

the grain, and retaining it in the center thereof, in combination with the vertical, vibratory motion, by means of the double reverse acting cranks, n, n, arms, s, and springs, m, or their equivalents, arranged and operating substantially in the manner and for the purpose set forth.

1,546.—Converting Motion.—C. L. Spencer, New York City, March 4, 1862:

I claim the use of the spring, I, or its equivalent, in combination with the curved connecting rods, G, G, for the purpose of enabling the operating pawls to be so adjusted as to obtain an effect upon the shaft equal to the action of the crank, while the danger of hanging upon the dead point is prevented, substantially as described.

1,547.—Converting Motion.—C. L. Spencer, New York City, Patented March 4, 1862:

I claim two hubs, each composed of the two parts, G and B, in combination with friction rollers, C, spring, S, and axle, I, so that each of the said hubs may be alternately fixed to said axle, one revolving loosely while the other is clutched and in action, for the purpose of producing a continuous rotary motion, in the manner and for the purpose herein set forth.

EXTENSION.

Mode of operating Brakes for Cars.—Nehemiah Hodge, North Adams, Mass. Patented Oct. 2, 1849. Re-issued March 1, 1853. Extended Sept. 16, 1863:

I claim a combination of two levers, f, f', a rod, h, two levers, c, c', and rods, d, d', as applied to the brakes, and two windlasses of the car, and operated by either of the windlasses so as to bring down at the same time the brakes of both trucks upon the wheels thereof, with the same or practically the same degree of force, and whether when the car is running on the railway, the axes of one truck, or of the wheels of one truck, are thrown or moved out of parallelism with those of the other truck, or the rubbers or brakes become unequally worn, or of an unequal thickness, as above stated.

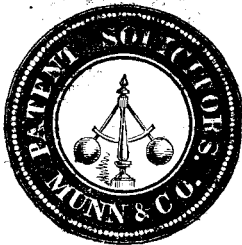
DESIGN.

1,820.—Clock Case.—Elias Ingraham, Bristol, Conn.

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. They also attend to various other departments of business pertaining to patents, such as Extensions, Appeals before the United States Court, Interferences, Opinions relative to Infringements, &c. The long experience Messrs. MUNN & Co. have had in preparing Specifications and Drawings has rendered them perfectly conversant with the mode of doing business at the United States Patent Office, and with the greater part of the inventions which have been patented. Information concerning the patentability of inventions is freely given, without charge, on sending a model or drawing and description to this office.



States and all foreign countries, on the most reasonable terms. They also attend to various other departments of business pertaining to patents, such as Extensions, Appeals before the United States Court, Interferences, Opinions relative to Infringements, &c. The long experience Messrs. MUNN & Co. have had in preparing Specifications and Drawings has rendered them perfectly conversant with the mode of doing business at the United States Patent Office, and with the greater part of the inventions which have been patented. Information concerning the patentability of inventions is freely given, without charge, on sending a model or drawing and description to this office.

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. The points of novelty are carefully examined, and a written reply, corresponding with the facts, is promptly sent free of charge. Address MUNN & CO., No. 37 Park Row, New York.

PRELIMINARY EXAMINATIONS AT THE PATENT OFFICE.

This service we render gratuitously upon examining an invention does not extend to a search at the Patent Office, to see if 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. But for a fee of \$5, accompanied with a model of drawing and description, we have a special search made at the United States Patent Office, and a report setting forth the prospects of obtaining a patent, &c., made up and mailed to the inventor, with a pamphlet, giving instructions for further proceedings. These preliminary examinations are made through our Branch Office, corner of F and Seventh streets, Washington, by experienced and competent persons. Many thousands of such examinations have been made through this office. Address MUNN & CO., No. 37 Park Row, New York.

HOW TO MAKE AN APPLICATION FOR A PATENT.

Every applicant for a patent must furnish a model of his invention 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. These should be securely packed, the inventor's name marked on them and sent, with the Government fees, by express. The express charge should be pre-paid. Small models from a distance can often be sent cheaper by mail. The safest way to remit money is by draft on New York, payable to the order of MUNN & CO. Persons who live in remote parts of the country can usually purchase drafts from their merchants on their New York correspondents; but, if not convenient to do so, there is but little risk in sending bank-bills by mail, having the letter registered by the postmaster. Address MUNN & CO., No. 37 Park Row, New York.

The revised Patent Laws, 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. Other changes in the fees are also made as follows:—

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-issuance.....	\$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 (but in cases of designs) on the above terms. Foreigners cannot secure their inventions by filing a caveat; to citizens only is this privilege accorded.

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! In fact, the publishers of this paper have become identified with the whole brotherhood of inventors and patentees at home and abroad. Thousands of inventors for whom we have taken out patents have addressed to us most flattering testimonials for the services we have rendered them, and the wealth which has inured to the inventors whose patents were secured through this office, and afterwards illustrated in the SCIENTIFIC AMERICAN, would amount to many millions of dollars! We would state that we never had a more efficient corps of Draughtsmen and Specification Writers than those employed at present in our extensive offices, and we are prepared to attend to patent business of all kinds in the quickest time and on the most liberal terms.

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. Our success in the prosecution of rejected cases has been very great. The principal portion of our charge is generally left dependent upon the final result.

All persons having rejected cases which they desire to have prosecuted, are invited to correspond with us on the subject, giving a brief history 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. A pamphlet of advice regarding applications for patents and caveats, printed in English and German, is furnished gratis on application by mail. Address MUNN & CO., No. 37 Park Row, New York.

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. We think we can safely say that THREE-FOURTHS of all the European Patents secured to American citizens are procured through the Scientific American Patent Agency, No. 37 Park Row, New York. Inventors 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.



E. J., of N. H.—Your idea for plating vessels is not new. The Ordnance Bureau is now experimenting on this very idea, and are to practice with a target this week. Commodore Porter has a patent on the use of India-rubber between plates, as you suggest. The owner of a patent of an improvement on a common patented article cannot use the article improved in connection with the original, without the consent of the original patentee, if he is obliged to infringe the first patentee's claims in using his improved implement.

D. P., of N. Y.—We have received your letter, but it is too long for a communication. It is an important subject, as you say, but more suited to the columns of a daily paper. We may be able to refer to the subject, but not at length.

C. E. L., of Mo.—Your article on "Moral Science applied to Labor" is not suited to our columns; but if it were we could not endorse the theory, that Government, as a grand central power, should have control of the labors of the farmer. If you will read Dr. Chalmers' Bridgewater treatise "On the Designs of God in Human Machinery," you will think differently on such subjects.

J. S. A., of D. C.—The article on cast steel, to which you refer, was not published in the SCIENTIFIC AMERICAN.

W. E. P., of Mich.—The largest steel cannon manufactured in the United States, so far as we know, was by Norman Ward, of this city. It was a 50-pounder and weighed 7,000 pounds.

J. J. B., of Iowa.—The loss of energy in a steam engine by wire-drawing the steam in its passage from the boiler to the cylinder, is inappreciable, according to the experiments of D. K. Clarken locomotives. He states that the area of the steam pipe should not be less than one-tenth the area of the piston, when the speed of the piston does not exceed 10 feet per second. Theoretically, there is some loss of energy by the friction of the steam in wire-drawing, but the amount has never been determined. When the resistance to the work of an engine is diminished, the best

method of economizing the power of the steam is by cutting off rather than by wire-drawing. The initial pressure should not be lowered in the cylinder.

J. B., of Ind.—The loadstone is a magnetic oxide of iron, found in many parts of the world. It abounds at a hill called the Iron Mountain, not far from St. Louis, Mo.; but the most powerful natural magnets of the kind are found at Magnet Cove or valley, near the Washitaw hot springs, in the State of Arkansas. The peculiar property of the loadstone was first observed in specimens of an oxide of iron found near Magnesia, a city of Lydia, in Asia Minor, and hence the name of magnetism has been applied to the phenomenon to which it appertains. Its polarity and attractive properties are daily witnessed in the needle of the mariner's compass, and in the little tack hammers used by some saddlers and upholsterers. Cobalt and nickel are the only metals besides iron which are known to be affected by the magnet. The sulphuret of iron, commonly called iron pyrites, often possesses magnetic properties. Its form is in acicular crystals of a beautiful bright golden color; and many a simple man has been deceived with them in supposing he had discovered a gold mine; verifying the trite proverb—"All is not gold that glitters."

M. B., of Vt.—Artesian wells are so called from the department in France where they were first made—the district Artois, called Artesian by the Romans. The water is generally tepid, but excellent to drink when cooled. The deepest in the United States is 4,000 feet, at Columbus, Ohio. One in Louisville, Ky., in Messrs. Dupont's paper mill, throws a jet more than 40 feet high: the water of which is impregnated with salt, much resembling the Blue Lick water of Kentucky, and similar to that of many German brunnen and quelle. It is much used for drinking and for bathing in.

A. J. D., of Ky.—The cultivation of the Chinese tea plant has been attempted with only partial success in several parts of the United States. In South Carolina, Tennessee, Texas and California it has flourished, but the insuperable obstacle to its general cultivation is want of cheap labor. The substitutes for the China tea, in the New world, are numerous. In almost every part of South America the mate is used for it. Mate is a species of holly called by naturalists *Ilex paraguayensis*. In North Carolina and the adjoining States an infusion of the yopon leaves is the common tea. In New England many aromatic garden herbs are made into tea. In the Middle and Western States the spring table drink is sassafras tea, made of the root bark of the very common laurus sassafras. Tea and coffee may both go out of use one of these days, in America, and something indigenous be used instead.

S. F. H., of N. H.—The lunar tidal-wave is the moving swell caused by the moon's attraction of the waters of the ocean. Its periods change with the position of the moon in her orbit. The most accurate information respecting the tides on the American coast is contained in the reports of the "Coast Survey."

B. W., of N. Y.—Chemically pure bismuth, tin, lead, &c., are not to be found in our markets. You may have such metals rendered pure, however, by Professor C. Seely, chemist and editor of the *American Journal of Photography*, this city.

Money Received.

At the Scientific American Office, on account of Patent Office business, from Wednesday, Sept. 30, to Wednesday, Oct. 7, 1863:—

- H. M., of N. Y., \$25; E. W. S., of N. J., \$25; W. T. E., of N. J., \$25; A. W. H. of Ill., \$41; A. T., of N. Y., \$16; W. V. M. K., of N. J., \$16; L. M. S., of Ill., \$20; B. F. S., of Iowa, \$20; A. McK., of N. Y., \$20; A. S. M., of Ill., \$20; J. R. S., of Pa., \$20; E. B. N., of N. Y., \$16; G. S., of N. Y., \$16; T. C., of R. I., \$46; S. R., of N. Y., \$25; J. H. Q., of N. J., \$15; J. L. L., of Pa., \$25; J. G., of Ind., \$16; C. S. W., of Mass., \$16; J. B., of La., \$10; E. H. G., of N. Y., \$25; F. J. T., of Md., \$16; A. P. P., of Conn., \$63; P. & S., of N. Y., \$23; H. G. G., of N. Y., \$44; J. L., of N. Y., \$16; J. A., of N. Y., \$16; C. M., of N. Y., \$16; H. S., of Pa., \$20; T. H., of Cal., \$20; T. H. B., of Mass., \$20; G. G., of N. Y., \$45; J. W. H., of N. Y., \$90; W. K., of N. Y., \$20; R. H., of N. Y., \$20; D. W. S., of Conn., \$16; J. E., of N. Y., \$92; G. W. H., of Pa., \$25; S. & B. of Ill., \$500; J. W. S., of Ill., \$16; D. and K., of Cal., \$15; C. B. G., of Iowa, \$16; H. A. A., of N. Y., \$25; W. W., of N. J., \$25; B. & B., of N. Y., \$25; D. G. G., of N. Y., \$16; L. C., of N. Y., \$20; J. B., of N. Y., \$20; P. M., of Ill., \$20; C. W. W., of Pa., \$45; W. R., of N. Y., \$45; H. I. D., of Ill., \$20; E. S., of N. Y., \$16; H. M., of N. Y., \$44; M. H. F., of N. Y., \$30; J. C. B., of Conn., \$19; C. S., of N. Y., \$12; S. B. H., of Mass., \$16; D. R. P., of Mass., \$26; J. B. A., of Ill., \$15; A. H. G., of N. J., \$25; E. St. J., of N. Y., \$16.

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 acknowledgement 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.

- H. M., of N. Y.; A. P. P., of Conn. (2 cases); P. & S., of N. Y.; E. C., of N. Y.; H. G. G., of N. Y.; T. C., of R. I.; E. H. G., of N. Y.; S. R., of N. Y.; C. S., of N. Y.; J. L. L., of Pa.; A. W. H., of Ill.; H. A. A., of N. Y.; W. W., of N. J.; B. & B., of N. Y.; E. C., of N. Y.; H. M., of N. Y.; D. R. P., of Mass.; A. H. G., of N. Y.; E. F., of Ohio; G. W. H., of Pa.; H. G. G., of N. Y.; E. W. S., of N. J.; W. T. E., of N. J.; A. W. H., of Ill.; T. F. H., of N. Y.; R. B. L., of Ohio; P. G., of Mo.; T. J. E., of Ind.; D. C. M., of Nevada; R. T. S., of N. Y.

Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office from Wednesday, Sept. 30, to Wednesday, Oct. 7, 1863:—

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, \$225 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.

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.

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.

KING'S NOTES ON STEAM. LESSONS AND PRACTICAL NOTES ON STEAM. THE STEAM-ENGINE, PROPELLERS, &c., &c., for young Marine Engineers, Students, and others. By the late W. R. King, U. S. N. Revised by Chief-Engineer J. W. King, U. S. Navy. Fourth Edition, enlarged and improved.

This is the second edition of a valuable work of the late W. R. King, U. S. N. It contains lessons and practical notes on Steam and the Steam-Engine, Propellers, &c. It is calculated to be of great use to young marine engineers, students, and others. The text is illustrated and explained by numerous diagrams and representations of machinery. This new edition has been revised and enlarged by Chief Engineer W. King, U. S. N. brother to the deceased author of the work. Boston Daily Advertiser.

This is one of the best, because eminently plain and practical, treatises on the Steam-Engine ever published. Philadelphia Press. Its republication at this time, when so many young men are entering the service as naval engineers, is most opportune. Each of them ought to have a copy. Philadelphia Evening Bulletin. In one volume octavo with illustrations, price \$2. Copies sent free by mail on receipt of price. Published by D. VAN NOSTRAND, 192 Broadway, New York. 15 2

ORDNANCE OFFICE.

WAR DEPARTMENT. Washington, Oct. 2, 1863

Sealed proposals will be received at this office until the 30th day of October next, for banding and bushing the 42-pounder guns, at the forts and arsenals of the United States in the Atlantic States, amounting in number to 200, more or less.

The guns will be delivered at, and removed from, the establishment where the work is to be done at the cost of the United States. Proposals for those on the Pacific Coast—about 50 in number—will be received until the 10th of December next; and in the case of these, the guns will be delivered at San Francisco or its vicinity.

The guns are to be turned down to a true cylinder for the length of twenty-seven inches from the rear of the base ring, prepared to take a band of the best wrought-iron, the interior diameter of which will be twenty inches and its thickness three inches.

The vent is to be bushed with a new bush of pure ingot copper, one inch in diameter and about nine and a half inches long, and bored with a vent of two tenths of an inch.

Drawings of the gun in its original form and with the band put on can be seen at this office, at the Watertown Arsenal, Mass.; at the Watervliet Arsenal; and at the New York Agency, No. 45 Worth street, city of New York; at the Arsenal at Bridesburg, Pa.; and at Allegheny Arsenal, Pittsburg, Pa.; at the Fort Monroe Arsenal, Va.; St. Louis Arsenal, Mo.; and Benicia Arsenal, Cal.

The work is to be done to the entire satisfaction of the officer who will be appointed to superintend it; and payment will be made in full for each gun upon his certificate of inspection and receipt.

Proposals will state the price per gun for the whole operation; describe in detail the manner in which they are proposed to put on the band; the number they will band per month; and the time which will be required to do the whole work. The method and the time required for doing the work, as well as the price, will be important elements in considering the bids and awarding the contract.

No bids will be considered from any parties but such as are actually engaged in the manufacture of iron and heavy machinery, and who are, in the opinion of this Department, fully prepared to execute the work. In the case of parties not known to this Department, evidence to the foregoing effect must accompany the proposal.

Bond, with satisfactory sureties, to the amount of fifty per cent. of the bid, will be required for the fulfillment of the contract; and the Government reserves the right to reject any or all bids, if deemed unsatisfactory.

Proposals will be endorsed "Proposals for Banding 42 Pounders," and will be addressed to Brigadier-General George D. Ramsay, Chief of Ordnance, Washington City. GEO. D. RAMSAY, Brigadier-General, Chief of Ordnance. 163

TO SHIP-BUILDERS.—A NAVAL ARCHITECT AT present engaged on iron-clad building in London, is desirous of an engagement in America. Thirteen years experience in all classes of merchant ships and a thorough knowledge of all the different constructions of European armor-clad war-vessels, will render his services of value. Address NAVAL ARCHITECT, care of Messrs. Delizé, Davies & Co., 1 Finch Lane, Cornhill, London, E. C. 163

HICKOK'S PATENT KEYSTONE CIDER AND WINE MILL.—12,000 in use and approved. If your merchant does not keep them, tell him to send for one for you, or write to the manufacturer yourself. Address W. O. HICKOK, Eagle Works, Harrisburg, Pa. 162*

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 power used by every other hammer to do the same work. For an engraving and description of this hammer see page 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, Secor, Delamater, Fletcher & Harrison, Duncan & Crampton, Anderson & McLaren, Duhurst & 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, Kaighn's Point, Phila.; Mallory & Cottrell, Mystic, Conn.; J. Dillon, Rondout; 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. 1*

TO SKATE-STRAP MANUFACTURERS AND DEALERS.—Sprague's Patent Lever Buckle, warranted to be in all respects under six inches, both round or square, is the best hammer now in use, and requires but one-half the power used by every other hammer to do the same work. For an engraving and description of this hammer see page 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.

WANTED A PARTNER WITH A CAPITAL OF about 40,000 dollars, to join in machinery and iron ship-building business, in a most favorable location on tide-water and railroads. Address BUSINESS PARTNER, care of A. F. Kindberg, 25 Rector street, New York. 162*

FOR HUB-MORTISING MACHINES, SPOKE PLANERS, Blanchard Lathes and Wheel Machinery, address J. A. FAY & CO., Worcester, Mass. 1*

MANUFACTURERS AND DEALERS, SEND CIRCULARS and Price List of machines and tools for Stamping, Braiding, Embroidering, Pinking, Fluting, Eyeletting, Hemming, Binding, Tucking, &c., to LADIES' EMPORIUM OF FASHION, Brooklyn, L. I. 162*

ROLLING MILL.—WANTED A SECOND-HAND 3 TO 4-inch mill. Send description and price to DENTIST, Box 936, Post office, Montreal, Canada. 162*

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 character of this useful work will be better understood after reading the following synopsis of its contents:—

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 PRACTICE, 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 MITN & CO., Publishers of the SCIENTIFIC AMERICAN, No. 37 Park Row, New York.

FOR SALE. THE AMERICAN HOE CO'S WORKS, situated in West Winsted, Conn. There is two Water Privileges, together of 125 horse power, and 4 Trip-Hammers Rolling Mill, 2 Presses, 7 Grindstones, 20 Polishing Wheels, &c. Could be easily altered for the manufacturing of Scythes, Edge Tools or Cutlery. Will be sold very low. For further particulars enquire of HORACE BOOTH, New Britain, Conn.; or R. W. BOOTH, 15 Gold street, New York. 15 4*

FAN BLOWERS.—DIMPPEL'S, ALDEN'S, MCKENZIE'S and others, for Steamboats, Iron Works, Foundries, Smith Shops, Jewelers, &c., on hand for sale by LEACH BROTHERS, 86 Liberty street, New York. 15 13

BOLTS, NUTS AND WASHERS OF ALL SIZES CONSTANTLY ON HAND FOR SALE BY LEACH BROTHERS, 86 Liberty street, New York. 15 13*

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 HOWARD, Howard Association, No. 2 South Ninth street, Philadelphia, Pa. 15 4

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. 15 13*

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 circular sent on application. Address J. G. HOADLEY, Lawrence, Mass. 16 13

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