the party for whom they are executed as soon as they have been used. We wish it understood, however, that no second-hand or poor engravings, such as patentees often get executed by inexperienced artists for printing circulars and handbills from, can be admitted into these pages. We also reserve the right to accept or reject such subjects as are presented for publication. And it is not our desire to receive orders for engraving and publishing any but good Inventions or Machines, and such as do not meet our approbation in this respect, we shall decline to publish.

For further particulars address— MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, No. 37 Park Row, New York City.

OIL! OIL! OIL!

For Railroads, Steamers, and for Machinery and Burning. PEASE'S Improved Engine and Signal Oil, Indorsed and recommended by the highest authority in the United States. This oil possesses qualities essentially 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 to 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, pronounces it "superior to any other they have ever used for machinery." For sale only by the Inventor and Manufacturer, F. S. PEASE, No. 61 Main street, Buffalo, N. Y. N. B.—Reliable orders filled for any part of the United States and 24 13*

GUILD & GARRISON'S CELEBRATED STEAM

Pumps.—Adapted to every variety of pumping. The principal styles are the Direct Action Excelsior Steam Pump, the improved Balance Wheel Pump, Duplex Vacuum and Steam Pumps, and the Water Propeller, an entirely new invention for pumping large quantities at a light lift. For sale at Nos. 65 and 67 First street, Williamsburgh, and No. 74 Beekman street, New York. 1 17 GUILD, GARRISON & CO.

VALUABLE DOCK PROPERTY FOR SALE.—THE

subscriber offers for sale a valuable plot of ground on Newtown Creek, near Penny Bridge, in the city of Brooklyn. The property is very desirably situated in the Seventeenth Ward, Meeker avenue, a great thoroughfare forming the southerly boundary of the Precinct. A valuable dock privilege of over 400 feet on Newtown Creek, renders the property very desirable for large manufacturing or storage purposes. Vessels of six or eight feet draught can navigate the creek at low tide, and of much greater capacity at high water. The upland and water privilege comprise about nineteen acres, and will be sold very cheap, and the terms of payment made liberal. For further particulars, address J. B. BULLOCK, attorney for the owners, No. 59 Nassau street, New York. 22 17

THE CELEBRATED CRAIG MICROSCOPE WILL BE

mailed, prepaid, for \$2 25, with 6 beautiful mounted objects for \$3; with 24 objects for \$6, by HENRY CRAIG, 180 Center street (3d floor), New York. Liberal discount to dealers. "The Craig Microscope are just what they claim to be, and those who wish for such an article will not be disappointed if they should obtain one of these."—N. Y. Methodist. 19 13*

TO PHOTOGRAPHERS.—IMPROVED PHOTOGRAPHIC

Camera, Patented March 23, 1862, by A. B. WILSON (Patentee of the Wheeler and Wilson Sewing Machine), adapted to all photographic work; such as Landscapes, Stereoscopic Views, Carte Visites, Amalgams, &c. Can be used by amateurs and others from printed directions. Send for a circular. Address A. B. WILSON, Waterbury, Conn. 18 1/2

IMPORTANT TO THOSE USING STEAM BOILERS.—

Blake's Patent Self-Acting Apparatus for supplying boilers with water. It keeps the water at a uniform height against any pressure. Very simple and sure. All interested can see them in operation at our works, or circulars describing them will be sent by mail. BLAKE & WHEELLOCK, 71 Gold street, New York. State rights sale. 23 2*

FLAX, HEMP, JUTE AND MANILLA.—RICHARD

KITSON, Lowell, Mass., manufacturer of needle-pointed card clothing for carding flax, hemp, jute and manilla. 21 1*

\$75 A MONTH! I WANT TO HIRE AGENTS IN

every county at \$75 a month, expenses paid, to sell my new cheap Family Sewing Machines. Address S. MADISON, Alfred, Maine. 21 13*

DAMPER REGULATORS.—GUARANTEED TO EF-

fect a great saving in fuel, and give the most perfect regularity of power. For sale by the subscribers, who have established their 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, No. 5 Park Place, New York. Responsible agents wanted. 16 25*

WATER WHEELS.—WARREN'S TURBINE WATER

Wheel and Turbine Regulator are used successfully in over 500 extensive cotton and woolen mills, where the greatest economy of water is at stake. Send for illustrated pamphlet. Address ALONZO WARREN, Agent for American Water Wheel Company, No. 31 Exchange street, Boston, Mass. 24 8*

POWER LOOM WIRE CLOTHS AND NETTINGS.

superior in quality and at low prices, by the CLINTON WIRE CLOTH COMPANY, Clinton, Mass. N. B.—Our trade-mark "Power Loom Wire Cloth." vol. 8 24 3/4*

Zur Beachtung für deutsche Erfinder.

Die Unterzeichneten haben eine Anstalt, die Erfindern das Bestehen ermöglicht, um sich ihre Patente zu sichern, herauszugeben, und verarbeitend, welche gratis an die Erfinder, welche nicht mit der englischen Sprache befaßt sind, können ihre Mitteilungen in der deutschen Sprache machen. Sagen ihre Erfindungen mit kurzen, deutlich gefaßten Bezeichnungen Bekannte man zu adressieren an MUNN & CO., 37 Park Row, New York.

Auf der Doffe wird deutsch abgedruckt.

Bestellt ist zu haben: Die Patent-Gesetz der Vereinigten Staaten.

nebst den Regeln und der Geschäftsordnung der Patent-Office und Anleitungen für den Erfinder, um sich Patente zu sichern, in den Ver. St. sowohl als in Europa. Ferner Auszüge aus den Patent-Gesetzen fremder Länder und darauf bezügliche Verfügungen; ebenfalls nützliche Hinweise für Erfinder und solche, welche patentieren wollen.

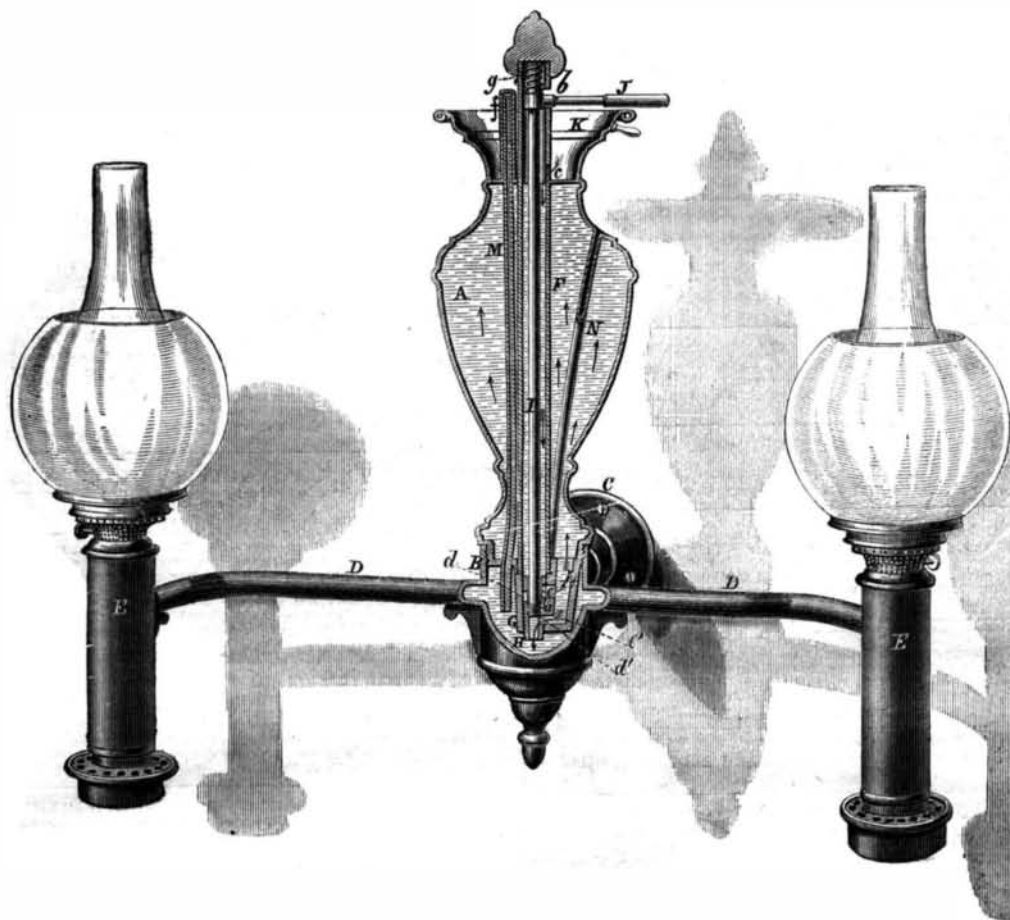
Preis 20 Cts., per 25 Cts. 24 8*

Improved Reservoir Lamp.

The engraving herewith presented is one of a class of lamps that are being gradually introduced to public notice. They possess decided advantages over lamps with burners attached directly to the fountains (as in ordinary ones), for the reason that the supply of oil to the wick is limited or weakened as the quantity decreases, and the light consequently becomes dim. With these lamps the reservoir, directly beneath the burner, is always full; the light is, therefore, clear and steady, and will last much longer without renewal than it does in ordinary lamps. When the lamp requires to be re-filled it can be easily done without removing chimneys, globes, or other appurtenances, and the flame need

atmosphere. On the upper part of the valve rod, I, there is a spring, G, which keeps the valve, H, in its place. These are the principal details of this apparatus; the operation is as follows:—

The fountain, A, is filled with oil by turning the valve, H, so that the hole, *d*, will be in line with the aperture, *e*, the other holes being of course out of line with each other. When the valve is in this position, a communication between the fountain, K, and the tube, F; all communication between A and B is cut off. When the oil is poured into the funnel, K, it runs down the tube, F, through the opening, *c*, and the holes, *d* and *e*, into the valve and socket and up through the chamber, L, into the fountain, A, as indicated by the arrows. When the fountain is

**SEAMAN'S PATENT RESERVOIR LAMP.**

not be extinguished to perform the office. The detailed description herewith appended will enable the reader to very clearly understand the philosophical principles on which the lamp works.

In Fig. 1, A represents the fountain of the lamp, screwed into the cup, B, attached to the bracket, C, and having a tube, D, communicating with it; this tube connects at its outer end with a small chamber, E, in the upper end of which the usual burners and globe are attached. It will be seen that the large fountain is elevated materially above the level of the burner, and that it has a tube, F, fastened securely in its center, in the lower end of which the conical socket, G, is fastened; in this socket the valve, H, is fitted and allowed to turn freely by means of the rod, I, and the handle, J, working through the slot, *b*, in the top of the tube. The valve has a partition, *a*, in which the rod is fastened. On the upper part of the fountain is the chamber, K. This chamber communicates at the bottom with the tube, F, through the opening, *c*; the valve, H, has also two holes, *d* and *e*, one above and the other below the partition. These openings are on opposite sides of the valve, and the socket, G, has also two holes, *e* and *e'*, one directly over the other and in line with the holes *d* and *e*. The apertures, *e* and *e'*, form a communication with a small chamber, L, adjoining the socket, G, which communicates at the top with the main reservoir. The tube, M, is fitted into the fountain and extends down a certain distance into the cup, B; the upper part of the tube rises above the top of the fountain, and is enclosed by a case, *f*, the lower end of which opens into the fountain. The tube, N, passes quite through the fountain and opens a communication between the cup, B, and the

full, communication between the holes, *d* and *e*, is cut off by turning the handles, J; this act brings A and B into connection with each other, so that the oil will flow into the tube, D, and up to the burner in F. The oil will run down from A to B until it covers the lower end of the tube, M, the flow will then cease in consequence of the atmospheric pressure being removed from the upper end of the reservoir. When the lower end of the tube, M, is open, the air in B, above the oil, passes up through the tube, M, into the upper part of the chamber, A, while B is supplied with air through the tube, N. As the oil is consumed in E, the level of it falls in B, and when the lower end of the tube, M, is left free, the air will rush up through it and cause a flow from A to B. Thus it will be seen that the wicks in E are constantly supplied with oil so long as there is any in the fountain. There is no possibility of the oil overflowing; the whole apparatus being self-acting, except so far as filling the reservoir primarily. The oil in the chamber, A, cannot escape without a pressure of air on its upper surface, and this cannot occur when the lower end of the tube, M, is immersed; the tube, M, also permits the air to escape when the fountain is to be filled.

These lamps, are, we are informed, selling quite rapidly, notwithstanding the short time they have been in the market, and they give the fullest satisfaction to all who have used them. Any number of branches for burners can be furnished, from one to forty and one, or a larger number still if required.

The patent for this invention was procured through the Scientific American Agency, on June 9, 1863, by John H. Seaman, 14 Meserole street, Brooklyn, N. Y., and further information can be had by address-

ing Fellows, Hoffman & Co., No. 74 Bockman street, New York.

NORTHERN RICE.—In Japan, a species of rice is cultivated in localities having a climate similar to Ohio, Indiana, Illinois, and Missouri. A species of wild rice grows in shallow lakes in Canada; and Rice Lake near Coburg, C. W., derives its name from the great quantity of this grain which grows in it. The Indians in that section consider this rice their natural, lawful crop, and gather it yearly, charging the white settlers about a dollar per bushel for it. This cereal could be raised in all the shallow bays of our North American lakes.

PROSPECTUS

OF THE
SCIENTIFIC AMERICAN.

THE BEST MECHANICAL PAPER IN THE WORLD.

NINETEENTH YEAR!

VOLUME IX.—NEW SERIES.

The publishers of the SCIENTIFIC AMERICAN beg to announce that on the fourth day of July, 1863, a new volume commenced, and it will continue to be the aim of the publishers to render the contents of each successive number more attractive and useful than any of its predecessors.

The SCIENTIFIC AMERICAN is devoted to the interests of Popular Science, the Mechanic Arts, Manufactures, Inventions, Agriculture, Commerce, and the Industrial pursuits generally, and is valuable and instructive not only in the Workshop and Manufactory, but also in the Household, the Library and the Reading Room.

The SCIENTIFIC AMERICAN has the reputation, at home and abroad, of being the best weekly journal devoted to mechanical and industrial pursuits now published; and the proprietors are determined to keep up the reputation they have earned during the eighteen years they have been connected with its publication.

To the Mechanic and Manufacturer!

No person engaged in any of the mechanical pursuits should think of doing without the SCIENTIFIC AMERICAN. It costs but six cents per week; every number contains from six to ten engravings of new machines and inventions which cannot be found in any other publication. It is an established rule of the publishers to insert none but original engravings, and those of the first class in the art, drawn and engraved by experienced artists, under their own supervision, expressly for this paper.

Chemists, Architects, Millwrights and Farmers!

The SCIENTIFIC AMERICAN will be found a most useful journal to them. All the new discoveries in the science of chemistry are given in its columns, and the interests of the architect and carpenter are not overlooked; all the new inventions and discoveries appertaining to those pursuits being published from week to week. Useful and practical information pertaining to the interests of millwrights and mill-owners will be found published in the SCIENTIFIC AMERICAN, which information they cannot possibly obtain from any other source; subjects in which planters and farmers are interested will be found discussed in the SCIENTIFIC AMERICAN; most of the improvements in agricultural implements being illustrated in its columns.

To the Inventor!

The SCIENTIFIC AMERICAN is indispensable to every inventor, as it not only contains illustrated descriptions of nearly all the best inventions as they come, but each number contains an Official List of the Claims of all the Patents issued from the United States Patent Office during the week previous; thus giving a correct history of the progress of inventions in this country. We are also receiving, every week, the best scientific journals of Great Britain, France and Germany; thus placing in our possession all that is transpiring in mechanical science and art in those old countries. From those journals we shall continue to transfer to our columns copious extracts of whatever we may deem of interest to our readers.

TERMS.

To mail subscribers:—Three Dollars a Year, or One Dollar for four months. One Dollar and Fifty Cents pay for one complete volume of 416 pages; two volumes comprise one year. A new volume commenced on the fourth day of July, 1863.

CLUB RATES.

Five Copies, for Six Months.....	\$6
Ten Copies for Six Months.....	12
Ten Copies, for Twelve Months.....	23
Fifteen Copies, for Twelve Months.....	34
Twenty Copies, for Twelve Months.....	40

For all clubs of Twenty and over the yearly subscription is only \$2 00. Names can be sent in at different times and from different Post-offices. Specimen copies will be sent gratis to any part of the country.

Western and Canadian money or Post-office stamp taken at par for subscriptions. Canadian subscribers will please to remit 25 cents extra on each year's subscription to pre-pay postage.

MUNN & CO., Publishers,
37 Park Row, New York.

FROM THE STEAM PRESS OF JOHN A. GRAY