



ISSUED FROM THE UNITED STATES PATENT-OFFICE
FOR THE WEEK ENDING FEBRUARY 7, 1865.
Reported Officially for the Scientific American.

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.

- 46,201.—Rotary Engine.**—Edgar B. Adams, Robt. P. Trimble and Horatio N. Adams, Salem, Ohio :
I claim, first, The combination of an eccentric hub, D, having a groove, g, formed in it, with the revolving ring, B, elongated yoke, A, and sliding pistons, b b', operating substantially as described.
Second, The application of springs, s s', to piston rods, e e', which are connected to a yoke, E, by means of pins, f f', working in slots, i i, substantially as described.
- 46,202.—Churn.**—David C. Aldrich, Anamosa, Iowa :
I claim the partition plates, B B, perforated at their lower ends, and provided with an oblong opening, g, in connection with the air tube, H, in the central compartment, e, and the dashers, C C, in the compartments, d d, all arranged to operate substantially as and for the purpose herein set forth.
I also claim the concave under surfaces, a*, of the dashers, in connection with the upper inclined surfaces, b*, the perforated partition plates, B B, and the air tube, H, for the purposes specified.
Further claim the water chamber, b, in combination with the perforated partition plates B B, dashers, C C, air tube, H, and thermometer, I, as and for the purpose set forth.
[This invention relates to a new and improved churn, of that class commonly termed atmospheric, and it consists in the employment or use of the dashers, perforated partition plates, an air tube, and a water chamber, all arranged in such a manner as to cause butter to be rapidly produced in good condition, and to separate the butter from the buttermilk.]
- 46,203.—Steam Boiler.**—John H. Ames, Baltimore, Md. :
I claim, first, The arrangement of flues, E' E', substantially as and for the purposes set forth.
Second, Producing superheated and saturated steam in a boiler and separating these two forms of steam from each other without injuriously interrupting the water level, substantially as described.
Third, Mixing together superheated and saturated steam in the steam pipe within the boiler, substantially as described.
- 46,204. Machine for Separating Lard, Tallow and Grease from the Refuse of Rendering Tanks.**—Peter Andrew, Cincinnati, Ohio :
I claim, first, The trap, B, arranged as specified and shown, operating substantially in the manner described for separating the grease from the water, and for the separation of liquids of unequal specific gravity.
Second, I claim the use of wire screens, substantially as described and set forth, for the separation of lard, tallow or grease from the refuse or slush taken from steam rendering tanks, and for the separation of any liquid having no affinity for water, and of less specific gravity from any substance that is not liquid.
Third, I claim the trough or gutter, D, for the purpose of skimming the grease from the surface of the water in the vat, as specified and in the manner described.
Fourth, I claim the perforated water pipe, F, for the purpose of lifting the grease above the screens until it flows into the trough, D, and for continuing the flow and driving it into the trough, substantially as described and shown.
Fifth, I claim the bottom of the vat, formed and arranged as described and for the purpose set forth.
- 46,205.—Presses.**—Stephen J. Austin, Freeport, Maine :
I claim, first, The expanding press box, B, constructed substantially as and for the purpose described.
Second, The ropes or chains, d d', pulleys, g' h' h' i m, and windlass, J, applied in combination with the movable side, a, of the press box, B, in the manner and for the purpose substantially as herein set forth.
Third, The pulleys, q' r' r' s' and t', applied in combination with the chains, o o', levers, D D', and follower, C, in the manner and for the purpose substantially as shown and described.
Fourth, The double drums, u u', in combination with the chains, o o', levers, D D', and follower, C, applied and operating substantially as and for the purpose set forth.
- 46,206.—Vessel for Holding Petroleum.**—John M. Batchelder, Cambridge, Mass. :
I claim a barrel or other vessel having a lining or interior coat, formed substantially as herein described and for the purpose specified.
- 46,207.—Cartridge Retractor for Breech-loading Fire-arms.**—Ferdyce Beals, New Haven, Conn. :
I claim, first, The hammer, F, provided with the notch, l m, in combination with the ejector, G, when constructed and operating as herein set forth.
Second, I claim the spring, H, when constructed and arranged to operate in combination with the ejector, G, as and for the purpose set forth.
- 46,208.—Process for Manufacturing Twine from Paper.**—E. B. Bingham, Newark, N. J. :
I claim in the manufacture of twine from paper, adding a waterproof sizing to the paper pulp, or applying the same to the paper while the latter is in a moist or green state, on the frame or web, previous to its passage through the final heated pressure cylinders, and previous to its being cut into strips and receiving its twist, as herein set forth.
- 46,209.—Molder's Bench.**—Chas. L. Bishop, Meriden, Conn. :
I claim a molder's bench, composed of a bracket, A, ribs, a, and cleats, d, horizontal arms, B, and brace, C, all constructed and fitted together in the manner substantially as herein set forth.
- 46,210.—Mess Kit.**—Erastus Blakeslee, New Haven, Conn. :
I claim attaching the pan to the kettle in the manner and for the purpose substantially as herein set forth and described.
- 46,211.—Tobacco Stopper.**—John M. Brown, Portland, Maine :
I claim, first, The pipe cover, perforated at the center, and fitted with spring arms, having shoulders, substantially as and for the purposes described.
Second, The stopper or plunger, m, in combination with the rod and spiral spring, n, substantially as and for the purposes enumerated.
Third, The combination of the detachable cover, as described, with the spring stopper or plunger, as described.
- 46,212.—Handle for Lamp Chimney.**—Morgan W. Brown, New York City :
I claim a metallic handle, formed as set forth, to clasp upon and be attached to an ordinary glass chimney, in the manner and for the purpose specified.

- 46,213.—Crane.**—Benajah J. Burnett, Mount Vernon, N. Y. :
I claim, first, The cast-iron tower or column, of one or more pieces in height, with bottom flanges or base, a, vertical cylindrical surface, d, and shoulder, i, all substantially as and for the purpose herein specified.
Second, The construction of the top of said tower, substantially as herein described, with a seat in its interior for the reception of the lower ring, l, of the box which contains the anti-friction balls upon which the cap or revolving head of the crane is supported.
Third, The cast-iron cap or revolving head, f, provided with ribs or inverted brackets, k k, for the reception of the sheave and tension bar pins, l m, and central downwardly-projecting journal, p, entering the box which receives the anti-friction balls upon which the said cap or head is supported, and receiving upon it the upper ring, l, of the said box, all substantially as herein specified.
Fourth, The annular box for the reception of the anti-friction balls which support the cap or revolving head, C, constructed of two rings, i i, the one forming the bottom and outer sides of the box, fitted into a seat in the top of the tower or column, and the other forming the top and inner sides of the box, fitted to the journal of the cap or revolving head, substantially as described.
Fifth, The construction of the circular traveler, B, with a flange for the reception of the suspending side branch rods, and with bearings for the reception of the jib shoes, and counter-weight sills, so that each thruss against the other, and a rolling joint is provided for the said shoes to permit the adjustment of the jib, all substantially as herein set forth.
Sixth, The branch side rods for suspending the circular traveler from the revolving cap, constructed with their upper parts single, as shown at G, and with their lower parts in two or more branches, as shown at q q, in Fig. 1, and combined with the cap or revolving head and traveler, substantially as herein described.
- 46,214.—Bottle for Oil.**—Charles W. Cahoon, Portland, Maine :
First, I claim a wooden bottle, made by boring a solid block of wood, and fitted with a stopper, rendered impermeable to liquids, substantially as herein described.
Second, Fastening a stopper into a bottle by means of a button, through which it is inserted, substantially as described.
Third, A bottle having a shoulder and a flaring neck, in combination with a straight side, uniform stopper, as herein described.
Fourth, A bottle fitted with channels, as herein described.
- 46,215.—Whip-socket Fastening.**—H. W. Catlin, Burlington, Vt. :
I claim the washer, B, in combination with the screw, C, passing through the dash, D, into the socket, A, to be arranged substantially in the manner as and for the purpose set forth.
- 46,216.—Bean Harvester.**—Norman Chappell, East Avon, N. Y. :
I claim the clearer or clearers, H, in combination with the cutter or cutters, G, and suitable frame, A, arranged and operating, substantially as herein set forth.
In combination with the clearers, H, cutters, G, and frame, A, I also claim the coulters, I, arranged and operating substantially as herein specified.
- 46,217.—Packing for Oil Wells.**—John R. Cross, Chicago, Ill. :
I claim the arrangement for arsesian oil wellsof a fibrous material, D, consisting of hemp or other elastic substance, in combination with the rings, A A', or other suitable frame therefor, so arranged that when said rings approach each other the packing material is compressed laterally, so as to fill the space between the tube and sides of the well, and relaxed when the rings are made to recede, the same being operated from the top of the well by the screw rods, e d, substantially in the manner and for the purpose set forth.
I also claim, in combination with said packing device, the valve, f, and tube, g, operating in the manner and for the purpose herein set forth.
- 46,218.—Ladies' Dress Protector.**—Theodore D. Day, New York City :
I claim an interior lining or facing for the lower edge of the skirt of ladies' dresses or other garments, formed with springs introduced in the manner and for the purposes specified.
- 46,219.—Fire Engine.**—John N. Dennisson, Newark, N. J. :
I claim the increasing or diminishing the effective area of the pump or pump means of a valve, B, between the piston and the steam fire engines, so that the quantity of water discharged at a stroke can be increased or diminished at pleasure without altering speed or stroke, for the purposes herein set forth.
- 46,220.—Ball Screw for Fire-arms.**—Arthur De Witzleben, Washington, D. C. :
I claim the tines or jaws, b b, with their threads or shoulders, a a, forming in combination the concave screw for the tines and purposes a, a, above described.
- 46,221.—Paper-covered Wooden Boxes.**—M. P. Dorsch, New York City :
I claim a box for collars and similar articles, made of a thin veneer of wood, with the top and bottom pieces secured to the sides by a strip of paper or other similar material glued around the said edges, and the box covered with paper, as specified, the whole forming a new article of manufacture.
- 46,222.—Operating Guns in Turrets.**—James B. Eads, St. Louis, Mo. :
First, I claim mounting a gun or guns upon a rotary platform, arranged to bring the muzzles of the guns to different ports in the turret or defense, within which it rotates, when the power which operates the guns is communicated through devices acting concentrically with the axis of rotation of said platform.
Second, Mounting guns on a rotating platform, which is arranged to rotate with a turret, when the power to operate the guns on said platform is conveyed to them through mechanical devices acting concentrically with the axis of said platform's rotation.
- 46,223.—Operating Guns and Gun Turrets.**—James B. Eads, St. Louis, Mo. :
First, I claim the use of a rotating tower, in combination with a rotating gun platform, when each is arranged to rotate independently of the other.
Second, The combination in one turret of devices for training ordnance operated by means of power transmitted through the pivot or shaft of the platform on which the ordnance is mounted, with a rotating platform and a rotating tower, each arranged in such a manner that the training of the guns on the rotating platform and the revolving of the tower may be performed independently of each other, substantially as described.
- 46,224.—Bread and Meat Slicer.**—John E. Dow, Boston, Mass. :
I claim the application and arrangement of the slicer in the mode above described, or substantially the same.
- 46,225.—Revolving Fire-arm.**—Wm. H. Elliott, Plattsburgh, N. Y. :
I claim, first, Dividing the cylinder, a, through its circle of chambers into two concentric parts, and having the recoil plate or breech permanently attached to the outer section, so that the core or central portion may be drawn out in a forward direction, for the purpose of unloading the cartridges, substantially as herein described.
Second, Charging the cylinder of a revolving pistol by first inserting the cartridges into the center of it, and then by pushing them in a lateral direction to their places, as herein described.
- 46,226.—Machine for Clipping Hair or Wool from Animals.**—Charles W. Emery, Dorchester, Mass. :
I claim the upper guard, i, for holding the hair or wool erect to facilitate the cutting, as herein set forth.
- 46,227.—Lanterns.**—Chas. Engelskirken, Buffalo, N. Y. :
I claim the expanding and contracting button, F, constructed and operating for the purposes and substantially as described.
- 46,228.—Fire-proof Safe.**—John Farrell, New York City :
I claim the employment of sulphate of magnesia in filling in the fire-proof chambers of safes, chests and other like structures, when prepared and put in, substantially as and for the purpose specified.
- 46,229.—Trip Hammer.**—H. E. Fessel and F. Krautwaid, Chicago, Ill. :
I claim the combination and arrangement of the devices, e f g, constituting both a tripping and adjusting contrivance, with the

- friction rollers, c c', crank shaft, E, and hammer, F C, in the manner and for the purpose described.
- 46,230.—Combining Aluminum with Vulcanite and other materials.**—Nahrl. C. Fowler, Yarmouth, Mass. :
I claim so combining granulated aluminum with vulcanite or rubber or analogous material, such as gutta-percha, forming a compound or composition of matter substantially as described.
Second, I claim the use of aluminum for the purpose of forming the joinings of articles made of vulcanite, for attaching rubber or vulcanite to other material, and for inlaying and ornamenting articles of vulcanite.
Third, I claim the use of vulcanite, for the purpose of attaching articles made of aluminum to other materials, or to other articles made of aluminum.
Fourth, I claim inlaying articles made of aluminum with vulcanite and imitating articles made of aluminum by a clasp, rivet or other fastening or ornamental device made of vulcanite.
- 46,231.—Lubricator.**—Thomas W. Goodwin, Portsmouth, Va. :
First, I claim the arrangement within a lubricator of a single cock having three or more openings, arranged in such a manner as to make an induction and ejection passage, when used as and for the purposes herein described.
Second, In combination with a lubricator, I claim the mode of charging and discharging the reservoir, by means of a single cock, arranged within a lubricator, when used substantially as described.
- 46,232.—Ladies' Paper Collar.**—Solomon S. Gray, Boston, Mass. :
I claim as a new article of manufacture a paper, or cloth and paper collar, to which the requisite curve or shape is given by contracting one of its edges, substantially as described.
- 46,233.—Tobacco Paper.**—Holman J. Hale, New York City :
I claim tobacco paper made substantially as above described.
I also claim the use of tobacco paper made substantially as described in the manufacture of tobacco cartridges and tobacco rettes, made from said material, substantially as above set forth.
- 46,234.—Voltaic Shoe Soles.**—Thomas Hall, Boston, Mass. :
I claim the combination of the non-conducting sole or base with a series of alternate plates of dissimilar metals lapping upon each other, so that their points of contact may be kept bright by the friction curved by the motion of the foot, and allowing the moisture or perspiration of the foot to act upon both metals at the juncture of the plates.
- 46,235.—Wire Fork for Toasting, Etc.**—Thos. Geo. Harold, Brooklyn, N. Y. :
I claim, first, Constructing an apparatus for toasting, broiling, &c., of two clamps, pressed toward each other by a spring or springs, in substantially the manner described and shown.
Second, I claim retaining the said clamps in correct position to each other by guides, in the manner and for the purpose specified.
Third, I claim the combination of the clamps, a a', spring, b, and guides, c c', for the purposes set forth.
- 46,236.—Hanger for Lamps.**—Thomas S. Hudson, East Cambridge, Mass. :
I claim the lamp-support hanger, as composed of the series of glass tubes, the end caps or cups, the rod or its equivalent, and the said elements, arranged relatively to one another, substantially as described.
- 46,237.—Shears for Cutting Metal.**—Julius Hornig, Oswego, N. Y. :
I claim, first, The metal shears connecting the shear-lever to the eccentric by means of a strap guide, l in a groove on the eccentric, in combination with a radial arm secured to the lever by means of a pin, L, on which it is free to vibrate, substantially as above described.
Second, I also claim the curved face, d, of the upper end of the shear lever, in combination with an eccentric against whose face it moves, and against which it is held by means of a radial vibrating arm, K, substantially as described.
Third, I also claim forming shoulders, s, on the faces of the washers, O, and shoulders, t, on the faces of the bosses or projections, q, in order to prevent the rotation of the washers during the vibrations of the lever, substantially as described.
[This invention consists in a novel method of holding the free end of the lever of a shears up to, or rather of connecting it with, the eccentric which operates the shears, and also in the application of a washer to the hub or trunnion of the shears.]
- 46,238.—Device for operating Safety Valves.**—William S. Hudson, Paterson, N. J. :
I claim the bell crank levers in combination with the means, I, M, or their equivalents, for readily changing the initial tension of the spring, l, within wide limits, substantially as and for the purpose herein set forth.
- 46,239.—Key Fastener.**—Henry Hungertord, Brooklyn, N. Y. :
I claim the combination and arrangement of the bolt, C, constructed substantially as described, and its ruiding or case, B, with the perforated key, the whole combined and operating substantially as and for the purposes set forth.
- 46,240.—Extension Table.**—Anthonie Iske, Lancaster, Pa. :
I claim the central column or support, A, with its cross pieces, B C, and slots, d, in combination with the cross slats, s, and their sliding pivots, 2 3 4 and 5, in said slots, d d d, arranged and operating substantially in the manner and for the purpose specified.
- 46,241.—Lock.**—Henry Jackson, Brooklyn, N. Y. :
I claim stub, F, constructed as described of a plurality of movable plates, c c, of unequal length or projection, employed in combination with the tumblers, E, in the manner and for the purpose specified.
[The object of this invention is to prevent a lock being picked or opened illegitimately by obtaining a pressure of the stub on the tumblers—a means usually resorted to by burglars in order to ascertain the position the tumblers must be brought to in order to admit of the bolt being liberated.]
- 46,242.—Machine for Pointing Wires in the Coil.**—C. Jilson, Worcester, Mass. :
I claim combining the cutter head and pattern with a revolving shaft having a spring or yielding roll within it, as and for the purpose herein described and represented.
I also claim, in combination with a revolving cutter head and pattern, the extending of the cutter stock or cutters that are operated by said pattern near through the cutter head, so that said cutters will not be thrown out or in any wise moved by the centrifugal force of the revolving head, substantially as described.
- 46,243.—Revolving Firearm.**—Benjamin F. Joslyn, Stonington, Conn. :
I claim the rod, I, and its transverse rod, m, in combination with the recessed and inclined end of the hammer—the whole being arranged and operating for the locking and unlocking of the cylinder substantially as and for the purpose herein set forth.
- 46,244.—Apparatus for Evaporating and Calcining Alkaline Solutions.**—Morris L. Keen and Hugh Burgess, Rogers Ford, Pa. :
We claim a furnace constructed for the purpose of evaporating the alkaline solutions used in the pulping and disintegrating of vegetable substances, in which the heat is utilized by means of an arrangement of pans, or their equivalents, substantially as and for the purpose described.
We also claim, in combination with the main evaporator, the finishing or calcining furnace or furnaces, substantially as described.
- 46,245.—Corn-sheller.**—Charles Ketchum, Penn Yan, N. Y. Antedated Jan. 29, 1865 :
I claim, first, The cylinder, H, when made as specified and used for the purpose set forth.
Second, I claim the concave when composed of the sections, F, substantially as specified.
Third, I claim the guides, M, and agitators, I, when constructed, arranged and used as specified.
Fourth, I claim encasing the concave, substantially as specified, and for the purpose set forth.
Fifth, I claim the plates, B and C, and hopper, L, when constructed

RE-ISSUES.

1,861.—Cartridge Box.—Erastus Blakeslee, New Haven, Conn. Patented Dec. 20, 1864 :

I claim a cartridge box constructed in the manner described, to carry one or more movable tubes, each tube containing two or more cartridges, as and for the purpose specified.

1,862.—Supplemental Valves for Steam Engines.—Richard Colburn and L. W. Hanson, Norwich, Conn. Patented May 20, 1856 :

We claim as our invention the combination of an apparatus, substantially as described and for the purposes specified, with the cylinder and piston of a steam engine—such apparatus consisting of the passages, F, G, the valve boxes, E, E', the valves, K, K', their seat passages, h, h', and the lever, L', or its equivalent.

We also claim the said apparatus constructed substantially as described and for the purposes specified.

1,863.—Valve Gear.—Joseph F. Hamilton, Pittsburgh, Pa. Patented July 14, 1863 :

I claim the arrangement of the regulating coupling arms, h, lifters or propeller arms, j, k, springs, l, levers, m and n, and link, d, when used in connection with a governor, rock shaft or eccentric of steam engines, the whole being constructed and operating substantially as herein described and for the purpose set forth.

1,864.—Arrangement of Valves for Steam Engines.—Joseph F. Hamilton, Pittsburgh, Pa. Patented July 24, 1860 :

I claim the use of the valve, i, placed in one of the receiving ports of steam engines, as herein described, and for the purpose set forth.

1,865.—Carding Machines.—Lawrence O'Brien, Indianapolis, Ind. Patented Oct. 6, 1863 :

I claim the arrangement of the roll, D, between the main card cylinder, A, and the endless apron, C, substantially as and for the purpose set forth.

Also the construction of the endless apron, C, substantially as herein described, so as to carry the fibers on top of the slats, and dust and other foreign matters between them, the fibers being delivered to the roll, D, and the foreign matters discharged in passing over the upper roll, F, when the same is applied in the manner specified.

1,866.—Keyed Instrument of Music.—Francis Peabody, Salem, Mass.—Patented Nov. 10, 1863 :

I claim as my improvement in mechanism for operating the sound-producing parts of a musical instrument the above-described arrangement of dents, or their equivalents, on a rotary plate, G, viz. in concentric circles, and with the circle of treble and bass dents alternating with respect to one another, substantially as set forth.

And in combination with the said arrangement of dents on a rotary plate, I claim the arrangement of the bass and the treble-key levers, or the parts which produce or aid in producing the musical sounds, in two separate series or sets, whereby those of the bass notes are in one set and those of the treble notes are in the other set, substantially as specified.

And in combination with the keys of a keyed musical instrument, I claim a series of operative key levers and a rotary plate, provided with dents, arranged on its face, as specified.

I also claim the combination of the separate operating wheel, D, and its operative mechanism, substantially as described, with the plate, G, provided with dents, or their mechanical equivalents, arranged as explained.

I also claim the combination of the hinged or elevating frame, M, with the plate, G, and the series of operating levers, C, C', or their equivalents.

I also claim the improved speed regulator, composed of one or more adjustable wings, N, M, and their stationary surface or wing or wings, and mechanism for varying the position of the adjustable wing or wings relatively to one or more stationary wings, substantially as and for the purpose specified.

I also claim a combination, consisting of the rotary plate, G, with its arrangement of dents, the series of key levers, C, C', or their mechanical equivalents, and a mechanism for imparting a rotary motion to the plate, G, the said key levers being applied to the keys and to the dents, by means, and so as to operate therewith, substantially as specified.

1,867.—Paper Collars.—Wm. E. Lockwood, Philadelphia, Pa., assignee by mesne assignment of Walter Hunt. Ante-dated July 24, 1854 :

As a new manufacture, a shirt collar, in which paper is used to imitate starched linen, and which is made of the desired shape by dies or forms applied under pressure.

DESIGNS.

2,028.—Military Belt Hook.—Erastus Blakeslee, New Haven, Conn.

2,029.—Badge or Breastpin.—Michael F. Ryan, New York City.

2,030.—Trade Mark.—Stephen S. Winchester (assignor to E. A. & W. Winchester), Boston, Mass.

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.

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.

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.

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.

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.

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.

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.

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 alike 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.

THE VALIDITY OF PATENTS.

Persons who are about purchasing patent property, or patentees who are about erecting extensive works for manufacturing under their patents, should have their claims examined carefully by competent attorneys, to see if they are not likely to infringe some existing patent, before making large investments.

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.

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.

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.

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.

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.

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.

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 fees for various patent services: On filing each caveat, \$10; On filing each application for a Patent, \$15; On issuing each original Patent, \$20; 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; 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.

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.

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.

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.

Patents may be extended and preliminary advice obtained, by consulting, or writing to, MUNN & Co., No. 37 Park Row, New York.

ASSIGNMENTS OF PATENTS.

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.

UNCLAIMED MODELS.

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.

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



S. J. A., of Vt.—No power is actually gained by either the lever, inclined plane, screw or wedge; what is gained in power is lost in time. This applies to them all equally.

O. M., of Ind.—You have doubtless seen that the true inventor of the Ruhmkorff coil has already been named in our paper.

D. B., of Wis.—The "natural lime" in soil is carbonate of lime, and this would not injure guano. Sulphuric acid, if mixed with guano, would combine with the ammonia to form sulphate of ammonia, and then this would be slowly decomposed during the growth of the plants, yielding the ammonia as it was wanted.

C. T., of Mass.—We know of no method by which you can mix kerosene oil with water.

J. W. P., of Me.—A sand bath for bluing steel is simply white beach sand, such as is used for scrubbing floors. Place it in an iron pan, over the fire, and heat it hot. The steel must be polished bright, and laid on the sand, when it will gradually acquire a bluish tint.

J. M., of N. Y.—Ede, on steel working, is the book you want. Address D. Appleton & Co., New York City, or go there for it.

G. F., of Mass.—The sample of paper you send is made of cotton.