horoughmanner. The invention also consists in using in connection with the spiral screen and chute aforesaid, a hopper the screen shaft, has an opening in its botto arranged to operate with a scraper in such a manner that the fle or other substance to be bolted or screened will be fed properly to the screens. The invention further consists in a means employed for glving a vertical and a lateral shake motion to the screen and chute, to ensure a perfect operation of the same, by preventing clogging and causing the article, while being screened, to pass freely over the

41,738.—Lifting Jack.—Ebenezer Young, Camden Centre, Mich.:

tre, Mich.:

I claim the lever, C, provided with oblong slots, c, having notches, d, at its outer end, in combination with the bail, D, and a suitable frame in which the lever, C, is fitted; all arranged to operate substantially in the manner as and for the purpose herein set forth.

41,739.—Potato-digger.—Peter Antonides, Freehold, N. J., assignor to himself and George W. Mayher, New York City:

I claim, first, The fork, F, attached to the front part of the bar, D, when used in combination with the share, C, and screen, E, as and for the purpose specified.

Second, The hooks or curved terminals, d, at the ends of the prongs, c, of the screen, E, substantially as and for the purpose specified.

[This invention relates to an improvement in that class of potato-diggers which are composed of a share with a screen attached to its back erect. The invention consists in attaching to the front part of a potato-digger of this kind a fork, arranged in such a manner as to effect a partial separation of the earth from the potatoes, before the latter fall or pass upon the screen, thereby relieving the screen or greatly aiding it in its work. The invention also consists in the emgreatly aiding it in its work. The invention also consists in the employment or use of an inclined bar, attached to the implement in such a manner that it will serve as a guard to protect the screen from weeds, grass, and similar trash, which prevent it from operating perfectly. The invention further consists in having the outer prongs of the screen at each side formed with hooks at their ends in order to level the ridges of earth formed at each side of the implement it is drawn along, and to separate the potatoes therefrom, so that they will be left upon the top of the earth.]

41,740.—Horse Rake.—James B. Drake (assignor to A. B., E. F., S. E., & L. B. Sprout), Picture Rocks, Pa.: I claim the application of the spring, A, to the tooth, B, spool, C, and staple, D, as herein described.

This invention relates to an approved manner of applying the [1ms invention related with approved manner of applying the teeth, whereby they may be elevated with great facility and returned automatically to their working position.]

41,741.—Lock and Latch.—H. H. Elwell (assignor to the Norwalk Lock Company), South Norwalk, Conn.:
I claim the employment or use of a sliding or adjustable pin, d, in the lever, D, in connection with a recess, b, in said lever to receive the inner end of the latch-bolt, C, substantially as and for the purpose herein set forth.

the inner end of the latch-bolt, C, substantially as and for the purpose herein set forth.

41,742.—Machine for stamping Carpenter's Squares.—
Horace K. Jones (assignor to Hart Manufacturing Company), Kensington, Conn.:
I claim first, the combination of the loose and removable roller, K, self-adjusting bed, G, and carriage, F, constructed, arranged, and operating, ubstantially as and for the purpose set forth.
Second Theodomination of a roller which carries the dies with a self-adjusting bed and a weighted lever, substantially as and for the purpose herein shown and described.

41,743.—Cultivator.—John Lacey (assignor to himself, Conrad Furst and David Bradley), Chicago, Ill.:
I claim the combination and arrangement of the movable adjustable frame, B, proted lever, D, segment pinion, C, and rack, h, with pulleys, a, rod, b, and foot levers, kt, the whole constructed and operating in the manner and for the purposes herein set forth.

41,744.—Car Brake.—George S. Miller, Thompsonville, Conn., E. B. Peck, Bridgeport, Conn., and William Olmsted, Thompsonville, Conn., assignors to said G. S. Miller & E. B. Peck:

We claim the employment of the flanges, G H, upon the axle, B, in combination with a double-acting lever, J, and connecting rod, I, substantially as and for the purpose described.

41,745.—Watch-guard or Safety Chain.—Edwin J. Morse

substantially as and for the purpose described.

1.745.—Watch-guard or Safety Chain.—Edwin J. Morse (assignor to himself and Josiah D. Richards), North Attleborough, Mass.:

Iclaim the said watch-guard or chain as constructed of the two cries of staple links and the series of grooved blocks, made, comined, and arranged together, substantially as herein before explained.

bined, and arranged together, substantially as herein before explained.

41,746.—Harvester.—Edgar M. Smith (assignor to Mitchell, Vance & Co.), New York City:
I claim in combination with the main driving and supporting wheels running loosely on their axle or journals, the main gear wheels, D, running loosely on the hubs of said drive wheels, and having a ratchet and pawl connection with each other, substantially in the manner and for the purpose herein described and represented.

I also claim the arrangement of the two setts of plates and boxes, on the opposite sides of the main frame, so that the cutting apparatus may be arranged on either side as set forth.
I also claim in combination with the two setts of plates arranged on opposite sides of the main frame, the curved bar or brace, F, extending from one to the other, so as to leave unobstructed space at I, for the free action of the rake, as described.
I also claim in combination with the loose and shifting main wheels, and main cogged gear, the pinions, b, permanently arranged on the shaft, d, so that said loose and shifting wheels will, when on either side of machine mesh, with said pinions as set forth, whichever end of the machine goes foremost.
I also claim banging the reel blades, to the reel shaft, by means of the crossed arms, and adjustable heads, hubs, or sockets, for the purpose of enlarging or diminishing the circumference of the reel, substantially as described.

41,747.- Screw Wrench.—George C. Taft, Worcester,

subitantially as described.

41,747.- Screw Wrench.—George C. Taft, Worcester,
Mass., assignor to Thomas H. Dodge, Nashua, N. H.:
I claim the combination in a wrench in which the strain is transferred from the ferrule to the shank as described, of one or more grooves, b, with perpendicular rear and bevelled or inclined from side or sides, with one or more projections, c, of corresponding form, on the rosette, F, substantially as and for the purposes set for h.

side or sides, with one or more projections, c, or corresponding form, on the rosette, F, substantially as and for the purposes set for h.

41,748.—Grain-dryer.—Henry Wood, Montreal, C. E.; George Henry Fourdrinier, Lyn, C. W.; and Margaret L. Haselden, Montreal, C. E., executrix of Richard Haselden, deceased:

We claim, first, The employment or use for the purpose of drying grain of a cylinder, B, revolving on wheels, a', and hubs, a', secured to its circumference and provided on its inside with spiral flanges, d. and lifters, e, substantially in the manner herein shown and described. Second, The steam coils, C, and jacket, B, arranged in combination with the perforated cylinder, B, rotated by means of the friction yollers, a', and with the lowers, F, in the manner and for the purpose set forth.

Third, The rotary cooler, G, provided with spiral passages, j, between two perforated cylinders, i, and with fair-blowers, K, to which motion is imparted by a sun and planet gear, m m' in the manner and for the purpose substantially as herein specified.

Fourth, The compartment, G', in combination with the cooler, G, elevator, J, and chimney, H, or its equivalent constructed and operating in the manner and for the purpose substantially as berein specified.

RE-ISSUES.

3.—Folding Chair.—John A., William F., & Isaac N. Dann, New Haven, Conn. Patented Jan. 6, 1863: claim the combination of bent or curved arms, with the cross

legs of folding chairs, when the said arms are pivoted or hinged to the two legs which sustain the front of the seat, and the other or upper end of the arms secured to the back by means of slots, whereby the several parts may be folded into a compact form without disconnecting the said curved arms from either back or legs.

onnecting the sain curved arms from either back of regs., 624.—Sash and Door Fastening.—Ross Johnson, Frederick, Md. Patented May 25, 1860:
I claim the within-described implement, Cji, as a doorand windowash fastener, substantially as set forth.
,625.—Sewing Machine.—A. B. & N. H. Shaw (assignees of A. B. Shaw), Swanton, Vt. Patented Dec. 16, 1862:

laim the combination of the lifting cam and pin, x, with the lever, and a spring applied to the said lever, to operate subtitally as and forthe purpose herein specified.

Mitchell Vance & Co. (assignees by

feed lever, and a spring applied to the said lever, to operate substantially as and for the purpose herein specified.

1,626.—Harvester.—Mitchell, Vance & Co. (assignees by mesne-assignments of John Powers & E. M. Smith), New York City. Patented Jan. 14, 1862:

I claim, first, The combination of the upwardly curved arms, D, and sliding bars, F, when united by a hinged joint, a, substantially as and for the purpose described.

Second, The combination of the outwardly curved arms with the wide-spread bearings or boxes, b, for the purpose of bracing the shoe and finger bar to the main frame in the direction of their greatest strain, substantially as described.

Third, The combination of the sliding lever, N, with the lifting segment, K, and shoe, C, and their flexible connections, oq, for the purpose of raising up, holding up, or lowering, the finger bar and cutting apparatus, substantially as and for the purpose described.

Fourth, The curved, flanged, or angle-iron bars or plates, st, for uniting the longitudinal pleces, rr, as herein represented and for the purpose described.

Ffith, The guard fingers having backs, h, and ledges, k, extending continuously along the bar so as to present closed surfaces in front and beneath, and formed with channels or grooves, i, extending beneath the sickle bar, and partially around the bolt-holes, I, and open at the back to permit the ready escape of moisture, gum, or other foreign matter, and thus avoid choices of clogging, substantially as described.

DESIGN.

1.903.—Stop-cock.—Henry G. Morris, Philadelphia, Pa.



MATENTS

FOR SEVENTEEN YEARS!

MUNN & COMPANY,

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 pre paring 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 thre ners of Patents :-

last ex-Commissioners of ratents:—

MESGRS, MUNN & CO.:—I take pleasure in stating that, while I held the office of Commissioner of Fatents, 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 states man, Hon. Joseph Holt, whose a dministration 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:

MESSES. 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.

Hon. Wm. D. Bishop, late Member of Congress from Connecticut, acceeded Mr. Holt as Commissioner of Patents. Upon resigning the

Succeeded Mr. Holt as Commissioner of Patents. Upon resigning office he wrote to us as follows:

Messers. Munn & Co. — It gives me much pleasure to say that, during the time of my holding the office of Commissioner of Patents, very large proportion of the business of inventors before the Patent Office was transacted through your agency; and that I have eve found you faithful and devoted to the interests of your clients, as we as eminently qualified to perform the duties of Patent Attorneys wit 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 patent able, are advised to make a sketch or model of their inventi submit it to us, with a full description, for advice. The p novelty are carefully examined, and a written reply, corresp

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 abroad. Thousands of inventors for whom they have taken out pat ents 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 flustrated 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 off that they are prepared to attend to patent business of all kinds in the quickest time and on the most liberal terms.

PRELIMINARY EXAMINATIONS AT THE PATENT OFFICE.

The service which Messrs. MUNN & CO. render gratuitously upor xamining an invention does not extend to a search at the Paten Office, to see if a like invention has been presented there; but is an pinion based upon what knowledge they may acquire of a similar avention from the records in their Home Office. But for a fee of \$5, ccompanied 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 inventio 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 satest way to remit money is by a crart on New York, payane to the order of Messrs-MUNN & CO. Persons who live in remote parts of the country canusually 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,

Patents are nowgranted for SEVENTEEN years, and the Government ee required on filing an application for a patent is \$15. Other changes n 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. On appeal to Commissioner of Patents.	20
On appeal to Commissioner of Patents	al De
On application for Re-issue	31
On application for extension of Patent On granting the Extension	й
On filing a Disclaimer\$	i
On filing application for Design (three and a half years)	10
On filing application for Design (seven years)	Į,
On filing application for Design (fourteen years)	31

The Patent Laws, enacted by Congress on the 2d of March, 1861, are ow in full force, and prove to be of great benefit to all parties

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

CAVEATS.

s 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 tee 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

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 authered to expire without any effort at extan-sion, owing to want of proper information on the part of the paten-tees, their relatives or assigns, as to the law and the mode of procedure in order to ootain a renewed grant. Some of the most valuable grants now existing are extended potents. Patentees, or, if deceased, their heirs, may apply for the extension of patents, but should give ninety days' notice of their intention.

Patents may be extended and preliminary advice obtained, by con-ulting or writing to MUNN & CO., No. 37 Park Row, New York.

REJECTED APPLICATIONS.

Messrs. MUNN & CO. are prepared to undertake the investigation and prosecution of rejected cases, on reasonable terms. proximity of their Washington Agency to the Patent Office affords them rare opportunities for the examination and comparison of references, models, drawings, documents, &c. Their success in the prose cution of rejected cases has neen very great. The principal portion of their charge is generally left dependent upon the final result.

All persons having rejected cases which they desire to have prose-

cuted, are invited to correspond with MUNN & CO., on the subject. giving a brief history of the case, inclosing the official letters, &c.

FOREIGN PATENTS.

Messrs. MUNN & CO., are very extensively engaged in the on and securing of patents in the various European countr the transaction of this business they have offices at Nos. 68 Chancery lane, London; 29 Boulevard St. Martin, Paris; and 26 Rue des Eperonniers, Brussels. They thing they can safely say that THREE-FOURTHS of all the European Patents secured to American citizens are procured through their agency.

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

Circulars of information concerning the proper course to be pursued m 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 all 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.

INVITATION TO INVENTORS.

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 interesto inventors, and is undoubtedly the most spacious and best arrange. in the world.

MUNN & CO. wish it to be distinctly understood that they do not

eculate or traffic in patents, under any circumstances; but that they devote their whole time and energies to the interests of their

COPIES OF PATENT CLAIMS.

MESSRS. MUNN & CO., having access to all the patents granted ince the rebuilding of the Patent Office, after the fire of 1836, can furnish the claims of any patent granted since that date, for \$1.