

ing the jacks without the detachment of the key from the action, as is necessary when the two are attached and arranged behind the jacks.]

45,676.—Grain Thrashing and Separating Machines.—Joseph Raynor (assignor to himself and John R. Moffit, Harvey Clark and H. Tamplin), Piqua, Ohio:

I claim the combination of the spout, l, fan, s, tube, O, and conductor, P, constructed and arranged as specified, and operating in connection with the shaking shoe and thrashing cylinder, substantially as and for the purpose set forth.

45,677.—Mode of Adjusting Circular Saws on their Arbors.—C. B. Rogers (assignor to C. B. Rogers & Co.), Norwich, Conn.:

I claim, first, The combination of the key tenon and slot, g g', with the four collars, c c' d d', saw, b, arbor, a, and nut, e, substantially in the manner and for the purpose described.

Second, Producing the desired changes in the degree of obliquity of the saw and at the same time registering and indicating the change, in the manner and by means substantially as described.

45,678.—Portable Forge.—Samuel Rohrer, Palmyra, Mo., assignor to himself and W. W. Granger, Lewis Co., Mo.:

I claim the case or box, A, adjustable fire box, D, detachable smoke stack, L M, and bellows, C, all combined and arranged substantially as and for the purpose set forth.

I also claim the plates, H H, attached to the fire box, D, and arranged with the projections, k k, at the sides of the box, A, to hold up the fire box, substantially as described.

I also claim the plate, G, when hinged to the fire box, D, and used in connection with the smoke stack, L M, substantially as and for the purpose specified.

I also claim the hinged bottom, b, when applied to the box, A, provided with the bellows, C, substantially as and for the purpose set forth.

45,679.—Machine for Sand-papering Pencils.—Phillip Schrag (assignor to Eberhard Faber), New York City:

I claim, first, The employment or use of one or more slotted racks, substantially as herein described, to operate in combination with a revolving polishing disk, in the manner and for the purpose substantially as set forth.

Second, Imparting to the slotted racks an automatic reciprocating motion, substantially as and for the purpose described.

45,680.—Low Water Signal for Steam Boiler.—Thomas Shaw, Philadelphia, Pa., assignor to Philip S. Justice:

I claim the employment of the metallic rod, in combination with a wood bearing, when arranged to operate substantially as and for the purpose set forth.

45,681.—Paper Collar.—Charles Spofford and Valentine Fogarty (assignor to themselves and W. S. Bell), Boston, Mass.:

We claim converting the ends of a paper collar into an imitation necktie, substantially as described.

45,682.—Shuttle for Looms.—William Tunstall (assignor to Theodore H. Conkling), New York City:

I claim the employment or use of the case, B, in combination with a shuttle, A, constructed, applied and operating substantially as and for the purpose set forth.

[This invention] consists in the employment of a case made sheet-metal or other suitable material, just large enough to receive a cup of suitable form and size, and secured in a shuttle in place of the ordinary quill, in such a manner that the weft thread is perfectly protected, and the liability of such thread becoming entangled is materially reduced.]

45,683.—Thrashing Machine.—George Westinghouse, Schenectady, N. Y., and Lorenzo Smith, of Sharon Springs, N. Y., assignors to George Westinghouse, aforesaid:

We claim, first, The rotary feeder, L, in combination with the riddle, F, and shaker, J, arranged and operating substantially as and for the purpose set forth.

Second, The grain receptacle or grain carrier, M, hung or suspended, as shown and described, in combination with the riddle, F, and thrashing cylinder, B, concave, C, and screw, D, all constructed and arranged to operate in the manner as and for the purpose specified.

Third, Encompassing the wooden shaft, d, of the shaker, J, with metal bands or ferrules, g, as and for the purpose set forth.

45,684.—Manufacture and Purification of Magnesium.—Edward Sonstadt, Loughborough, Eng. Patented in England May 21, 1863:

I claim the manufacture of the metal magnesium by acting by means of sodium on a material obtained by evaporating to dryness and then heating to redness a mixture, in solution, of chloride of magnesium with chloride of potassium, substantially as described.

I also claim the distillation of metallic magnesium by means of an apparatus made of iron, from which atmospheric air is excluded during the distilling process, such apparatus consisting of a receiver placed immediately beneath the fire bars of the furnace which heats the vessel containing the crude metal, so that the receiver may, when required, be heated sufficiently to keep the magnesium which distills over in a fused or liquid state, and so that the pipe connecting the two vessels may be kept sufficiently hot to prevent the condensation of magnesium in it, substantially as herein described.

RE-ISSUES.

1,840.—Tobacco Pipe.—Charles Houghton, Trustee, Roxbury, Mass., assignee of Philip C. Rowe, Boston, Mass. Patented July 12, 1864:

What is claimed is a smoking pipe having its parts constructed and arranged in the manner and for the purpose substantially as described.

1,841.—Boots and Shoes.—The McKay Turned Shoe Company, Massachusetts, assignees by Mesne Assignments of L. H. and B. S. Holden, Woburn, Mass. Patented April 2, 1861:

What is claimed as the invention is, so preparing the sole and upper for sewing that the parts thereof to be sewed together are brought to the condition substantially as shown and described, that is to say, projecting from or beyond the sole at right angles, or nearly so, to the general surface thereof, in such manner as to bring both faces of the seam on the outside of the work while the sewing is being performed.

1,842.—Boots and Shoes.—The McKay Turned Shoe Company, of Massachusetts, assignees by Mesne Assignments of L. H. and B. S. Holden, Woburn, Mass. Patented April 2, 1861:

Claims a boot or shoe having the construction substantially as specified.

1,843.—Cupola and other Furnaces.—Addison Smith and James M. Sayre, New York City, assignees by Mesne Assignments of Philip W. Mackenzie, Jersey City, N. J. Patented May 25, 1857. Re-issued Feb. 10, 1863:

We claim, first, a furnace of elongated form and having its surrounding shell concave on the sides, substantially as described for the purpose set forth.

Second, We claim introducing the blast in cupola or blast furnaces in a thin sheet or sheets, substantially as described, in contradistinction to a series of round jets, whereby the blast is caused to act more uniformly in the charge.

Third, We claim a furnace having the plan of its bosh of a shape substantially like that shown, and provided with a means for the introduction of the blast all along both sides whereby the mass of fuel and metal is presented in thin vertical strata to the action of two continuous sheets of blast entering at the opposite sides of the furnace, substantially as and for the purpose set forth hereinbefore.

Fourth, We claim projecting the inner edge of the bosh (or the inner lower portion of the furnace chamber) inwardly beyond the tuyere or blast opening, or tuyere mouths, substantially as described.



PATENTS

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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 three 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 doubt not justly deserved) 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 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 proceedings. 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.

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. 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 prepaid. 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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On filing each Caveat.....	\$10
On filing each application for a Patent, except for a design.....	\$15
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On appeal to Commissioner of Patents.....	\$20
On application for Re-issue.....	\$30
On application for Extension of Patent.....	\$50
On granting the Extension.....	\$50
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The Patent Laws, enacted by Congress on the 2d of March, 1851, now in full force, and prove to be of great benefit to all parties who are concerned in new inventions.

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 invention by filing a caveat; to citizens only is this privilege accorded.

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 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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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 MUNN & CO'S Agency, the requirements of different Government Patent Offices, &c. may be had, gratis, upon application at the principal office, No. 37 Park Row, New York, or any of the branch offices.

SEARCHES OF THE RECORDS.

Having access to the official records at Washington, pertaining to the sale and transfer of patents, MESSRS. MUNN & CO., are at all times ready to make examinations as to titles, ownership, or assignments of patents. Fees moderate.

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Inventors who come to New York should not fail to pay a visit to the extensive offices of MUNN & CO. They will find a large collection of models (several hundred) of various inventions, which will afford them much interest. The whole establishment is one of great interest to inventors, and is undoubtedly the most spacious and best arranged in the world.

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EXTENSION OF PATENTS.

Many valuable patents are annually expiring which might readily be extended, and if extended, might prove the source of wealth to their fortunate possessors. Messrs. MUNN & CO. are persuaded that very many patents are suffered to expire without any effort at extension, owing to want of proper information on the part of the patentees, their relatives or assigns, as to the law and the mode of procedure in order to obtain a renewed grant. Some of the most valuable grants now existing are *extended patents*. Patentees, or, if deceased, their heirs, may apply for the extension of patents, but should give ninety days' notice of their intention.

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The assignment of patents, and agreements between patentees and manufacturers, 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.

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Parties sending models to this office on which they decide not to apply for Letters Patent and which they wish preserved, will please to order them returned as early as possible. We cannot engage to retain models more than one year after their receipt, owing to their vast accumulation, and our lack of storage room. Parties, therefore, who wish to preserve their models should order them returned within one year after sending them to us, to insure their obtaining them. In case an application has been made for a patent the model is in deposit at the Patent office, and cannot be withdrawn.

It would require many columns to detail all the ways in which the inventor or Patentee 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.