

The terrible effects of carelessness are too apparent when steam boilers explode, and blow to the four winds of heaven all that a man has been able to accumulate in a lifetime of hard labor. See to it, then, you manufacturers, and you, engineers! that there are no half-way measures adopted; that no "penny wise and pound foolish" policy prevails; keep the boilers in the best possible repair and condition; buy none but the best fuel; hire only capable, conscientious, and sober men to oversee them; and the rate of insurance will be lower, higher profits will accrue, and steam power be rendered what in fact it is—an energetic, easily-managed, and economical servant.

RECENT AMERICAN PATENTS.

The following are some of the most important improvements for which Letters Patent were issued from the United States Patent Office last week. The claims may be found in the official list:—

Port Stopper.—The immense weight of which it is necessary to make the port stoppers of iron clad, turreted, or other vessels intended to be invulnerable, to give them the requisite power of resistance to projectiles, has rendered them, as hitherto applied, extremely difficult of operation, owing to the great amount of power required to move them: and the methods of applying them hitherto adopted have rendered them liable to be so bound or disarranged by the blow of a shot as to render it impossible to operate them. The object of this invention is to obtain for a port stopper the requisite power of resistance, and yet enable it to be worked by the application of a very small amount of power, and to prevent its being seriously bound or obstructed in its action by any displacement or disarrangement which is likely to be produced by the blow of a projectile. With a view to accomplish the above object, this invention consists in the construction of the stopper in the form of a crank; also its arrangement to turn about an upright or nearly upright axis situated some distance within or behind and opposite, or nearly so, to the center of the port or embrasure; and further in the attachment of the bearings in which the journals or pivots of the port stopper turn, to supports which are detached from the wall of the turret or other defensive structure in the immediate neighborhood of the port. John Ericsson, of New York city, is the inventor of this improvement.

Registering Marine Log.—The object of this invention is to register the direction of the distances run by a ship or other vessel, as well as the distances themselves; and to this end it consists in the combination with an apparatus substantially like what has been heretofore known as the registering marine log, or "patent log" of a compass of peculiar construction, and an apparatus connected with the registering mechanism for dropping pellets into a compartment of the said compass whenever a certain distance has been made by the vessel to which the log is applied. Alexander Gordon, of New York city, is the inventor of this improvement.

Machine for Exercising the Human Body.—The object of this invention is to obtain a simple and efficient machine for exercising certain portions or members of the human body, designed more especially for the benefit of persons afflicted with dyspepsia, liver complaint, &c. The invention consists in the employment or use of a lounge provided with an adjustable section for the purpose of adjusting the patient in the proper and desired position, and using in connection with said lounge a pair of reciprocating pads arranged and operated in such a manner as to effect the desired end. Dr. Charles F. Taylor, of No. 153 Fifth Avenue, New York, is the inventor of this improvement.

Brewing With Malt.—It is understood by persons that in order to effect the dissolution and saccharification of barley-malt, a temperature of about 160° to 168° Fah. is required, and that when the temperature exceeds 170° the saccharifying property of the malt is killed and the malt is rendered useless. The starch of Indian corn or maize, however, cannot be perfectly dissolved at a temperature lower than that of boiling water, and the attempts heretofore made to treat barley malt and maize mixed together in the same mash tub have failed, because the temperature

required for the saccharification of the malt is not high enough to dissolve the starch of the corn, and very little benefit is derived from the use of the corn; or if the temperature is raised high enough to dissolve the starch of the corn, the barley malt is killed and the whole process a failure. These difficulties are overcome by the present invention, which consists in disclosing the starch of Indian corn and preparing the saccharified extract from corn mixed with barley malt, all in one and the same vessel, simply by sacrificing a small quantity of barley malt, or if desired the process may be executed in different vessels, and from 40 to 50 per cent of corn can there by be mixed with barley malt, and great economy effected in brewing malt liquors. Ludwig Haecker, of Altenburg, in the Kingdom of Hungary, is the inventor of this improvement, and further information may be obtained of Escher & Co., 9 Murray street, New York.



ISSUED FROM THE UNITED STATES PATENT-OFFICE

FOR THE WEEK ENDING DECEMBER 8, 1863.

Reported Officially for the Scientific American.

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

49,803.—Composition for Covering Hams.—Henry A. Amelung, New York City:

I claim a covering for ham or other meat, consisting of paper or cloth soaked in a solution made of the ingredients herein specified and mixed together in about the proportion and substantially in the manner described.

[This invention consists in the application to ham or other meats, of tissue paper or cloth soaked in a suitable solution in such a manner that all parts of the ham or other piece of meat are perfectly covered and protected against the injurious and decomposing influence of the atmosphere. This covering is much cheaper than that generally used, and by its use a great saving in the weight of the hams is effected.]

49,804.—Generating Gases for Heating and Illumination.—Jacques Arbos, Barcelona, Spain:

I claim, first, The formation of a gaseous compound, as hereinbefore described, and the mixing of the same with gas, arising from the distillation of coal, or from the decomposition of oils, resins, tars, or fatty bodies to manufacture gas suitable for lighting and heating.

Second, The apparatus for generating the gaseous compound, constructed and acting substantially as herein before described and illustrated in the accompanying drawings.

49,805.—Gas for Motive Power.—Jacques Arbos, Barcelona, Spain:

I claim, first, The production of a gaseous mixture composed of oxide of carbon of hydride of azote and of a small proportion of carbonic hydrogen, said compound being combined with air and used as motive power, in the manner hereinbefore set forth.

Second, The apparatus for generating the gaseous mixture to be used in the manner substantially as hereinbefore described and illustrated in the accompanying drawings.

Third, The generation of steam by the heating of water in the jacket of the cylinder of the said gas engine and in a boiler surrounding the furnace of the said gas generating apparatus, substantially as hereinbefore described.

49,806.—Snap Hook.—Samuel Babcock, Middletown, Conn.:

I claim the improved manufacture of a snap hook as made not only with its eye in one piece with its hook and with its tongue not only provided with lips to embrace the shank of the hook and form a joint therewith, but with a recess arranged substantially as described, and for the purpose of carrying a straight or leaf spring disposed within such recess, in manner as hereinbefore explained.

49,807.—Skate.—Wm. Bailey, Utica, N. Y.:

I claim, first, The construction of the clamps with the pendant lips, connected and arranged as I have described, and the mode of operating them which I have described.

Second, I claim the construction and use of the skate runner of the flattened form with the elevated edges spread apart for greater base, and for other purposes as described, in combination with the deep wooden stock with bearing sheaves as described, and for the purposes as described.

Third, I claim the mode of fastening the runner to the wooden stock, by means of the dove-tail device at the toe, as described; and the heel pin passing directly through the runner at the heel, with head countersunk, in the manner described and for the purposes described.

Fourth, The whole being constructed, combined, and arranged substantially in the manner herein set forth.

49,808.—Telescope.—Wm. H. Baker, Marathon, N. Y.:

I claim supporting the lenses or their settings and diaphragm which compose the eye-piece of the telescope by means of a spring or springs, thereby making a fastening that may be more readily removed, and rendering the lenses less liable to work loose or be broken by the jaw or concussion to which they are exposed in use.

I claim the notch, C, in the setting of the object lens, in combination with the beam on the tube which holds the setting in and prevents it from working out by the recoil of the gun when it is fired.

I claim the spring clasp for holding the fore end of the telescope to the barrel of the gun.

I claim securing the disk, P, to the adjusting screw by turning the edge of the socket over the edge of the disk as described.

I claim fastening the telescope to the disk, P, by means of the ears, T, strap, S, and pin, R, in combination with the spring or springs, between the disk and telescope and between the telescope and strap, S.

49,809.—Lock for Fire-arms.—Wm. H. Baker, Marathon, N. Y.:

I claim in combination with a cock or hammer, having its main

pring rigidly attached to it as described, the swivel or link, F, provided with notches for the sear to hold the hammer at full or half cock.

I claim a lock constructed as described, extending the arm of the sear or link through the lock plate, to make a connection between the sear and the cock.

60,810.—Railroad Journal Box.—O. Beecher & R. E. Rogers, Philadelphia, Pa.:

We claim, first, The oiling roller, K, frame, J, and weighted lever, M, or its equivalent, the whole being constructed and arranged within a journal-box and operating substantially as and for the purpose herein set forth.

Second, The partition, I, oil chamber, L, frame, J, and oiling roller, K, the whole being arranged substantially as set forth for the purpose specified.

Third, The annular flange, G, or its equivalent secured to or forming part of the wheel or axle, and arranged to project into the interior of the box, substantially as and for the purpose described.

Fourth, The annular flange, H, secured to or forming a part of the wheel or axle and arranged in respect to the annular flange, E, of the box, substantially as and for the purpose herein set forth.

60,811.—Soda Water Apparatus.—J. H. Blaisdell, Boston, Mass.:

I claim in a soda apparatus the arrangement of one outlet for soda within another, substantially as described.

Also the arrangement around or adjacent to the soda outlet or outlets of the various outlets for sirups and other fluids, substantially as described.

Also the arrangement in a soda apparatus of a diaphragm, n, and disk, q, or the equivalent thereto, so as to act under pressure as described, to admit into two or more passages, and to shut off therefrom the soda supplied from a common source.

Also the formation of a chamber in a soda discharge pipe, so as to operate to check the velocity of the discharge under pressure, and to supersede the employment of the condensing bottle, substantially as set forth.

Also the condensed arrangement of outlets, so that while each is separate from the others, they are all within the compass of and admit of their discharge into an ordinary drinking glass, without removal thereof, from a fixed position.

60,812.—Harvester.—Virgil W. Blanchard, Bridport, Vt.:

I claim, first, The employment or use of a sliding shaft, E, one or two, provided with arms, H, in combination with two concentric circles of cogs, b, b', attached to the driving wheel, D, or to a wheel connected therewith for the purpose of varying the speed of the shaft, and throwing the same in and out of gear, substantially as set forth.

Second, The employment or use of springs, G, G', applied to or connected with the shaft or shafts, E, in the manner shown, or in any equivalent way for the purpose of equalizing the motion of the sickle, or causing it to operate smoothly without jars or concussions as herein set forth.

Third, The curved stay bar, T, attached to the bar, O, and shoe, P, substantially as shown; in combination with the roller, C, connected to the finger bar, S, as shown, and the cylindrical pin, w, by which the finger bar is attached to the shoe; all arranged as shown, to admit of the finger bar or sickle being raised and lowered, and to the same time serve to hold or retain the same in a proper working position.

Fourth, The connecting of the cylindrical pin, w, to the lever, U, by means of the chain, c, passing over and around the pulleys, f, f', in the bar, O, and around the pulleys, h, h', on the frame, A, and attached to the lever, U, for the purpose of raising the finger bar and sickle as set forth.

Fifth, Securing the bar, O, or staying the same in proper position by means of the roller, v, placed in the arm, Q, and fitted in the pendant frame, K, attached to the frame, A, substantially as herein described.

[The object of this invention is to obtain a grain and grass harvester which will be of light draught, admit of having a more or less rapid movement communicated to its sickle as occasion may require, be durable, free from all unnecessary friction in the operation of its working parts, and admit of having its finger bar adjusted with the greatest facility so as to clear obstructions which may lie in its path.]

60,813.—Railway Carriage.—Nahum Franklin Bryant, East Boston, Mass.:

I claim the combination of the sliding box, e, made either with or without the oil chamber and either a stationary or a moveable bearing, the housing f, and the axle, c.

And I also claim the combination of such parts and the check, H, arranged and applied to them so as to operate with them substantially as specified.

I also claim the combination of the moveable stopper, a, with the housing, f, and its check, H, the said stopper being for the purposes or to operate as specified.

I also claim the housing as made and provided with the packing groove, t, and packing, w, to encompass the sliding box, in manner and for the purposes specified.

I also claim the combination of the centralizer or lip, s', with the housing or truck frame, or carriage thereof, when the latter has its wheels so applied as to be capable of being adjusted by means of a wheel changing track to either of two tracks of different gages.

60,814.—Channeling Tool.—Albert Bottum, Bridgeport, Conn.:

I claim the combination of the straight cutter, A, and the arc-formed cutter, B, for cutting a score and a channel within it of the form substantially as herein specified.

[This invention consists in the combination of a straight cutter and an arc-formed cutter so arranged relatively to each other, that while the first cuts a score in the sole or other article the other cuts from within the said score a strip whose transverse section is of semi-circular or segmental form, thus producing a semi-circular or segment shaped covered channel.]

60,815.—Machine for making Nuts.—Orin C. Burdick, New Haven, Conn.:

I claim, first, A die constructed as described in two parts, a and b, and the said two parts combined with a movable punch, L, and a fixed punch, N, to operate in the manner and for the purpose specified.

Second, The combination of the sleeve, i, punches, L and N, when the same are arranged in the manner described and combined with a die constructed as and for the purpose specified.

60,816.—Feeding Device for Saw Mills.—Victor H. Buschmann, Baltimore, Md.:

I claim, first, Applying the required pressure to the feed and guide rollers, by means of a single force acting equally upon opposite sides of both roller carrying frames, by mechanism constructed and operating substantially as described.

Second, Hanging or supporting the roller carrying frames constructed as described in such manner that while they will always preserve their parallelism to each other they are allowed to yield equally on each side of a central line and accommodate themselves to boards of different thicknesses, substantially as described.

Third, The use of adjustable bearings, i, i', or their equivalents, in combination with the roller frames, b, b, and pressure plates, g, constructed and operating substantially as and for the purposes described.

Fourth, A central weight or other similar force in combination with a guide applied and operating substantially as and for the purposes described.

60,817.—Construction of Buggies.—Jonathan H. Bye, Sterling, Ill.:

I claim, first, The combination of the thills, a, a, with the springs, b, b and c, for the purpose and in the manner herein described.

Second, The combination of the coupling, m, m, with the rear springs, s and s', the curved continuation, n, n, of the coupling, m, m, the beam, j, with its guides formed by l and l', and the flexible bar, h, substantially as set forth.

60,818.—Filter.—Anthony Chabot, San Francisco, Cal.:

I claim, first, Combining one or more porous tubes with a pipe, B, by means of a flange, a, on the pipe for the reception of one end of each tube, a cap, C, for the reception of the other end and a bolt, D, substantially as herein described.

Second, In a filtering apparatus constructed substantially as specified, I claim the herein described arrangement of chambers and passages for conveying the water to and from them, operating as explained to provide for the cleaning of the filters by reversing the flow of water through them without reversing or changing the position of the filter or filters.

Third, The combination and arrangement of the porous tube or tubes, A, pipe or pipes, B, tank, E, trunk, G, chamber, F, openings, f, g, h, i, and gates or valves, f', g', h', i', to operate substantially as and for the purpose herein specified.

[This invention consists in a novel mode of applying porous tubes for filtering purposes whereby they are secured in their places with great facility and their strength greatly increased, and provision is made for a very free flow of water to pass through and from them; also in the arrangement of a filter or filters and the chamber and passages for conveying the water to and from them, in such manner as to provide for the cleansing of the filters by reversing the flow of water through them.]

40,819.—Window-sash Fastener.—Charles B. Clark, Mount Pleasant, Iowa :

I claim the circular flange, B, or its equivalent and the peculiar-shaped rollers, C, C' the same being combined and operated substantially as and for the purpose as set forth.

40,820.—Railroad Car Coupling.—Wm. C. Clark, Portland, Maine :

I claim the application of the pin to the bunter bar, so that the pin may be capable not only of swinging on a fulcrum in manner and under circumstances as stated, but of being raised off the fulcrum in order to disconnect the link from the bunter bar.

I also claim the combination of the latch or its equivalent with the pin and its supports as described when such may be applied to the bunter bar, substantially in manner and so as to operate as specified.

40,821.—Washing Machine.—Adams R. Cooper, Mason City, Ill. :

I claim, first, The combination of the furnace, the boiler, and the washing mechanism, substantially in the manner described for the purpose set forth.

Second, Mounting the upper rubbing and squeezing rollers in an independent skeleton frame, substantially in the manner described for the purpose set forth.

Third, The combination of three or more rollers leaving a differential motion, with two or more rollers carrying an endless apron over a board between them, substantially in the manner and for the purpose described.

40,822.—Corn Planter.—Wm. Craig, Urbana, Ill. :

I claim, first, The roller, C, constructed of sections, a' a' a', which are provided with flanges, b*, as shown for the purpose specified.

Second, The button, L, attached to the back part of the draught pole, B, and arranged as shown for the purpose of keeping the front part of the frame, A, elevated and the shares, F, above the surface of the earth when required.

Third, Arranging or placing the drivers seat, M, on supports, N, the upper parts of which are horizontal and are fitted in slots made longitudinally in the ends of the seat, M, to admit of the adjustment of the latter as set forth.

[This invention relates to a new and improved seed-planting device by which seed may be planted either in drills or hills and in check rows, and the seed-distributing device operated either automatically or by hand, and the seed also properly covered and the earth rolled so that the latter will be firmly compacted over the seed and the clods of earth crushed or pulverized, the device also, by a simple manipulation being capable of having its furrow shares raised out of and free from the earth, as is necessary in turning at the ends of rows, transporting the device from place to place and in rolling land.]

40,823.—Seat and Cane.—Charles H. Dascomb, Cleveland, Ohio :

I claim the herein described improvement in combined cane and seat, consisting of the sections, A B B, canvas, S, head figure, 3, and pin, D, the several parts being constructed and united in the manner and for the purpose herein set forth.

40,824.—Apparatus for Adjusting Ordnance in Boring Mill.—S. B. Dean, Boston, Mass. :

I claim the arrangement of the bearing, the incline, c, wedge, d, screws, g and i, and uprights, h, or their equivalents, all operating together substantially as and for the purpose set forth.

40,825.—Nut Cracker.—Timothy Earle, Smithfield, R. I. :

I claim, first, A crusher, m, which has a lateral motion imparted to it by the action of a cam surface, c, or its equivalent, in combination with a stationary back rest, g, substantially as described for the purposes specified.

Second, The use of a back rest, g, which can be adjusted for nuts of various sizes, when applied to a nut-cracker, substantially as described.

40,826.—Hoe.—Josiah Ells, Pittsburgh, Pa. Ante-dated Dec. 1, 1863 :

I claim the hollow or concave bracket, b, and groove, p, in combination with a blade, m, having a semi-circular flange, e, and arched recess, h, and the key (Fig. 3). For securing and strengthening the blade, substantially as herein set forth.

40,827.—Machine for making Tags.—Thomas B. De Forest, Birmingham, Conn. :

I claim, first, An automatic feeding mechanism, in combination with an eyeletting mechanism whereby eyelets may be set at given intervals, substantially as set forth.

Second, The combination of an eyeletting mechanism, a feeding mechanism and a stamping or cutting-out device or mechanism, whereby the material may be eyeleted and cut apart into pieces of given size with the eyelet in a given position in each.

Third, An eyeletting or eye-forming mechanism, in combination with a stamping or cutting-out device or mechanism; whereby the eye-forming operation and cutting out are both performed in an organized machine without moving the material (or handing it) more than once.

Fourth, The punch, a, as operating previously to the insertion of the eyelet in combination with the eyeletting mechanism and cutting-out dies, D, to perform the successive operations of punching out, setting the eyelet and cutting apart the material, substantially as set forth.

Fifth, The employment of the presser foot, g, or its equivalent in combination with the eyeletting mechanism as and for the purpose substantially as described.

Sixth, The employment of the hammer, L, or its equivalent, in connection with the eyeletting mechanism, to insure the flow of eyelets through the supply passage or chute, Q, substantially as herein before set forth.

40,828.—Percussion Fuse for Shells.—A. H. Emery, New York City :

I claim, first, The combination and use of the flange, D, and the shell, F, with the plunger, C, substantially as and for the purposes herein described and set forth.

Second, The combination and use of the washer, E, when combined with the shell, H, flange, D, and screw thread, F, substantially as and for the purposes herein described and set forth.

40,829.—Latch.—Barthol Erbe, Snowden, Pa. Ante-dated Oct. 24, 1863 :

I claim the use and employment of a round latch head when the same is connected with the internal moving parts, so as to revolve on its axis, in the manner substantially as described for the purpose set forth.

40,830.—Port Stopper for Vessels of War.—John Ericsson, New York City :

I claim, first, The construction of a port-stopper in the form of a crank, substantially as herein specified.

Second, The arrangement of a port-stopper to turn about an upright axis or nearly upright axis, situated some distance within or behind and opposite or nearly opposite to the center of the port, substantially as and for the purpose herein specified.

Third, The attachment of the bearings for the pivots or journals of the port-stopper to supports which are detached from the wall of the turret or other defensive structure in the immediate neighborhood of the port, substantially as herein described.

40,831.—Bed Bottom.—George Frey, New York City :

I claim the combination of two frames, A, C, one being provided with movable legs and the other with an adjustable head piece and both being connected with each other by elliptic springs, D, in the

manner and for the purpose substantially as herein shown and described.

[This invention consists in the application of elliptic springs between two frames, one of which is provided with movable legs and the other with an adjustable head-piece and with a cane bottom, in such a manner that when the legs of the first or lower frame are in their places, the whole device forms a convenient and cool lounge particularly intended for summer, and when the legs are removed the device can be placed into a bedstead and used as a spring bed bottom of superior durability and elasticity.]

40,832.—Process for Removing Burrs from Wool.—James Fullen, of Saxtonville, Mass. :

I claim the treatment of wool, as described, viz., by applying to it in connection with the treatment of it, an acid solution, a picker and an alkaline solution, as set forth, a solution of Irish Moss, or its equivalent, the whole being operated substantially as specified.

40,833.—Car Coupling.—M. C. Gardner, Rochester, N. Y. :

I claim the method herein described of supporting the pin, P, by means of the balls, C, moving in holes or grooves at right angles to the line of draft, the whole operating in the manner and for the purpose substantially as described.

40,834.—Registering Marine Logs.—Alexander Gordon, New York City :

I claim the combination with the registering marine log, of a compass divided into compartments, z, z', for the reception of pellets or their equivalents and an apparatus for dropping a pellet into one of said compartments whenever the vessel has made a certain distance, the delivering tube or portion of the said dropping apparatus being so controlled as to always point in the direction in which the vessel is moving through the water, and the whole operating substantially as and for the purpose herein specified.

40,835.—Composition for Lubricating.—Charles Grath, St. Louis, Mo. :

I claim the production of a n axle and machine grease made from paraffine oil with the combination of the substances above specified.

40,836.—Brewing with Maize.—Ludwig Hacker, Altenburg, Hungary :

I claim, first, The within-described process of disclosing the starch of corn and preparing the saccharified extract from corn mixed with barley malt, in about the proportion heretofore specified, by the three manipulations substantially as set forth, said manipulations being conducted either in one and the same or in different vessels, as may be desirable.

Second, Exposing maize, when the same is mixed with barley malt about in the proportion herein specified, to the action of boiling water, substantially as and for the purpose set forth.

40,837.—Sawing Machine.—C. J. Holman, Oshkosk, Wis. :

I claim the combination of the shaft, e, and spur wheel, d, with the gears, a, a', a'', and their movable collars, p, p', with the gears, c, c', c'' arranged substantially in the manner and for the purpose specified.

40,838.—Machine for Grinding and Polishing Tools.—J. A. Hendrick, Providence, Pa. Ante-dated Nov. 21, 1863 :

I claim the two rock shafts, I, J, fitted in a sliding frame, H, having a lateral reciprocating movement and provided respectively with the sockets, K, V, with the tool and pattern fitted in them, and operated from the grinding shaft, G, as shown, or in any equivalent way, in combination with the grindstone, B, and the adjustable bearing, S, or its equivalent, for the purpose herein set forth.

40,839.—Composition for Bank-note and other Inks.—T. S. Hunt, Montreal, C. E. :

I claim a new and useful ink of the said mineral compounds, as an ingredient or basis of ink for printing from engraved plates, from types or for other kinds of printing.

40,840.—Grain Cleaner.—John Hutchinson, of Three Rivers, Mich. :

I claim, first, The combination of the hopper, the sliding-sleeve, and the rotating dish, or scattering cup, substantially in the manner and for the purpose set forth.

Second, The combination of the scattering dish, inclined board, E, and beak, e, with the suction spout, as described, for the purpose set forth.

Third, The combination of a sliding sleeve, cut-off, a cant board, and a suction spout with a fan, substantially in the manner described, for the purpose set forth.

Fourth, The combination of the hopper the toll dish, and the slide-valve, as and for the purpose set forth.

40,841.—Inkstand.—L. P. Jenks (assignor to L. L. Tower), Boston, Mass. :

I claim the combination of the elastic ring, G, with the reservoir, F, and the dipping cup, c, and for the purposes shown.

40,842.—Potato Digger.—William Jones, St. Louis, Mo. :

I claim, first, The digger, D, arranged on the front end of the machine and combined with the bar, E, for operating the same. The whole to be constructed and arranged substantially in the manner set forth.

Second, I claim the rods, K, and springs, J, in combination with the hinged platform, H, as and for the purpose set forth.

Third, I claim, in combination with the digger, G, the sifter, N, constructed and operated as set forth.

Fourth, I claim, in combination with the digger and sifter, constructed as set forth, the endless apron, m, for the purpose of receiving and delivering the potatoes, as described.

40,843.—Ventilating Railroad Cars.—T. S. Lambert, of Peekskill, N. Y. Ante-dated Dec. 4, 1863 :

I claim the application of ice to assist in the ventilation of railroad cars, E, and for other purposes, substantially as set forth.

The construction of a closet with shelving or drawers for ventilation by means of passing air over the surface of ice, substantially as set forth.

40,844.—Mode of Facing the Walls of Buildings.—T. S. Lambert, Peekskill, N. Y. :

I claim the construction of facing for the inner or outer surface of walls, of building each piece of which facing is finished with a shoulder offset arm, to be the means of fastening it to the wall, in the manner and for the purpose substantially as set forth.

40,845.—Roller for Wringing Machines.—T. S. Lambert, Peekskill, N. Y. :

I claim the application of any kind of cordage to form the surface of rollers in wringing machines, in the manner and for the purposes substantially as set forth.

40,846.—Pen and Pencil Case.—J. J. Lownds, New York City :

I claim the two tubes, A, B, arranged to slide one within the other, in combination with the spirally-slotted tubes, E, F, pen slide, C, and pencil, I, all arranged as and for the purpose herein set forth.

[This invention consists in having the case of the pen and pencil formed of two tubes, arranged so that one may slide within the other and connected with a pen-slide movement or mechanism, in such a manner that the pen will be moved out from and drawn within the case by extending and closing the tubes. The device being also provided with a reserve for leads and a pencil arranged in a novel way to form a convenient article of the kind specified.]

40,847.—Hose Nozzle.—C. F. Macy and Seth Martin, Little York, Cal. :

We claim a hose pipe provided with internal radial plates, substantially as and for the purpose herein set forth.

[The ordinary hose pipes, especially those which are used for mining purposes, scatter or spread the stream which is ejected from them, partly in consequence of the taper form of the pipe and partly in consequence of the hose itself, which is almost invariably more or less twisted or crooked near the pipe. This scattering or spreading of the stream detracts greatly from its efficiency, and to obviate this difficulty is the object of this invention.]

40,848.—Sofa Bedstead.—T. J. Magee, Cincinnati, Ohio :

I claim the arrangement of sofa or lounge, A, folding frame, B, arms, C, C', springs, D and legs, F, F', and cords, G, G', the whole forming a combined sofa and self-unfolding bedstead, substantially as set forth.

40,849.—Mode of Slinging Accouterments.—W. D. Mann, Detroit, Mich. :

I claim the manner herein described and represented of slinging the cartridge-box of an infantry or cavalry soldier so as to have the weight thereof counterbalanced by the other accouterments and arms usually worn upon the body, and the weight of the whole borne upon the shoulders, substantially as described.

[The object of this invention is to transfer the entire weight of the arms and accouterments of a cavalry or infantry soldier usually worn upon the body, from the waist to the shoulders, for the purpose of lessening the tendency of the soldier to inflammation of the bowels, piles, hernia and other diseases which result from wearing a tight body belt, and at the same time enable him to carry a much larger quantity of ammunition than he could possibly do in the usual or ordinary way.]

40,850.—Excavator.—Daniel McNabb, Moscow, Mich. :

I claim, first, The scraper, B, with its grooves, P, and pulley, K, suspended by chains, E, E, on pivots, N, and operating substantially as described.

Second, Also claim the bar, G, the hooked king-bolt, the shifter, F, and the brake, D, the whole constructed, combined and operating substantially as described and for the purposes specified.

40,851.—Clock and Watch Escapement.—Don J. Mozart, New York City, and Levi Beach, Farmington, Conn., and Laporte Hubbell, Bristol, Conn. :

We claim, first, Constructing a screw or verge, in such manner that the teeth or points of teeth, are adapted to receive the teeth of a common ratchet scape wheel, substantially as described.

Second, The concave beveled surfaces, j, j, and groove or channel, i, formed in the solid cylindrical verge, substantially as described.

Third, The application of the scape wheel, d, or its equivalent, to the verge, h', when constructed substantially as described.

Fourth, Giving the vertical adjustment to the support for the verge of the escapement by means substantially as described.

40,852.—Hydrant.—John Pringle, Jersey City, N. J. :

I claim, first, The plug, a, with three passages, p, h, and held in place by a cap, c, over its thick end in combination with the lever, h, rod, e, slip weight, E, and pipes, B, C, all constructed and operating in the manner and for the purpose substantially as set forth.

Second, The weight, E, made in two parts and united by a dovetail in combination with the rod, e, and plug, a, constructed and operating as and for the purpose directed.

[The object of this invention is a self-acting metallic hydrant capable of being closed by the action of a weight and provided with a three-way cock, to admit the water or other liquid from the supply to the delivery pipe and allow the waste in the upper part of the delivery pipe to run down into the ground, thereby preventing its freezing, and saving the hydrant from injury.]

40,853.—Sewing Machine.—W. S. Pratt, New York City :

I claim, first, A sewing machine making a running stitch and using an ordinary sewing needle, operating substantially as described, in which the needle is not stationary, but is carried or driven forward through the cloth in making the stitch, and then carried backward with the fabric preparatory to the making another stitch.

Second, The arrangement of the lip, d, in combination with the needle, g, and the rollers, a, a', and bar, e, for making the stitch, substantially as described.

Third, The combination and arrangement of the ratchet, o, and impelling arm or pawl, n, with the mechanism, rotating the rollers, a, a', b, b', substantially as and for the purposes set forth.

Fourth, The combination of the adjustable arm or pawl, n, with the ratchet, o, for the purpose of regulating and varying the length of the stitch, substantially as described.

40,854.—Quartz Mill or Crusher.—P. M. Randall, San Francisco, Cal. :

I claim a rotary mill provided at its face side with grooves of involute or other form, which will convey or force the substances acted upon from the periphery of the miller toward its center and thence upward through the miller, so that the substances may be expelled by centrifugal force toward the periphery of the miller, and then pass down again underneath the miller to be forced toward its center as before, as herein set forth.

[The object of this invention is to obtain a miller to operate in such a manner as to subject the article being ground or reduced by a continuous operation until the article is reduced to the desired degree of comminution. The invention is applicable to the reduction of most substances to a pulpy or pasty consistency, but is more especially designed for the reduction of quartz and the amalgamation of the minerals contained therein.]

40,855.—Pen and Pencil Cases.—J. H. Rauch, New York City :

I claim, first, The tube, B, placed centrally or concentrically in the tube, A, in combination with the detachable pen-slide tube, D, all arranged as shown to admit of the tube, D, when shoved into tube, A, passing over the tube, B, for the purpose of enabling a large pen, G, to be used.

Second, Constructing the pen-slide, E, of two tubes, a, b, one being fitted over the other with the shank of the pen-holder, F, between them, as and for the purpose specified.

Third, The slide, H, on the head, F', provided with a flange, g, or its equivalent, when said slide is used in connection with the tubes, A, B, for the purpose set forth.

Fourth, The ring or band, f, within the tube, D, and attached to the pencil-slide, E, when used in connection with the tube, B, in the tube, A, to preserve the nib or point of the pen when the tube, D, is shoved into tube A, as described.

Fifth, The combination of the tubes, A, B, pen-slide, E, and the head, F', with slide, H, all arranged substantially as and for the purpose herein set forth.

[The object of this invention is to obtain a combined pen and pencil case which will be capable of being closed so as to be quite short and convenient to carry in the pocket, and at the same time be capable of being readily extended or lengthened when used either with the pen or pencil and admit of a good sized-pen being used.]

40,856.—Compound Projectile for Ordnance.—L. E. Reynolds, Mendon, Ill. :

I claim the combination of the major and minor projectiles, the interspace charge and the fulminate priming, substantially as herein described, the whole forming a compound projectile operating as herein set forth.

And I also claim the protecting ring, e, applied substantially as and for the purpose set forth.

[This invention consists in a compound projectile composed of two distinct projectiles, one of which fits the piece of ordnance from which it is to be fired, and the other fits to and projects from a suitable bore or cavity within the first one, such bore or cavity also containing, behind the smaller projectile, a charge of gunpowder and percussion priming for the ignition of the same, or a charge of fulminating powder alone. The larger projectile is intended to have its weight so distributed that when it is discharged from the gun the point of the smaller projectile will strike and by percussion cause the explosion of the charge by which the smaller one, after having received the whole impact due to the larger one, will receive an additional impact.]

40,857.—Stamp Canceled.—R. H. Rogers, New York City :

I claim the ink reservoir, A, with perforated stamp plate, J, attached to its lower end in connection with the plunger, D, and diaphragm, E, either or both, and with or without the gage, H.

[This invention relates to a fountain canceling device, one which

will contain a quantity of ink so as to supply the device for an indefinite number of impressions and obviate the necessity of applying the device to an ink pad when an impression is to be given.]

40,858.—Joint for Slate and other Frames.—Francis Shenton, Stratton, Pa.:

I claim a joint formed of notching the sides and ends, as described, in combination with the spline or piece, J, and pins, K K.

40,859.—Cultivator.—M. H. Skiff, Cornwall Bridge, Conn.:

I claim the combination of the carriage, F, that carries the cultivator teeth or plows, with the axle, A, and with the main frame, C carried on said axle, that the driver from his seat may, at pleasure, move said carriage laterally, or tip it up or let it down, and fasten it down substantially in the manner and for the purpose herein described and represented.

40,860.—Hay-elevating Fork.—R. J. Stanley, Mount Morris, N. Y.:

I claim the double fork composed of the two stocks, A A', with their attached lines, the two arms, C C', two links, D D', and the catch lever, G, and spring catch, d, or their equivalent, attached to one of the arms, C C', the whole combined and operating substantially as and for the purpose herein specified.

[This invention has been more especially designed for forks for the discharging of straw from the bleaches in the manufacture of paper, but may also be applied to agricultural purposes. It consists in a novel construction of the fork and in certain novel appliances thereto, whereby the opening and closing at the proper time is rendered automatic, and the necessity for a separate tackle to open the fork is dispensed with.]

40,861.—Truss.—W. R. Stephenson, West Greenville, Pa.:

I claim the combination of the adjusting straps, C C', and body-bracing overlapping springs A A', with each other and with the swinging arms, D D', and pads, E E, in the manner herein shown and described.

[The object of this invention is to arrange the branched ends of a double body spring by means of straps, for extension and counter-extension, so that they cross each other and bear with equal force on the opposite sides of the spine; and furthermore, the pads are so combined with a strap and with a ratchet and spring pawl, that the pressure exerted by said pads on the body can be increased or diminished at pleasure without removing the truss.]

40,862.—Evaporator for Sorghum Juice.—D. S. Stewart, Wapello, Iowa:

I claim, first, The combination and arrangement of the pans, B C C, the furnace, A, and flues, D D, substantially as and for the purpose set forth and described.

Second, The arrangement of the valves, T T, in combination with the flues, D D, for the purpose of varying the heat under the pans, C C, as described.

Third, The entire apparatus herein described, consisting of the pans, B C C, arranged as shown, the furnace, A, with flue, F, the flues, D D, and chimneys, M M, and valves, T T, the whole combined and operating as and for the purpose described.

40,863.—Cooking Stove.—L. E. Suffer, St. Louis, Mo.:

I claim the removable heating jacket or chamber to be placed on top of the stove, furnace, or any other fire-place, fig. 6a, substantially as described above.

40,864.—Harvester.—W. A. Sweet, Syracuse, N. Y.:

I claim, first, The attaching or securing of the cutter-bar head, C, to the sickle, B, by providing said head, C, with a shank, c, of taper form, interposed between the cutter bar, b, and the teeth, a, of the sickle, substantially in the manner as and for the purpose herein set forth.

Second, The peculiar construction and arrangement of the slot cap, E, and wayside, F, substantially as shown, for the purpose of forming a guide for the pitman, D, and for the retaining of the journal, g, within the cutter bar head, C, as set forth.

40,865.—Machine for Exercising the Human Body.—C. F. Taylor, New York City:

I claim the arms, G G, provided with adjustable pads, M M, and attached to the reciprocating bar, C, substantially as shown, for the purpose specified.

I further claim the arms, G G, pads, M M, bar, C, serpentine cam, E, and lounge, A, all arranged and combined for joint operation, as and for the purpose specified.

40,866.—Combining Springs for Motive Power.—George Terry, New York City. Ante-dated Oct. 3, 1863:

I claim the combining or connecting together of a series of springs, in the manner substantially as herein described, so that said springs will be wound up simultaneously by the turning of a common shaft, and when wound up, be made to exert their power, or act in an uniform combined manner upon said shaft, as set forth.

[This invention consists in combining a series of springs, two or more, in such a manner that the power or strength of all the springs will be applied to a common shaft, and so as to act equally and harmoniously precisely the same as a single spring, but with an increased duration equal to the time of the action of one spring multiplied by the number of springs used.]

40,867.—Lifting Jack.—William Thurber, Olean, N. Y.:

I claim, first, The combined arrangement of the truck wheels, I I, the spring shoe, h, and pointed spikes, k k, operating in the manner as and for the purposes herein set forth.

Second, I claim the combination of the hanging rack, a, the stirrup, j, the supporting spring, e, and the lever, E, with the notches, l l, for changing the fulcrum to get more or less power on the lever, in the manner herein specified.

40,868.—Shutter Fastenings.—T. J. Townsend, Baltimore, Md.:

I claim the wheel, A, chain, F, and bar, E, placed respectively within a case, C, in connection with the hinge, F, of the blind or shutter applied to the wheel, A, or shaft, B, thereof, the case and pipe being applied to the window frame, and all arranged substantially as and for the purpose herein set forth.

[This invention relates to a new and improved device for opening and closing window shutters and blinds, and for securing them at any desired point between an open and a closed state from the inner side of a room without raising the sash. The invention consists in the employment or use of a chain attached at one end to a sliding bar and attached at the opposite end to a wheel provided with a shaft or arbor on which the lever hinge of the blind or shutter is fitted.]

40,869.—Pruning Hook.—Aaron Travis, Peckskill, N. Y.:

I claim a pruning hook, A, constructed in the form herein shown with cutting edge on the various parts, cc and d, as set forth.

[This invention relates particularly to the shape of the pruning hook, and it consists in running the cutting edge from the handle in a straight line up to about two-fifths (more or less) of its entire length and turning it off at an angle of about 135 degrees, whereby an inclined plane is produced which finally ends in a short hook, in such a manner that in applying said cutting edge to a twig or branch of a tree or to a stalk of corn or other plant, a draw-cut is produced and the operation of cutting performed with less power than with a hook of the ordinary shape.]

40,870.—Sugar Evaporating Apparatus.—Erasmus Tucker, Poplar Grove, Ill.:

I claim, in combination with an evaporating pan, an intermediate heat regulator, H, consisting substantially of alternate shallow water pans and perforated plates, when constructed and operated substantially in the manner and for the purposes described.

I also claim, in combination with the intermediate heat regulator, H, the dampers, g h, for the purpose of regulating or shutting off the heat from the pan, substantially in the manner herein described.

I also claim, in combination with the evaporating pans, set at different levels, the two chimneys, E F, and dampers, k m, for the purpose of heating the first pan, B, independently of the others, substantially in the manner and for the purposes set forth.

40,871.—Machine for Renovating and Purifying Feathers.

—Clark Turner and J. A. Jackson, Triangle, N. Y.:

We claim the revolving feather receptacle, A, in combination with the steam chamber, C, provided with perforated tubes, D D, passing into the sides of the receptacle, A, and having valves, E, fitted within them and all arranged as shown to operate in the manner as and for the purpose herein set forth.

[This invention consists in the employment or use of a rotating feather receptacle provided with an internal steam tube having tubes projecting from it provided with valves, and all arranged in such a manner that the feathers may be steamed and cleaned or purified and dried in a thorough manner.]

40,872.—Condenser.—G. J. Washburn, Worcester, Mass.:

I claim, first, An intermittent syphon condenser constructed and operating substantially as herein described.

Second, The employment or use in a condenser, of the construction specified, of a water chamber, A', to contain a supply of water which may descend by its own gravity in the event of pressure occurring within the tank.

Third, The check valve, b, employed for the purpose described in combination with a condenser of the construction specified.

Fourth, The combination of the perforated diaphragm, J, and syphon pipe, M, with the tank, A, and chamber, A', for the purposes set forth.

Fifth, The combination of the safety valve, l, with a condenser of the construction described.

[This improvement obviates the difficulties hitherto existing in the employment of the syphon principle to elevate water for injection.]

40,873.—Plant Protector.—James Weed, Muscatine, Iowa:

I claim the employment or use of rockers, D, of circular or sector form attached to shutters, B, to admit of the adjustment or manipulation thereof, substantially in the manner as and for the purpose herein set forth.

I also claim the supplemental shutters, j l, attached respectively to the framing or structure and shutters, substantially as and for the purpose set forth.

I further claim connecting the rockers with the base of the structure or with ways attached thereto by means of cords, as and for the purpose specified.

[This invention relates to an improved means for protecting trees, vines and other plants against injury from winter and spring frosts, and may be considered as the further carrying out, perfecting or extending of a means which was patented by this inventor on Oct. 21, 1862.]

40,874.—Machine for Amalgamating Gold and Silver.—Zenas Wheeler, San Francisco, Cal.:

I claim, first, The fixed spiral ribs, h, on the periphery of the rotary muller, D, and reversely spiral ribs, e, on the inner side of the pan, A, in combination with the curved grooves, g, in the face or underside of the muller, D, and reversely curved grooves, d, in the bottom of the pan, A, when arranged for joint operation in the manner and for the purpose specified.

Second, Connecting the muller, D, to the shaft, F, by a universal joint composed of the yoke, F, and ring, i, provided at four equidistant points around its periphery with journals, j h h, the former working in bearings in the lower end of the yoke, F, and the latter in boxes attached to the upper side of the muller, D, as and for the purpose specified.

Third, In combination with the muller, D, and pan, A, the curved plates, e, supported at their outer ends in slides, n, and at their inner ends in a frame, M, which is supported on the upper end of the shaft, G, in such a manner that the plates, L, will follow any adjustment of the muller, and thus bear the same relation to it whether in its highest or lowest working position, as specified.

[The object of this invention is to obtain a device of simple construction which will cause a thorough incorporation of the quicksilver with the pulp containing the metal, so as to insure a perfect amalgamation of the latter.]

40,875.—Latch for Gates.—S. B. Williams, Leavenworth, Kansas:

I claim the securing of the bolt, D, of the latch within the case, A, and to the slide, B, by means of the set screws, E, substantially as shown, to admit of the longitudinal adjustment of said bolt for the purpose herein set forth.

[The object of this invention is to obtain a latch with a bolt so arranged that it may be adjusted longitudinally further forward or backward in the latch case, so as to compensate for any shrinking or swelling of the gate or fence, and admit of the bolt always being put in a proper relative position with the strike or nosing so that it may operate well at all times however much the space between the gate and the fence may vary in consequence of shrinking and swelling.]

40,876.—Combined Rake and Reel for Harvesters.—W. A. Wood, Hoosick Falls, N. Y.:

I claim the combination of an independent rake and reel, when arranged to work together, substantially in the manner and for the purpose herein set forth.

[The object of this invention is to obtain a rake with a bolt so arranged that it may be adjusted longitudinally further forward or backward in the latch case, so as to compensate for any shrinking or swelling of the gate or fence, and admit of the bolt always being put in a proper relative position with the strike or nosing so that it may operate well at all times however much the space between the gate and the fence may vary in consequence of shrinking and swelling.]

40,877.—Ruffle.—E. C. Wooster, New York City:

I claim the two-ply ruffle herein described, composed of a single piece of cloth folded, fluted or crimped and sewed or stitched, substantially as herein specified.

[This invention consists in a two-ply ruffle composed of a single piece of cloth doubled by turning inward and folding both of its edges, having the two edges secured by two lines of sewing or stitching running lengthwise of the piece, with two frills which extend outward from the line of stitching, and with a series of flattened plaits between them, the stitching serving the purpose of confining the plaits and frills as well as the edges of the piece.]

40,878.—Washing Machine.—G. F. S. Zimmerman, Frederick, Md.:

I claim in a washing apparatus that is to be set and used in a common wash tub, the hinging of the frame, d, that carries the rubber, F, to the stationary or under portion, b, for the purpose and in the manner herein described and represented.

40,879.—Spring Hinge.—Lorenz Bommer (assignor to the American Spiral Spring Butt Hinge Manufacturing Company), New York City:

I claim, first, The hollow cylinder, D, or its equivalent, when applied to the sectional spring hinge, e essentially as and for the purpose herein set forth.

Second, The annular groove, p, in cap, E, or its equivalent, in conjunction with pins, f, g, as and for the purpose herein set forth.

Third, The combination of cylindrical caps, E F, spring, C, or their equivalents, substantially as and for the purposes herein set forth.

40,880.—Machine for Nailing Shoes.—J. H. Brown (assignor to himself and J. E. Farwell), Boston, Mass.:

I claim the improved machine, as not only having its shear or cutter arranged in respect to the nail driver and nail strip carrier substantially in manner as described, but as having combined with the shear and nail driver a mechanism, viz: the lever, D, and cam, c, or the mechanical equivalent thereof, which through or by the downward movement of the said driver shall be caused to force the shear forward against the nail strip in a manner to cause a nail by the conjoint action of the channel, a, and the said shear, to be separated from the strip.

And furthermore I claim the improved machine, as not only so made, but as provided with a feeding mechanism, constructed, arranged and applied to the nail strip carrier, substantially as and so as to operate by means as described.

And furthermore I claim the arrangement of the spring, N (either with or without the auxiliary carrier, L), with the nail carrier, the channel stock and the shear, made to operate with such stocks as specified.

I claim in the nailing machine not only the arrangement of the spring within the driver, but its combination with a bearer to work within such driver, substantially as specified.

40,881.—Tobacco Smoking Pipe.—Frederick Fickey (assignor to Wm. H. Fickey), Baltimore, Md.:

I claim, first, The combination and arrangement of the chambers,

A B C and D, the smoke passages, a b c and d, and the saliva cup in the manner described and shown.

Second, Placing a sponge or similar material in such a position in a tobacco pipe that while it shall absorb and retain the nicotine, it shall not be liable to come in contact with and absorb the saliva which may accumulate in the pipe, substantially in the manner and for the purpose described, and this I claim irrespective of any special form or arrangement of chambers so long as the principle herein set forth is maintained.

40,882.—Lock.—T. G. Harold (assignor to himself and J. W. Kissam), Brooklyn, N. Y.:

I claim a changeable ring, b, notched for the passages of the bolt or shackle in combination with a notched circular tumbler, whereby the permutations or combinations may be changed as specified.

Second, I claim the ring, g, carrying the shackle in combination with the divided and flanged case, secured together as specified, whereby the hinge of the shackle is secured between the flanges, as set forth.

Third, I claim the divided lock case secured together as specified, in combination with the ring carrying the shackle, when said case is provided with two more openings whereby the position of the shackle relative to the indicators can be changed when the shackle is withdrawn, without opening said case as specified.

40,883.—Harvester.—William Jones (assignor to himself and T. L. Salisbury), St. Louis, Mo.:

I claim, first, The arrangement of the elevating lever, S, on the front of a draft machine, for the purpose of raising and lowering the apparatus, in the manner and for the purpose shown and described.

And second, I claim the arrangement of the cogged segments, B B, grippers, P P, and reel posts, O, in respect to each other and to the frame of the machine, as shown and described.

40,884.—Breech-loading Fire-arm.—J. H. Merrill (assignor to Merrill's Patent Manufacturing Co.), Baltimore, Md.:

I claim, in combination with the ordinary hammer of a gun for exploding a cap, an auxiliary hammer, C, for exploding a metallic cartridge, said auxiliary hammer being pivoted to some stationary part of the arm, and actuated by said ordinary hammer, substantially in the manner and for the purpose set forth.

40,885.—Percussion Fuse for Shells.—W. F. Patterson, Somerset, Ky. (now in the U. S. Army) assignor to himself and W. S. Forbes, Philadelphia, Pa.:

I claim the holding of the inner tube, C, which is the hammer or plunger in its place, and to the outer tube, B, by means of a wooden pin, D, applied and acting as herein described and represented.

40,886.—Sizing for Hats, &c.—H. E. Pond, Franklin, Mass., assignor to W. E. George, Wrentham, Mass.:

I claim the above-described improvement in making the hydro-alcoholic solution of gum for the purpose specified.

40,887.—Breech-loading Fire-arm.—Joseph Rider, Newark, Ohio, assignor to himself and E. Remington & Sons, Ilion, N. Y.:

I claim the so combining of the hammer and the independent breech plate, as that they may lock and interlock with each other, substantially as herein described and represented.

40,888.—Explosive Projectile.—J. N. Smith (assignor to himself and W. B. Headley, Jersey City. Ante-dated Dec. 1, 1863):

I claim the arrangement of the bent levers, H H, in pivot sockets in the wall of the missile, as also in relation to the front and rear shell, so as to simultaneously fulfill the two functions of direct hammers, and, through connecting wires, of operating other hammers in a distant part of the missile, substantially as herein specified.

I also claim the protecting cap, G, with its hollow cap arms, g g, constructed, arranged and operating, substantially as herein set forth.

I also claim the arrangement of the spiral wings, M M, in combination with the arms, g g, of the cap, G, as herein set forth.

I also claim locating separate shells in the extreme end of the projectile, and exploding them simultaneously by the connecting wires, V V, or their equivalents, substantially as herein described.

I also claim the separate inclosed hammer chambers, N N, as set forth.

I also claim the peculiar construction and combination of the rear multi-chambered shell, C, and plug, D, as set forth.

40,889.—Railway Car Truck.—C. T. Tisdale (assignor to himself, B. W. Tisdale and M. B. Boynton), East Boston, Mass.:

I claim the combination of the two separate wheel frames, C D, and the king bolt bar, G, or its mechanical equivalent, the whole being applied together and to the wheels substantially in manner and so as to operate as and for the purpose herein specified.

And I also claim the combination of the said separate wheel frames, C D, and their king bolt bar, G, with means substantially as described, viz: the latch bars, L, and their pins, f g, for connecting and disconnecting each two adjacent ends of said wheel frames, the purpose of connecting them being as hereinbefore stated.

And I also claim the combination of the wheel frames, C D, and their bars, L, and their holes, K K, or their mechanical equivalent, applied to the frames and bar, the same being for the purpose of fixing the frame to the bar in order to preserve the wheels in their true position with respect to the railway track.

And I also claim the bar, G, as provided with one or more shoulders, e, at each end, when the said bar is combined with two wheel frames, C D, applied to it and supporting the wheel axles, substantially as set forth.

40,890.—Lamp Chimney.—Albert Albertson, New York City. Ante-dated Nov. 26, 1863:

I claim a lamp chimney composed of a metal frame, formed of a tube, D, rods, a, and a ring or base, E, and a glass portion, F, fitted on the exterior of the metal frame, in such a manner as to be capable of being raised and lowered thereon, substantially as set forth.

40,891.—Toy Automaton.—J. S. Brown, D. C., assignor to himself and C. P. Stimets, New York City:

I claim producing the walking motion by propelling each foot forward alternately in the arc of a circle, around the other foot as a stationary center or pivot.

I also claim the alternately acting wheels, L L, for propelling the feet forward, having an intermittent moving action, so as to make the feet progress in succession, substantially as herein set forth.

I also claim adjusting the feet up and down on the legs or frame, so as to vary or adjust the steps, as desired, substantially as herein specified.

I also claim suspending and pivoting the bust of the automaton upon the movement thereof, substantially as and for the purposes herein described.

I also claim the wire hoops or rings, u, u, for securing a covering around, without interfering with the movement, as specified.

RE-ISSUES.

1,587.—India Rubber Soles for Boots and Shoes.—Charles McBurney, Roxbury, Mass. Patented April 5, 1859:

I claim a new manufacture of a sole for boots or shoes made of vulcanized india rubber or other vulcanized gum provided with holes for the reception of nails, pegs, rivets threads or other mechanical devices by means of which the sole may be attached to the uppers, such soles having a protecting external vulcanized surface, substantially as herein described.

I also claim making india rubber soles or soles of any other vulcanizable gum in molds, in combination with forming therein, previous to vulcanization, holes designed to contain nails, pegs, rivets, thread or other mechanical means for the attachment of the sole to the uppers.

1,588.—India Rubber Soles for Boots and Shoes.—Charles McBurney, Roxbury, Mass. Patented April 5, 1859

I claim a new manufacture of a vulcanized india rubber sole or sole made of any other vulcanized gum adapted for attachment to boots or shoes by means of pegs, nails, rivets or sewing or other equivalent means, the sole being made in such manner that said attachment does not require any previous preparation of the sole by piercing or cutting holes.

I also claim a new manufacture of boots and shoes produced by combining with the uppers thereof, a molded sole made of vulcanized india rubber or other vulcanizable gum, when the latter is attached to the former by nails, rivets or other mechanical devices or threads, applied in such manner as will neither deform the shape or require the piercing of the face or bottom of the sole after vulcanization.

Money Received.

At the Scientific American Office, on account of Patent Office business, from Wednesday, Dec. 9, to Wednesday, Dec. 16, 1883:—

H. & B., of N. Y., \$75; I. E. P., of Conn., \$12; G. L. T., of N. Y., \$49; M. C. B., of Ill., \$20; M. & S., of Vt., \$45; G. M. Jr., of Ill., \$20; M. & H., of N. Y., \$20; A. J. B. F., of Ind., \$20; P. L. S., of N. Y., \$16; F. L. S., of Pa., \$45; A. C., of N. Y., \$61; L. C. W., of N. Y., \$20; J. H., of Pa., \$10; F. H. C. M., of N. Y., \$30; W. H., of Cal., \$15; W. K., of N. Y., \$25; J. L. & Co., of Iowa \$250; L. & L., of Mass., \$16; L. W. F., of Ind., \$25; E. C. N., of N. H., \$16; R. L., of Ohio, \$15; L. B. S., of Conn., \$25; M. B. W., of Conn., \$20; W. A., of U. S. N. Y., \$20; S. A. S., of N. Y., \$25; G. P. G., of N. Y., \$25; J. & D., of N. Y., \$59; J. W. R., of N. Y., \$20; R. H. M., of Wis., \$20; T. F. B., of N. Y., \$25; W. L., of N. Y., \$16; H. T. M., of N. Y., \$16; J. P. H., of Iowa, \$15; D. H. S., of Iowa, \$20; E. S. H., of N. Y., \$16; B. E., of N. Y., \$16; C. S., of N. Y., \$16; M. & G., of N. J., \$25; G. T., of Mich., \$25; K. S. & Co., of Pa., \$600; P. W., of Iowa, \$15; C. K., of Ill., \$32; C. & D., of Conn., \$25; W. M., of Ill., \$16; A. T., of Iowa, \$16; F. A. De M., of N. Y., \$25; J. D.,

H., of N. Y., \$20; J. L. C., of Iowa, \$20; G. A. S., of Conn., \$16; S. S., of N. J., \$12; A. G., of N. Y., \$12; J. E., of N. Y., \$20; R. H. B., of N. Y., \$20; T. B., of N. Y., \$16; J. R. B., of Ind., \$60; E. M., of France, \$16; J. N., of Ill., \$20; W. G. S., of N. Y., \$20; J. A. D., of N. Y., \$16; C. H. G., of Wis., \$20; D. W., of Ill., \$25; E. P., of Mass., \$25; B. L., of N. Y., \$28; T. W. W., of Ill., \$25; W. D. McG., of Pa., \$10; L. P., of Ind., \$15; E. G. R., of Mich., \$16; E. F. of N. Y., \$15 A. A. B., of N. Y., \$16; H. B. H., of Ill., \$12; J. M., of N. Y., \$16; D. D., of N. Y., \$20.

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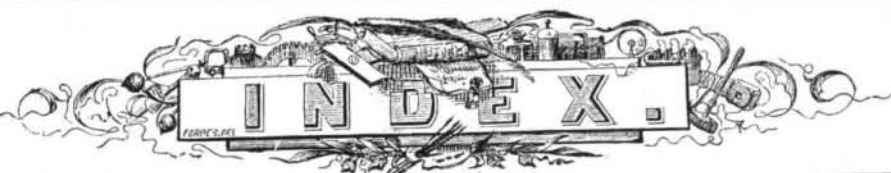
Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office, from Wednesday, Dec. 9, to Wednesday, Dec. 16, 1883:— H. & B., of N. J. (3 cases); S. A. S., of N. Y.; S. S., of N. J.; I. E. P., of Conn.; G. P. G., of N. Y.; A. G., of N. Y.; G. L. P., of

N. Y.; J. & D., of N. Y.; T. C., of N. Y.; M. & G., of N. J.; F. H. C. M., of N. Y.; C. & D., of Conn.; W. M., of Ill.; E. P., of Mass.; G. T., of Mich.; W. K., of N. Y.; T. W. W., of Ill.; W. D. McG., of Pa.; L. W. F., of Ind.; B. L., of N. H.; C. A., of N. Y.; F. A. De M., of N. Y.; J. J. De B., of N. Y.; D. D., of Mich.; L. B. S., of Conn.; H. B. H., of Ill.

A. B. Jr., of N. Y.—Gas cannot be made from kerosene oil by driving a current of cold air through it. Who informed you that 1,000 cubic feet of gas could be made from a gallon of this oil? About 10 cubic feet only are obtained from a gallon. You will find an apparatus for distilling it, with much useful information on the subject, illustrated and described on page 324 (new series) of the SCIENTIFIC AMERICAN.

E. C. M., of Pa.—We do not know where you can obtain a steam engine of the class to which you refer. We advise you to get a good small horizontal engine in preference. It will give you more satisfaction in operating your crusher.

J. E. McE., of N. Y.—Employers have no more right to use an invention patented by an employee, even if made while working for them, than a stranger.



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