

RECENT AMERICAN INVENTIONS.

Breech-loading Firearm.—This invention, secured to B. F. Skinner and A. Plummer, Jr., of Mystic Bridge, Conn., consists in a certain mode of applying a breech which opens and closes by a swinging movement transverse to the barrel, whereby, in the closing movement of said breech, its front face is caused to leave a slight movement toward and from the rear end of the barrel, and in its opening movement the said face is caused to have a corresponding movement away from the barrel. It also consists in an improved arrangement of a locking device for locking the breech in a closed condition, whereby great facility is afforded for unlocking it, and the re-loading of the piece, after its discharge, can be performed very expeditiously. It has also a certain improved means of applying and cocking the hammer or other device employed, in combination with such a breech, to effect the explosion of the priming.

Hoop Skirt.—This invention is intended to remedy a great defect which has existed in all the skirts previously manufactured with hoops of metal. Owing to the inflexibility of such hoops in an upward and downward direction the front parts of those hoops whose back parts are pressed down in sitting, are thrown upward, raising the front of the dress in an objectionable manner. The invention consists in so constructing one or more of the hoops of a skirt with joints, or otherwise, that while a desirable degree of inflexibility in an upward and downward direction is preserved in all other parts of the said hoops, they are made capable of an easy flexure in such direction, at convenient points on each side, to enable their front parts to fall and hang over the front of the seat when the wearer is sitting down. George Mallory, of Watertown, Conn., is the patentee.

Elevating Machine.—David L. Miller, of Madison, N. Y., has secured an invention relating to that class of portable elevating machines which are mounted upon wheels and used in clearing new-made land of stones and stumps. It consists in the manner of arranging the windlass so as to cause the strain in lifting to be equally divided upon three wheels. It also consists in the manner of operating the windlass by a worm screw and worm wheel, whereby a continuous motion is given to the windlass, producing great power, the worm screw being so arranged in relation to the wheel that it can be easily disengaged therefrom to allow the windlass to be operated with great speed when it is desired to unwind or wind up the chain preparatory to applying the power to elevate the stump or stone from its bed.

Bellows.—The object of this invention, which is particularly applicable to organ bellows, is to enable the performer or operator to increase the force of the wind at pleasure. The invention consists in the arrangement of an additional reservoir with a movable part in combination with the ordinary bellows, and connecting with the same by a suitable tube or air trunk, in such a manner that the pressure of the air acting on the movable part of the additional reservoir produces an additional pressure on the top of the bellows, and that by this application the power of the wind itself is employed to act like a movable weight put on or taken off from the bellows at pleasure. Invented by E. D. Stuart, Brooklyn, E. D., N. Y.

Enameling Jewelry.

The white enamel of watch dial plates is composed of ground flint glass, and the oxide of tin. The enamel in a pasty condition is laid upon the polished metal, and all the free moisture is absorbed by applying a dry cotton cloth to it, after which it is smoothed on the surface and permitted to become dry. It is now placed within a muffle, and subjected to a powerful heat in a furnace. Several thin coats of enamel, frequently four, are laid upon the top of one another, each fired and rubbed down with a fine file and polished with a burnisher. Blue enamel is obtained by mixing cobalt with an opaque white enamel. The protoxide of copper affords the color for red enamel.

HORSE POWER AND STEAM PRESSURE.—One indicated horse power with expansion requires per hour—
17.9 lb. weight of steam, at 10 lb. pressure.
15.5 lb. weight of steam, at 20 lb. pressure.
14.1 lb. weight of steam, at 30 lb. pressure.
13.2 lb. weight of steam, at 40 lb. pressure.
12.6 lb. weight of steam, at 50 lb. pressure.
12.1 lb. weight of steam, at 60 lb. pressure.



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 2, 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.

34,399.—J. C. Adams, of Baltimore, Md., for Improvement in Combined House, Bridge, Boat and Wagon Body :
I claim the described house, or its equivalent, which can be converted into the uses set forth.

34,400.—J. S. Barden, of New Haven, Conn., for Improvement in Crank and Cross-Head Connection for Steam Engines :
I claim the combination and arrangement of the flanges, o, o, grooves, i, i, and rail bearings, k, l, m, with the three friction rollers, and the crosshead, A, the whole being applied to a crank and a piston rod and to operate substantially as set forth.

I also claim the combination of the semi-tubes, F, G, with the rollers when applied, and to operate within a rail frame, A, as described.

34,401.—C. H. Burgess, of Sandwich, Mass., for Improvement in Doors for Reverberatory and other Furnaces :
I claim constructing the doors of reverberatory and other furnaces, with the water space described, in combination with the arrangement of the pipes essentially as set forth.

34,402.—M. L. Callender, of New York City, for Improvement in Hydro-carbon Burners :
I claim, first, The relative arrangement of the cone, d, and the interior deflector, I, with its shield, b, for the purpose of burning hydro-carbon oils with or without a chimney in the manner specified.

Second, I claim a burner so constructed as to increase the length of its metallic connection between the flame and the body of the lamp and the wick tube, without adding materially to its height, using for that purpose, the spiral coil, B, B', on which the cone, d, is mounted.

Third, I claim the new and cheap method of forming the levers, s, s', from the metal of which the body of the burner itself is constructed by which means the springs to hold the chimney in position and the body of the burner are made simultaneously from one piece of metal.

34,403.—Paul Casamajor, of New York City, for Improved Apparatus for Making Vinegar :
I claim, first, The method of creating an artificial draft by inspiration or suction, substantially as described and for the purpose set forth.

Second, The rotary apparatus, substantially as described and for the purpose set forth.

34,404.—J. Clarke and D. French, of Syracuse, N. Y., for Improved Composition for Pavements, Roofing and other Purposes :
We claim the described composition substantially as and for the purposes set forth.

34,405.—M. C. Cogswell and A. G. Williams, of Buffalo, N. Y., for Improvement in Grain Driers :
We claim, first, The double head, c, having an air chamber, G, and hollow journal, B, for the purposes and substantially as described.

Second, We claim the combination of the double head, c, with perforated distributing air tubes, F, for the purposes and substantially as described.

Third, We claim the combination of the double head, c, hollow journal, B, distributing air pipes, F, and lifting buckets, I, with the case, A, for the purposes and substantially as set forth.

34,406.—James Collins, of Farmington, Ill., for Improvement in Cultivators :
I claim, first, The combination of the perpendicular draft rods, f, f', depending from the transverse bar, a, a', and braces, h, h, extending back from the lower part of the said draft rods to the axle-tree, all constructed and arranged as described and for the purposes stated.

Second, I claim the combination of the clevis, g, and draft rods, f, f', when constructed and operating as and for the purposes set forth.

Third, The crank levers, k, k', and adjusting nuts, x, constructed and arranged in connection with a corn plow on wheels, in the manner and for the purposes set forth.

Fourth, The combination of the cross bar, a, a', draft rods, f, f', braces, h, h', clevis, g, adjusting levers, k, k' and p, p', curved axle-tree, e, e', and seat, m, all substantially as and for the purposes set forth.

34,407.—Hannah D. Conrad, of Dayton, Ohio, for Improvement in Setting and Threading Needles in Sewing Machines :
I claim, first, In combination with a sewing machine, the improved needle threader and setter described, pivoted or hinged to the needle arm or bar to the needle bar socket.

Second, And in combination with the improved needle threader and setter pivoted or hinged, as described, I claim the stop, k, for the purposes set forth.

Third, In combination with the funnel, F, I claim the screw, J, for adjusting the eyes of needles of different sizes opposite the termination of the funnel.

34,408.—E. T. Covell, of New Bedford, Mass., for Improvement in Lamps :
I claim placing the slitted deflector, d, over the wick tubes, g, and f, for the purpose of enabling my said lamp to produce a flat flame from a tubular wick, substantially as represented; but this I only claim when air is permitted to flow through the space within the wick tube, g, for the purpose of aiding in the production of a more perfect combustion than has ever before been produced in an oil lamp.

When a slitted deflector is placed over the tubular wick of a lamp, I also claim supporting the said deflector in such a manner that it can be turned to any desired position, independently of the wick tubes of said lamp, substantially as set forth.

34,409.—Henry Craig, of Cleveland, Ohio, for Improvement in Microscopes :
I claim the lens, E, when constructed as set forth.

34,410.—A. B. Davis and Thomas Crook, Jr., of Philadelphia, Pa., for Improvement in Corn Shellers :
We claim the angular strip, a, on the wheel, K, arranged in respect to the stripper wheels, L and L', substantially as set forth for the purpose specified.

34,411.—G. B. Davis, of Chicago, Ill., for Improvement in Water Filters :
I claim, first, The tub or pail, A, divided into two compartments, C, D, by a horizontal partition or false bottom, B, in combination with the filter case, G, perforated at its side or sides, provided with an internal perforated, cone, d, and fitted or arranged on the false bottom, B, to operate substantially as and for the purpose set forth.

Second, The combination of the partition or false bottom, B, in tub, A, filter case, G, cocks, E, K, and air tube, J, when all arranged substantially as and for the purpose specified.

Third, The combination of a double-walled tub or pail, A, with the false bottom, B, and filter case, G, arranged as shown to form combined filter and cooler, as set forth.

[The object of this invention is to obtain a filter which will thoroughly cleanse water, and which will not only admit of being readily cleansed when filtering, but will not be so liable to become foul as those of ordinary construction.]

34,412.—Francis Deluce, of Boston, Mass., for Improved Centering Implement :
I claim the implement for drilling central holes, constructed and operating substantially as set forth. Also in combination with the said improvement, the means described, or the equivalent thereof, for changing the relative position of the drill.

34,413.—Augustus Destouy, of New York City, for Improvement in Sewing Machines :
I claim in a machine provided with a table or support for the material to be sewed to rest upon, and a feeding and thread controlling device. I claim the combination of the following elements constituting a sewing mechanism adapted to the manufacture of boots and other like articles, viz., an awl and a forked needle, the former for piercing the material and the latter to carry the under thread through it and a stationary thread case and a rotating hook, the former for holding the upper thread and the latter to seize and carry the under thread loop over and around the thread case so as to lock in the thread fed out from said case, the whole being arranged substantially as described to operate in the manner and for the purposes set forth.

34,414.—Wm. H. Devalin, of Sacramento, Cal., for Improvement in Rotary Engines :
I claim the combination of the pistons, H, boxes, I, rods, g, cross-heads, J, rollers, c, c', h, h', all constructed, arranged and operating in the manner and for the purposes shown and explained.

34,415.—Joseph Dodin, of New York City, for Improvement in Lamps :
I claim the particular shape of the plate of metal combining the mode of locking together at A, and clamping the tube at n, substantially as described.

34,416.—J. H. Doughty, of Adamsville, Ohio, for Improvement in Churns :
I claim the combination of the channels, i, k, formed and arranged as described, when used in connection with the cylinder, G, piston, F, and valve, J, arranged and operating substantially as and for the purposes set forth.

34,417.—Thaddeus Fairbanks, of St. Johnsbury, Vt., for Improvement in Platform Scales :
I claim the described application or arrangement of a fractional scale arm, H, and a movable counterbalance weight, I, relatively to the scale beam and to operate the same, substantially as specified.

I also claim the arrangement of the superior lever, C, and the pest, F, with respect to the stand or base of the platform of the scale.

34,418.—Henry Farmer, of Pontiac, Michigan, for Improvement in Vegetable and Root Cutters :
I claim, first, The use of the cylinder, C, constructed in the manner and for the purpose set forth.

Second, The employment of the sections, E, hinged and provided with knives, a, a, as and for the purposes specified.

34,419.—Albert Fuller, of Cincinnati, Ohio, for Improvement in Faucets :
I claim, first, A faucet having an interior elastic tube, by the compression and expansion of which the flow of liquid may be regulated or prevented, substantially as described.

Second, The application of the central tube, D, to the elastic tube, C, for the purpose of securing the latter, substantially as described.

34,420.—O. T. Gilman, of Washington, D. C., for Improvement in tools :
I claim the employment of the claw, C, in combination with hammer, A, for forming three tools in one, substantially as specified.

34,421.—E. D. Gould, of Lockport, N. Y., for Improvement in Channeling Tools for Harness Makers :
I claim a channeling tool constructed substantially as described, with the sliding knife, or knives, c, d, and adjustable spring knife, e, operating substantially in the manner set forth.

I also claim constructing the knife, e, with a segmental spring shank in combination with the adjusting screw, n, substantially as and for the purposes set forth.

34,422.—J. D. Green, of U. S. Army, for Improvement in Breech-loading Firearms :
I claim the combination of the sliding and revolving plunger or breech plug, I, with the rod, K, when the hand lever, L, by which the breech plug is revolved, is attached to the rod, as set forth.

34,423.—J. J. Hirschbuhl, of Louisville, Ky., for Improvement in Military Ammunition Box :
I claim the described ammunition box having an apartment, E, for a powder flask and separate boxes, B, C, D, attached to one side by hinges so as to open outward, for the reception of balls, percussion caps and cartridges, when arranged in the manner and for the purpose described.

[An engraving of this invention will soon be published in the SCIENTIFIC AMERICAN.]

34,424.—William Hodgson, Jr., of Philadelphia, Pa., for Improvement in the Manufacture of Graduated Glass Measures :
I claim the forming of graduated glass measures and the graduations thereon at one operation in a press mold so constructed, marked and shaped that all vessels made in the same mold will be precisely alike as regards form and capacity, and will have graduations so arranged in respect to that form and capacity that the same accurate measurement may be made of all vessels alike, as set forth.

34,425.—M. W. House of Cleveland, Ohio, for Improvement in Electric Baths :
I claim, first, The insulator, J, for the support of the basket, b, for the purpose described, in combination with the insulated rotatings, s, t, and traversing wheels, e, when arranged and operating as and for the purpose specified.

Second, I claim the head plate, C, when hinged to the insulator, J, in such a manner that the distance between the plate and head of the patient can be increased or diminished, for the purpose of concentrating or diffusing the electrical current through the part exposed to its action.

34,426.—G. W. Howard, of Pontiac, Mich., for Improvement in Oil Tanks :
I claim constructing an oil tank with an open bottom, in combination with buoys or floats, substantially in the manner described, whereby the upper edge of the tank is always kept above the surface of the water, and the tank may readily be floated from place to place, or rise and fall with the tide, as described.

34,427.—Edgar Huson, of Ithaca, N. Y., for Improved Machine for Raising Carriages :
I claim such a combination of lever loop joints and ratchets for a carriage jack, as that when the weight is raised and the lever pressed down against the standard the slide is supported and upheld without any fastening, by the support of the loop, which falls outside the joint, D.

34,428.—T. A. Jenckes, of Providence, R. I., for Improved Water-Proof Fabric :
I claim the fabric in which flecks or fibers and india rubber or other allied gums are combined with cloth or other base by means of pressure, so as to become integral portions of the new napped water-proof fabric, substantially as described; the same being a new manufacture.

34,429.—G. R. Kelsey, of West Haven Conn., for Improvement in the Manufacture of Buckles :
I claim a buckle in which the bow and loop is made of one piece of wire, when the ends of the cross bar, c, are clinched around the opposite parts, a and b, of the bow and loops, to strengthen the buckles, as described.

34,430.—Rhodolphus Kinsley, of Springfield, Mass., for Improvement in Tompion for Firearms :
I claim, first, A tompion consisting of a wooden pin, split in two parts throughout a portion of its length, and having a spring of metal, rubber or other suitable substance inserted between these two parts to force them against the bore of a gun, substantially in the manner and for the purpose described.

Second, Forming the pin or shank part of the tompion smaller at the middle than at each end, for the purpose and in the manner substantially as set forth.

34,431.—A. Kline, of Philadelphia, Pa., for Improved Match Safe :
I claim the match safe, A, having its lid, B, applied and arranged to operate in relation to the same in the modes described and set forth for the purpose specified.