



ISSUED FROM THE UNITED STATES PATENT-OFFICE
FOR THE WEEK ENDING FEBRUARY 23, 1864.

Reported Officially for the Scientific American.

33 Pamphlets containing the Patent Laws and full particulars of the mode of applying for Letters Patent, specifying size of model required and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

41,668.—Packing Projectiles for Rifled Cannon.—John Absterdam, New York City :

I claim, first, constructing a projectile for rifle cannon with one or more bands or bearings of an anti-friction metal that expands in cooling or that does not shrink in cooling, for the purpose herein described.

Second, Sawing the end of the expanding cup in several cuts diagonally to the axis of the projectile, substantially as described.

41,669.—Manufacture of Gun Barrels.—Walter Baker, Ilion, N. Y. :

I claim as a new article of manufacture the forming of a solid cone seat upon a hollow gun barrel, from the metal at the butt of the same, without welding, in the manner substantially as shown and described.

41,670.—Feed Bag.—Joseph Becker and Wm. Tustin, Philadelphia, Pa. :

We claim, first, The strap, A, running obliquely under the throat of the animal and fastened by a loop upon the rear top side of the bag, substantially as and for the purpose described.

Second, The sieve or ventilator, F, Fig. 2, or its equivalent, at the bottom of the bag, as herein described, substantially as and for the purpose set forth.

41,671.—Machinery to aid in puddling Iron and Steel.—Henry Bennett, Wombidge, England. Patented in England May 18, 1863 :

I claim improved apparatus or mechanism to be used in the process of puddling iron, steel-iron or steel, and constructed substantially as herein more fully set forth and specified.

41,672.—Water Elevator.—B. B. Signall, Owego, N. Y. :

I claim the reel, B, having the spurs, k, k, of nearly the same transverse thickness at the base and top, and the bearings, l, l, respectively on each side of the spurs, for the support of the chain, substantially as herein set forth.

I also claim the toothed reel, B, constructed as described, with the main chain, C, auxiliary chain, C', and bucket, D, all arranged and operating substantially as and for the purpose herein specified.

41,673.—Street-sweeping Machine.—H. S. Blood, New Orleans, La. :

I claim, first, The rotating brush, J, in combination with the dirt-plate, K, provided at its lower end with the elastic strip, M, arranged to operate in the manner substantially as and for the purpose specified.

Second, The endless apron, N, placed in the box or dirt-receiver, L, for discharging the dirt therefrom when used in combination with the brush, J, for the purpose set forth.

Third, The operating of the endless apron, N, from the driving wheel, P, by means of the shaft, O, S, gearing, G', P, Q, R, and endless belt, V, as described.

Fourth, The operating of the door, W, from the lever, A, simultaneously with the throwing in and out of gear of the pinion, F, with the wheel, G, substantially as described.

Fifth, The combination of the rotating brush, J, endless apron, N, and dirt-plate, K, all constructed and arranged to operate in the manner substantially as and for the purpose herein set forth.

[This invention consists in the employment of a rotary brush placed in an oblique position in a mounted frame and used in connection with a curved inclined dirt plate and a dirt receptacle provided with a dirt-discharging apron, all arranged to operate in such a manner that the dirt will be cleanly swept up from the pavement of the street, and discharged at suitable or desired intervals in piles.]

41,674.—Working and using Sugar Evaporators.—Luke W. Bodwell, Ann Arbor, Mich. :

I claim the combination and arrangement of the eccentric shaft and cam, A, a the fulcrum or center of motion, E, the flue, R, sliding plate, f, opening, T, enlargement, S, in connection with the arch, J, combined and arranged as and for the uses and purposes set forth in the foregoing specification.

41,675.—Protecting Lead Pipe against the Action of Water.—Leopold Brandeis, Brooklyn, N. Y. :

I claim the application of hydrogen or any other gas in combination with sulphur for the purpose of producing a sulphite of lead, on which water cannot act, and thereby do away with any danger of lead-poisoning, even if water should be kept standing in such pipe or vessel.

41,676.—Opening and closing Iron Blinds or Shutters.—William H. Brown, Worcester, Mass. :

I claim, first, The combination with a sliding blind of the slats, b, connecting rod, c, lever, G, rack bar, u, and sliding shaft, n, with its gear, m, arranged and operating together, substantially as and for the purposes set forth.

Second, The combination with a sliding blind of the lip, e, spring, i, ratchet wheel, o, and pawl, t, for the purposes stated.

41,677.—Cultivator.—C. J. Buchner, Paxton, Ill. :

I claim the combination of the horizontal connecting plate, a, pendulum-slotted plates, b, b and f, beams, g, rods, i, i, bracing foot bars, G, G, and transverse bars, K, K, all as herein shown and described.

[This invention relates to a corn-planter of that class which are mounted on wheels and are provided with a driver's seat. The object of the invention is to obtain a plow of the class specified which may be manipulated by the driver with the greatest facility and be completely under his control, and also have a draught equalizer of simple construction to insure an even pull of the team and an uniform draught movement of the machine.]

41,678.—Fastening for Breast-pins.—Gaspard Buhler, Newark, N. J. :

I claim, first, The single or double U-shaped clasp, B, hinged to the under or inner surface of a breast-pin, button, stud or other similar article, and operating in combination with the point, f, projecting from the inner surface of said breast-pin or other article, substantially as and for the purposes herein shown and described.

Second, The application of the secondary clasp, C, in combination with the main clasp, B, points, f, f', and button or other similar article, A, arranged and operating in the manner and for the purpose substantially as set forth.

41,679.—Governor.—John P. Burnham, Chicago, Ill. :

I claim the lever, E, with the slotted link, h, and friction wheel, G, in combination with the rocking shaft, C, and sleeve, g, of the gover-

nor, A, all constructed and operating in the manner and for the purpose substantially as herein shown and described.

[This invention consists in a slotted link secured to a lever which is suspended from a rock-shaft in combination with an ordinary ball-governor and with a friction wheel, which works within the slotted link in such a manner that when the balls of the governor fly out, the slotted link is pressed up against one side of the friction wheel, and the steam-valve is closed or the effective surface of the sails of the wind wheel decreased, and when the balls sink down, the link is pressed up against the opposite side of said friction wheel, and the steam valve is opened, or the effective surface of the sails increased, and by this means the speed of an engine and wind-wheel can be rendered self-regulating.]

41,680.—Sugar-cane Mill.—Wm. H. Clark, Cincinnati, Ohio, and Walter E. Edgerton, Spiceland, Ind. :

We claim, first, So arranging the connecting gearing of three-roll cane mills, that the minor rolls may be placed and worked with their faces nearly in contact, for the purpose herein described.

Second, Supporting the lower ends of the roll shafts in oil-tight cup boxes, a dust-hole vertically, substantially as described.

Third, Arranging the stay-rods or bolts, e, e, c., obliquely in opposite directions, as and for the purpose specified.

Fourth, The construction and arrangement of the scrapers, h, h, in reference to the rolls, A and C, for the purpose described.

Fifth, The false plate, E, adjustable to the lower ends of the unflanged rolls, B, C, and resting against the circumference of the flange of the roll, A, in combination with the adjustable rolls, A, B, C, substantially as described.

41,681.—Sugar-cane Mill.—Wm. H. Clark, Cincinnati, Ohio, and R. R. James, Rising Sun, Ind. :

We claim, first, In combination with the regular main-pressure roll, D, and delivery roll, P, the use of the fluted feed roll, E, when arranged and operating in connection with the former in the manner and for the purposes herein described.

Second, We claim the hand-hole, i, in the end plate and cap, h, when the latter is so constructed and adapted to the plate as to form in connection therewith a plain face on the inner side, as and for the purpose specified.

Third, We claim the vibrating or self-adapting conductor, G, in combination with either a plain or fluted feed roll, for the purpose described.

Fourth, In combination with the juice channel, J, extending into the triangular space between the rolls, we claim the bridge plate, K, for the purpose specified.

Fifth, We claim the grooves, m, in the end plates and the grooves, n, in the ends of the rolls either separately or in combination for the purpose described.

41,682.—Sofa Bedstead.—Francis Cotton, Brooklyn, N. Y. :

First, I claim tightening the sacking, B, substantially as described for the purpose specified.

Second, I claim the use of the hinged levers, E, constructed as shown, in combination with the sofa, A, sacking, B, secondary frame, C, and rubber springs, h, h, in the manner and for the purpose or purposes specified.

41,683.—Door Bell.—Nathan F. Cone, La Crosse, Wis. :

First, I claim, in combination with the bridge or bar, B, the screw-threaded stem, A', formed or cast in one piece with the bell, A, so as to avoid or permanently close any aperture in the said bell, substantially as described.

Second, In combination with the bell, A, rotating shaft, f, cam, E, frog, G, and one or more hammers, D, D', I claim the bar, B, inclosed within the bell and employed for the attachment of the latter, in the manner herein explained.

[This invention relates to that class of door bells in which the striking mechanism is operated by rotating the knob, and the present improvement consists in dispensing with all external appliances as a means of attachment.]

41,684.—Fixed Ammunition for Fire-arms.—George Conover, Middletown, Conn. :

I claim the combination with the shell, A, of the chamber, B, disk, d, nipple, a, and percussion cap, l, substantially as and for the purpose herein specified.

[This invention relates to the use in fixed-ammunition cartridges, for loading in front of the chamber or chambers of or at the muzzle of a fire-arm, of a second charge of gunpowder, for the purpose of expelling the case or shell of the cartridge through the barrel and out at the muzzle of the fire-arm, in which the cartridge is used ; it consists in a novel mode of applying and igniting such second charge.]

41,685.—Mode of manufacturing Alcohol from Olefant Gas.—E. A. Cotelle, Paris, France :

I claim forming alcohol from olefant gas and water by means of diluted acids acting only by their presence without reconcentration or reification, substantially as herein described.

41,686.—Gang Plow.—F. R. Crothers, Sparta, Ill. :

I claim, first, Hinging the axletree to the frame of the machine so that the former will swing forward of its hinge connection, in combination with the thrusting connecting rod, N, chord or chain, m, and windlass, p, all applied and operating substantially as described.

Second, The use of a stiff rod, N', in combination with a windlass, p, and a hinged axle, D, operating substantially as and for the purposes described.

Third, The manner of attaching the draft pole, P, to the plow beams, substantially as and for the purposes described.

41,687.—Preparation for destroying Vermin.—John W. Dodge, New York City. Ante-dated Feb. 21, 1864 :

I claim the composition, mixed together, of the ingredients herein specified, substantially in the manner and about in the proportion set forth.

[The object of this invention is a composition which will, in every case, kill all kinds of vermin that infest the human head or body, and also cattle and plants, and which is equally effective on bedbugs and fleas.]

41,688.—Machine for making Splints for Barrel Hoops.—John B. Dougherty, Rochester, N. Y. :

I claim the within-described machine for preparing at one operation, hoop splints ready for market, said machine being constructed and operating substantially as set forth.

41,689.—Rocket.—Isaac Edge, Jersey City, N. J. :

I claim a telescope tail to guide and rotate a rocket in its flight, by means of wings fixed to rods held at each end by rings made to slide or close on the rocket and be partly withdrawn and fastened to the end of the rocket when in use, the wings being then expanded and secured from spreading by means of ties or straps, substantially as described.

41,690.—Refrigerator.—John N. Ehrsam, Hoboken, N. J. Ante-dated Feb. 12, 1864 :

I claim the arrangement of the water-chamber, F, covering the whole area of the bottom of the refrigerator, in combination with the ice-chamber, B, and the serpentine pipe, E, connected with and receiving the discharge from said ice-chamber, all as herein shown and described.

[This invention consists in the application to a refrigerator of a salt-water reservoir in combination with the ice chamber and with a serpentine metal pipe conducting the ice water through the salt-water reservoir in such a manner that the temperature of the salt water is brought down to and kept at a low temperature by the action of the ice water passing through it, and thereby an additional refrigerating agent is obtained.]

41,691.—Lime-kiln.—Edward B. English, Philadelphia, Pa. :

First, I claim the arrangement at or near the base of the chimney, of the damper, a, or its equivalent, as and for the purpose set forth.

Second, The chambers, W and X, when formed and arranged in respect to each other, as and for the purpose specified.

Third, The fire-places, F, F', with their diverging sides when combined with the chamber, W, as and for the purpose described.

ing operation that, in the successive passages of the rollers the lines of the impressions do not come exactly in the same place, and impressions produced are rendered imperfect; and steel plates are so hard that a good transfer is only obtained by many repetitions of the operation of the rollers, and the rollers soon wear out. It has been attempted to decarbonize the faces of steel plates to give them the requisite degree of softness, but this has not been successful. The object of this invention is to obtain plates which have a desirable softness of surface, and the requisite hardness or strength of body to resist the heavy pressure to which they are subject; and to this end it consists in combining a layer of steel and a layer of fine iron, by welding, casting or any other suitable method of uniting the iron forming the face and the steel forming the back of the plate. Alfred Sellers, of New York city, is the inventor of this improvement.

Life-boat and Pontoon Bridge.—The object of this invention is to obtain a life-boat which may, when not required for use, be compactly folded and stowed away in a small space and still be capable of being readily adapted for use, and possess the advantage of always righting itself if thrown into the water. The invention consists in having a series of air chambers formed of india-rubber, gutta-percha or any other suitable air-tight and water-proof fabric, provided with inflating tubes so arranged that the chambers may be readily filled with air and the latter retained therein, and having a metallic keel attached to the central air chamber, the upper surface of the boat being provided with a netting and the under surface having a rope applied to it; all being arranged in such a manner as to effect the desired end. Edward L. Perry, of New York city, is the inventor of this improvement.

Fastening for Breast-pins.—This invention consists in a single or double U-shaped clasp hinged to the under side of the breast-pin, stud, button, or other similar article, in combination with a point projecting from the under surface of said breast-pin, button or other article, and passing through all but one of the shanks of said clasp in such a manner that when the clasp is turned back, it can be readily hooked over one or both ends of a dress; or the ends of a sleeve or other part of a garment can be readily entered between its shanks, and on closing it down the point penetrates the fabric between its shanks, and the breast-pin, button or other article is firmly retained in the desired place; it consists, further, in the application to a button or other similar article of a double clasp, the main clasp being hinged to the under surface of the button, and the secondary clasp to the last shank of the double U-shaped main clasp in combination with two points, one projecting from the under surface of the button or other similar article, and the other from the inner surface of the secondary clasp in such a manner that one end of a shirt sleeve, or other part of a garment, can be secured in the main clasp and the other end in the secondary clasp, and the degree of tightness with which the shirt sleeve or other part of a garment is fastened, can be regulated at pleasure. Gaspard Buhler, of Newark, N. J., is the inventor of this improvement.

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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 board sides covered with marble paper, and morocco backs and corners.

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oroughmanner. The invention also consists in using in connection with the spiral screen and chute aforesaid, a hopper, which is also attached to the screen shaft, has an opening in its bottom, and is arranged to operate with a scraper in such a manner that the flour or other substance to be bolted or screened will be fed properly to the screens. The invention further consists in a means employed for giving 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 screen and chute.]

41,738.—Lifting Jack.—Ebenezer Young, Camden Centre, Mich. I claim the lever, C, provided with oblong slots, c, having notches, d, at its outer end, in combination with the ball, B, 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 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 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 as 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 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.

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 operated, substantially as and for the purpose set forth. Second, The combination 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, pivoted lever, D, segment pinion, C, and rack k, h, with pulleys, a, rod, b, and foot levers, k, k, 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 (assignor to himself and Josiah D. Richards), North Attleborough, Mass. I claim the said watch-guard or chain as constructed of the two series of staple links and the series of grooved blocks, made, combined, 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 sets 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 sets 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 hanging 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, 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 beveled or inclined front side or sides, with one or more projections, c, of corresponding form, on the rosette, F, substantially as and for the purposes set forth.

41,748.—Grain-dryer.—Henry Wood, Montreal, C. E.; George Henry Fourdriner, 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, E, arranged in combination with the perforated cylinder, B, rotated by means of the friction rollers, a', and with the louvers, 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, i, and with fan-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 described.

RE-ISSUES.

1,623.—Folding Chair.—John A., William F., & Isaac N. Dahn, New Haven, Conn. Patented Jan. 6, 1863: We 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.

1,624.—Sash and Door Fastening.—Ross Johnson, Frederick, Md. Patented May 25, 1860: I claim the within-described implement, C, J, I, as a door and window-sash fastener, substantially as set forth.

1,625.—Sewing Machine.—A. B. & N. H. Shaw (assignees of A. B. Shaw), Swanton, Vt. Patented Dec. 16, 1862: I claim the combination of the lifting cam and pin, x, with the 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, o, q, for the purpose of raising up, holding up, or lowering, the finger bar and cutting apparatus, as and for the purpose described.

Fourth, The curved, flanged, or angle-iron bars or plates, s, t, for uniting the longitudinal pieces, rr, as herein represented and for the purposes described.

Fifth, 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, l, extending behind the sickle bar and partially around the bolt-holes, l, and open at the back to permit the ready escape of moisture, gum, or other foreign matter, and thus avoid choking or clogging, substantially as described.

DESIGN.

1,903.—Stop-cock.—Henry G. Morris, Philadelphia, Pa.



PATENTS GRANTED 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 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 state man, Hon. Joseph Holt, whose administration of the Patent Office was 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, 1869, 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, W. 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.

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PRELIMINARY EXAMINATIONS AT THE PATENT OFFICE.

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 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 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.

Patents are now granted for SEVENTEEN years, and the Government fee required on filing an application for a patent is \$15. Other changes in the fees are also made as follows:—

Table listing various fees: 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 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 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.

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.

EXTENSION OF PATENTS.

Many valuable patents are annually expiring which might really 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.

Patents may be extended and preliminary advice obtained, by consulting 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. The close 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 prosecution of rejected cases has been 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 prosecuted, 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 preparation and securing of patents in the various European countries. For the transaction of this business they have offices at Nos. 66 Chancery Lane, London; 29 Boulevard St. Martin, Paris; and 26 Rue des Eperonniers, Brussels. They think 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 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 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 interest to inventors, and is undoubtedly the most spacious and best arranged in the world.

MUNN & CO. wish it to be distinctly understood that they do not speculate or traffic in patents, under any circumstances; but that they devote their whole time and energies to the interests of their clients.

COPIES OF PATENT CLAIMS.

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