

1,635.—Self-loading Fire-arm.—Albert Ball, Worcester, Mass. Patented June 23, 1863 :

I claim the mode substantially as described of making the rear part of the barrel or cartridge chamber, and the front part of the charging carriage, that is to say, making the charging carriage with a recess or trough for receiving a cartridge and allowing of the ejection of its shell in manner as explained, and so constructing the breech end of the barrel or the cartridge chamber thereof, that such recess or trough of such charging carriage may, when the cartridge is in place in the bore or cartridge chamber, form part of and complete such cartridge chamber, in manner substantially as described.

I also claim the combination of the ejecting spring, D, with the charging carriage, when constructed and combined with a magazine and barrel, substantially in manner and so as to operate therewith as hereinbefore explained.

I also claim the combination of the locking-piece, P, with its actuating mechanism (viz: the spring, G, and catch, F), with the tumbler, I, and the charging carriage, O, the whole being constructed and arranged in manner and so as to operate together, substantially as explained.

I also claim the charging carriage as made in manner and so as to operate with the magazine and the barrel as described, viz: to receive within it a cartridge from the magazine, to raise it up to the barrel or charging chamber thereof, to form part of and serve as a breech to such chamber, and finally to withdraw the shell of the cartridge therefrom, all as explained.

1,636.—Steam Boiler.—Wm. M. & Jonas B. Ellis, Washington, D. C. Patented Aug. 26, 1862 :

We claim connecting the water-legs, extending continuously from the front to the rear of the boiler, to the shell of the boiler at the point of the working water-line of the boiler, substantially as herein set forth.

1,637.—Steam Boiler.—Wm. M. & Jonas B. Ellis, Washington, D. C. Patented Aug. 26, 1862 :

We claim gradually increasing the area of the tubes from the highest to the lowest tubes, as herein described.

1,638.—Side Lights for Ships.—Enoch S. Hidden (assignee of Enoch Hidden), New York City. Patented June 21, 1853. Re-issued Sept. 8, 1863 :

I claim, first, The combination, substantially in the manner described, of a turning flange arranged, shaped, and operating substantially as specified with a glass frame and suitable interposed packing whereby the packing may be compressed and the frame held shut or have liberty to open under a mode of operation substantially as set forth.

Second, I claim in combination with a glass frame and a turning flange substantially such as are described, a pin and a stop, operating substantially as set forth.

Third, I claim a stationary frame with projecting lugs having long mortices therein in combination with pins projecting from a glass frame, both substantially such as herein set forth, so that the glass frame may be opened and shut, substantially as set forth.

Fourth, I claim in combination with a stationary frame attached to the side or deck of a vessel, a sleeve or ring of lead or other ductile metal, soldered or otherwise joined thereto, so that it can be flanged or turned over the edge of the opening through the vessel, thereby making the joint between the stationary frame, and the vessel water tight, substantially as described.

1,639.—Wheel Skate.—Orasmus M. Vail, Brooklyn, N. Y., and Thomas J. Vail, Hartford, Conn., assignees of Reuben Shaler, Madison, Conn. Patented Feb. 24, 1860 :

We claim a roller skate which is a combination of a foot-stock with rollers made elastic by india-rubber or gutta-percha, the combination operating substantially as herein set forth.

DESIGNS.

1,920.—Nut-cracker.—Eli W. Blake (administrator of the estate of Edward F. Blake), New Haven, Conn.

1,921 to 1,924.—Carpet Patterns (4 cases.)—Elemir J. Ney (assignor to The Lowell Manufacturing Company), Lowell, Mass.

EXTENSIONS.

Portable Furnace.—John T. Davy, Troy, N. Y. Letters Patent No. 7,159. Dated March 12, 1850 :

I claim combining with a portable furnace of the usual construction a surrounding heating chamber provided with apertures or slots to admit of the insertion or removal of the flaps combined with the door or flap at top, substantially as described.

I also claim providing the said air-heating chamber with a revolving top provided with a single small door or flap, which by the rotation may be brought directly over the slots in succession and the flaps inserted or removed, substantially as described.

Process of rolling India-rubber Cloth.—Francis D. Hayward & John C. Brickford, Colchester, Conn. Letters Patent No. 7,189. Dated March 19, 1850 :

We claim the new or improved process of applying and fixing rubber to cloth by means of rollers; the said improved process being a combination of the method of spreading the rubber by the pressure of rollers, and the method of grinding and fixing it at the same time against and into the substance of the cloth, all as specified.

TO OUR READERS.

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 enclosing \$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.

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.

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.

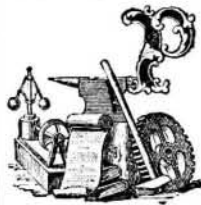
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It is important that all works of reference should be well bound. The SCIENTIFIC AMERICAN being the only publication in the country which records the doings of the United States Patent Office, it is preserved by a large class of its patrons, lawyers 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 oarboard 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.



PATENTS

GRANTED

FOR SEVENTEEN YEARS!

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In connection with the publication of the SCIENTIFIC AMERICAN, have acted as Solicitors and Attorneys for procuring "Letters Patent" for new inventions in the United States and in all foreign countries during the past seventeen years.

Statistics show that nearly ONE-THIRD of all the applications made for patents in the United States are solicited through this office; while nearly THREE-FOURTHS of all the patents taken in foreign countries are procured through the same source. It is almost needless to add that, after seventeen years' experience in preparing specifications and drawings for the United States Patent Office, the proprietors of the SCIENTIFIC AMERICAN are perfectly conversant with the preparation of applications in the best manner, and the transaction of all business before the Patent Office; but they take pleasure in presenting the annexed testimonials from the three last ex-Commissioners of Patents:—

Messrs. MUNN & CO.:—I take pleasure in stating that, while I held the office of Commissioner of Patents, MORE THAN ONE-FOURTH OF ALL THE BUSINESS OF THE OFFICE CAME THROUGH YOUR HANDS. I have no doubt that the public confidence thus indicated has been fully deserved, as I have always observed, in all your intercourse with the office, a marked degree of promptness, skill, and fidelity to the interests of your employers. Yours very truly, CHAS. MASON.

Judge Mason was succeeded by that eminent patriot and statesman, Hon. Joseph Holt, whose administration of the Patent Office was so distinguished that, upon the death of Gov. Brown, he was appointed to the office of Postmaster-General of the United States. Soon after entering upon his new duties, in March, 1859, he addressed to us the following very gratifying letter:

Messrs. MUNN & CO.:—It affords me much pleasure to bear testimony to the able and efficient manner in which you discharged your duties as Solicitors of Patents, while I had the honor of holding the office of Commissioner. Your business was very large, and you sustained (and I claim) the reputation of energy, marked ability, and uncompromising fidelity in performing your professional engagements. Very respectfully, your obedient servant, J. HOLT.

Hon. Wm. D. Bishop, late Member of Congress from Connecticut, succeeded Mr. Holt as Commissioner of Patents. Upon resigning the office he wrote to us as follows:

Messrs. MUNN & CO.:—It gives me much pleasure to say that, during the time of my holding the office of Commissioner of Patents, a very large proportion of the business of inventors before the Patent Office was transacted through your agency; and that I have ever found you faithful and devoted to the interests of your clients, as well as eminently qualified to perform the duties of Patent Attorneys with skill and accuracy. Very respectfully, your obedient servant, Wm. D. BISHOP.

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.

As an evidence of the confidence reposed in their Agency by inventors throughout the country, Messrs. MUNN & CO. would state that they have acted as agents for more than 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 they have taken out patents have addressed to them most flattering testimonials for the services rendered them; and the wealth which has inured to the individuals whose patents were secured through this office, and afterwards illustrated in the SCIENTIFIC AMERICAN, would amount to many millions of dollars! Messrs. MUNN & CO. would state that they never had a more efficient corps of Draughtsmen and Specification Writers than those employed at present in their extensive offices, and that they are prepared to attend to patent business of all kinds in the quickest time and on the most liberal terms.

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The service which Messrs. MUNN & CO. 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 they may acquire of a similar invention from the records in their Home Office. But for a fee of \$5, accompanied with a model, or drawing and description, they 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 proceeding. These preliminary examinations are made through the Branch Office of Messrs. MUNN & CO., corner of F. and Seventh streets, Washington, by experienced and competent persons. Many thousands of such examinations have been made through this office, and it is a very wise course for every inventor to pursue. Address MUNN & CO., No. 37 Park Row, New York.

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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. 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 a draft on New York, payable to the order of Messrs. 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.

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

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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 is \$10. A pamphlet of advice regarding applications for patents and caveats is furnished gratis, on application by mail. Address MUNN & CO., No. 37 Park Row New York.

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J. B. C., of Colorado.—It is not probable that your lead sent us contains any gold, or enough silver to pay for extracting. You can have it analyzed for \$10, if you wish to incur that expense.

G. W. G., of Maine.—We see no ground for your hypothesis that the force necessary to overcome in obtaining speed for ships is analogous to the resistance offered by bodies falling out of a perpendicular. Your communication is rejected.

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At the Scientific American Office, on account of Patent Office business, from Wednesday, March 16, 1864, to Wednesday, March 23, 1864:—

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Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office, from Wednesday, March 16, 1864, to Wednesday, March 23, 1864:—

- B. M., of N. Y.; W. R., of N. J.; C. A. S., of N. Y.; J. B. R., of N. Y.; S. & C., of N. Y.; J. McF., of N. Y.; F. S., of Pa.; E. P., of Ill.; A. A., of Ill.; O. L., of N. Y. (2 cases); W. B. K., of N. H.; E. B., of Ind.; F. R., of Conn. (2 cases); J. A. H., of Maine; A. E. K., of Pa.; S. P. B., of N. Y.; H. & B., of Ill.; V. H. H., of N. Y.; A. H. W., of England; W. W., of Cal.; T. L. W., of Wis.; T. E., of England; A. T., of Pa. (2 cases); W. H. F., of Pa.; M. B. D., of Colorado Territory; F. B., of Bavaria; E. E., of Ill.; W. O., of Mass.; L. H., Jr., of N. J.; G. L. J., of N. Y.; L. G., of Russia; M. G. D., of N. Y.; A. P., of N. Y.

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