



ISSUED FROM THE UNITED STATES PATENT OFFICE

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** Pamphlets giving full particulars of the mode of applying for patents, under the new law which went into force March 4, 1861, 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.

648.—J. H. Bell, of Chelsea, Mass., for an Improved Stove-Pipe Connection:

I claim the specified improved stove-pipe connection, as composed of the box, A, and the two adjustable joints, B, C, constructed, arranged, and combined together, substantially in manner and so as to operate as explained.

649.—I. A. Benedict and G. W. Cummings, of Conneaut, Ohio, for an Improved Ditching Machine:

I claim the inclined rotating shovels, k k k k, constructed as described, in combination with plow, G, inclined and curved guard, H, and the inclined side guard, I, all arranged and operating as and for the purposes set forth.

[This invention relates to an improvement in machines for forming ditches through land for the purpose of drawing off water, whereby the earth is rapidly plowed up, elevated to the surface, and thrown off at a proper distance from the side of the ditch by the operation of rotary shovels or elevators and inclined guards.]

650.—L. D. Burch, of Sherburn, N. Y., for an Improvement in Plows:

I claim, first, The perforated colter, A, nearly balanced on its axis of oscillation braced and supported at its upper end, so constructed and arranged as that it may be adjusted vertically and laterally by an attendant, and at the same time oscillate sufficiently to allow stone or other obstructions to pass freely between the point of the plow and the lower extremity of the colter, substantially in the manner and for the purposes set forth.

651.—Joseph Corduan, of Brooklyn, N. Y., for an Improvement in Lining Journal Boxes:

I claim the lining of a metallic journal box with horn, substantially in the manner described.

652.—Jonathan Creager, of Cincinnati, Ohio, for an Improvement in Machines for Turning Irregular Forms:

I claim the combination with the spindle, D, pattern, C, and gage, J, of a machine for turning irregular forms; G, of the cutter, G H I, having a hemispherical or approximately hemispherical contour and rotated on its axis at right angles to the axis of rotation of the spindle, D, substantially as and for the purposes set forth.

653.—J. A. Cutting, of Boston, Mass., for an Improvement in Aquariums:

I claim the combination of a tank or aquarium for containing water, fishes, aquatic plants, &c., with a reservoir of air, said reservoir so operating as to gradually force into and keep up a supply of air in the said tank, as set forth.

654.—R. Daniels and G. P. Cobb, of Woodstock, Vt., for an Improvement in Bee-hives:

We claim providing the removable and replaceable comb frames, constructed and described, with guide blocks, for so guiding all portions of these frames in placing them in and taking them out of the hive, as to prevent the comb in the frames, and the frames themselves from contact with the hive or comb and honey of the next contiguous frames and preventing the bees uniting their comb to both hive and frame.

We also claim providing the comb frames with small wires for effectually sustaining the comb, and around and on to which the bees may build and unite their comb without impeding their progress.

We also claim providing the comb frames with movable needles for securing the comb after being placed therein from the common hive.

We also claim providing the comb frames with their ribs, L, fixed around and on the inside and central portion of the comb frame to facilitate the commencing of the comb by the bees, and continuing their work, and in securely retaining the comb when formed.

655.—F. P. Dimpfel, of Philadelphia, Pa., for an Improvement in Friction Gearing for Machinery:

I claim, first, The application and use of friction gearing, constructed and arranged in the manner and for the purpose described. Second, I also claim the described arrangement in combination with a blower, for the purpose of economizing space and power.

656.—Levi Dodge, of Waterford, N. Y., for an Improvement in Forming and Punching Articles of Irregular Forms:

I claim in the manufacture of axes of a swelled form, punching the eyes of the same when enclosed in conforming dies made to open and close upon such swelled forms, substantially in the manner set forth. I also claim combining the punch with said dies in the manner set forth.

657.—A. S. Eastham, of Wharton, Texas, for an Improvement in Cotton Cleaners:

I claim the brush cylinders, D G J, brush boards, E F H I, and the oblique boards, K, arranged relatively with each other as shown, in connection with the combined fans and brush cylinders, O O O, stripping boards, Q, and concave screens, L I P, and card or brush cylinder, M, all arranged for joint operation, substantially as and for the purpose set forth.

[This invention consists in the employment or use of a series of revolving brush cylinders in connection with stationary brush and stripping boards and wire screens, whereby cotton, preparatory to ginning, may have dust, dirt, hulls and all foreign substances separated from it.]

658.—W. B. Goodrich, of Ashley, Ohio, for an Improvement in Apparatus for Evaporating Sugar Solutions:

I claim the employment of the supplementary pan, B, raised above the bottom of the main pan projecting beyond the fire space provided with an inclined bottom, and separated from said main pan, A, by means of a gauze partition, D, for the purpose of preventing the scum and sediment from mingling with the body of the sirup when agitated by ebullition, substantially as specified.

659.—Walter Hart, of Philadelphia, Pa., for an Improved Egg-beater:

I claim the tube, B, its screw thread, the nut, D, and beaters or dashers, b, in combination with the internal rod, C, and its disk or button, e, the whole being constructed and arranged substantially as and for the purpose set forth.

660.—L. W. Hayden, of Wilkesbarre, Pa., for an Improved Machine for Crimping Boots:

I claim the employment of the rack bar, G, and the bars, D D, as constructed, the clamps, a, the straps, d, d, the treadle, e, clamp, E, chuck, R, and set screw, N, arranged and connected to form a machine for crimping leather, substantially as specified.

661.—C. W. S. Heaton, of Salem, Ill., for an Improvement in Cultivators:

I claim the arrangement of the slotted adjustable crosspieces, B B', reversible adjustable braces, F F', and adjustable standards, D D', with

the curved main beam, A, deflecting rod, i, and crosspieces, C C, in the manner and for the purposes shown and described.

[The object of this invention is to provide the means for conveniently adjusting the shovels of a cultivator in a lateral as well as in a longitudinal direction, and to change the position of the braces, which serve to steady the shovels, according to the nature of the work to be performed.]

662.—C. H. Helms, of Poughkeepsie, N. Y., for an Improved Machine for Trimming Heels of Boots and Shoes:

I claim the arrangement of the heel plate, I, and centering pin, b, with the rotary cutters, G, in the manner and for the purposes shown and described.

I also claim the arrangement of the cutter stock with the carriage, B, as shown and described, that is to say, the stock passing through a slot in the carriage, but leaving the cutter free to move, all as set forth.

663.—I. G. Inskeep, of West Middleburgh, Ohio, for an Improvement in Field Fences:

I claim the upper and lowermost notched boards or strips, a, of the panels in connection with the adjustable reversely notched boards or strips, a', and the wedge, B, arranged substantially as and for the purpose set forth.

664.—G. W. Jennings, of Boston, Mass., for an Improvement in Mowing Machines:

I claim the arrangement of the cam wheel, E, shaft, e, driving wheels, B B, bed plate, A, and cutters, D D', provided with the arms and friction rollers, b and c, working in the cam groove, a, the several parts being combined in the machine and operating in the manner and for the purpose specified.

665.—J. H. Landis, of Eden, Pa., for an Improved Meat Chopper:

I claim the chopper-fulcrum, G, revolving on pins, H, in combination with the lever-arm, F, and its strap, I, and hook, J, when made substantially as set forth for the purpose specified.

666.—H. J. Lombaert, of Philadelphia, Pa., for an Improvement in Draught Bars for Railroad Cars:

I claim a draught bar for railroad cars, consisting of the rigid bar or bars, D, buffer heads, F F, and springs, E E, the same being constructed and arranged together in combination with the bolsters, B B, so as to operate in the manner described.

667.—M. B. Lord and S. J. Lord, of Ellsworth, Maine, for an Improvement in Brakes for Sleighs:

We claim the arrangement of the cams, d, pivoted to the end of the sliding arms, E, and operating in combination with the cranks, a, and with the draught-pole, D, in the manner and for the purpose specified.

[This invention consists in the arrangement of two hinged cams or teeth, one on each runner, and connected to arms which are attached to the draught-pole in such a manner that said teeth are forced down into the ground as soon as the sled, in going down hill, crowds in upon the team, and that, in backing or turning, said cams do not interfere with the motion of the sled.]

668.—John Loudon and H. Iversen, of New York City, for an Improvement in Ventilators for Windows:

We claim the metallic sockets, a, a, formed with eyelet centers, secured in a metallic frame and receiving slats, c, c, of glass, or other material, as set forth.

We also claim the bar, d, attached to said metallic sockets, a, a, by the eyelet centers, 2, 2, as set forth, for moving the said slats to open or shut the same, as specified.

669.—G. A. Mitchell, of Turner, Maine, for an Improved Tip for Boots and Shoes:

I claim my described boot and shoe tip, constructed, slotted and applied essentially in the manner and for the purposes fully set forth and described.

670.—P. C. Perkins, of Waterford, N. Y., for an Improved Punching and Shearing Machine:

I claim the construction of the frame, A, with a series of bolsters, C, and the frame, B, with a series of crossbars, e, to carry, respectively, punches, dies, stampers or shears, when the above parts are arranged to operate together in the manner shown and described.

[This invention consists in having a reciprocating frame provided with crossbars, having benches and shears attached, and fitted within a suitable stationary framing provided with bolster plates and cutters, the parts being so arranged that several punches and sets of shears may be operated simultaneously, and any one used separately, or two or more used simultaneously, as may be required.]

671.—Byron Rice, or Schuyler, N. Y., for an Improvement in Grain Separators:

I claim, first, The arrangement of the sieves, I I, concave, D, provided with arms, F, cams, N, and lever, M, in the manner and for the purpose set forth.

Second, The combination and arrangement of adjustable concave, D, crooked prongs, H H, and guard, R, operating in connection with the shaking shoe, J, in the manner and for the purpose set forth.

[This invention consists, in the first place, in a simple and effective device for imparting a rapid vertical shaking motion to the shoe in grain separators; and, secondly, in a new and improved construction of rake and its accessories for separating the grain and chaff from the straw.]

672.—M. M. Rounds, of New Haven, Conn., for an Improvement in Furnace Grates:

I claim the improved grate or combination of stationary comb grates and rocker grates, arranged in relation to each other and made to operate together substantially in manner and for the purpose as described.

673.—Isaac Rulofson and D. De Garmo, of Rochester, N. Y., for an Improvement in Plows:

I claim the arrangement of the beam, B, plate, f, rests, u and v, slots, c, and clamping bolts, b, the whole being constructed substantially in the manner shown and described.

674.—A. T. Serrell, of New York City, for an Improved Binding Roller for Rotary Planers:

I claim the feed rollers, g, formed with serrations upon its edge which are oblique to the surface of the bed upon which the wood moves, so that the action of the rotary cutter upon said wood shall cause the same to remain firmly upon said bed, as set forth.

I also claim the rollers, e, e, in combination with the aforesaid serrated roller, g, and rotary cutter, c, in the manner specified for the purpose of planing curved moldings, as set forth.

675.—J. P. Simmons, of Fulton, N. Y., for an Improvement in Packings for Barometers:

I claim the described process of preparing chamois leather, or equivalent material, to serve as a packing or hermetically sealing the joints of barometers, and other similar purposes, substantially as specified.

676.—J. S. Smith, of Brooklyn, N. Y., for an Improvement in Cartridge Boxes:

I claim the employment, in combination with a cartridge box, C, of a tin case, A, constructed of a series of slotted vertical tubes, B, substantially in the manner and for the purpose specified.

I also claim the rollers, e, e, in combination with the tubes, B, out of corrugated strips, b, connected by staples, c, as set forth.

677.—David Sprague, of Elizabethport, N. J., for an Improved Punching Machine:

I claim the removable die, F, with a slot, f, in combination with the cam, a, on main cam shaft, B, the whole constructed and operating as described for the purpose set forth.

678.—J. B. Turner, of Jacksonville, Ill., for an Improvement in Cultivators:

I claim, first, The arrangement of the frame, A, with the draught-pole, B, triangular frame, D, and bar, C, substantially as shown, to admit of the independent lateral movement of the frame, A, as set forth.

Second, The arrangement in the described connection with a cultivator of the double tree, E, and stirrups, G, G, connected by chains, F, the stirrups being fitted loosely on the rod, H, at the front part of the frame, A, to prevent the draught mechanism interfering in the least

with the adjusting movement of frame, A, and to render the line of draft perfectly adjustable.

Third, The combination of the hinged guard frame, K, chain, p, and seat, I, constructed, arranged and operating in the manner and for the purposes set forth.

Fourth, The combination of the curved bars, O and w, and sliding collar, P, constructed and operating as described to adjust the height of the plows, K.

Fifth, The employment or use of the adjustable cutters or scrapers, L L, applied to the frame, A, and in front of the rollers, M M, for the purpose set forth.

Sixth, The arrangement of the driver's seat, I, with the cultivator frames, J J, and guard frame, K, attached in connection with the adjustable bar, q, as and for the purpose specified.

[This invention has for its object the cultivation of crops in a mature state of growth without injuring the plants by any parts of the machine coming in contact with them; and also so constructing and arranging the frame that the same may be placed under the complete control of the operator, a guiding movement being allowed it independently of the team. The invention has further for its object the complete cultivation of crops grown in hills or drills, the soil between the latter being perfectly acted upon, and at the same time the plants protected from clods of earth, trash or substances which, in the use of ordinary cultivators, are liable to fall on them.]

679.—William Strieby, of Wagontown, Pa., for an Improvement in Cultivators:

I claim the beam, A, its teeth, e and f, and its hinged shares or vanes, h and h'; the latter being rendered adjustable by the hooked rods, l, and perforated plate, j, and their teeth, m and n, when the said beams are so connected to the beam, A, as to be adjusted laterally as well as vertically by means of the devices described or their equivalents, and when the whole of the above-mentioned parts are arranged as and for the purpose set forth.

680.—G. A. Walker, of Annville, Pa., for an Improvement in Plows:

I claim the arrangement of the detachable and reversible plow point, B, with land side recess, D, said point having a tapering shank, C, with concave upper and lower edges, d, d, and being otherwise constructed as described.

681.—P. P. Warriner, of Holland Patent, N. Y., for an Improved Table:

I claim the combination of the levers, E, and knob, F, with the buttons, G, curved bars, C, and leaves, A, in the manner and for the purposes shown and described.

[The object of this invention is to obtain a table leaf support which will adjust itself in proper position to support the leaf when the latter is raised, and at the same time admit of being readily released so as to allow the leaf to fall when desired.]

682.—Cyrenus Wheeler, Jr., of Poplar Ridge, N. Y., for an Improvement in Reaping and Mowing Machines:

I claim the combination of the hinged shoe, H, and pivoted plate, G, for allowing the finger bar connected with said shoe to be folded to or around by the main frame and be supported by and carried on its hinges, substantially as described.

I also claim the combination of the two frames, A P, connected to the same axle, the former supporting the gearing and cutting apparatus, and the latter extending rearward and by means of its casters supporting the driver or conductor and a raising and lowering apparatus, for raising, lowering or suspending the frame, A, upon itself, substantially as described.

I also claim the combination of the pivoted plate, G, carrying the finger bar, the stationary plate, F, the guides, r, s, and the lever, w, for allowing one plate to move freely and truly upon the other, and for holding them rigid when desired, substantially as described.

I also claim the clutching and unclutching mechanism composed of the obliquely-slotted stationary plate, j, the inclined movable plate, o, with its flange, p, and the lever, i, arranged substantially as described.

I also claim, in combination with a hinged finger bar and platform that are free to rise and fall at their outer ends, and that carry the reel supports, a belt riding on the main frame, to prevent the end motion of the reel shaft from throwing the belt off from its driving pulleys, substantially as described.

I also claim, in combination with the pivoted lever, I, and its catch pin and foot, 40, resting upon the shoe, H, the hinged hook and latch, y, for catching in one position and holding the lever and finger bar in another position, substantially as described.

I also claim the manner of holding the cutter plate, 18, in place by means of its own projections and those upon the upper part of the finger, substantially as described.

I also claim hanging casters to one side of a shank that is, in turn, hinged by an inclined pivot pin, so that they will freely swing around to ease the machine in turning, and be easily got at to be cleaned of all grass or straw that may wind around them or their journals, substantially as described.

I also claim, in combination with a hinged track clearer, the lock, 11 12, for the purpose of making said track clearer rigid or flexible as occasion may require, substantially as described.

683.—E. S. Willson, of Saratoga Springs, N. Y., for an Improvement in Safety Ships:

I claim a refuge cabin in combination with the layers of cement and water bed, air boxes, and device for ventilation—the whole constructed and all its parts arranged substantially as specified.

684.—S. W. Brown, of Syracuse, N. Y., assignor to himself and J. McComber, of Watertown, N. Y., for an Improvement in the Method of Locking Type Galleys:

I claim the arrangement in the construction of a printer's galley, of the parts, B C D E F, oblique slots, e, e, guides, g, g, and screws or pins, f, f, in the manner and for the purposes described.

685.—E. S. Holmes (assignor to O. E. Holmes and William Perrigo), of Wilson, N. Y., for an Improvement in Machines for Pressing Fruit in Barrels, &c.:

I claim the link, E E, or its equivalent, operating in combination with the lever, A A, and the plunger, C D, in the manner and for the purpose substantially as described.

686.—Jacob Jenkins, of Lynn, Mass., assignor to J. C. Stimpson, W. D. Waters, and M. W. Sheperd, of Salem, Mass., and G. W. Keene, of said Lynn, for an Improved Machine for Applying Heels to Boots and Shoes:

I claim, first, The rotary heel bed, O, provided with the nail holes, P, and operating as described, in combination with the plungers, P, and arm, M, or its equivalent, for the purpose specified.

Second, The combination and arrangement of the adjustable swinging arm, K, shaft, H, frame, B, spring, J, and connecting rod, L, substantially as and for the purposes described.

Third, The combination and arrangement, substantially as described, of the rotary heel beds, O and P, rotating frame, B, arm, K, and lever, D, for the purpose of compressing the lifts and sole, and holding the heel in any desired position for finishing the edge.

Fourth, The use of the rubber or elastic cushion, G, as and for the purpose set forth.

Fifth, In combination with the punch, 8, the centering arms, 4 5 6, sliding yoke, 7, and adjustable yoke, 2, substantially as described and for the object specified.

687.—George Juengst (assignor to J. McCrossan and T. J. McArthur), of New York City, for an Improvement in Sewing Machines:

I claim, first, The arrangement of the shafts, cranks and link, as set forth, for operating the take-up and needle, so as to leave the loop of the needle's thread in proper position and condition for allowing the shuttle to pass freely and safely through.

Second, The take-up attached to the connecting rod of the needle bar, and so arranged, in relation to the two stationary guides, as to control the thread through all its movements and tighten the stitch, as described.

Third, Regulating the feed by the screw and stud, the two being in contact at all times, and operating as described.

688.—E. R. Pease, of Poughkeepsie, N. Y., assignor to R. P. Pease, of Brooklyn, N. Y., for an Improvement in Mowing Machines:

I claim the dividing lever, I, arranged in relation to the main frame and driver's seat substantially as described, for operating the finger bar in the manner and for the purpose set forth.

689.—G. B. Phillips (assignor to J. S. Littell), of Newark, N. J., for an Improved Wagon Wrench:

I claim, as a new article of manufacture, the wrench described in the foregoing specification and represented in the accompanying drawing.

690.—Arcalous Wyckoff and Lafayette Stevens, of Elmira, N. Y., assignors to Arcalous Wyckoff aforesaid, for an Improvement in Hollow Augers:

We claim constructing the cutter head of annular augers by the combination of two rings, first accurately fitted together by annular tongue and groove respectively on and in the adjacent surfaces thereof, and then by dividing one ring into sections of separate cutters, &c., and properly fastening and securing them, while the other ring remains entire and unaltered from its original accurate form, so that, upon attaching the sections to the entire ring by screws or otherwise, unerring accuracy of form and perfection of parts are secured, substantially as represented.

We also claim the advance blunt terminal point, m, of the prime cutter, l, constructed and operating substantially in the manner and for the purpose shown and described.

RE-ISSUE.

45.—D. W. Shares, of Hamden, Conn., for an Improvement in Harrows. Patented Jan. 27, 1857:

I claim a series of coulters, H, formed substantially as specified, and arranged diagonally to the line of motion, so as to form a harrow that loosens, mollifies and harrows the soil, as described.

I also claim the tooth, G, at the front end of the center bar, formed with two divergent wings, in combination with a series of harrow teeth, H, on the diagonal bars, B'B', as set forth.

ADDITIONAL IMPROVEMENTS.

317.—Douglas Bly, of Rochester, N. Y., for an Improvement in Attaching Thills to Vehicles. Patented April 12, 1859:

I claim the tightening block, D, in combination with the movable collar, G, and nut, H, substantially as and for the purpose specified.

318.—S. B. H. Vance, of New York City, for an Improved Electrical Apparatus for Lighting Gas. Patented Feb. 5, 1861:

I claim the employment or use of the stationary electric machine, as described, in place of the lamp, candle, taper, or other match, generally used for lighting gas.

EXTENSION.

E. B. Bigelow, of Boston, Mass., for an Improvement in Brussel Looms. Patented March 20, 1847; re-issued Sept. 11, 1849:

I claim, first, Giving to the two parts of the mechanism—that which weaves the cloth or forms the body of the fabric, and the one which operates the figuring wires—a separate and distinct organization, substantially as described, when these are connected and confined by an intermediate mechanism which shifts the motive or driving power from one to the other, substantially as described; and, in combination with this, I also claim the employment of two brakes to arrest the momentum of the moving parts, to prevent any conflict in the operations of the two parts of the mechanism.

Second, I claim, in combination with a loom for weaving such looped fabrics as designated, the employment of a box, trough, or the equivalent thereof, for receiving and holding the figuring wires preparatory to their being introduced under the figuring warps, substantially as described.

Third, I claim the fingers, or their equivalents, which receive the figuring wires from under the pile or figuring loops, in combination with the trough box, or the equivalent thereof, into which they are deposited preparatory to the introduction of them under the figuring warps, substantially as described.

Fourth, I claim, in combination with the mechanism which withdraws the figuring wires from under the pile or figuring loops, the fingers, or their equivalent, for transferring the said wires to the trough or the equivalent thereof, from which or by which they are transferred to the open shed of the figuring warps, substantially as described.

Fifth, I claim the method, substantially as described, of introducing and dropping the figuring wires in the open shed of the figuring warps, as described.

Sixth, And finally I claim the method, substantially as described, of supporting the figuring wires in the opening shed of the figuring warps when they are being introduced, as described.



T. D. A., of N. Y.—Your siphon will keep the water in your two tanks at the same level. The water will not separate in the middle of the siphon when the water comes to a level as your friends affirm.

G. L. P., of N. Y.—Leaves may be reduced to skeletons and made perfectly white by first pouring some boiling water over them in a suitable vessel, then exposing them in a pan placed in a moderately warm situation until they ferment. After this the pulpy parts can be easily removed with the thumb and fingers, so as to leave the skeleton only. This is now bleached by immersion in weak chloride of lime, or by smoking it with the fumes of burning sulphur in a close wooden box. The operation requires patience and care, but is not difficult to perform. The leaves of trees containing tannin or resin are unsuited for making phantom bouquets; oak, willow, pine, &c., are therefore not well adapted to such purposes.

C. F., of Ohio.—There have been several patents taken out for machines for dressing millstones.

E. C. C., of Ohio.—We are not able to give you the price of peanut oil in this market.

B. F. W., of Conn.—We are not familiar with the rules and regulations of the West Point Military Academy.

W. C., of Ill.—We do not remember the name of the patentee of the lock which you describe. We could probably ascertain by making a preliminary examination, which we advise. The work to which you refer was published by Blackie & Son, of this city.

C. W. S. H., of Mass.—Gouge-formed grooves, as substitutes for square grooves in rifles, are old, and in many instances have been used. We have a diagram of a rifle that was made with such grooves 16 years ago. According to the opinion of Colonel Jacobs, an author on rifled firearms, three grooves are just as good as five or six. The French rifle pistols are made with triangular grooves, which are perhaps better than either the square or rounded grooves.

G. W. M., of C. E.—The atmosphere is diathermic, that is to say, it allows the rays of heat to pass through it; but this is not the case with brick. Hence, a chimney becomes heated by absorbing the sun's rays, and transmitting the heat to the air within, rarifies the air and produces an upward current.

W. B. M., of Mass.—Address Charles A. Seely, No. 424 Broadway, this city, for the price of the photographs you inquire about.

C. P., of Ind.—Iron to be placed in water may be prevented from corroding by coating it with zinc. We know of no paint better than that made from lead for preserving wood.

W. F., of Va.—There are so many rifles, each claiming to be the best, that we must let you select for yourself.

C. P. K., of Cal.—The objection to the use of water from city works as a motor is that it is too expensive.

J. R. L., of Ind.—Rotary engine motion would be preferred by machinists were it not for mechanical difficulties, one of which is the difficulty of packing without great increase of friction. There would be no gain, however, from "lever power"; what is gained in power is lost in time.

W. C. D., of Fla.—We advise you to buy a steam engine. If the wind in your locality is sufficiently constant, a windmill might answer your purpose, but you would probably find it a source of constant vexation.

A. J. W., of Conn.—About 60 per cent of the power is all that you will probably get from an overshot wheel as usually constructed. Stevenson's turbine yielded, at the trial at Philadelphia, 87 per cent. Turbines, however, are not adapted to work in which there are great changes in the amount of power required. Your several improvements could probably be embraced in one patent, though this would depend on the circumstances of the case.

C. C., of Ill.—Whether the water you speak of will produce foam in a steam boiler could be most readily ascertained by trying it. Sulphuric acid would be injurious to your boiler unless the quantity was very minute.

C. H., of Conn.—Smee's "Electro-metallurgy," published by John Wiley, No. 56 Walker-street, this city, is the work you want.

W. N. R.—We know of no work on the manufacture of corn starch. You will find articles on the subject on pages 151, 167 and 181, Vol. II. (new series), of the SCIENTIFIC AMERICAN.

S. S. R., of Tenn.—You can get the combined iron and steel plates made in large quantity at the Novelty Works or the Al-laire Works, in this city, and we have no doubt that there are plenty of establishments in Cincinnati and St. Louis which would fill your order. The price would depend on the quality of steel that you require.

J. M. L., of Mich.—To enable electricity to pass to a distance through an imperfect conductor, it must possess high intensity, while for chemical decomposition its power is in proportion to the quantity. The Ruhmkorff coil will charge a Leyden jar the same as an electrical machine. 80,000 feet of No. 32 copper wire have been used by Ritchie, of Boston, in the construction of one of these coils. This projected a shower of sparks 16 inches in length. The power of the magnetic machine described would depend on its size.

S. C. S., of Mass.—Take a strong solution of logwood and mix it with some common lac varnish, and you will obtain a quick drying stain for wood. The black enamel which you have noticed on certain wooden articles is produced by several coats of paint, rubbed down after drying, and then varnished and polished.

C. D., of La.—We advise you to communicate directly with Mr. Kase respecting his rice mill. We think it is a good improvement.

J. W. P., of Mass.—You will find the process of enameling hollow iron ware described on page 318, Vol. XIV. (old series), of the SCIENTIFIC AMERICAN.

J. D. A., of N. Y.—You can distil bituminous shales and obtain oil from them by admitting highly heated steam into the retort among the shale and then condensing the products of distillation. This method of distilling such substances is not patented; it is an old process, and may be remunerative in your hands.

E. F. A., of Mo.—We have seen machine-made bricks equal in quality to any made by hand. Those who informed you to the contrary must be mistaken.

Money Received

At the Scientific American Office on account of Patent Office business, for the week ending Saturday, March 16, 1861:—

- J. R., of N. Y., \$15; O. H. & M. R. B., of Mass., \$25; A. M., of N. Y., \$50; L. C., of N. J., \$10; C. M., of Conn., \$100; J. G., of Mass., \$25; M. B., of Conn., \$40; R. R., of N. Y., \$65; H. McD., of Pa., \$25; J. B. D., of Mass., \$15; M. D. B., of Cal., \$22; E. G., of Mass., \$10; J. O. F., of Mass., \$10; G. L. T., of N. Y., \$15; H. C. H., of Ill., \$60; M. C., of Pa., \$15; J. P. S., of N. Y., \$10; G. P. W., of N. Y., \$15; M. F., of N. Y., \$40; G. T. L., of Pa., \$25; R. T., of N. Y., \$15; P. H., of Mo., \$20; J. N., of N. Y., \$25; N. H. B., of Ill., \$35; B. & H., of N. Y., \$40; D. R., of N. Y., \$30; W. D. L., of N. Y., \$35; T. H. M., of La., \$55; J. N., of N. Y., \$10; E. F. F., of Tenn., \$150; R. R., of N. Y., \$55; C. M., of N. Y., \$15; H. McK., of Ala., \$30; G. M., Jr., of Ill., \$10; L. H. A., of Mass., \$15; D. B., of Ill., \$25; W. M., of N. Y., \$30; B. J., of Mass., \$35; T. S. B., of N. Y., \$30; F. W. Y., of Ohio, \$25; C. & W. R., of Mass., \$15; J. V. B., of N. J., \$10; P. G. B., of Cal., \$25; L. A. B., of N. Y., \$40; W. H., of Pa., \$25; F. H., of Mass., \$25; G. M., of N. Y., \$25; V. C., of Va., \$25; L. D. B., of N. Y., \$40; C. A. W., of Mass., \$25; T. P., of Ill., \$25; J. H. B., of N. J., \$100; C. V., of N. Y., \$15; M. T. G., of Ill., \$30; S. J., of N. J., \$10; E. H. L., of N. Y., \$25; C. C. H., of N. Y., \$25; T. D., of Iowa, \$30; S. R. D., of N. Y., \$15; P. C., of N. Y., \$15; W. C. C., of Wis., \$30; C. & S., of N. Y., \$10; E. L., of L. I., \$10; G. L. W., of Pa., \$30; A. M., of Pa., \$15; F. C., of N. Y., \$15; A. D., of Oregon, \$35; D. P., of Iowa, \$30; W. & L., of N. Y., \$30; J. M. H., of Cal., \$25; G. I. M., of Conn., \$25; G. H. C., of N. Y., \$25; W. H. N., of N. Y., \$35; D. E. T., of N. Y., \$25; N. & B., of Mass., \$22; J. M. B., of N. Y., \$10; G. B. T., of N. Y., \$22.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending March 16, 1861:—

[The patents on these cases, when issued, will be granted for seventeen years under the new Patent Law.]

- J. G., of Mass.; O. H. & W. R. B., of Mass.; D. R. P., of Conn.; W. & L., of N. Y.; R. R., of N. Y.; H. McD., of Pa.; C. P. W., of N. Y.; H. C. S., of Ohio; E. F. H., of Ill.; A. D., of Oregon; L. D. B., of N. Y.; G. H. C., of N. Y.; J. V. B., of N. J.; L. & K., of Iowa; L. C., of N. J.; G. B. T., of N. Y.; J. R. R., of Mass.; H. McK., of Ala.; E. G., of Mass.; N. H. B., of Ill.; J. H. Van R., of N. Y.; G. T. L., of Pa.; M. F., of N. Y.; F. W. Y., of Ohio; V. C., of Va.; T. P., of Ill.; T. H. M., of La.; J. N., of N. Y.; E. H. L., of N. Y.; D. B., of Ill.; C. C. H., of N. Y.; J. O. F., of Mass.; M. D. B., of Cal.; S. J., of N. J.; W. H., of Pa.; W. D. L., of N. Y.; C. S., of N. Y.; J. P. S., of N. Y.; W. H. N., of N. Y.; J. M. B., of N. Y.; N. & B., of Mass.

New Books and Periodicals Received.

THE AMERICAN JOURNAL OF SCIENCE AND ART—Conducted by Professors B. Silliman, B. Silliman, Jr., and James H. Dana, in connection with Professor Asa Gray and Professor Louis Agassiz, of Cambridge, and Dr. Wolcott Gibbs, of New York. Published by the editors at New Haven, Conn.

This old established and substantial bi-monthly journal continues to present to its readers the latest discoveries in every department of science, all treated in the most profoundly learned style. The March number contains some letters from the eminent French paleontologist, J. Barrande, which tend very strongly towards settling the old dispute between Dr. Emmons and Professor Hall, in favor of Dr. Emmons.

NOTES ON SCREW PROPULSION.—By W. M. Walker, Commander, U. S. N. Published by D. Van Nostrand, No. 157 Broadway, this city.

This is a little sketch of the history of screw propulsion, from the first efforts of John Stevens, of Hoboken, in 1804, down to the present time. Captain Ericsson receives the credit of practically introducing the system.

NORTH BRITISH REVIEW.—Published by Leonard Scott & Co., Gold-street, this city.

This periodical is a representative of the Free Presbyterian Church of Scotland, and is second to none of the great British quarterlies. The number for the present quarter contains a long list of very able articles, and one on "Engineers and Engineering," by Sir David Brewster, is of the most instructive and interesting character to men of science.

Important Hints to Our Readers.

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The new Patent Laws, recently enacted by Congress, are now in full force, and promise to be of great benefit to all parties who are concerned in new inventions.

The duration of patents granted under the new act is prolonged to SEVENTEEN years, and the government fee required on filing an application for a patent is reduced from \$30 down to \$15. Other changes in 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.....\$20
On appeal to Commissioner of Patents.....\$30
On application for Re-issue.....\$20
On application for Extension of Patent.....\$50
On granting the Extension.....\$50
On filing 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 law abolishes discrimination in fees required of foreigners, except in reference to such countries as discriminate against citizens of the United States—thus allowing English, French, Belgian, Austrian, 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.

During the last sixteen years, the business of procuring Patents for new inventions in the United States and all foreign countries has been conducted by Messrs. MUNN & CO., in connection with the publication of the SCIENTIFIC AMERICAN; and as an evidence of the confidence reposed in our Agency by the Inventors throughout the country, we would state that we have acted as agents for more than FIFTEEN THOUSAND Inventors! In fact, the publishers of this paper have become identified with the whole brotherhood of Inventors and Patentees, at home and abroad. Thousands of Inventors for whom we have taken out Patents have addressed to us most flattering testimonials for the services we have rendered them, and the wealth which has inured to the Inventors whose Patents were secured through this Office, and afterward illustrated in the SCIENTIFIC AMERICAN, would amount to many millions of dollars! We would state that we never had a more efficient corps of Draughtsmen and Specification Writers than are employed at present in our extensive Offices, and we are prepared to attend to Patent business of all kinds, in the quickest time, and on the most liberal terms.

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A pamphlet of information concerning the proper course to be pursued in obtaining patents through their Agency, the requirements of the Patent Office, &c., may be had gratis upon application at the Principal Office, or either of the Branches. They also furnish a Circular of Information about Foreign Patents.

Consultation may be had with the firm, between NINE and FOUR o'clock, daily, at their PRINCIPAL OFFICE, NO. 37 PARK ROW, NEW YORK. We have also a BRANCH OFFICE in the CITY OF WASHINGTON, on the CORNER OF F AND SEVENTH STREETS, opposite the United States Patent Office. This office is under the general superintendence of one of the firm, and is in daily communication with the Principal Office in New York, and personal attention will be given at the Patent Office to all such cases as may require it. Inventors and others who may visit Washington, having business at the Patent Office, are cordially invited to call at our Office.

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