RECENT AMERICAN INVENTIONS.

The following inventions are among the most useful improvements patented this week. For the claims to these inventions, the reader is referred to the official list on another page:—

AIR ENGINE.

This invention consists in the arrangement of a flame space between the supply cylinder and the working cylinder, whereby a more intense and quicker heating of the air in said cylinder is effected, also in the arrangement of an eccectric frame suspended from a suitable pivot, and operated by an eccentric in such a manner, that the supply piston receives the desired motion in advance of the working piston, and that a reversing of the engine is rendered possible; also in the combination with the supply piston of the regenerator in such a manner that both move together, and that the air, in passing from one side of the piston to the other, is compelled to pass through said generator, where it takes up the heat stored up therein, so that when it arrives in the center of heat, it takes but little time to heat it to the desired temperature; and it further consists in the arrangement of a reversible eccentric, in combination with a spring bar, for the purpose of opening and closing the exhaust valve instantaneously as the crank passes its center. The credit of this invention is due to Dr. A. A. Henderson, of Portsmouth, N. H.

REVOLVER.

This invention consists in the employment, in combination with a cylinder having its chambers opening into its rear face, of a recoil shield made separate from the frame of the arm, and moveable transversely thereto, in such a manner as to expose the rear openings of the chamber to permit the insertion of cartridges thereat, the object being to make an arm of cheap construction, and to obviate the necessity of either taking out the cylinder, or opening the frame to insert the charge. This invention was designed by A. J. Gibson, of Worcester, Mass.

STEAM ENGINE.

The principal objects of this invention are, first, to enable a steam engine having a long cylinder, and consequently a long stroke of piston, to be brought within a comparatively small space; and second, to enable two complete revolutions of the crank shaft to be produced by the stroke of the piston back and forth. The invention consists in connecting the piston rod and crank of an engine by means of a system of toggles and connecting rods applied and arranged in a peculiar manner, whereby the above objects are accomplished, and an engine possessing superior qualities for driving the screw propeller is obtained. The patentee of this invention is R. C. Barton, of Troy, N. Y.

PEN CLEANER.

With pens, especially with pens made of metal, such as steel or gold it is of the greatest importance that the same should be kept clean, because the ink, when left on the pen, is liable to cause the same to corrode, and to diminish its proper elasticity and smoothness, and because the ink, when not cleaned off from the pen, becomes thick and causes the pen to write bad. It is obvious that the cleaning of the pen can be accomplished with the greatest ease and perfection in liquid which dissolves the ink. To effect this purpose is the object of this invention, which consists in the arrangement of a bottle of peculiar form, and provided with a brush which is firmly sprung into the bottle in such a manner that some suitable fluid may be introduced into the bottle, and the pen may be thoroughly cleaned. The inventor of this ingenious device is Jonathan Warren, of Brooklyn, N. Y.

THE LAST COTTON CROP.

The New York *Shipping List* makes up the account of the cotton crop annually on the 31st of August. It appears that the crop ending August 31, 1860, amounted to 4,675,770 bales, distributed as follows:—

	Bales.
New Orleans	2,139,425
Alabama	843,019
Texas	352,424
Florida	192,724
Georgia	531,219
South Carolina	510,109
North Carolina	41,194
Virginia	56,987
Tennessee	108,676
Total	4,675,770
Taken for home use north of Virginia, bales	792,621
Taken for home use in Virginia and south and west of Virginia, bales	185,522
Total consumed in the United States, including burned at the ports, bales	978,043

ISSUED FROM THE UNITED STATES PATENT OFFICE

FOR THE WEEK ENDING OCTOBER 9, 1860.

[Reported Officially for the SCIENTIFIC AMERICAN.]

. Pamphlets giving full particulars of the mode of applying for patents, 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.

30,282.—F. B. Abbott, of St. Louis, Mo., for an Improved Quartz Crusher and Amalgamator:

I claim, first, The use of the heater, R, in combination with the boiler and crusher, when arranged in the manner described for the purpose specified.

Second, I claimconstructing, arranging and operating the amalgamator, substantially in the manner described for the purpose specified.

Third, I claim arranging the engine and boiler with the crusher and amalgamator, substantially in the manner described, for the purpose of economiziug in the room, welght and cost of quartz crushing apparatus.

30,283.—A. L. Adams, of Philadelphia, Pa., for an Apparatus for Copying Letters:

I claim the employment of the retaining hooks, d d, or their equivalents, in combination with the roller, B, and its apron, C, whether the said roller and apron are used in connection with the board, A, or are applied directly to a copying-book, as set forth.

30,284.—Josiah Ashenfelder, of Philadelphia, Pa., for an Improvement in Transferring Railroad Cars from one Track to Another:

I claim the employment, in connection with the siddings or turnouts of railroads, of a supplementary inclined rail, in combination with car wheels, so constructed in respect to said supplementary rail, which is so arranged in respect to the rails of the straight and of the deviating line of road that the wheels are moved from the influence of the rails of the one line of road to that of the other, as described.

30,285.—H. Beamer, of Smithburg, Pa., for an Improvement in Fruit-driers:

I claim, first, In combination with the drawers or trays, E, the double inclined hinged covers, B B, and hinged gables, C C, arranged as represented, so as to protect or expose said trays, in the manner and for the purpose set forth.

I also claim, in combination with the drying chamber, the hinged frames, E, that may he swung into or out of said chamber, for the purpose of protecting or drying by artificial heat inside, or exposing the fruit to the air or sun as circumstances may require, and as set forth.

30,286.—Aaron Bechtol, of Berkley Springs, Va., for an Improved Bedstead Fastening:

I claim the bed posts mortised as described, in combination with a bed frame mortised in a corresponding manner, as that the two ends of the frame may be supported across their entire width by means of transverse rails and the posts and frame held together by means of adjustable dogs or buttons, substantially as and for the purposes set forth.

30,287.—James A. Bennet, of King's County, N. Y., for an Improvement in Propelling Cars on Railroads:

I claim the combination and arrangement of the entire machine for propelling machinery. cars on railroads, and othervohicles, as described in this specification, consisting of springs, cog wheels, ratchets and levers.

30,288.—J. A. Berrill, of Waterville. N. Y., for an Improved Paint Mill:

I claim forming the periphery of the rotating grinding plate, A, with a recess, a, to provide a ledge, b, as and for the purpose set forth.

[The object of this invention is to prevent the paint as it is ground from flying off from the runner or revolving grinding plate as it is discharged from between said plate and the upper stationary one.]

30,289.—P. I. Biderman, of Philadelphia, Pa., for an Improvement in Conveying City Railroad Cars over Obstructions:

I claim raising and lowering the forward and rear trucks of the car, substantially in the manner specified, whereby the car wheels are elevated so as to pass over obstructions upon the track, as and for the purpose set forth.

30,290.—W. O. Bourne, of New York City, for an Improvement in Ore Separators:

I claim, first, A bed for separating ores or similar substances, composed of layers of fibrous or woven materials, secured by stitches or equivalent means for maintaining a fixed and firm support to said bed, and preventing unevenness and bagging, as set forth.

Second, In combination with a bed, constructed as set forth, I claim the adjustable plate or rim, f, for regulating the depth of the ore on the bed, as described.

30,291.—Wm. Breitenstein, of New York City, for a Fire-escape:

I claim, first, The construction of the ladder, consisting of several sections joined and hinged, substantially as described.

Second, The secure folding and unfolding of the ladder, by means of the windlass, H, the reel or drum, D, and the ropes, H, substantially as specified.

Third, The manner of attaching the escape box, N, to the ladder, and of sliding it on the same, substantially as set forth.

Fourth, The manner of adjusting the carriage and frame, A, to any position required, by means of the division of the frame, and the insertion of lever screw and handle, P P, substantially as specified.

Fifth, The general construction of the machine, in the manner and for the purpose substantially as described.

30,292.—Frederick Brubach, of Lancaster, Pa., for an Improvement in Wooden Coffins:

I claim the combined framework of the coffin lid, A B C D, and pins, d, with the glass plates, E, inserted, the loose panels, G H, with their pins, K, and lock button, I, when made substantially as specified, for the purpose set forth.

30,293.—I. C. Bryant, of Philadelphia, Pa., for an Improvement in Casting Embossed Type:

I claim, first, The combination of the bottom and top letter or letters in a frame made of iron, brass, copper, or any other metal, suitable for the purpose.

Second, I claim the arrangement of the openings in the top letters, for putting in the steel, iron, or brass wire, forming the points or projections on the face of the type.

Third, I claim the combination of one or more guide letters at the top, with one or more letters at the bottom, formed so as to give the desired shape in points or projections to the letters or designs to he cast.

Fourth, I claim the combination of separate pieces of steel, iron, or brass wire, round, square, or any other shape suitable, in connection with frame and guide and bottom letters or designs.

Fifth, I claim the combination of points, so as to form a letter or letters, and solidifying them by casting type or other metal around them in a mold and double matrice, as described.

Sixth, I claim the mold, in connection with the matrice, slide and pin, as described.

30,294.—Patrick Burke, of Helena, N. Y., for an Improvement in Stabling Cows:

I claim the arrangement of the perforated floor, G, and rollers, E, with the tight floor, D, and manger, A, as and for the purposes set forth and described.

[The object of this invention is to stable cattle in a more cleanly and healthy manner than has heretofore been done; at the same time to offer many advantages in the removing of manure from the stable, the saving of urine, and the cleaning out of the stable both before and after milking.]

30,295.—N. C. Carter, of Union City, Ind., for an Improvement in Cultivators:

I claim the arrangement of rods, c c, rods, e e, with the looped heads, e' e', and terminal screw bolt, d', in connection with rods, g and h, and screw link, i, all constructed and operated in the manner as and for the purpose set forth.

30,296.—Ezekiel Casner, of Penn Yan, N. Y., for an Improved Mill Bush:

I claim the combination of the case, A, bush blocks, E E E E, bottom plate, C, and bolts, F F, when made and used substantially as specified.

30,297.—Robert Cathcart, of Baltimore, Md., for an Improved Light for Cars:

I claim the arrangement in the manner specified of the conical reflector and lantern relatively to the lamp and roof of railway and other cars, for the purpose described.

30,298.—L. S. Chichester, of New York City, for an Improved Mill for Grinding Coffee:

I claim the adjustable cheek pieces, c c, formed with converging grooves, in combination with the oscillating or vibrating cylinder, h, as and for the purposes specified.

30,299.—D. W. Clark, of Stratford, Conn., for an Improvement in Stirrups:

I claim the making of the side pieces of stirrups adjustable in the manner and for the purposes substantially as shown and described.

I also claim the spring G, between the side pieces, when arranged and operating as set forth.

30,300.—T. C. Clarke, of Camden, N. J., for an Improved Filter:

I claim, first, In a filter for water, an opening or escape on the supply side of the filtering medium, controlled in the manner set forth and for the purposes specified.

Second, I claim the slide. I, in combination with the valve, h, for opening said valve to clean the filter or draw unfiltered water, as specified.

Third, I claim the construction of the divided case, c d, kept together by the turn buttons, e e, and provided with the ribs l l, forming the water channels, in the manner and for the purposes specified.

30,301.—C. P. Crossman and J. B. Brown, of Warren. Mass., for an Improvement in Stove Radiators:

We claim a heat radiating attachment for stoves, which is composed of an outer case. A, flanged opening, C, inner conical chamber B, filling, B', top plate, a' cold air pipe, D, smoke pipe E, oven above the chamber, B. with openings, b F, the whole being constructed as set forth and described, so as to be capable of application to the top-plates of common cooking and other stoves, all as set forth.

[The object of this invention is to obtain a portable and simple device that may be readily applied to ordinary stoves, and which will serve to retain the heat that usually passes up the flue, and render the same available for cooking purposes and also as a heat radiator.]

30,302.—Cyrus Debolt, of Ottawa, Ill., for an Improvement in Cultivators:

I claim the arrangement of the handles, C C, the joints, K K, the brackets, F, and the uprights, D D, for the purpose set forth and as described

30,303.—Charles Doolittle, of Oswego, and Alfred Carson, of New York City, for a Fruit Case:

We claim the construction of the fruit case with a receptacle. B, springs, C, and an ice-chamber, f, the whole arranged and operating as and for the purposes set forth and described.

[This invention consists in placing the receptacle which is to contain the fruit, or other article or substance to be transported within a box or case, and connecting the former to the latter by means of springs, so as to admit of the receptacle having a certain degree of play or elastic movement within the box or case, and thereby protect the contents of the receptacle from concussions and sudden jars.]

30,304.—A. M. Dye, of Clinton, Ill., for an Improved Folding Bedstead:

I claim constructing the bed post in two sections. D and F, when made to be conjoined by the ring, C, or its equivalent, and secured in an upright position for use by the screw bolts, c c, and thumb nuts, g g', and when made to fold or turn upon said screw bolts, c c, for the purpose of making the whole bedstead compact and portable, substantially as described.

30,305.—Lewis Evans, of Morgantown, Va., for an Improvement in Breech-loading Ordnance:

I claim, first, Locking the breech-piece, F, in the breech end of the barrel, A, by means of a hinged lock bar, J; passing through a slot in the breech piece, and corresponding slots in the breech end of the barrel, as and for the purposes described.

Second, Operating the hammer, F', by means of a hinged dog, E, and crank shaft, B as and for the purposes described.

Third, Adjusting the breech-piece in line with the barrel, by means of toothed brackets, L, moving in vertical ways as and for the purposes described.

Fourth, The combination of the breech-piece, F, with a sliding standard, R, spring catch, O, pin, Q, incline, T, and rack gear, W V, for the purposes described.

30,306.—John Ericsson, of New York City, for an Improvement in Air Engines:

I claim, first, The combination of the equilibrium cylinders, a b, the equilibrium pistons, f g, and the working piston, c, when used substantially in the manner and for the purpose set forth.

Second, The combination of the equilibrium cylinders, a b, the equilibrium pistons, f g, the valves, 5 and 6, the vessel, k, and the tubes therein contained, when used substantially in the manner and for the purposes set forth.

Third, The combination of the equilibrium cylinders, a b, the equilibrium pistons, f g, the valves, 3 and 4, and the heat deposit vessel, h, when used substantially in the manner and for the purposes set forth.

Fourth, The combination of the equilibrium cylinders, a b, the

equilibrium pistons, f g, the valves, 5 and 6, and the heater, i, when used in the manner and for the purposes set forth.

Fifth, The combination of the equilibrium cylinders, a b, the equilibrium pistons, f g, the valves, 1 and 2, and the cooler, n, when used in the manner and for the purposes set forth.

Sixth, The combination of the equilibrium cylinder, a, the equilibrium piston, f, the valve, 5, and the bent pipe, h' h' h", when used for the purposes set forth.

30,307.—L. Y. Gardiner, of Amsterdam, N. Y., for an Improvement in Window Sash Supporters:

I claim the india-rubber (traveling) ball or roller, a, and the groove or guide, b, when constructed a d arranged substantially as set forth.

30,308.—W. M. Garee, of Cox, Ohio, for an Improvement in Seeding Machines:

I claim the arrangement of the spring, B, jawa, D E, and board, C, with the slide, F, box, A, guard plate, j, and brush, h, all as set forth and described, for the purposes set forth.

his invention relates to that class of seeding machines which are o rated manually and are carried in the hands of the operator, and is an improvement on a machine formerly patented by this inventor.]

30,309.—A. J. Gibson, of Worcester, Mass., for an Improvement in Revolving Fire-arms:

I claim the transversely movable recoil plate, D, applied in combination with the chambered cylinder, substantially as and for the purpose specified.

30,310.—W. L. Gilroy, of Philadelphia, Pa., for an Improved Paint Can:

I claim constructing the upper end of the body of the vessel, A, with the wired boundary edge or rim, d, and the inner bead, f', substantially in the manner and for the purpose set forth and descr bed.

30,311.—C. Gloyd, of Wynant, Ohio, for an Improved Frame for Bill of Fare:

I claim the arrangement of the arms, A, supported by legs, B, and provided with recesses, b, in combination with the frames, D, constructed and operating substantially in the manner and for the purpose set forth.

[This invention consists in the arrangement of two arms supported by three or more legs, and provided with suitable slots or recesses to receive the frame in which the bills of fare are adjusted in such a manner that said bills of fare, when adjusted in the frames and placed in said arms, are visible by the persons sitting around a table, and that they can be seen and examined by different persons and from different sides of the table at one and the same time.]

30,312.—G. W. Grader and A. C. Wurzbach, of Memphis, Tenn., for an Improved Steam Gage:

We claim the employment of an air chamber, connected with the water space of the boiler, and interposed between it and the indicating gage, substantially as and for the purpose shown and described.

[This invention relates to pressing gages for steam or water. Its object is to prevent the steam or water ever coming in contact with the gage, thereby preventing its ever being overheated or frozen, and preventing the deposit of sedimentary matter within it. It consists in the employment of a column of air interposed between the steam or water and the gage, so that the gage is acted upon through the medium of air instead of directly by the steam or water.]

30,313.—J. T. Ham, of Senatobia, Miss., for an Improvement in Cotton Seed Planters:

I claim the combination of the bi-conical roller or hopper, C, with the adjustable rod, G, arranged for joint operation, as and for the purpose set forth.

I further claim, in connection with the roller or hopper, C, and rod, G, the adjustable arm, E, provided with the furrow openers, F C, and the adjustable bar, H, all being arranged substantially as and for the purpose set forth.

[This invention consists in the employment or use of a bi-conical roller or seed hopper, placed within a suitable frame, which is provided with an adjustable furrow opener, cover device and cleaner, all being so arranged whereby the desired work may be p rfectly performed and the implement readily controlled by the attendant, and the ridges in which the seed is planted being not only preserved but also perfected during the planting operation, and left in a properly rounded state, with the earth well compacted on the seed.]

30,314.—L. H. Hasse, of New York City, for an Improvement in Submarine Lamps:

I claim the construction and arrangement of the submarine lamp, substantially as described, with a double bottom of the casing containing caustic potash, and with an exhaust pipe, for the purpose of easily removing the products of combustion.

And I also claim th submarine lamp, substantially as specified, in combination with the tubes, O and P, and with the piston, Q, working on a detonating compound for the purpose of igniting the same, substantially as set forth.

30,315.—A. A. Henderson, of Portsmouth. N. H., for an Improvement in Caloric Engines:

I c aim, first, The arrangement of the flame space, a", between the cylinders, A and G, substantially as and for the purpose set forth.

Second, The arrangement of an eccentr c frame, F, and reversible eccentric, N, in combination with the supply piston, J, constructed and operating substantially as and for the purpose specified.

Third, The combination of the regenerator, J3, with the supply piston, J, constructed and operating substantially as and for the purpose described.

Fourth, The arrangement of the reversible eccentric, X, in combination with the spring rod, d and exhaust valve, b, constructed and operating in the manner and for the purpose set forth.

30,316.—Daniel Herr, John Herr and J. F. Herr, of Lancaster, Pa., for an Improvement in Corn Planters:

We claim the combination and arrangement of the cogged cam, M, slotted sliding ledge, D, connecting blocks, C C3, sliding valves, A, with their openings, 3 3, and pegs, 2, together with the hopper and shovel support, E, on the pivoted side pieces, F, and cam support, L, simultaneously operated by the lever, Z, substantially as set forth and specified.

30,317.—Joseph Hill, of Brooklyn, N. Y., for an Improvement in Galvanic Plates for Medical Use:

I claim the galvanic foot plate or batte y formed of the sections, a b c d, hinged or jointed together in the manner and for the purposes specified.

30,318.—James Hobbs, of Columbus, Ind., for an Improved Fire-escape:

I claim the arrangement of the clamping plates, B B', with the the screw, C, crank, c, and spring, b, as shown and described, for the purpose set forth.

[This invention consists in the arrangement of two friction plates with a series of studs placed in a zigzag line, and with a central regulating screw, in such a manner that said plates can be adjusted to suit different sized ropes, and that the friction of the rope passing over and around said zigzag studs can be regulated at pleasure.]

30,319.—R. W. Hoit, of Boston, Mass., for an Improvement in Apparatuses for Burning Gas:

I claim, first, Carrying off the unconsumed products of combustion of the flame or jet by forming within the apparatus itself ventilating flues, arranged and operating as described; the same consisting of the main stock, a a, and branch pipe, c, terminating in a bell-shaped mouth extending over the flame or jet, as set forth.

Second, So arranging and locating the gas-supplying pipes, or the reservoir from which all the branch pipes for conveying gas to the burners receive their supply that they or it shall receive, and be exposed to the upward heated currents that proceed from the flames or jets, substantially as described and for the purposes specified.

30,320.—Lewis Holcomb, of Granby, Conn., for an Improvement in the Method of Oiling Leather:

I claim the method of treating leather described, which consists substantially in submitting the leather, after it has been tanned, finished and covered with tallow, to the action of a hot smoothing iron, all as set forth.

[This invention consists in the application to the skins, after they have been tanned and finished and greased in the usual manner, of a hot flat iron, for the purpose of spreading the grease evenly over the skin, a d to cause the same to combine with the fibers, rendering the skin tougher and more im rvious than when it is prepared according to the old method.]

30,321.—Gilbert Hubbard, of Montville, Mass., for an Improvement in Measuring Faucets:

I claim the piston and piston rod, D', inlet and discharge valve orifices with their v ves, a c' c', arranged as described, in combination with the rods, C and C', wheel, H, a d pawls, G I, operated alternately by the rising and falling of the piston, the whole being arranged relatively with each other and operating substantially in the manner set forth.

I further claim the wheel, M, with its notches and teeth, i i, and stop pin, j, in combination with the index-registering hand, L, spring, k, wheel, h, pinio and shaft, g, and ratchet wheel, H, arranged substantially in the manner and for the purposes set forth.

[This invention consists in operating a plunger or piston placed within a cylinder communicating with the vessel from which liquid is to be drawn and measured, in such a manner that it will actuate certain valves and a train of wheelwork, and measure the liquid as it passes from the barrel into and from the cylinder. It also consists in combining certain mechanism with the plunger for operating the valves, and for registering the quantity of liquid to be measured.]

30,322.—Charles Hughes, of New Orleans, La., for an Improved Machine for Straightening Bale Hoops, &c.:

I claim the arrangement of the rollers, B B C C, and platforms, F F, with the paint trough, I, and drip box, G, as and for the purposes shown and described.

[This invention consists in the employment or use of two pairs of rollers in connection with a paint-trough or hopper and dip box, so arranged whereby metal hoops for cotton and other bales may be straightened and painted at one operation.]

30,323.—K. T. Hurlburt and Howard Thompson, of Port Byron, N. Y., for an Improvement in Operating Gates of Canal Locks, &c.:

We claim, in combination with a vertically rising and falling lock gate, a moving frame for receiving and carrying said gate around out of the way of passing boats or craft, substantially as described.

30,324.—G. C. Jenks, of New York City, for an Improvement in Letter Boxes:

I claim so notching or otherwise forming the edge of the ledge or ledges placed in the channel to the receptacle that the withdrawal of a letter shall be thereby prevented, substantially as described.

30,325.—Amos Jones, of Lebanon, N. H., for an Improvement in Roof Brackets:

I claim the employment of the adjustable clamping plates, a a, and screws, b b c, in combination with the stripe, A, hinged resting bar, B, rack plate, C, and hinged prop, D, all in the ma ner and for the purpose shown and described.

[This invention is a new and improved bracket for pitched roofs, to be used thereon for roofing, sla ng or for any kind of work where men are required to work on the roofs any length of time. The invention provides for forming a strong and safe staging on roofs which are very slanting, which staging may be applied to any roof or removed therefrom in a short time, a d with comparatively little labor.]

30,326.—John Johnson, of Biddeford, Maine, for an Improvement in Steam Generators:

I claim the arrangement of the tubes, B, and valves, f, with each other and with the independent water heating case, A, in the manner shown and described.

[This steam gene ator and superheater is composed of a system of tubes so arranged within the upper part of an upright water casing, within whose lower part is arranged the fire-chamber, that water, after being heated in the said casing below the boiling point, can be fed to the upper and cooler part of the system of tubes in just such regulated quantities as will produce the necessary supply of steam, and may circulate toward the lower and hotter part of the system; but before its arrival at the lower part of the system, may be all first converted into steam and afterward superheated. The object of the invention is more especially to economize fuel.]

30,327.—F. W. Kroeber, of Forbestown, Cal., for an Improved Gate and Door Swing:

I claim the application of the incined plane, the wheel, the lever and the spring to the adjusting of gates and doors to any required position.

30,323.—T. S. La France, of Elmira, N. Y., for an Improvement in Pistons for Steam Engines:

I claim, first, The combination of the hollow piston rod, A, with the rod, B, when the said rod, B, is provided with inclined planes which act upon radial studs, in the manner and for the purpose specified.

Second, Elevating or depressing the rod, B, by means of nuts acting upon the screw bolts, f and g, when the latter are placed at the extremities of the cross bar, K, in the manner and for the purpose set forth.

30,329.—A. J. Laird, of Middletown, Pa., for an Improved Arrangement for Operating the Valves of Steam Engines:

I claim the vibrating and sliding bar, C, in combination with the rocker arm, D, substantially as set forth, for operating the valve motion of steam engines.

30,330.—S. T. Lamb, of New Washington, Ind., for an Improvement in Harvesting Machines:

I claim, first, In combination with the pulley and crank and the semi-clutches formed thereon, and the spring for holding them together, the several devices that enable the driver, from his seat, to unclutch them for the purpose stated, said devices being arranged substantially a described.

I also claim, in combination with an automatic rake, the making of the teeth three sided, and presenting one of the sides thereof to the grain, when said teeth are inclined on the rake head from its heel towards its point, for the purpose of allowing the rake to clear itself from the grain, substantially as described.

I also claim, in combination with a sweeping rake, such as is represented, the interposing of the springs, f and g (the former traveling with the rake and the latter stationary on the platform), between the rake and the part or point upon which it drops, when said springs are so arranged as not to retard the movement of the rake by their recoil, and so that the raising or lowering of the rake shall not be injuriously affected by any sudden jarring of its parts, but have a free and easy movement, as described and represented.

I also claim, in combination with a traveling rake, the traveling support, f, substantially as and for the purpose s cified.

30,331.—A. F. Lapham, of New York City, for an Improved Washing Machine:

I claim the air-tight cylinder, d, when constructed with transverse circular ribs, e, as described, and arranged to revolve endwise together with the loose balls, f, substantially as set foath.

30,332.—J. P. Lindsay, of New York City, for an Improvement in Locks for Fire-arms:

I claim the use of the detent in combinatio with the hammer and trigger, when the whole is constructed, combined and made to produce the required result, substantially as set forth.

30,333.—D. G. Littlefield, of Albany, N. Y., for an Improvement in Furnaces. Ante-dated July 3, 1860:

I claim the combination of the cold air channel, H, the perforations, s s s s s s s, the register top to covering, L L L L, and the damper, R, the whole being constructed and arra ged in the particular manner specified.

30,334.—F. H. Manny, of Rockford, Ill., for an Improvement in Winnowing Machines:

I claim the combination of the driving shaft, C, pitman rods, c', parallel bar, H, connecting rods, h h', and bell cranks, h2, with the removable nest of sieves, F', and screen, G, when the whole are constructed, arranged and operated in the manner described, for the purpose set forth.

30,335.—T. J. Mayall, of Roxbury, Mass., for an Improvement in Breech-loading Ordnance:

I claim, first, "Thumbing" the touch holes of the chamber automatically by means of the plate, o', operating as described, or any other equivalent arrangement of mechanical devices for accomplishing the desired result.

Second, Preventing the accidental non-discharge of any one chamber from disorganizing the apparatus by means of devices operating as descri ed, to throw the rammer out of gear and prevent ng its inserting another cartridge, and then throwing it into gear again to be in readiness to perform its functions for the next succeeding chamber.

Third, In combination with the rotating magazine, the needle rod, N', operated automatically as described, and connected with a galvanic battery, so as to ignite the charges at the proper times, as set forth.

Fourth, The a angement of the gears, N O and P, and their swinging arms operating together as described, so as to permit the gun cartridge to travel back and forth without disconnecting the devices which communicate motion to the machinery from the driving shaft.

Fifth, The sponging or "swabbing" of the chambers of the magazine by means of the devices operating as described, the same consisting of the rod, D', carrying a suitable sponge jointed to a right angular lever, actuated by a suitable cam, as set forth.

30,336.—Charles McCarthy, of New York City, for an Improved Safety Apparatus for Steam Boilers:

I claim the arrangement and combination of the pipe, E, with a safety valve, in such a manner that, by any excess of pressure in the boiler, the water from the lower part of the boiler shall e forced up said pipe, E, to open said valve and pass upon the fire, or made to give an alarm, the whole being constructed substantially as set forth.

30,337.—James McMahan, of Amelia, Ohio, for an Improvement in Window Sash Supporters:

I claim the elastic lining strips, a a, and the rollers, d d, when employed in a window frame and sash, substantially as and for the purposes described.

30,338.—G. R. Meneely, of West Troy, N. Y., for an Improvement in Hanging Bells:

I claim, first, In uniting the bell to the rocking or revolving yoke, the employment of the flanged and slotted, round, tapering neck, F, cast on the bell, the round tapering hole, G, made in the yoke, the mo able perforated cap, H, and the series of screw bolts, K; all constructed and arranged in combination substantially as described.

Second, I also claim securing the supporting bolt, C, of the clapper to the yoke, D, by means of a key, Q, formed and applied to the clapper bolt and to the yoke, and arranged with the parts by which the bell is united to the yoke, as described, so that the clapper will be thereby prevented from being turned in the yoke with the bell when the parts by which the bell is secured to the yoke are turned in the yoke with the bell about the clapper bolt.

30,339.—Titus Molinier, of New Orleans, La., for an Improvement in Apparatus for Scumming:

I claim the described crank-skimming machine, consisting in three essential parts—a frame, A, a pushing and drawing screw, B, and a movable basin, C, at the end of the box, D, sliding in frame, A, said box, D, having in its interior a system of paddles; by which machine the cane juice contained in the last kettle of a set of sugar kettles may be skimmed clean in any easy, prompt, and efficacious manner.

30,340.—Charles Newcomb, of New York City, for an Improvement in Apparatuses for the Ventilation of Railroad Cars:

I claim the combination with the main pipes running along the train of cars, as described, of perforated pipes within the body of the cars and below the ceiling, together with their dampers, the whole being arranged to be operated as described, so that each car may be supplied with the requisite quantity of fresh air free from dust, smoke or cinders, and without such ventilation of one car interfering with that of the other.

30,341.—J. W. Palmer, of Port Republic, and J. K. Leeny, of Tom's Brook, Va., for an Improvement in Bee-hives:

We claim, first, The combination of the partitions B B, and the slides, C C, each being provided with openings which correspond, the partitions being provided w th dovetail grooves upon one side for receiving the slides, two being placed back to back with the slides together, substantially as and for the purpose specified.

Second, The funnel-shaped box, E, the pipe, F, and the bag, C, when the same are arranged in the manner and used for the purpose of making a bee-feeder, substantially as set forth.

30,342.—J. Y. Parce, of Fairport, N. Y., for an Improved Packing Press:

I claim the combination and arrangement of the foot lever, B, stirrup rods, b b, jo nted elbow lever, d, and pawl, g, operating conjointly, substantially as set forth and described.

I also claim the follder plate, m, attached to the packing box, K, substantially as and for the purposes set forth.

30,343.—Edward Pave (assignor to himself and C. H. Delamater), of New York City, for an Improved Forge Hammer:

I claim an elastic or yielding connecting rod, constructed as described or in some equivalent manner.

I claim an elastic or yielding connecting rod, or its substantial equivalent, in combination with the vibrating arm or lever that operates it to work the hammer.

I claim connecting the connecting rod to the arm or lever that operates it by means of a slide arranged to traverse on said arm, so

as to vary the length of the stroke and the force of the blows struck by the hammer while in operation and without stopping it.

I claim the crank which operates the hammer, in combination with an elastic or yielding connecting rod.

I claim balancing the helve and hammer by springs arranged on one or both sides of the fulcrum.

30,344.—J. M. Perkins, of Chicago, Ill., for an Improved Picnic or Excursion Seat:

I claim the portable picnic seat constructed as set forth.

30,345.—John Pettingell, of Lowell, Mass., for an Improvement in Chimney Tops:

I claim the construction of the chimney top with the inclined plate, a, to direct the air upward, the rim, h, to assist the draft, the rim, d, to bind the brickwork between it and the lower rim, c, and the molding, e, to connect the said lower rim, c, with the plate, a; the said molding being joined to the plate a little inside of the edge thereof, so as to leave a dripping edge; the whole being intended to be cast of metal in one piece, all as shown and described.

30,346.—J. J. Pike, of Chelsea, Mass., for an Improved Carriage Jack:

I claim my improved carriage jack as constructed with the extra bearing lever, C, combined and arranged with the lifting lever, B, and the supporting frame, A, substantially in the manner and so as to operate as described.

And I also claim the combination and arrangement of the two spring stopping levers, k l, and the pin, P, with the levers, B and C, applied within the frame, A, and with respect to one another as specified.

30,347.—Joseph Pine, of New York City, for an Improved Apparatus for Heating Railroad Cars:

I claim the arrangement of the heaters, F F, with the outside end platforms, B B, plates, b b, boxes, J, and gratings, d, as shown and described, whereby the driver and conductor, and others standing upon platforms outside of the car, will receive the benefit of the heaters as well as the passengers occupying the interior.

[This invention is a new and useful method of warming city cars, so as to make them comfortable to the passengers and to the driver and conductor. It is intended more especially for the street cars where it is desirable to economize space in the car, and where stoves could not be practically used. The invention consists in arranging under the platform of the car double-wall furnaces, and in conducting the air which is heated between the walls of each furnace through a flue or flues that are enclosed by smoke flues, through the middle or along each side of the floor of the car from front to rear thereof, and finally conducting it off through flues at each end of the car.]

30,348.—W. G. Pollock and J. W. Sener, of Fredericksburgh, Va., for an Improvement in Seed Planters:

We claim, first, The vibrating, adjustable rake frame, E, constructed and arranged and operating as described.

Second, In combination with a seed planter, fixing the central pressure roller to the shaft, S, while the slide rollers are loose upon it in the manner and for the purpose set forth.

Third, The combination and arrangement of the cylinder, C, frame, F, and pressure rollers, R R', in the manner set forth and shown, when used in a seed planting machine.

30,349.—D. S. Quimby, of Brooklyn, N. Y., for an Improved Fireplace Heater:

I claim the arrangement of the fireplace box, F, perforated plates, A B C D, with the flues, G G', and flue, E, arranged and operated as described.

30,350.—C. L. Rehn (assignor to J. Lucas & Co.), of Philadelphia, Pa., for a Fastening for Metallic Kegs:

I claim the fastener, E, composed of the plate, f, and its two arms, e and e', when one or both of the said arms has a rounded end, x, and each arm has a notch, y, and when the whole is constructed as set forth for attachment and detachment from the staples, D and D', on the edge of the keg, by the method and for the purpose described.

30,351.—J. K. Robinson and J. M. Clark, of Bellaire, Ohio, for an Improvement in Pistons for Steam Engines:

We claim, first, The valve seat bolts constructed substantially in the manner and for the double purpose described.

Second, The combination of the key, h', with the rims, h c, on the piston head and follower, substantially in the manner and for the purpose described.

30,352.—H. D. Rogers, of Grafton, Ohio, for an Improvement in Securing Points to Plows:

I claim the securing the point, B, by means of the shoe, A, hook, D, and set screw, E—the whole being arranged in the manner and for the purpose as described.

30,353.—Johu Ruegg, of St. Louis, Mo., for an Improved Brush Machine:

I claim the combination of what I have above denominated the "adjusting head" with what I have above denominated the "cutting or trimming head," in the manner described; and I also claim making the said adjusting and trimming heads, in the manner described for the purpose specified.

30,354.—M. E. Rudasill, of Shelby, N. C., for an Improvement in Pumps:

I claim the arrangement of the plate, A, box, C, and cylinders, B B, with the pistons, I I, springs, F F, hollow shaft, D, and cam cylinder, E—the several parts being connected and made to operate substantially as and for the purpose specified.

30,355.—C. J. Schueder, of Astoria, N. Y., for an Improved Propeller:

I claim the arrangement of the rod, H, lever, g, rods, h, and braces, i, with the two sleeves, G H, bars, c d, and sheet, E, as and for the purposes shown and described.

[The object of this invention is to produce a propeller which imitates the action of the foot of a duck or frog, so that by its applications a boat may be propelled without creating a swell, rendering this propeller peculiarly useful for canal boats.]

30,356.—Robert Scott, Jr., of Madison, Ind., for an Improved Cotton Press:

I claim the arrangement of the lever, B, arm, K, connecting piece, J, and head, D, with the cords, G H, lever, C, head, E, lever, e, connecting piece, F, and cords, I and L; the whole being constructed and operating in the manner and for the purpose specified.

30,357.—M. G. Slemmons, of Cadiz, Ohio, for an Improvement in Plows:

I claim the arrangemeut of the two curved, shouldered beams, A A a, clevis, B, transverse bar, D m, slotted, adjustable, forked handles, E E b, and notched and morised shovels, C C e, in the manner and for the purpose described.

30,358.—C. Snyder and S. M. Smith, of Hawley, Pa., for an Improved Portable Crane:

We claim the combination with the extension mast and adjustable crane arm, E, of the extension braces, when the same are constructed and operate substantially as and for the purposes set forth.

[This invention is a portable extension crane which is so constructed that it can be readily set up from place to place in any building, from eight to ten feet, more or less, between the floors. The invention consists in combining with an extension mast and adjustable crane arm, an extension brace for supporting the arm at any elevation to which it is capable of being placed.]

30,359.—Henry Snyder, of Dayton, Ohio, for an Improvement in Machines for Pulling and Cutting Stalks:

I claim the employment or use of the wheels, J J, having an oblique position with the wheels, B B, and provided with hooks or cutters, O, in combination with the bars or knockers, P, or their equivalents, essentially as and for the purpose set forth.

[The object of this invention is to obtain a simple and efficient machine by which old cotton stalks may be eradicated or pulled out of the earth by the roots, to make way for a succeeding crop; the invention being also applicable for cutting standing corn stalks.]

30,360.—Henry Stanley, of Troy, N. Y., for Improved Propellers in their Application to Vessels:

I claim the employment of two propellers having conical hubs and blades, as described, at the bow or stern of a vessel, substantially as and for the purposes set forth.

I also claim, in combination with the cone-formed hub and spiral blades, as above set forth, the backward inclination of said blades at the bows and the forward inclination at the stern, of those blades, as and for the purposes described.

I also claim the combination of twin bow and stern propellers, as described, attached to the same boat, for the purposes set forth.

30,361.—Achilles St. Dezier, of Plaquemine, La., for an Improvement in Cane Harvesters:

I claim the combination of the rotating cutter wheel, G, moldboard, H, and guides or plates, d f, the latter being attached to the runners, E I, and all arranged as and for the purpose set forth.

[This invention relates to a new and improved machine for cutting standing sugar cane and depositing it, as cut, in windrows parallel with the rows in which it grew. The invention consists in the employment of a rotary cutter in connection with a moldboard and guide plates, all being attached to a suitable frame and arranged in such a manner as to constitute a very simple, efficient and economical machine for the desired purpose.]

30,362.—Isaac Stoddard, of Great Bend, Pa., for an Improvement in Propelling Machinery by Horse Power:

I claim the arrangement of rollers, R R, wheel, W, standards, s s s, block, B, cranks, c c, band wheels, D D, pinions, G G, and segments, o o; the whole combined and operating substantially as set forth.

30,363.—S. D. Stout, of Charleston, Tenn., for an Improvement in Pumps:

I claim the three-chambered box, A, with its valves, b b and d, and leader pipe, B, in combination with the air pipes, C C', cut-off box, E, and bellows, G, or its equivalent; the whole being arranged substantially as and for the purpose described.

[This invention consists in the employment of compressed air in a novel manner for forcing water up through a pipe from the bottom of a well, or other low level, in a continuous stream. The invention further consists in the use of a vibrating cut-off for conducting air alternately to the two side compartments of the valve box.]

30,364.—J. B. Suitt, of Indianapolis, Ind., for an Improved Device for Operating the Tilting Tables in Shingle Machines:

I claim the folding lever spring, K, with shoe, J, and weight, L, with weighted table, F, when operated in connection with the wheel, B, cam, C, connecting arm, P, or their equivalents, as and for the purposes set forth.

30,365.—G. W. Van Deren, of Big Flatts, N. Y., for an Improved Valve for Steam Engines:

I claim the construction of the valve with a shoulder, a, at its extremity and with a projection, B, extending beyond its periphery and otherwise made as shown and described, for the purposes set forth.

[The object of this invention is to construct an oscillating steam valve in which the pressure of the steam has little or no effect to increase the friction of the valve, so that the same works with equal facility when under pressure as it does before the steam is let on.]

30,366.—M. W. Warne, of St. Louis, Mo., for an Improvement in Filters:

I claim the employment or use of a cylinders, C D E, one or more placed within a water cooler, A, and provided with a suitable filtering medium, F, and iron and sulphur, H G, essentially as and for the purpose set forth.

[This invention consists in arranging the parts of a filter in such a manner that the water will pass upward through a proper filtering medium, and cause the impurities to settle at the bottom, the filtering medium being placed within suitable boxes or receivers in a cooler, and used in connection with iron and sulphur, so that the water, while being purified and cooled, will also be medicated.]

30,367.—J. L. Wells, of St. Louis, Mo., for an Improvement in Compositions for Tanning:

I claim the compound composed of the constituents specified.

30,368.—George Wheeler, of New York City, for an Improved Keyhole Guard:

I claim the guard, D, constructed so as to be attached to an ordinary key, and operate substantially in the manner and for the purpose set forth.

30,369.—J. R. Williamson, of Washington, D. C., for an Improvement in Stirrups:

I claim the rotating and oscillating step, having friction rollers or their equivalents, on both the step and sides of the bow, constructed and arranged in the manner and for the purposes specified.

30,370.—Isaac Wiswell, of Springfield, Vt., for an Improvement in Combined Window Net and Sash:

I claim the arrangement of the nettings and rollers, D D', with the sashes, B B', in the manner shown and described, so that when either of the sashes are opened the netting will follow the sash and protect the space, and when either sash is closed, the netting appended thereto will be rolled up, all as set forth.

[This invention consists in applying in a novel manner to window sash, a screen or mosquito net, which will be operated by the raising or lowering of either top or bottom sash, so as to close up either the upper or lower half of the window. This netting is applied either to the upper or lower sash, or to both, if desired, in such a manner that it will roll up or unroll by simply moving the sash.]

30,371.—Samuel Wiswell, of Hyde Park, Vt., for an Improved Extension Wash Bench:

I claim the combination of two extension shelves, B and C, and an elevated frame or posts A, with the ordinary wash bench: all the parts being constructed and arranged as and for the purposes set forth.

[The object of this invention is to provide a convenient wash bench upon which may be placed a wash tub, a soap dish, a clothes wringer and a clothes basket. The relative positions of the tub, the wringer and the basket are such that the clothes, after being washed, may be passed from the tub through the wringer, and deposited into the basket, without any re-handling after being fed into the wringer.]

30,372.—C. W. Wood, of Worcester, Mass., for an Improvement in Breech-loading Fire-arms:

I claim, first, Limiting the amount of motion of the barrel by the catch or lever, G, when constructed and operating substantially as described.

Second, I claim making the lever, G, serve the double purpose of withdrawing the cartridge and limiting the amount of motion of the barrel, as set forth and described.

30,373.—C. C. Barton, of Troy, N. Y., assignor to E. D. Barton and W. J. Harlan, of Jersey City, N. J., for an Improvement in Steam Engines:

I claim the connection of the piston rod and crank of an engine by means of side rods, J J, and toggle rods, K K L, applied and arranged in combination with the cylinder, piston rod and crank substantially as specified.

30,374.—C. C. Crosby (assignor to himself and W. C. Gardner), of Nantucket, Mass., for an Improved Machine for Punching Nail Holes:

I claim the described application or arrangement of a sheet carrier and discharger, S, and a series of rollers, H H H H' H' H', with respect to the movable carriage, K, its supporting frame, A, and edge punching and bearing wheels, G F, applied to and operating with other punching and bearing wheels, substantially as explained.

And in combination with the carriage, K, and its discharging device, S, I claim the inclined struts arranged on both ends of the frame, A, in manner and so as to receive and guide a discharged and punched sheet of sheathing, as specified.

30,375.—John Gray, of Melrose, N. Y., assignor to himself, J. R. Weed and C. M. Clay, of New York City, and J. W. Danford, of Brooklyn, N. Y., for an Improved Washing Machine:

I claim the hollow vertical cylinder having open inclined slats and inclined ribs, b, to cleanse clothes or other materials by rinsing, in the manner specified.

30,376.—E. T. Green (assignor to himself and J. R. Folsom), of Stoneham, Mass., for an Improvement in Machines for Cutting Boot and Shoe Heels:

I claim the combination of a heel-cutting mechanism, operating substantially as specified, with a mechanism for relatively adjusting, in the direction of the length of the shoe, the tread and seat-formers, by which the rake or pitch of the rear of the heel may be varied without substitution of other formers.

Also, so arranging, in the heel-shaping machines, which operate substantially as described, of the forming and holding mechanisms, that each is distinct in itself, and removable one from the other, substantially in the manner and for the purpose set forth.

Also, the employment of the heel-seat portion of the sole for a former of the heel and guide for the knife, either with or without the use of the tread-former.

30,377.—Albert Kleinsteiber, of Milwaukie, Wis., assignor to W. Musgrove, of New York City, for an Improvement In Lamps:

I claim the tube, E, and piston, F, the latter being adjusted by the screw, C, or other device, in combination with a hollow wick formed of a straw, G, or its equivalent, and twist, H, essentially as and for the purpose set forth.

[The object of this invention is to obtain a lamp for burning lard, grease collected in cooking, &c., &c. The invention is designed solely for domestic or household use in rural districts, and to apply the majority of scraps and grease for illuminating purposes which are now used less advantageously.]

30,378.—H. L. McNish (assignor to himself and Dr. C. Butler), of Lowell, Mass., for an Improved Barrel-head Machine:

I claim, first, Giving the saw a vibrating movement in a direction longitudinally with its axis and simultaneously with its rotation, by means of the cam, V, bars, P S, and spring, U, or their equivalents, for the purpose of cutting the heads in an ovalor elliptical form, to compensate for the shrinking of the same, substantially as set forth.

Second, The arrangement of the slide, Q, cam, V, and screw, R, substantially as shown, for the purpose of varying, in a slight degree, the diameter of the heads, as set forth.

Third, The arrangement of the plate, Z, and circular plate, D'; the former being attached to the latter by the bolt, g', passing through the slot, r, and the plate, D', attached eccentrically to the bar, S, as and for the purposes specified.

Fourth, Connecting the shaft, K, with the bar, J, which is fitted loosely on the tubular upright, f, and arranged substantially as shown, to admit of the turning and adjusting of shaft, K, in a proper relative position with the saw shaft, A, for the purpose of driving both said shafts from one and the same counter shaft.

[See illustration in No. 8 of the current volume of our journal.]

30,379.—F. S. Sibley (assignor to himself and W. E. Doubleday), of Brooklyn, N. Y., for an Improved Method of Curling Hat Rims:

I claim the rope, strap or band, c, in combination with the dies, a and b, for drawing upon and curling the material forming the hat brim, as specified.

30,380.—Sylvenus Walker (assignor to himself and S. S. Hemenway), of Boston, Mass., for an Improved Sash Fastener:

In combination with the cross-bars of window sashes, I claim the arrangement of plates, A and B, when these are locked together by the hook of D, in the manner and for the purpose set forth.

RE-ISSUES.

E. L. Perkins, of Roxbury, Mass., for an Improvement in Machines for Drying Paper and other Fabrics. Patented June 7, 1859:

I claim, first, A drying apparatus, consisting of the combination of a dying chamber with inlet and outlet passages, for insuring a circulation through it, an apparatus for heating the same, and suitable carrying rolls for suspending the fabric vertically (or nearly so) in the drying chamber, and for carrying it into and through the same.

Second, I claim the within-described arrangement of the carrying rolls, e and e', with regard to each other, for the purpose of deflecting the fabric from a vertical plane and into a series of zigzag planes, thereby making a series of bearing points, the effect of which is to distend the fabric equally and prevent it from roping up, as set forth.

J. R. Rogers, of Sacramento, Wis., for an Improvement in Percussion Seeders. Patented March 6, 1860:

I claim, first, The employment of the horizontal wheel, F, provided with tapering flanges, when said wheel has a backward and forward rotary motion imparted to it, for the purpose of seeding by percussion and for lapping the grain, substantially as specified.

Second, The seed-shaker and regulator, c, in combination with the eccentric shaft, E, when the same are used as and for the purpose specified.

Third, The use of the rod, H, and cord, a, in combination with the shaft, E, and the flanged wheel, F, substantially as and for the purpose specified.

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

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

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

H. Smith and D. B. Wesson, of Springfield, Mass., for an Improvement in Revolving Fire-arms. Patented July 5, 1859:

We claim the spring bolt, k, applied to the outer or curved part of the cylinder, in combination with the nose of the hammer, one of them being furnished with a wedge-shaped piece or projection, and the otherwith a spring projection, for the purpose specified.

Amos Whittemore, of Cambridgeport, Mass., for an Improved Machine for Making Horse-shoe Nails. Patented August 14, 1860:

I claim, first, The anvil, I, the same having both a rocking and reciprocating motion, in combination with adjustable or stationary dies, the faces of which shall be provided with a recess or groove for the purpose of preventing the pointing of the nail until its head and shank have been formed, substantially as set forth.

Second, I claim the pin, k', upon which is secured, permanently, the anvil, I, when the same shall be operated substantially as and for the purpose specified.

Third, I claim the mode of operating the shears or cutters, the same being made to advance at the proper moment to sever the nail from the rod, and then to fall back out of the way, substantially as and for the purpose described.

Fourth, I claim the various parts which constitute the feeding apparatus, consisting of upright, 5, levers, S and c, spiral spring, a, and rod, b; the whole being operated in the manner and for the purpose specified.

Fifth, I claim the levers, m ande, acting in conjunction to hold the rod while the nail is undergoing its formation, substantially as and for the purpose specified.

Sixth, I claim the sliding frame, D, in combination with the hammers, H H, each being operated upon substantially as and for the purpose described.

ADDITIONAL IMPROVEMENT.

T. T. S. Laidley, of the United States Army, for an Improvement in Tape Primer for Fire-arms. Patented February 15, 1859:

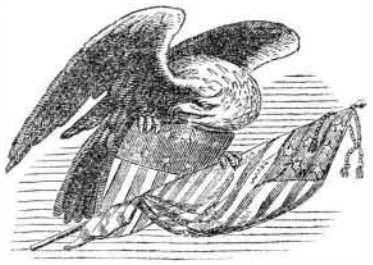
I claim making a continuous tape primer by inserting a cup or pellet, containing the percussion powder, in a recess or indentation formed in a strip of soft metal, alloy, india-rubber, gutta-percha, or other suitable material, and holding the cup or pellet in place by pressing the metal or substance of the strip partly over the outer edge of the pellet or cup, or by an easily-fusible solder securing the cup to the strip, or by means of a cement for that purpose.

DESIGNS.

S. H. Sailor and J. Steffe, (assignors to North, Chase & North), of Philadelphia, Pa., for a Design for Stoves.

Elias Tompkins, of Brooklyn, N. Y., for a Design for Heater Fronts.

THE RISE AND PROGRESS OF INVENTIONS.



During the period of Fourteen Years which has elapsed since the business of procuring patents for inventors was commenced by MUNN & Co., in connection with the publication of this paper, the number of applications for patents in this country and abroad has yearly increased until the number of patents issued at the United States Patent Office last year (1859) amounted to 4,538; while the number granted in the year 1845—fourteen years ago—numbered 502—only about one-third as many as were granted to our own clients last year; there being patented, through the Scientific American Patent Agency, 1,440 during the year 1859. The increasing activity among inventors has largely augmented the number of agencies for transacting such business.

In this profession, the publishers of this paper have become identified with the universal brotherhood of Inventors and Patentees at home and abroad, at the North and the South; and with the increased activity of these men of genius we have kept apace up to this time, when we find ourselves transacting a larger business in this profession than any other firm in the world.

We may safely assert that no concern has the combined talent and facilities that we possess for preparing carefully and correctly applications for patents, and attending to all business pertaining thereto.

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Persons having conceived an idea which they think may be patentable are advised to make a sketch or model of their invention, and submit to us, with a full description, for advice. The points of novelty are carefully examined, and a reply written corresponding with the facts, free of charge. Address MUNN & CO., No. 37 Park-row, New York.

PRELIMINARY EXAMINATIONS AT THE PATENT OFFICE.

The advice we 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 we may acquire of a similar invention from our long experience, and the records in our Home Office. But for a fee of $5, accompanied with a model or drawing and description, we 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 our Branch Office, corner of F and Seventh streets, Washington, by experienced and competent persons. Over 1,500 of these examinations were made last year through this office, and as a measure of prudence and economy, we usually advise inventors to have a preliminary examination made. Address MUNN & CO., No. 37 Park-row, New York.

CAVEATS.

Persons desiring to file a caveat can have the papers prepared on reasonable terms, by sending a sketch and description of the invention. The government fee for a caveat is $20. A pamphlet or advice regarding applications for patents and caveats furnished gratis on application by mail. Address MUNN & CO., No. 37 Park-row, New York.

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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 is composed for the Patent Office. These should be securely packed, the inventor's name marked on them, and sent, with the government fee, by express. The express charges should be prepaid. Small models, from a distance, can often be sent cheaper by mail. The safest way to remit money is by draft on New York, payable to 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.

REJECTED APPLICATIONS.

We are prepared to undertake the investigation and prosecution of rejected cases, on reasonable terms. The close proximity of our Washington Agency to the Patent Office affords us rare opportunities for the examination and comparison of references, models, drawings, documents, &c. Our success in the prosecution of rejected cases has been very great. The principal portion of our 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 us on the subject, giving a brief history of their case, enclosing the official letters, &c.

FOREIGN PATENTS.

We are very extensively engaged in the preparation and securing of patents in the various European countries. For the transaction of this business we have offices at Nos. 66 Chancery Lane, London; 29 Boulevard St. Martin, Paris; and 26 Rue des Eperonniers, Brussels.

We think we can safely say that three-fourths of all the European patents secured to American citizens are procured through our Agency.

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

Circulars of information concerning the proper course to be pursued in obtaining patents in foreign countries through our Agency the requirements of the different Patent Offices, &c., may be had gratis upon application at our principal office, No. 37 Park-row, New York, or either of our branch offices.

CAUTION TO INVENTORS.

Messrs. MUNN & CO. wish it to be distinctly understood that they neither buy nor sell patents. They regard it as inconsistent with a proper management of the interests and claims of inventors, to participate in the least apparent speculation in the rights of patentees. They would also advise patentees to be extremely cautious into whose hands they entrust the power to dispose of their inventions. Nearly fifteen years' observation has convinced us that the selling of patents cannot be conducted by the same parties who solicit them for others, without causing distrust.

BUSINESS CONDUCTED CONFIDENTIALLY

We would inform inventors that their communications are treated with the utmost confidence, and that the secrets of inventors confided to us are never divulged, without an order from the inventor or his acknowledged representative.

TESTIMONIALS.

Immediately after the appointment of Mr. Holt to the office of Postmaster-General of the United States, he addressed to us the subjoined very gratifying testimonial:—

Messrs. MUNN & Co.:—It affords me much pleasure to bear testimony to the able and efficient manner in which you have discharged your duties of 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.

Messrs. MUNN & Co.:—Gentlemen: It gives me much pleasure to say that, during the time of my holding the office of Commissioner of Patents, a very large proportion of the business of inventors before the Patent Office was transacted through your agency, and that I have ever found you faithful and devoted to the interests of your clients, as well as eminently qualified to perform the duties of Patent Attorneys with skill and accuracy. Very respectfully,

Your obedient servant, WM. D. BISHOP.

MONEY RECEIVED

At the Scientific American Office on account of Patent Office business, for the week ending Saturday, Oct. 13, 1860:—

J W., of N. Y., $98; J. B. C., of N. Y., $12; H. C. A., of Ill., $31; A. C., of N. B., $25; J. J. S., of N. Y., $25; R. T. K., of Pa., $30; J. W. K., of Ga., $30; J. H. G., of Ky., $55; B. A. G., of Mass., $30; J. W., of N. Y., $32; G. I. M., of Conn., $30; G. K. W., of R. I., $30; W. C., of N. Y., $30; M. D., of Ind., $30; C. D., of Mass., $15; G. G. L., of Del., $60; J. H. B. S., of Ga., $15; J. B., of Texas, $30; J. G., of N. H., $30; J. M., of Conn., $55; L. A. B., of N. Y., $31; R. H., of N J., $135; C. G., of Pa., $25; R. & W., of N. Y., $25; L. S., of Ky., $25; W. F. K., of Ill., $30; J. C., of Minn., $25; C. W. S. H., of Ill., $10; S. L. W., of N. C., $30; W. H. N., of Conn., $58; C. & S., of Pa., $30; E. D., of N. Y., $31; S. P. P., of N. Y., $30; J. A. G., of Mass., $30; T. J. P., of Ohio, $75; C. W. W., of Mass., $30; A. C. C., of R. I., $25; J. H. D., of Mo., $30; C. R. O., of N. Y., $15; J. R., of N. Y., $25; E. W. G., of Mass., $40; P. M., of Mich., $55; P. K., of Conn., $20; J P. F., of N. Y., $25; T. J. W., of Conn., $25; J. H. B., of N. Y., $15; J. B., of N. Y., $30; J. A. A., of Mass., $30; W. C. E., of Tenn., $25; W. & G., of Va., $20; E. R. P., of N. Y., $10; J. S., Jr., of Pa., $25; J. B. McM., of N. Y., $15; J. D., of La., $25; S. L. B., of S. C., $30; H. M. B., of Ohio, $30.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, Oct. 13, 1860:—

E. W. G., of Mass.; J. W., of N. Y.; W. F. K., of Ill.; T J. W., of Conn.; J. J. S., of N. Y.; J. M., of Conn.; O P., of N. Y. (two cases); J. S., Jr., of Pa.; P. H., of Mo.; A. C. C., of R. I.; J. D., of La.; C. G., of Pa.; R. & W., of N. Y.; J. C., of Minn.; L. S., of Ky.; J. H. B., of N. Y.; C. D., of Mass.; J. R., of N. Y.; J. B. P., of Miss.; H. Van S., of Conn.; G. K. W., of R. I.; L. O. B., of N. Y.; J. H. B. S., of Ga.; J M., Jr., of N. Y.; J. W., of N. Y.; A. C., of N. B.; R. C., of Texas; J W. R., of Ga.; J. P. F., of N. Y.; R. T. K., of Pa; J G., of Ky. (four cases); J. B. C., of N. Y.; W. C. E., of Tenn.; W. G., of Mass.; C. W. W., of Mass.

Notes and Queries

CORRESPONDENTS sending communications for publication in our columns are requested to avoid writing on both sides of a sheet of paper. This fault, though common to persons unaccustomed to writing for the press, gives great trouble to the printer (especially in long articles), and, when combined with illegibility of handwriting, often causes interesting contributions to be regretfully consigned to our waste-paper basket.

E. B., of Mass.—The Ruhmkorff apparatus is simply an induction coil on a large scale. A common battery may be used in repeating Gassiot's experiments, but success would be doubtful unless you have a very large one. A current of intensity is required. By the flat spiral, we understand a coil like a watch spring. Professor Rogers, of Boston, has a set of Gassiot's tubes.

HUGO, of Pa.—The error of your calculation lies in the supposition that the lower hemisphere attracts your body (B) with the same force as the upper. Sir Isaac Newton was right, and you are wrong. It has before been proposed to carry up condensed gas with a balloon, and dispense with ballast in the way you describe.

C. F., of Mass.—In the process of hermetically sealing fruits, catsup, oysters, &c., it is not the custom to add any substance, unless sirup, to prevent fermentation. Success seems to depend upon having the articles fresh, and excluding all the air. The process of sealing seems quite simple, yet requires a good amount of judgment and dexterity. If you wish to use an antiferment we would recommend the bisulphite of lime.

MINERALOGIST, of Pa.—Dana's is the best treatise on mineralogy.

J. N., of Oregon.—There are several varieties of silver ores, each requiring peculiar treatment. Ore containing silver in the metallic state may be treated precisely like gold ore, viz.: by crushing, washing and amalgamation.

J. S. F., of Ill.—It is not probable that nitric acid would be used for the adulteration of vinegar. Sulphuric acid is readily detected by the addition of a few drops of a solution of chloride of barium. We thank you for the compliment on our amiability. Good-tempered folks live longest and do the most good.

H. E., of N. Y.—About 2 lbs. of shellac to the gallon of alcohol is a good proportion for shellac varnish.

E. H. R., of Iowa.—We have had no experience in fastening leather to iron pulleys which are to be exposed to the weather; but for such a case we would try roughening the metal with acid, and then fastening the leather with india-rubber cement. You may find it better, instead of the leather, to use an india-rubber band, which you can easily stretch over the pulley, and which will require no cement.

M. B. T., of N. J.—The term "improved article of manufacture" implies that the party asks a patent, not for an entirely new thing, but for the thing in its improved state.

J. J., of Conn.—The difficulty of casting zinc on steel arises chiefly from the fact that these metals expand by heat at very different rates.

A. B., of Iowa.—You ask how it is that a high pressure steam engine will work at all, unless the steam is of a greater pressure than 15 lbs. It will not work. No steam will be made until the water receives sufficient heat to overcome the pressure of the atmosphere. As the pressure of the atmosphere varies (which it does at different elevations above the level of the sea) water boils at different temperatures. Under an atmosphere that exerts a pressure of 2½ lbs. to the square inch, water boils at 136° Fah.; under 8 lbs., at 192°; under 15 lbs., at 212°; under 33 lbs., at 255°; under 60 lbs., at 292°, and so on.

R. S. C., of Wis.—The device described by you is very ingenious, but it is not new.

B. L., of Mass.—A patent could be obtained for the combination for the particular purpose specified, though the several parts have long been known. In regard to the value of the invention you must be your own judge. Our own opinion is that it would depend on the way you managed it.

G. P. N., of Tenn.—The north star is not exactly in the pole of the heavens, but revolves daily around the true pole with all the rest of the stars, as well as the sun and the moon.

R. T. K.—You will find your letter on page 243 of the present volume. Our own articles, as well as those of our friends, have frequently to lie over two or three weeks after they have been passed to the printer.

C. B., of Penn.—The air is not composed of the same substances as water. Air consists principally of oxygen and nitrogen in the proportion of about ¼ oxygen to ¾ nitrogen, while water is composed of hydrogen and oxygen in the proportion of 1 lb. of hydrogen to 8 and 13-1000 lbs. of oxygen.

L. M. E., of N. C.—To reduce the degrees of the centigrade thermometer to those of Fahrenheit, multiply by 9, divide by 5, and add 32. The zero of the centigrade is at the freezing point of water, and the boiling point is at 100°.

S. S., of N. Y.—The idea of your invention is a good one, but you ought to work it into more complete shape before applying for a patent.

O. C. P., of N. J.—The water gas of Narbonne is entirely different in principle from that of Philadelphia. In the French system, hydrogen gas is simply used as fuel for heating a wire to a white heat, and the light comes from the wire.

S. S., of Vt.—The specimen you send us is a very good clay, of which much is found in your State. The potteries of Bennington are well-known here.

F. G. A., of N. Y.—Our "Talks with the Boys" will be continued, though we may not write them every week during the publication of Faraday's lectures.