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FOR THE WEEK ENDING MAY 3, 1864.

Reported Officially for the Scientific American.

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42,545.—Knitting Machine Burr.—Charles Allardice, Cohoes, N. Y.:

I claim the combination of the chamber, e, in the hub, the dovetail tongues, n, on the sinkers, and the shoulder, s, on the busb, substantially as and for the purpose herein set forth.

42,546.—Tool for channeling Soles.—Alvin Allen, North Brookfield, Mass.:

I claim the employment of a channeling knife and grooving knife applied to a stock to operate together, substantially in the manner and for the purpose specified.

I also claim so applying the knives to the stock or holder that they can be adjusted with respect to each other, or separately removed for repairs or other purpose, as set forth.

I also claim constructing the stock or holder with the surface, t, and lips or guides, h, whereby the depth of cut of the channel and its distance from the edge of the sole is gaged, as set forth.

42,547.—Camp-kettle.—Cyrus Avery, Ashtabula, Ohio:

I claim the herein-described combined pan and kettle, when the several parts are constructed, arranged, and operating as and for the purpose herein specified.

42,548.—Machine for pulling Beans.—Joel Baxter, North Greece, N. Y.:

I claim, first, The employment in bean harvesters, of the pullers, G, having a horizontal, lateral axis upon which they may be rocked.

Second, Attaching the axial shaft, J, of the pullers, G, to the periphery of the wheels, D and D', substantially in the manner and for the purpose set forth.

Third, The combination of the cam, C, with the pullers, G, and spring, c, or its equivalent, they being constructed, arranged and operating substantially as and for the purposes set forth.

Fourth, The combination of the setting bars, f and f', latch, h, and spring, n, with the compressing cams, T, arranged and operating substantially as set forth and for the purpose described.

Fifth, Closing the pullers, G, as seen in Fig. 3, by means of the spring, S', or its equivalent, bars, f and f', arranged and operating in combination with the lug, v, substantially as shown and described.

Sixth, The arrangement of the reel, F, so as to operate in combination with the revolving pullers, G, substantially in the manner and for the purpose set forth.

42,549.—Box for Mustard and the like Articles.—Robert A. Betts, New York City:

I claim the box of paper or pasteboard with an inner end, b, of similar material and inclosed by the metallic flanged base or end, c, as set forth.

42,550.—Mortise and Draw-bore Delineator.—Reuben Bloss, Rochester, N. Y.:

I claim the combination and relative arrangement of the system of mortise and draw-bore spurs, a b c and e, substantially as specified, when they are used in combination with the bed, A, and the sliding frame.

42,551.—Grain Sieve.—J. J. Bradner, Pine Creek, N. Y.:

I claim the inclined meshes, a a, covering the end spaces between the screens, in combination with said screens arranged as a compound sieve, and having the bevel, G, the whole arranged relatively to the blast, substantially as described and constituting a new article of manufacture.

42,552.—Many-barreled Gun-battery.—James Brett, Mattewan, N. Y.:

I claim, first, The vertically sliding breech-piece and chamber block, C, applied in combination with each other and with the barrel block, B, substantially as and for the purpose herein specified.

Second, The spring, G, applied in combination with the movable breech-piece, D, and with the pins, E E, substantially as and for the purpose herein specified.

Third, The combination of the single hammer, F, and a series of pins, E E, corresponding with the number of barrels, substantially as herein specified.

Fourth, The combination of the hooked levers, N N, and loaded levers, P P, with each other and with the hammer, F, substantially as herein set forth.

Fifth, The shaft, L, and its arms, M M, applied in combination with the hammer, F, and levers, N N P P, substantially as herein described to serve the two purposes of cocking and liberating the hammer.

[This invention consists in certain improved means of securing in place and of providing for the removal of the chambered breech-piece employed for the reception of the cartridges in a many-barreled gun-battery; also in certain improvements in the mechanism for firing the charges in such a battery.]

42,553.—Wire-heddle for Looms.—Darius C. Brown, Lowell, Mass.:

I claim my improved loom harness or heddle metallic eye, as made of two round wires twisted together and condensed in their twists, not only in the continuations of the planes of the sides of the eye, but in directions in other respects, substantially as set forth.

42,554.—Breast Strap Slide.—Andrew Buckham, Newark, N. J.:

I claim in combination with a breast strap slide, the ribs, R R', and tongue, S, all constructed and arranged as described.

42,555.—Machine for polishing Heels of Boots and Shoes.—Benjamin Q. Budding, Milford, Mass.:

I claim in combination with a polishing tool which has a vibratory movement imparted to it, a mechanism which allows the shoe to be freely turned by hand in every direction necessary to bring all parts of the heel to be operated upon, into contact with the polishing tool.

I also claim the construction of the plate, r, with the shoulder, v, ratchet or ratchets, z, pawl, c', and strap, w, or their equivalents, substantially as set forth.

42,556.—Locomotive Truck.—James D. Butler, Brooklyn, N. Y.:

I claim, first, Combining two or more connections, J I H, and E K Z, or their equivalents, between the main and truck frames of a locomotive, substantially as described.

Second, The combination with the notched bar, D, or its equivalent, of the pins, L and Q, and the spring, R, or their equivalents, substantially as described.

42,557.—Steam Fire Engine.—Lysander Button & Robert Blake, Waterford, N. Y.:

We claim the combination of two pistons moving in opposite directions at the same time in one steam cylinder operating two pistons in one water cylinder (in opposite directions), connected by two piston rods, one working within the other. The motions of which are governed by a double crank, having direct connection with the piston rods, substantially in the manner and for the purpose described.

We also claim the construction of the single valve, having openings and chambers for the admission and exhaustion of the steam at the ends and center of the cylinder, so constructed as that both pistons are operated upon in opposite directions at the same moment.

42,558.—Machine for cleaning and separating Ore.—Nicholas Carpenter, Ellenville, N. Y.:

I claim, first, A hutch which is made tapering from the top towards the bottom, substantially as and for the purposes set forth.

Second, So constructing and combining the plunger and hutch as to admit of the ingress and egress of the air around the plunger (or in any other manner), as and for the purpose described.

Third, The combined arrangement of an elevator or conveyor, E, with the hopper, I, and any suitable screen, as and for the purpose hereinbefore set forth.

42,559.—Bottling Soda Water under Pressure.—Henry Caise, Pittsburgh, Pa.:

I claim the application and use of a fluid chamber attached to the charging cylinder of a bottling machine, for the purpose of saving the surplus sirup and water passing off while filling one bottle, and forcing it into the succeeding bottle in advance of the fluid that comes from the reservoir, substantially in the manner and for the purposes herein set forth.

I also claim the combination of the faucet, c, and escape valve, t, with the fluid chamber, A, and pipe, L, when arranged and operating as hereinbefore stated for the purposes set forth.

42,560.—Ratchet Drill.—John C. Chapman, Charlestown Mass.:

I claim, first, A self-feeding ratchet drill in which the feeding shaft, G, is thrust out from an exterior sleeve, D, by revolving the sleeve by a ratchet and pawl operated by the hand lever, A, substantially as set forth.

Second, I claim the hollow sleeve, D, and feeding-shaft, G, sliding therein with a spline and feather, in combination with the screw shaft, E, operating in the manner and for the purpose substantially as described.

42,561.—Floating Derrick.—James V. Collins, Georgetown, D. C.:

I claim, first, In combination with the bulls or floats, I J, the abutments, A A, and connecting arches, C C, constructed and arranged substantially as herein shown and described.

Second, I claim the derricks, A, in combination with the truss frames, D D, and brace rods or ties, i i' m, the whole being constructed and arranged in the manner and for the purpose set forth.

Third, In combination with the above parts, I claim the tackle, l, and grappling hooks, x x, arranged and operating substantially in the manner described.

[This invention relates to a floating contrivance of great strength which is designed to raise sunken vessels and other submerged bodies of immense weight, and also to transfer ordnance, &c., upon the water.]

42,562.—Steam Boiler.—Henry D. Cooper, Boston, Mass.:

I claim the combination and arrangement of the fan-wheel or rotary scraper with the boiler, substantially as and for the purpose specified.

42,563.—Ditching Machine.—Albert W. Cox, Dublin, Ind.:

I claim, first, The arrangement of the parts, N O o P Q R r S T U U' u u' V V' W l, or devices substantially equivalent, whereby the plows and elevator are capacitated for simultaneous elevation and depression while preserving their proper relative positions and the continuity of the driving mechanism, substantially as set forth.

Second, The devices, G H H' I J K L M, or their equivalents, for enabling the sudden elevation of the excavating mechanism out of the ground and its restoration to the working position without disturbing the adjustment, as herein explained.

42,564.—Harvester.—Thomas Curtis, New Hudson, Mich.:

I claim the combination and arrangement in connection with a grain reaper, of the rake, Q Q, binder, H H', and carrier, P, constructed and operating severally and in combination with each other, substantially as set forth, whereby the grain as fast as it is cut is carried by the rake to the binder, by which it is bound into bundles and then delivered on to the carrier, by which the bundles are carried along with the machine until a bunch or shock is gathered, when they are deposited together on the ground, the rake, binder, and carrier being operated by the reaper, and the action of the whole machine being substantially as described.

42,565.—Step Ladder.—Thomas Curtis, New Hudson, Mich.:

I claim the combination of the standards, B B, pendent brace, C, roller, E, or its equivalent, and folding braces, D D' D'' D''', arranged, connecting and operating substantially as described, so that as the standards, B B, are carried backward from the ladder, they will also, at the same time, by the action of the braces, D'' D''', be expanded at their lower ends, substantially as and for the purposes set forth.

42,566.—Operating Ordnance.—James B. Eads, St. Louis, Mo.:

I claim the use of the lever, G, and the way or slide, I, for the purpose of retaining the muzzle of a gun in a horizontal line intersecting the center of the port-hole whilst the gun is being raised or lowered for the purpose of aiming it.

Second, The use of the stationary guide or director, K, for the purpose of returning the gun to a convenient level for loading.

Third, The devices as substantially herein described.

42,567.—Washing and Pressing Machine.—M. C. Davis & L. C. Keith, Folsom, Cal.:

We claim, first, The tank, B, and furnace, A, in combination with the pump, C, sprinkler, D, and pressure-board, F, constructed and operating substantially as and for the purpose herein shown and described.

Second, The pressure-board, F, and pump, C, in combination with the hand lever, I, constructed and operating in the manner and for the purpose substantially as specified.

Third, The hinged sprinkler, D, in combination with the rabeted frame, E, and rods, r, constructed and operating substantially as and for the purpose set forth.

Fourth, The perforated trough, f, in combination with the pump, C, and sprinkler, D, constructed and operating as and for the purposes specified.

[This invention consists in the arrangement of a furnace hot-water tank and pump, in combination with a sprinkler and reciprocating pressure-board operated by a hand lever, connecting with toggle arms, in such a manner that by the action of the hand lever the pump is set in motion and a quantity of water from the tank is forced up on the sprinkler and discharged on the clothes hung under said sprinkler and between it and the pressure-board, and at the same time a gradually increasing pressure is exerted on the clothes, thus alternately charging them with hot water and squeezing them dry until all the dirt has been completely removed from the same.]

42,568.—Machine for Amalgamating.—M. B. Dodge, Black Hawk Point, Colorado:

I claim the employment or use in an amalgamating machine of adjustable shoes attached to or connected with supplemental bars or arms which are arranged with springs and with the main or principal rotating arms to operate in the manner substantially as and for the purpose herein set forth.

[This invention relates to a novel arrangement of the rotary shoes of the machine, whereby the outer ones, which are subjected to the most wear, in consequance of having the greatest speed, may always be adjusted so as to run in contact with the bottom of the pan, and the wear thereby compensated for. In the ordinary amalgamating machines the outer shoes, in consequence of being subjected to more wear than the inner ones, soon become comparatively useless and thereby render the machine much less efficient than it otherwise would be.]

42,569.—Spindle-lubricator for Spinning Machines.—James, Eaton, Boston, Mass.:

I claim an elongated box or receptacle, formed in or upon the lower ril of mules or spring frames to contain a lubricating substance and at the same time afford a suitable support or continuous bearing for the spindle, substantially as herein set forth.

I also claim the combination of a thin coat of non-oxidizable metal with the spindle, the same being applied at its bearing surfaces, substantially as herein described.

42,570.—Smelting Lead Ores.—Alexander H. Everett, New York City:

I claim the improved process herein described for smelting or reducing sulphuretted ores.

42,571.—Construction of Ordnance.—George H. Ferriss, Utica, N. Y. Ante-dated April 19, 1864:

I claim the manufacture of my improved cannon by the combination of a series of metallic disks which are formed by coiling up and welding ribbons or bars of metal whose quality increases in hardness and temper from one end to the other, placing the softest quality in the center of the coil, all substantially in the manner and for the purpose herein set forth.

When a gun is constructed of a central core, and incircling bands or rings, substantially as herein described, I claim securely retaining said rings in their proper positions upon the core by means of key rings, sprung into grooves formed upon the periphery of the core, constituting retaining shoulders thereon, substantially in the manner herein set forth.

42,572.—Device for shearing Sheep.—A. J. Fullam, Springfield, Vt.:

I claim, as an improved article of manufacture, a sheep-shearing device composed of a cutting apparatus combined with a steam engine provided with flexible induction and eduction pipes, substantially as herein shown and described.

[This invention consists in combining flexible tubes with a steam engine and a cutting device, in such a manner that a portable and efficient device will be obtained for shearing sheep, one which may be manipulated with the greatest facility, and perform its work in a perfect manner, and admit of the operator handling the animal so as to properly apply the shearing device to it without any inconvenience or difficulty whatever.]

42,573.—Breech-loading Fire-arm.—John Goulding, Worcester, Mass.:

I claim the combination of the cam, D, and lever, E, with the hinged breech-piece, C, when constructed and operated substantially in the manner and for the purposes described.

I also claim in combination with the hinged breech-piece, C, the friction piece, m, for the purpose of preventing the hinged breech-piece from closing when the gun is turned on one side to discharge the empty cartridge, substantially in the manner herein described.

42,574.—Hitching Horses to Vehicles and Plows.—John Graham, Ceresco, Mich.:

I claim the employment of the modified double-tree, D, in combination with the hitching strap, S, and roller, R, arranged and operated substantially as and for the purpose herein specified.

42,575.—Harness Motion of Power Looms.—James Greenhalgh, Pascoag, R. I.:

I claim, first, The projections, i i', upon the hooks, D D, in combination with the knives, d d', whereby the knives besides opening the shed in the usual manner are made to produce the closing of the shed, substantially as herein described.

Second, The upright connections, f f, applied between the lower jacks and the upper parts of the hooks, D D, and arranged between the hooks and the loom framing, substantially as and for the purpose herein specified.

Third, Operating the knives by means of the rockers, k k', which are fast upon the same rock shaft, l, and one of which is longer than the other, substantially as and for the purpose herein described.

[This invention relates to that kind of harness motion for fancy or figured weaving in which the opening of the shed is effected by the action of what are called knives upon hooks attached to jacks, with which the harness is connected, the action of the said knives being controlled by means of a studded pattern chain or cylinder.]

42,576.—Sewing Machine.—William O. Grover, West Roxbury, Mass. Ante-dated April 26, 1864:

I claim the combination of a stationary face cam and a revolving slot with a crank pin, substantially in the manner described, to control the movements of the needle-bar in sewing machines.

42,577.—Car-axle Lubricator.—Thomas C. Hargrave, Roston, Mass.:

I claim the combination and arrangement of the outside spring, f, the rod, e, the support, d, and the lubricating wheel or roller, c, with the journal, b, and housing, j, substantially as and for the purpose set forth.

42,578.—Car-axle Lubricator.—Thomas C. Hargrave, Boston, Mass.:

I claim the combination and arrangement of the bent spring, d, and lubricating wheel or roller, c, with the journal, b, and the housing, g, substantially as and for the purpose set forth.

42,579.—Sheep Shears.—J. A. Hadley, West Waterford, Vt.:

I claim the employment or use of one or more rods or guards, E, attached to a plate, D, which is secured by a pivot or screw, a, to one of the blades, A, of a sheep shears and is connected to the other blade, A', by means of the slot, b, and screw, c, all arranged substantially as and for the purpose herein set forth.

42,580.—Mode of pitching Barrels.—J. F. H. Holbeck & Matthews Gottfried, Chicago, Ill.:

We claim, first, The application of heated air under blast to the interior of casks, by means substantially as described and for the purposes set forth.

Second, The use of a removable conductor, E, in combination with a furnace and blowing apparatus, arranged and operating substantially as described.

Third, The tube-holding plate, i, in combination with the removable pipe, E, and blast furnace, A, substantially as and for the purposes described.

42,581.—Trip-hammer.—Bennet Hotchkiss, New Haven, Conn.:

I claim arresting the stroke of the hammer by means of the latch, L, or its equivalent, when the said latch is arranged in combination with the hammer and cross-head, to operate automatically in the manner and for the purpose substantially as described.

42,582.—Mitre-box.—Daniel Howell, Jr., & Moses K. Kellam, New York City:

We claim, first, The combination of the upright gaging rollers upon adjustable arms, B and C, with the facing-board, F, and the bed-board to make an adjustable bevel jack, in the manner substantially as above described.

Second, The construction of the combined arms, H and I, Fig. 4, Plate 1, to form the proper opposite angles for sawing the moldings of any regular figure, in the manner described.

42,583.—Saddle.—L. T. August Leurs, Liege, Belgium:

I claim, first, The combination of the adjusting straps, e, with the props, g h, pads, D E, and side-bars of the saddle-tree, A, constructed and operating in the manner and for the purpose specified.

Second, The malleable iron bow and cantel, B C, with braces, b c, and flanges, b' c', in combination with the saddle-tree, A, constructed and operating in the manner set forth.

[This invention relates to an improvement in that class of saddles which are provided with self-adjusting pads, so that the same adapt themselves readily to the motions of a horse or to the changes in the shape or form of its body. Further information concerning this invention may be had of Alex. Trippel, 18 Exchange Place, New York.]

42,584.—Manufacture of Enameled Leather, Cloth, &c.—Francis Longhurst & Albert L. Murdock, Boston, Mass.:

We claim to apply, as a first coat, to leather or cloth, in the process of patenting or enamelling, a soluble elastic paste or fluid, composed of variable proportions of rosin or pitch, candle pitch, naphtha or bituminous coal, sulphur, lampblack, litharge, gutta-percha and india-rubber, vulcanized or pure, and linseed oil, prepared and treated, substantially as for the purposes herein described.

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42,585.—Grooving or Panel Plow.—William S. Loughborough, Rochester, N. Y.:

I claim, first, The above-described panel plow or plane, when constructed, arranged, and combined in the manner and for the purposes specified, as a new article of manufacture.

Second, Securing the gage of the fence, B, at any desired point by operating a single screw, E, substantially in the manner specified.;

42,586.—Railroad Rail Support.—Wm. S. Mallory, Batavia, N. Y.:

I claim, first, The construction of a rail chair or support to the rails, having adjustable jaws, that can either be attached to the sleepers or to a base plate, and the latter fastened to the sleepers, when saidjaws or one of them is held and retained in position by means of corrugations upon the bottom portion of them, fitting to corrrsponding corrugations upon the base plate, and made adjustable by means of a set screw and slot in the jaws, and when the upper and inner ends coming in contact with the rails are furnished with rollers, in the manner and for the purposes set forth.

Second, I claim the construction of a shoe for the reception of the rails with flanges on each side thereof to prevent lateral movement, on one of which flanges a bar extending across the joints of the rails in which rollers are placed to prevent friction, said shoe, or the flanges of the rail if desired, when no shoe is used being held in position upon the chair or sleeper by means of screws or spikes with rollers in the head thereof, so adjusted as to hold either the shoe or the rail, in the manner and for the purpose set forth.

Third, I claim placing a roller or rollers in the sides of the rails and also in the bottom of the same, arranged and constructed as described and for the purpose set forth.

Fourth, I claim supporting the ends of the rails and connecting them together by means of hollow tubes, slotted or otherwise, and secured to the rails by rings or in any suitable manner, constructed and arranged substantially as described and for the purposes set forth.

Fifth, I also claim supporting and connecting the ends of rails by means of side pieces on each side, extending across the joints, with rollers inserted therein and bolts passing through slotted holes in said side pieces and also in the rails, constructedand arranged as described and for the purposes set forth.

Sixth, I claim securing and holding rails fast to a cross tie at the ends and also near the longitudinal center thereof, by means of the arms, s, bolted through the rail and secured to the tie, as described,

Seventh, I claim making the bottom shoe, with or without vertical flanges, and holding the rails thereto by means of the said side pieces across plate under said shoe with bolts passing through holes in the same near each end with nuts under the bottom forming a kind of stirrup, and said bolts passing up through the shoe, one of said bolts being in the form of an elbow, passing through said pieces and rails and an eye upon the top of the other bolt secured by a nut, said bolts having rollers on the side bearing against said side pieces, and also bolts passing through the shoe with or without the said cross-piece, upward between the side pieces and the rails with rollers on the same with two eyes on the top through which a cross bolt passes on a roller and secured by a nut, and thus allowing free action but still holding the rails firmly to the shoe; and I claim also the means of tightening the same by the set screw, n, the whole combined and arranged as herein set forth and described.

Eighth, I claim the combination and use of rollers, balls, and wheels, with the rails and side pieces, bases, or supports, for the purpose herein set forth and substantially as described.

Ninth, I claim sustaining the ends of the rails by the jogs on each end thereof in combination with the side pieces, and the bolts and fastenings, u u, substantially as described and for the purposes set forth.

42,587.—Soda Fountain.—John Matthews, Jr., New York City:

I claim combining with the iron and the enamel a third substance, of the character and for the purpose substantially as set forth.

42,588.—Parlor Cooking Stove.—Matthias Mead, Lowell, Mass.:

I claim the above described arrangement of the fire-pot, A, the boiling or smoke chamber, E, the ash chamber, B, the oven, C, the descending smoke flues, G G, and base chamber, D, and the ascending smoke-flue, H.

I also claim the arrangement of the hot-air chamber, K, fire-pot, A, smoke chamber, E, ash chamber, B, oven, C, descending smoke flues, G G, and ascending smoke flue, H.

I also claim the arrangement and combination of the air induction and edaction pipes, L M, the oven, C, the smoke flues, G G H, the ash chamber, B, and the fire-pot, A, the whole being substantially as described.

I also claim the arrangement of the descending ash and air conduit, I, the ash chamber, B, oven, C, the descending smoke flues, G G, and the base chamber, D.

42,589.—Concrete Pavement.—Henry Myers, Hyde Park, Pa.:

I claim a concrete pavement composed of the ingredients above specified, and mixed together in about the proportion set forth, in combination with the foundation, prepared as described.

[This invention relates to a composition which is particularly applicable to side-walks, cellar floors, &c., and is mixed together of sawdust, pulverized clay, coal ashes, sand, and coal tar, and spread on a foundation prepared of iron slags, cinders, coarse gravel, or other indestructible material, cemented together by coal tar.]

42,590.—Railroad Car.—Wm. Miller, Boston, Mass., & Hamilton E. Towle, New York City:

We claim, first, The combination of a lever and pawl and ratchet with the draft bar, in the manner and for the purpose specified.

Second, Starting a car with mechanism, substantially as described, in such a manner that the first draft of the tractive force operates to turn the wheel with a leverage greater than its radius.

42,591.—Combined Abdominal Supporter and Corset.—Mrs. S. A. Moody, New York City:

I claim a pair of stays or corsets, A, provided with an extended front, or one projecting down to the lower part of the abdomen, and having elastic plates. b b, inserted or fitted in it, in connection with the side lacings, c, and air bag, B, all arranged substantially as and for the purpose set forth.

42,592.—Collet.—S. A. Morse, East Bridgewater, Mass.:

I claim in combination with the movable jaws, cams and ring, the conjoined action and use of the V-shaped end of one of the jaws, and the single point of the opposite jaw by means of which the drill is held firmly at three bearing points which are always equidistant from the center, whether the drill shank be large or small.

41,593.—Oil Can.—L. H. Olmsted, Newark, N. J.:

I claim, first, The attachment of a collar to the tube, for the purpose specified.

Second, Combining a raised and round top with a semi-spherical bottom, as shown and described.

Third, Combining the semi-spherical bottom and weight with the flexible top as shown.

42,594.—Connection for Floating Barrels.—Robert W. Park, Pittsburgh, Pa.:

I claim the combination and arrangement of the lugs or ears, T T, with the eyes or rings, S S, long bolt, R, ears, C C and hooks, N N, of a clamp for holding floating oarrels, constructed and operating as herein shown and set forth.

I also claim securing the barrels together by means of the screw bolts, L L, passing through the lugs or ears of the clamps, in combination with a board or its equivalent, placed between the heads of the barrels held and supported in the manner as herein set forth.

42,595.—Hoisting Machine.—F. B. Perkins, Roxbury, Mass.:

I claim the employment in a hoisting machine of racks and pinions, having teeth of the character shown in the drawing, and which gear with each other in combination with a platform and with worm screws and worm wheels or their equivalents, the mechanism being actuated by an endless belt or chain or by other equivalent means of imparting motion, and being constructed and operating substantially as described.

This invention relates to a new and improved hoisting machine, designed for hoisting and lowering goods in warehouses, and for other similar purposes. The invention consists in the means employed for operating the platform or receptacle on which the goods to be elevated and lowered are placed. Said means being comprised in racks attached to vertical posts between which the platform or receptacle works pinions, worm-wheels and screws, which are connected with the platform, and are put in motion by an endless belt.]

42,596.—Ore Separator and Amalgamator.—Herman Pietsch, New York City:

First, I claim the employment or use of a series of pans, d e f g, revolving on a shaft, G, in combination with a similar series of pans, d′ e′ f′ g′, revolving on a shaft, H, in a direction opposite to the first pans and arranged in such relation to the same that the bottoms of one series form the covers of the other series, substantially as and for the purpose herein specified.

Second, The zig-zag channel, k′, formed by the rims of the pans, d e f g, d′ e′ f′ g′, rising alternately on the inner and outer peripheries, substantially as and for the purpose specified.

Third, The combination of the stationary mercury cups, m s, agitators, J L, tank, A, and rotary pans, d e f g, d′ e′ f′ g′, all constructed and operating in the manner and for the purpose substantially as set forth.

[This invention consists in the use of a series of pans, each provided with a toothed top and plain bottom, revolving in opposite directions, in combination with a zig-zag channel forming the communication between the succeeding pans in such a manner that the ore and water, while passing through the several pans, is thoroughly agitated and gradually freed from its heavy particles, which precipitate upon the bottoms of the different pans; the invention consists, further, in the application of two pans containing mercury and communicating with each other through a central channel in combination with suitable rotary agitators causing the ore to enter the mercury pans and to be distributed and spread within the same in such a manner that all the heavy parts of the ore will be retained and not a particle of the precious metals contained therein will be allowed to escape.]

42,597.—Machine for crimping Barrel-hoops.—Martin Reed, Rochester, N. Y.:

I claim the combination of the roughing cylinder, C, with the notched feed board, E, and feed roller, F, constructed, arranged and operating substantially in the manner and for the purposes specified.

42,598.—Preparing Barrels to Contain Petroleum, Coal Oil, &c.—Louis S. Robbins, New York City:

I claim the combination formed by saturating the outer surface of the cask with heated oil and the body of the staves and heads with soap suds or an alkaline solution, substantially as and for the purpose set forth.

42,599.—Combination of Pen-holder, Pen-case and Money-safe.—W. E. Rose, Waukou, Iowa:

I claim a circular case or box, provided with a recess to contain a pen when not in use, and also provided with a hole to receive the pen when in use, all arranged to form a combined pen-case and pen-holder, substantially as described.

I further claim the coin or money recess in said box to form a combined pen-case, pen-holder, and porte-monnaie, substantially as set forth.

[The object of this invention is to obtain a portable device for the pocket, or one which may be suspended on a neck chain, and be capable of being used as a pen-holder, pen-case and porte-monnaie, and at the same time be simple in construction.]

42,600.—Black-washing Mold.—George Ross, Newport, Ky.:

I claim the flanged casing, D, in combination with the sprinkler, A, constructed and operating substantially as and for the purpose shown and described.

Second, The combination of the board, I, with the casing, D, and sprinkler, A, substantially as and for the purpose set forth.

Third, The head, B, in combination with the sprinkler, A, and casing, D, as set forth.

Fourth, The employment or use of the fender, H, in combination with the sprinkler, A and casing, D, constructed and operating in the manner and for the purpose substantially as specified.

42,601.—Folding Bedstead.—Joseph Sutter, New York City:

First, I claim the folding side rails, c, set at an inclination and formed with the ledges, 6 6, receiving the slats, or folding bottom framed, d, as specified.

Second, I claim the table or desk top, e, applied as specified, in combination with the folding bedstead as set forth.

42,602.—Bottoms for Chairs and Sofas.—Joseph Sutter, New York City:

I claim the springs applied to the ends of the webbing to draw the same out flat or nearly flat when not under strain, or to allow said webbing to yield to a weight as specified.

42,603.—Egg-beater.—Wm. Saladee, and E. M. Luckett, Philadelphia, Pa.:

We claim the application of the opposite grooves or guide-pieces, a4, a4, on the inner side of the containing vessel, A, and the supplementary bar, D, in combination with the beaters, B B, bar, a2, and cover, a′, the whole being constructed and arranged to operate together substantially in the manner described, for the purpose specified.

42,604.—Call Bell.—Deming W. Sexton, East Hampton, Conn.:

I claim the combination of a double-knobbed horizontal finger bar with a doubled clapper, suspended by a pivot above the body of the bell, substantially as set forth and for the purpose specified.

42,605.—Construction of Cog-wheels.—Abraham Skaats, Jr., New Haven, Conn.:

I claim constructing the teeth or cogs of gear wheels substantially as described, so that without undue friction continuity of action of one wheel upon the other shall be effected irrespective of their relative position within the limits determined by the depth of teeth or cogs.

42,606.—Ventilator.—James L. Smith, Tuscola, Ill.:

I claim the compartments, C and F, in combination with pipes, B H E and D, the whole constructed in the manner and for the purpose herein set forth.

42,607.—Clothes-wringer.—Charles F. Spaulding, St. Johnsburg, Vt.

I claim the combination of the eccentric guides, h h, with the rollers, C D, and their supporting frame, the whole being so as to enable or cause the rollers to operate substantially as hereinbefore explained.

I also claim the combination of the slotted guards, G G, with the rollers, C D, the eccentric guides, h h, and the supporting frame, the whole being arranged as specified.

I also claim the arrangement and combination of the elastic springs, c c, the eccentric guides, h h, and the rollers, C D.

42,608.—Machinery for Forming Hoop-skirt Clasps.—Franklin J. Terrell, Ansonia, Conn.:

I claim the male forming die, d e f, composed of two or more independently-operating pieces in combination with a series of rotating female-forming dies, b b substantially as and for the purpose herein specified.

(This improvement is more particularly designed for the manufacture of the various kinds of metallic clasps used in the manufacture of hoop skirts, and is attached to the ordinary cutting-out press by which the blanks are cut from the plate. It consists in the employment for forming the blanks after they have been cut to the required form and have passed through the cutting die, of a male-forming die made of two or more attached but independently movable parts and a series of rotating female-forming dies.]

42,609.—Gas-burner Socket.—Joseph Todd, Madison, Ind. Ante-dated April 1, 1864:

I claim uniting the two pieces of the gas socket by means of a male and female screw thread by which the elastic interior packing is rendered adjustable, substantially as herein described.

42,610.—Coal Stove.—W. B. Treadwell, Albany, N. Y.:

I claim, first, The fire-pot, C, constructed substantially as described to operate in the manner set forth. (See drawings, Figs. 1 and 5).

Second, Ring, n, within feed cylinder, K, drawings Figs. 1 2 and 3, as described, for the purpose set forth.

42,611.—Felting Machine.—Enoch Waite, South Natick, Mass.:

I claim the combination and arrangement of the feeding apron B, the feed rollers, C C′, the rotary beater, D, the batting apron F, the roller, G′, and the case, E, the whole being made to operate together and with felting aprons and platens or their equivalents, substantially in manner as hereinbefore specified.

I also claim the combination and arrangement of the pasting apparatus (viz., the brush, N, and its trough, O), the carrying and drying rollers, P, Q, and the receiving beam or roller, R, the whole being as hereinbefore specified.

I also claim the combination and arrangement of the rotary pasting brush, N, and its trough Q, with the carrying and drying and finishing rollers, P Q.

I also claim the combination, composed not only of the carrying and drying rollers, P Q, made so as to be heated as described, and an apparatus for applying paste or cement to a sheet of paper, but of a set of felting aprons and platens, as described, and a mechanism for making a bat and introducing it between the felting aprons, the whole being constructed and to operate essentially as, and for the purpose or objects as hereinbefore explained.

42,612.—Corn Planter.—John Waterman, Keokuk, Iowa:

I claim, first, The adjustable boxes, I, employed in combination with the hopper, E, to plant any desirable number of hills of corn at each motion of the slide, or adapt the machine to conform to the various distances at which the relative hills may be formed.

Second, In combination with a seeder constructed as described, I claim the laterally adjustable covers, K K′ k k′, constructed and operated, substantially as specified.

[This invention consists in a novel machine of simple and cheap construction, and which beside being superior in its operation as a seeder or corn planter, is adapted to be converted with facility into an adjustable harrow.]

42,613.—Machine for twisting and plating Cords.—J. T. Williams, Newark, N. J.:

I claim, first, The employment or use of an endless belt, J, substantially such as herein specified, for the purpose of insuring an even distribution of the covering or plating material.

Second, The use of an endless belt, with frames, O, or their equivalents, as described, for the purpose of pulling out and laying the required length of strand previous to the twisting operation.

Third, The application of hooks, e, or their equivalents to the laying belt, N, as and for the purpose set forth

42,614.—Projectile for Rifled Ordnance.—Wm. S. Williams, Canton, Ohio:

I claim the combination of the ribs, a, with the expansible rings, D D D′, and sleeves B B′, all constructed, arranged and operating substantially as and for the purposes set forth.

[In this invention packing rings of peculiar construction are employed in connection with a longitudinally sliding sleeve, in such manner that when the discharge takes place the rings will be effectually forced into the grooves of the gun from which the shot is projected.]

42,615.—Binder Attachment for Sewing Machines.—Geo. Wisler and Chas. H. Peters, Cincinnati, Ohio:

We claim the combination of the convex slotted tape guide, C C,′ the concave-faced tapering block, E, and adjustable edge turners D D′, all constructed and operating substantially as and for the purposes described.

Second, The described combination with the parts A B C D D′ E,′ of the reel or tape holder, I J K L, substantially as set forth.

42,616.—Machine for boring Curved Cylinders.—William Wright, New York City:

First, I claim the combination of the main shaft, C, the arm, D, the cutter stock, E, and the gearing or its equivalent for driving the cutter stock, the whole arranged and operating substantially as and for the purpose set forth.

Second, The feed screw P, nut, N, swinging socket, Q, and feed shaft, M, the whole applied in combination with each other and with the arm D, to operate substantially as herein specified.

42,617.—Pump.—Martin W. and John Zimmerman, Earl Township, Pa.:

We claim the use of a single wire, in combination with the regulating screw, y, burrs, v v, rocker shafts and arms, B H R, weights, L, operated by a water wheel and crank in the manner and for the purpose specified.

42,618.—Pegging Jack.—Wm. Billings of Brooklyn, N. Y., assignor to Abraham W. Godfrey, New York City:

I claim the adjusting screw, C, in combination with the standard, B, swinging bar, and adjustable gudgeons, c, all constructed and operating in the manner and for the purpose substantially as herein shown and described.

[This invention consists in a swinging bar, the gudgeons of which are adjustable in different notches in the edges of the uprights which form their bearings, in combination with an adjusting screw passing through the standard which supports the heel end of the last, in such a manner that by means of said movable passage and adjusting screw the swinging bar can be readily adjusted for lasts of different sizes and shapes and that said lasts are firmly supported at the heel and at the toes.]

42,619.—Treating Leather, &c.—Joseph Burrill, (assignor to himself, A. S. Moore and J. A. Johnson), Lynn, Mass.:

I claim the within-described process of treating leather or paper by exposing it to the solutions herein set forth, and mixed together substantially in the manner and about in the proportion specified.

42,620.—Compresser for Flyers in Spinning Machines.—Simeon Goodwin and John A. Emery (assignor to Charles A. Shaw), Biddeford, Maine:

We claim changing the direction of the thread of roving being wound on the bobbin, at or near the heel or flyer end of the compresser, from a spiral movement around the body of the same, to a horizontal direction or movement along the back or outside of the body of the compresser, and conducting the said thread (when such a change is made in the direction of its movements at that point), along the body of the compresser protected from both heads of the bobbin, substantially in the manner and for the purposes specified.

42,621.—Nipple Guard for Fire-arms.—Benjamin Lilly (assignor to Henry Charlton), Birmingham, England. Patented in England May 12, 1863:

I claim the improvements in the construction or snap caps or nipple protectors for fire-arms, substantially as herein described.

42,622.—Sewing Turn.—Gordon McKay, of Boston, Mass., & Lyman R. Blake, Quincy, Mass., assignors to said Gordon McKay:

We claim the process herein described, the same consisting in the employment of a pattern in connection with a ring gage or guide operating substantially as and for the purpose described.

42,623.—Coal Hod.—J. R. Miller, Cincinnati, Ohio, assignor to himself and J. W. Wayne:

I claim the combination with the body, A, and foot, F, of the beveled-edged slab, C, and metal plate, D, upset over the edge of the said slab, when the compound bottom thus formed is applied within the downwardly-converging portions of the body, A, and foot, F, in the manner herein shown and explained so that any depression of the bottom, will tend to lock the whole more firmly together without strain upon the nails.

42,624.—Mode of manufacturing Tin Cans, Caddies, &c.—John W. Millet, Batchellorville, N. Y., assignor to himself, Isaac Noyes, Jr., and T. C. Fanning:

I claim a mode or process of manufacturing boxes, cans and caddies by first cibiling, crimping and beading the rim, then inserting the top or bottom, after which the rim is clamped or held around the top or bottom while it is being soldered or otherwise fastened.

42,625.—Circular Brush.—Martin Robbins and Charles Heery, Cincinnati, Ohio, assignors to said Charles Heery:

We claim as an improvement in the manufacture of brushes, swabs, emery wheels, and analogous articles, the combination of the bristle washers, D, substantially as described, with screw clamps of any suitable form, either with or without central stems or intermediate washers.

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42,626.—Mode of cutting Coal and other Minerals.—Thomas Harrison, Tudhoe, England. Patented in England Dec. 2, 1863.

I claim the combining a turbine with a truck trolly or other carriage, substantially as described, and the comb ning therewith rotating cutters so arranged that the carriage can be caused to travel gradually forward as the work progresses and the cutters set to cut a greater or less distance into the coal mineral or stone, as required, substantially as above described.

42,627.—Gage for measuring the Pressure of Explosive Gases, &c.—Thomas Shaw (assignor to himself and P. S. Justice), Philadelphia. Pa.:

I claim, first, The employment of a chamber, Y, when provided with a valve, a, and in combination with a gage, for the purpose specified.

Second, The employment of glycerine in combination with the gage for the purpose specified.

Third, The employment of the metallic disk, S, in comb nation with gum disk, m, for the purpose specified.

Fourth, The employment of faucet, M, in combination with valve, i, for the purpose specified.

42,628.—Grain Separator.—Henry B. Thomas (assignor to Henry F. Hart), Chicago, Ill.:

I claim, first, The separation of mixed grains by means of the cells, a, when the same are applied to the exterior surface of cylinders or their equivalents.

Second, I claim the cylinders, A A, provided with the cells, a a, substantially as shown.

Third, I claim forming the cells upon the surface of the cylinders, A, by means of the narrow strips of metal, bent as shown and described, or by any equivalent means.

Fourth, I claim one or more brushes, B, used in combination with a surface provided with the cells, a, substantially as and for the purpose set forth.

Fifth, In combination with the cylinders, A A, or their equivalents, I claim the shoe, E, provided w th the screens, f and h, and the return boards, e and j, when constructed substantially as shown.

42,629.—Polishing and grinding the Edges of Heels for Boots and Shoes.—James M. Thompson and George B. French, Stoneham, Mass., assignors to Seth D. Tripp, Lynn, Mass.:

We claim the combination of the rotary clamps, F G, with the turning and vibrating holders, H I.

We also claim the oscillating frame as composed of the holders, H I, the actuating spring, L, and the toggles, O, P, arranged and combined substantially as specified.

We also claim the combination of the slider or sliding bearing, g, the toggles, O P, the spring, R, and the treadle, M.

We also claim the combination consisting of the rotary clamps, F G, the turning and vibrating holders, H I, the actuating spring, L, the toggles, K K, the slider or sliding bearing, g g, the operating toggles, O P, the spring, R, and the treadle, M, the whole being arranged, constructed and applied to a grinding or polishing wheel, D, so as to co-operate and operate therewith, substantially as specified.

We also claim the arrangement of the cleansing wheel, E, with the grinding wheel, D, and the mechan sm, as described, for holding, operating and guiding the shoe, or the heel thereof, to be ground.

42,630.—Operating Ships' Guns.—Sarah Ward, New York City, administratrix of James H. Ward, deceased, late of the U. S. Navy:

I claim, first, So applying the rolls and supports underneath the slide, rails or ways, on which the gun and its carriage runs in and out, and is trained and at or near the center thereof, as that the ways shall tip when the excess of weight is on either side of said rolls or central support, substantially in the manner and for the purpose set forth.

Also, in combination with the tipping slide, ways, or rails on which the gun and car iage are worked, the t l-piece connected thereto, but removable at pleasure, said tail-piece resting upon the gun deck when in use, for the purpose of readily mounting the gun and carriage on the slide, substantially as described.

Also, in combination with the breeching or breech tackle, for catching and restraining the recoil of the gun, the elastic ring, for gradually checking the strain on the breeching, substantially as described.

Also, in combination with the tipping slide and tail-piece, a turntable for turning and shifting the gun from one port to another, or from one s de of the ship to the other, substantially as described.

42,631.—Plow.—F. F. Cary, New York City:

I claim, first, The roller, D, when the diameter at the lower end is equal to or greater than the upper end, as shown and described, and composed of one piece or divided transversely near the middle or smaller diameter, said roller working upon a vertical or nearly vertical spindle, S, substantially as and for the purpose described.

Second, The roller, D, as described, in combination with the toe, C, scraper, G, and one or both of the w heels or disks, F and F', arranged and operating substantially as set forth.

RE-ISSUES.

1,662.—Grain Separator.—Aaron Higley, Warren, Ohio. Patented Dec. 3, 1861:

I claim, first, The shoes, B J, when superimposed one above the other, being suspended and operated in such a way as to cause the lower shoe to vibrate with less velocity than the upper one, and so arranged as to admit a wind spout, G, to be interposed between said shoes.

Second, I claim so hanging and operating the lower shoe that its lateral vibration shall be at a less velocity and longer stroke than the upper shoe, as and for the purpose specified.

Third, I claim the arrangement of the hopper, A, sieves, e f g h i j, imperforate plates, o v, and troughs, A' B' W X, with shoe, B, the whole combined and operating in the manner and for the purpose set forth.

Fourth I claim the arrangement of the sieves in the shoe, B, with the endless apron, F, trunk, G, fan, I, sieves, K L M, in the shoe, J, and drawers, E O R, the whole combined and operating in the manner and for the purpose described.

Fifth, I claim the combination of the sliding gate or valve, a, screw bolt, b, and nut, c, for regulating the size of the seed aperture in the hopper, H, substantially as described.

1,663.—Breech-loading Fire-arm.—Joseph Rider, Newark, Ohio, and E. Remington & Sons, Ilion, N. Y., assignees of said Rider. Patented Dec. 8, 1863:

We claim, first, So constructing and arranging the breech-plate and hammer, as that when the hammer is on the cock and the breech-plate drawn back to open the breech or bore of the arm for the insertion of the cartridge, neither can be made to fly up by the accidental or otherwise touching of the trigger, substantially in the manner described.

We also claim so combining a hammer and an independent breech-plate, as that the hammer shall lock the breech-plate, when both are up against the end of the bore, and the breech-plate lock the hammer when both are swung back to open the bore or chambers, substantially as herein described.

We also claim so constructing and arranging a hammer and an independent breech-plate, as that whilst moving upon different centers and in different arcs, they shall both, when up against the end of the barrel or bore of the arm, occupy substantially the same space, as herein described and represented.

We also claim, in combination with a hammer arranged behind and acting in rear of the breech-plate, the pivoting of said hammer in front or the pivot of the breech-plate, substantially as and for the purpose described.

EXTENSIONS.

Machine for making Wrought-iron Railroad Chairs.—William Van Anden, Poughkeepsie, N. Y. Patented April 30. 1850. Re-issued Aug. 12, 1853:

I claim, first, The combination of two or more properly-shaped dies between which a chair blank is clamped prior to the cutting of that port on of it which constitutes the lips thereof, substantially in the manner and for the purposes herein described.

Second, I claim automatic shears in combination with properly-shaped dies for clamping a chair blank and cutting the lips thereof, substantially as herein set forth.

Third, I claim such shears when they also act as benders to complete the formation of a c air lip by reason of their having a motion in two directions, substantially in the manner herein specified.

Fourth, I claim a double or parting clamp and die, substantially such as is herein described, so that a chair may be removed from the die upon which it is formed, as herein set forth.

Fifth, I claim discharging a chair from a double or parting die or its equivalent, by hooks or their equivalents, acting to shove a chair off a die, substantially in the manner herein described.

Sixth, I claim, in combination, two clamping dies, one of which acts as a former and divides at proper intervals, shears which also act as benders or their equivalents, and a discharging apparatus acting in respect to each other, substantially in the manner and for the purposes herein set forth.

Construction of the Frame, Roof and Floor of Iron Buildings.—James Bogardus, New York City. Patented May 7, 1850:

I claim the method, substantially as herein described, of making the frame-work of iron houses of more than one story by means of beams cast in sections with end flanches which receive bolts for uniting and drawing them together, and with top and bottom parallel flanches when this is combined with columns, pilasters, or posts cast with horizontal flanches at top and bottom, the top flanch of one column and the bottom flanch of another being secured by bolts to the horizontal flanges of two beams, one column above and the other below the point at which the beams are joined, for the purpose and in the manner substantially as described.

I also claim the method, substantially as herein described, of making the floors by means of thin plates of metal formed with a groove on one edge and tongue on the other, by riveting narrow strips of metal to their under surface and near the edges, the plates so formed being put together breaking joints, substantially in the manner and for the purpose specified.

I also claim the method, substantially as described, of covering the roofs of houses by means of series of thin metal plates formed each with a groove on one edge, by riveting narrow plates or strips to the under surface thereof, that the edge of one plate may fit into the groove on the lower edge of the next above, and so on throughout the series, substantially as described, when these plates are also provided with the lapping pieces or plates riveted or otherwise secured to the upper surface of one end of each plate in each series to lap over the end of the contiguous plates of the next series, the said lapping pieces of each series being also made to lap one over the other, substantially as and for the purpose specified.

Straw-carrier.—William Pierpont, Salem, N. J. Patented May 7, 1850:

I claim an elongated apron or pierced platform hung upon and worked by cranks, connected with and forming a part of the thrashing and separating machine, substantially in the manner and for the purposes herein described.

For the Week ending May 10, 1864.

42,632.—Product from Caoutchouc, &c.—H. A. Ayling, Boston, Mass.:

I claim the improved product resulting from the contact of caoutchouc with a mixture of carbon spirits and chloride of sulphur, substantially as specified.

42,633.—Process for Changing, Curing, or Treating Caoutchouc, &c.—Henry A. Ayling, Boston, Mass.:

I claim the within described process for curing caoutchouc and its compounds, the same consisting of their immersion in, or their contact with a mixture of carbon spirits and chloride of sulphur, and afterward allowing them to dry, substantially as and for the purpose specified.

42,634.—Harness Hook.—S. P. Babcock, Jordan, N. Y.:

I claim a harness hook having its shank, a, provided with lips or guards, d, d, arranged relatively with the hook, c, substantially as and for the purpose herein set forth.

[This invention consists in providing the harness hook with two lips or guards applied to the shank of the hook and opposite the point of the same, whereby the ring can only be fitted in the hook when the former is turned edgewise, and thus presented, when in the hook, from being casually detached therefrom.]

42,635.—Grain Screen.—G. B. Bailey, Greenfield, Ind.:

I claim, first, The rotary screen, B, in combination with the fan, F, and disk, B, provided with one or more openings, all arranged to operate substantially as and for the purpose herein set forth.

Second, The valve, K, fitted in one of the sides of the screen, B, provided with a curved plate, j, substantially as and for the purpose specified.

[This invention consists in the employment or use of a rotating screen in connection with a section fan and a valve, all constructed and arranged in such a manner, that the grain will be deprived of all impurities, and the screen rendered capable of being supplied with grain, with the greatest facility, and the latter when properly screened and cleansed allowed to be very readily discharged from the screen.]

42,636.—Railroad Rail.—Sidney A. Beers, Brooklyn, N. Y.:

I claim the manufacture and use of compressible railroad rails; such compressibility resulting from the irregular form of the web, or shank of the rail, which thus becomes a spring of more or less elasticity, in proportion to the extent of departure from a direct or vertical line; as set forth, or by the use of any other form, which will secure or promote elasticity between the base and face of the rail.

42,637.—Photographic Printing Frame.—Geo. W. and Wm. Bowlsby, Monroe, Mich.:

We claim, first, The protector rings, D, D, with their fastenings, I, I, I.

Second, The pocket, F.

Third, The combined latches, L, L, L, catches, m, m, m, and springs, S, S.

Fourth, The screen, S, C, with the ways, W, W, made substantially in the manner described.

Fifth, The cushioning of both sides of the negative instead of one only, as heretofore done, and which is here complete, as shown at C, C, C.

Sixth, We also claim the combination of all the devices for the purposes set forth, in the manner herein above shown.

42,638.—Let-off Mechanism for Power-looms.—Patrick Boylan, Gloucester, N. J.:

I claim the combination of the yarn beam, H, the worm-gear, m, n, the bevel-gear ratchet-wheel, k, l, i, and the oscillating plate, p, the same working on the shaft, o, and being connected with the balanced levers, r, r, and whip-roll, g, all arranged and operating in the manner as described, for the purposes herein specified.

42,639.—Hollow Augers.—Cornelius L. Campbell, Binghamton, N. Y.:

I claim the arrangement of the slides, S, S, and knives or bits, k, k, operated and adjusted by the lever, B, and clamp screw, p, in combination with the frame, A, and tube, P, as and for the purpose set forth.

42,640.—Paddle Wheel.—Albert M. Comstock, Old Lyne, Conn.:

I claim the flat V-shaped floats deepest at the angle of the v, applied to the paddle-wheel with their points outward, and their hollow edges toward the axis of the wheel and strengthened at their joints by plates, c, c, and bolts, l, l, as herein described.

42,641.—Coffin.—E. Hall Covel, New York City:

First, I claim the water-jacket as arranged, for the purpose of preserving the body of the dead, in combination with the coating of felt, wool or other non-conducting substance.

Second, I claim passing a current of external air which has passed the cold tubes or ducts, over the body and in direct contact with it for the purpose hereb fore named.

Thirdly, I claim the air-duct, f, or its equivalent when used for the purpose herein described.

Fourth, I claim the detachable ice chamber, a, in combination with the lid of the casket.

Fifth, I claim the ventilating pipe, d, or its equivalent in combination with the outlet, e, or its equivalent as arranged.

42,642.—Steering Apparatus for Steam Vessels.—Samuel F. Covington, New Albany, Ind.:

I claim an auxiliary steering apparatus for steam-boats or vessels, consisting of one or more screws placed transversely under the rake aft of the boat, and constructed and operated in the manner described.

42,643.—Casting Drain Tiles.—John Coy, Oswego, N. Y.:

I claim casting drain tiles from a mixture of coal tar and sand, in an iron mould, substantially such as herein described, coated on its inner surface with a composition of soft soap and sand, tallow and sand, or clay and tallow, in the manner specified.

42,644.—Knife for cutting Tobacco.—Seneca S. Davis, New York City:

I claim the improved method of cutting or granulating leaf tobacco to make what is known to the trade as "Kinnikinnic Smoking Tobacco," by cutting it at one operation, with a double-edged serrated knife as hereinbefore described.

42,645.—Heating Stove.—A. G. Dayton, Maysville, Ky. Ante-dated, May 2, 1864:

I claim, first, The employment or use in a stove or furnace of an internal air-heating chamber, F, provided with a water vessel, I, and provided with one or more hot-air conducting pipes, and a cold air-ducts, a, all arranged substantially as and for the purpose herein set forth.

Second, The outer water-vessel, J, in combination with the inner water vessel, I, when connected together or made to communicate with each other as shown, and both arranged in relation with or applied to the stove, as and for the purpose specified.

42,646.—Cultivator.—E. M. Dever & Ira C. Pratt, Peoria, Ill.:

We claim, first, The rotary guards, a a, mounted upon the stock, P, and employed in combination with inner cultivators, k k, in the manner and for the purposes described.

Second, The foot lever, V, fulcrumed upon the axle and extending forward beneath the bar, m, and backward into convenient proximity with the seat, F, as and for the object specified.

42,647.—Tool-holder.—Wm. W. Draper, Greenfield, Mass.:

I claim the bed-piece, B, and lever, C, in combination with and operated by screw, D, substantially as shown and for the purpose set forth.

42,648.—Many-barreled Fire-arm.—Wm. H. Elliot, Plattsburgh, N. Y.:

I claim, first, So constructing and arranging the sere and tumbler in relation to each other, that when the hammer is thrown back a little by the power of the lock after falling upon the charge, the sere shall fall into the half-cock notch, as and for the purpose herein specified.

Second, The employment of a cocking lever in combination with the hammer and firing point for the purpose of giving motion to the two latter devices, as specified.

Third, The employment of spring, v, for throwing the lever out of the way of the hand while the hammer remains at full cock, when said lever is so arranged that when it is depressed, its thumb-piece occupies a portion of the handle of the pistol, as herein shown.

42,649.—Many-barreled Fire-arm.—Wm. H. Elliot, Plattsburgh, N. Y.:

I claim, first, The employment of a cam or cams for giving motion to one or more firing points so as to change the position of said points from one charge or chamber to the other, as herein set forth.

Second, So constructing and operating the hammer and firing points in relation to each other, that the point which occupies a middle position between the chambers shall not be driven forward by the hammer as herein specified.

42,650.—Photographer's Head-rest.—G. Alexander Emery, Boston, Mass.:

I claim the stand composed of two flat standards, A A, and a cross-head, B, in which the said standards are adjustable, substantially as and for the purpose herein specified.

42,651.—Hame Fastening.—J. B. Tinkelpaugh, Hastings, Minn.:

I claim, first, The tubular support, A, in combination with the notched rod, c, substantially as and for the purpose described.

Second, I claim a metallic tube, A, for the purpose of a support and protection to the operative parts of a hame-fastener, substantially as described.

Third, I claim the removable hook, b, in combination with the tube, A, substantially as described.

42,652.—Collice.—John Flock, Newark, N. J.:

I claim the convex guide, F, constructed substantially as shown, when combined with the block, C, constructed substantially as shown, handle, A, and support, B, as and for the purpose specified.

42,653.—Washing Machine.—J. R. Gill, Charleston, Ill.:

I claim, first, The oscillating shaft, C, in combination with the presser, D, arms, b, and spring arm, b', constructed and operating in the manner and for the purpose set forth.

Second, The toggle lever, F, in combination with the set screw, e', sliding box, h, spring, g, oscillating presser, D, constructed and operating in the manner and for the purpose substantially as shown and specified.

42,654.—Machine for making Nuts.—A. B. Glover, Yonkers, N. Y.:

I claim, first, In combination with the dies, the stationary and movable cutters, E1 E2, gage, n, carrier, F, and guide, p, the whole constructed and arranged relatively to each other and to the dies, and operating substantially as herein specified.

Second, The tongue, f, on the bar, C4, and longer mortise, g, in the front die slide, C3, the projection, h, on the bar, C4, and stop, h', in the frame, and the spring, k, or their equivalents all in combination with each other and with the front and back dies, substantially as and for the purpose herein set forth.

Third, The combination of the shaft, B, cams, C D E, dies, C1, C2, punches, c D1, rod, D4, sliding bar, E3, die-block, G, and cutters, E1 E2, all arranged and operating substantially as specified.

[This invention consists in certain improvements in nut making machinery, whereby, 1st, its construction is considerably simplified; 2d, it is enabled to be run at a very high speed; 3d, the labor of the pressing dies is reduced and they are enabled to be kept cool so that they wear longer, and nuts of better quality are produced.]

42,655.—Blacking Brush.—W. A. Greene, Troy, N. Y.:

I claim the hinged blacking brushes, a a, when constructed so as to enclose a blacking box, in the manner substantially as herein fully shown and for the purposes as described.

42,656.—Piling Old Railroad Rails.—John Griffin & M. P. Weeks, Buffalo, N. Y.:

I claim, first, Forming a pile or fagot of rails whose flange or flanges have previously been sheared off, substantially as described for the purpose set forth.

Second, The combination with a pile of rails so sheared and interlocked, of extra or special pieces, of proper form or forms to fill out or square the pile, substantially as set forth.

42,657.—Corder for Sewing Machines.—Frank Henry, Bridgeport, Conn.:

I claim, first, Attaching the cord-guide, K, to the presser-foot or presser-bar of a sewing machine so that it shall rise and sink therewith, to automatically adjust itself to the thickness of the goods being worked, substantially as herein set forth.

Second, The employment of a swivel joint, G, between the cord-guide, K, and the presser-foot or presser-bar, when the cord-guide, K, is carried vertically with each movement of the presser-bar, as herein set forth.

42,658.—Lantern.—Wm. H. H. Hinds, Groton, Mass.:

I claim the application to hand lanterns of a tube, B, to support the candle, D, and the spring, f, enclosed within the tube for the purposes herein described.

Also the standard, P, and sleeve, E, for the support of the lantern, as above set forth.

42,659.—Coffin.—Thomas Holmes, M.D., Washington, D. C.:

I claim the arrangement and construction of the deodorizing cases, with their pipes arranged and constructed in the inside of a coffin, as herein described and for the purposes set forth.

42,660.—Time Fuse for Shells.—B. B. Hotchkiss, Sharon, Conn.:

I claim in connection with the fuses of time shells, the time composition, C, fulminate, F, striker, G, interior communicating passages, G', and exterior lateral discharge passages, I, combined and arranged substantially as and for the purpose herein set forth.

42,661.—Spinning Wheel Head.—T. D. Hotchkiss, Guilford, Conn.:

I claim so applying a spring or springs in combination with the standards, H H, of a spinning wheel head, as to exert an upward pressure on the said standards and preserve a proper tension of the band, b, without the use of screws or any other manual adjustment.

42,662.—Truck for Locomotives.—Wm. S. Hudson, Paterson, N. J.:

I claim, first, in locomotives, disconnecting the forward pair of drivers, G, from the equalizing mechanism which connect the drivers, E and F, and equalizing between the drivers, G, and the bearing wheels

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of the truck, so as to form independent equalizing devices, the forward one of which includes the forward drivers and the truck, substantially as and for the purpose herein set forth.

Second, I claim the transverse bearing bar, J, and lever, K, in combination with the forward pair of drivers, G, and two or more truck wheels, H, and arranged relatively to each other and to the other parts, substantially in the manner and for the purpose herein set forth.

Third, I claim the bushing, L, adapted to move vertically through the framing, B, and arranged relatively to the truck frame, C, and equalizing lever, K, substantially as and for the purpose herein set forth.

Fourth, I claim in combination with the last the rubber spring, M, arranged relatively to the bushing, L, and to the bearing-piece, N, substantially as and for the purpose herein set forth.

42,663.—Thread-tension and Delivery Mechanism for Braiding Machines, &c.—Liveras Hull, Charlestown, Mass.:

I claim the combination and arrangement of the guide roller, d, the frame, C, the bobbin, A (or the spindle, B), the rod, E, and the weight, F.

44,664.—Horse Rake.—Charles Jennings, Easton, Conn.:

I claim the arrangement of the rocking levers, F G, and rod, H, with each other and with the rake-head, D, and seat, I, in the manner herein shown and described.

[This invention consists, 1st, in an improved manner of attaching the wire teeth of the rake to its head, whereby the teeth may be very readily and firmly secured to the head, and also readily detached therefrom in case new ones are required, or any individual tooth in consequence of breakage requires to be replaced by a new one. The invention consists, 2d, in an improved means for easing and lowering the rake and regulating the pressure of the same on the earth and for discharging the load from it.]

42,665.—Ship's Sails and Rigging.—H. C. Johnson, Philadelphia, Pa.:

I claim, first, Spilling lines and brails arranged in respect to the sails substantially in the manner described so that the latter can be reefed or taken in from the deck of the vessel, substantially as and for the purpose set forth.

Second, The top, top gallant and royal sails, when so formed that they can all be attached at their lower outer corners to one yard, substantially as set forth.

Third, The rods, II, when arranged in respect to the truss, 12, as and for the purpose set forth.

42,666.—Applying Percussion Priming to Cartridge Cases.—Algernon K. Johnston & Lorenzo Dow, New York City:

We claim the application of a cup or cap to the flange of a cylinder with fulminating powder between, substantially as above described, the whole forming a percussion cap or base for a cartridge.

42,667.—Applying Percussion Priming to Cartridges.—Algernon K. Johnston & Lorenzo Dow, New York City:

We claim the use of a disk in connection with a cup, and held in close juxta-position to its base by turning the edges of the cup, substantially as above described, together with a tube communicating with the fulminating powder on the disk at the base of the cup, either through that or through the disk, in the manner above set forth.

42,668.—Improved Fabric for Envelopes of Cartridges.—Algernon K. Johnston & Lorenzo Dow, New York City:

We claim the application to the fabric or tissue forming the covering of cartridges of a substance or preparation which shall thoroughly fill the interstices thereof, and render it firm and impenetrable to the burning gases within the chamber of the gun at the instant of discharge, using for that purpose the aforesaid substances as above described, or any other of similar nature which will produce the intended effect.

42,669.—Coal-mining Apparatus.—R. H. Lamborn, Altoona, Pa.:

I claim, first, The arrangement and combination of the cylinder, D, with the truck, C, in such a manner as to give the piston rod, E (to the end of which the chisel is attached), an angle with the face of the coal, the force of the blow given by said piston rod being regulated by the connection of said rod with cross-head, L, valve rod, I, and adjustable stops, e f, as set forth.

Second, In combination with the foregoing I claim the sectional tracks, constructed, secured, and employed as and for the purpose herein specified.

Third, The combination of wheel, h, pinion, g, and cog wheel, B′, with the sectional tracks constructed as herein described, to give the necessary forward movement to the truck by their connection with valve rod, I, and lever, K.

Fourth, The employment in an apparatus such as described of the exhaust air or steam to keep the channel clear of chips and dust, in the manner described.

42,670. Trunk.—Henry T. Lee, Jersey City, N. J.:

I claim the projecting caps, D, when constructed in the manner herein shown and described, and combined with the corners of the trunk, as set forth.

[The object of this invention is to produce a barrel-stave trunk, being in form and appearance an exact imitation of an ordinary sole leather trunk, and superior to the same in durability, strength, and cheapness.]

42,671.—Deodorizing Petroleum, &c.—Sylvester Lewis, Rochester, N. Y.:

I claim the use and application of the above ingredients, to wit, ashes and charcoal for the purpose of deodorizing petroleum and kerosene oils, naphtha, benzone, and benzine, and the process of filtering the same through the above ingredients as above set forth, without reference to the exact proportions of such ingredients, which vary somewhat, depending upon the state of the oil to be deodorized.

42,672.—Stop-motion for Knitting Machines.—B. L. Mack, Essex, Conn.:

I claim the locking lever, F, having a beavier arm to be supported by the yarn and a lighter to the other arm in combination with a notched lever, E, connected with a spring shipper, all substantially as and for the purpose herein described.

[This invention consists in the arrangement of a locking device in combination with the belt shipper, whereby the yarn, in passing from the bobbin to the conductor of the machine, is caused to hold up the said lever and makes it lock the shipper in condition to keep the machine running, but when the yarn gives out or breaks, the said lever being no longer held up, is acted upon by gravitation in such manner as to unlock the shipper and allow the machine to be put out of gear by the spring, or its equivalent, provided for the purpose.]

42,673.—Letter Paper.—Richard Magee, Philadelphia, Pa.:

I claim letter or note paper coated as described, for the purpose specified, as a new article of manufacture.

42,674.—Strap-fastener.—Albert J. McWhirt, Galesburg, Ill.:

I claim a band or double loop with a bar which I use for fastening one end of a strap without sticking-buckles or knots, as described in specification herewith filed, and is described as follows:—a flattened metallic bar or double loop, the sides perpendicular to the top and bottom, the width to be equal to the width of the strap to be used, and about three tines its thickness, the narrowest sides projecting beyond one end to receive and support a bar around which the strap passes.

42,675.—Hollow Wooden-ware.—Henry Mellish, Walpole, N. H.:

I claim, as a new manufacture, an article of hollow wooden-ware made of a scroll, provided at its upper rim with a bead, a, and there secured by a fastening, b, all as herein described and for the purposes specified.

[This invention consists in the employment or use, for the purpose of manufacturing hollow wooden-ware, of sections taken from a helical strip of wood obtained by cutting spirally round a cylindrical piece of timber.]

42,676.—Combined Beer Faucet and Vent.—John Miller, Buffalo, N. Y.:

I claim, first, The piston cylinder, B, piston, H, and valves, G and K, constructed and operating substantially as herein described.

Second, The vent-valve, M, supported and operated upon by the spring, N, in combination with a faucet, constructed as set forth.

42,677.—Hoop Skirt.—S. A. Moody, New York City:

I claim a hoop skirt having a suitable number of its lower hoops divided at each side and connected by loops, b b, and links, c, all as herein represented and described.

42,678.—Economizing Human Power.—Wm. C. Moores, Bloomfield, Wis.:

I claim, first, The ratchet-wheel, A, with its notches cut in each direction and worked by means of the levers, B B, with the pawls, C C, and springs, D D, as described.

Second, In combination with the above I claim the treadles, E E, attached to the ends of the levers, B B, constructed in box-form, as described.

Third, The seat, F, constructed as described, when used in combination with the ratchet-wheel, A, levers, B B, and pawls, C C, and treadles, E E, and springs, G G, all arranged as set forth.

42,679.—Apparatus for raising Water.—John C. Morris, Cincinnati, Ohio:

I claim the shield, D, for the purposes specified, in combination with the general arrangements, all substantially as and for the purposes set forth in the foregoing specification.

42,680.—Brick Machine.—David Murtha, Philadelphia, Pa.:

I claim, first, The rotating disks, I, arranged and operating in the described combination with the aperture, b, and employed to sever the sheet of clay into strips of width equal to the length of the bricks, as set forth.

Second, I claim the rotating and transversely moving disks, J, operating to sever the strips into widths for bricks, as explained.

Third, I claim the sectional feeding table, E E′ e, constructed, operated, and employed substantially as and for the purpose specified.

42,681.—Pump.—J. P. Nevens, Stark, Maine:

I claim the combination of the inlet ports, e e′, and outlet ports, f f′, with the oscillating plunger, B, pump-box, A, and stock, D, all constructed and operating as and for the purposes shown and described.

[This invention relates to an improvement in that class of pumps in which a hinged plunger is employed, which works in a suitable box, being connected at its loose end, by means of a rod, to a suitable hand lever, so that an oscillating motion can be imparted to it.]

42,682.—Car Spring.—Francis E. Oliver, New York City:

I claim an improved spring composed of two or more metallic C-shaped plates, united at their upper and lower edges by suitable bearing caps, and combined with a central compensating spring of india-rubber, gutta-percha, or other equivalent elastic material, substantially in the manner and for the purpose herein set forth.

42,683.—Letter-clip.—Lewis E. Osborne, New Haven, Conn.:

I claim the combination and arrangement described of the clamps, B and D, with the lever, F, in the manner and for the purpose herein substantially set forth.

42,684.—Measuring Funnel.—Nathaniel Otis, Cook county, Ill.:

I claim, first, The register, E, constructed as and for the purpose herein set forth.

Second, The slide, c, the spring, d, the latch, e, the pawls, I and J, and the register, E, the whole arranged and constructed as and for the purpose herein set forth.

42,685.—Breech-loading Fire-arm.—Charles F. Payne, Gardner, Mass.:

I claim, first, Throwing down the breech-block, D, by means of a spring or springs released by a trigger, in the manner herein substantially described.

Second, I claim operating the discharger, F, by the trigger which releases the breech-block, D, substantially in the manner set forth,

42,686.—Double-acting Submerged Pump.—Andrew J. Reynolds, Sturgis, Mich.:

I claim the cylinder, A, provided with the two ball valves, B and C, in combination with the water passages, D D and d, all arranged to operate in connection with a double-acting hollow discharging piston, as and for the purposes herein set forth.

42,687.—Sewing Machine.—Barton Pickering, West Milton, Ohio:

I claim, first, For the purpose of operating the feed wheel, J, the lever, I, connected to the spindle hub, C, by the screw, f, for its fulcrum, operating substantially as described.

Second, I claim the combination of the screw, l, springs, m and z, the hub, u, with a socket for the supporting piece, k, which has a slot for the reception of an arm, j, of the lever, I, for the purpose of regulating the feed of the material being sewn, substantially as described.

Third, I claim the bracket support, O′, it being held in the socket of the hub, 10, by the adjusting screw, q, for sustaining the feed wheel, J, in position, as desired, in combination with the plane surface of the spindle hub, C, and the spring, p, the different parts being constructed and operating substantially as described.

Fourth, I claim the passing of the thread from the spool, L, through an eye in the lever, H, thence through the slot, r, thence between the head, s, and felt, t, thence over the grooved arm, u, and then e around the grooved wheel, v, for the purpose of unwinding the thread and securing an uniform tension of the thread, substantially as described.

Fifth, I claim the construction of a tension piece, 10, fig. 4, connected to a thread carrier (similar to that patented by Joseph Bond, Jr., May 22, 1855), by a screw, 13, which keeps the said tension piece and spool, 12, in position within the thread carrier, the said tension piece being constructed and operating to regulate the tension of the thread, substantially as described.

Sixth, I claim the construction of a tension piece composed of several parts, namely, the standard, k, the spool arm, M, shaft, s, arm, u, and the pieces of felt, t, in combination with the grooved wheel, v, to aid in the operation of unwinding the thread and to give an uniform tension to the thread, the whole operating substantially as herein set forth.

Seventh, I claim casting the bed-plate, A, with the spindle hub, C, the hub, 10, and the hub, 11, in one piece, the different parts being constructed substantially as herein specified and for the purposes set forth.

42,688.—Revolving Fire-arm.—Henry Reynolds, Springfield, Mass.:

I claim the arrangement of the pin, f, upon the stock, A, at the rear of the recoil shield, C, so as to pass through the said shield, all in the manner herein shown and described.

[This improvement relates to revolving fire-arms for the use of fixed ammunition or other metallic cartridges, and its object is to provide for the expulsion of the discharged shells of such cartridges without disconnecting any portion of the arm.]

42,689.—Buckle.—E. G. Rockwood, Hillsdale, Mich.:

I claim a buckle composed of a frame, a, provided with two cross-bars, b b′, one of which, b′, has a fixed tongue, e′, and a loose tongue, e, attached to it, when the said fixed tongue is employed as the means of attaching the strap to the buckle, and all the parts are constructed and arranged in the manner and for the purposes herein set forth.

[This invention consists in constructing the buckle of a metal loop or frame provided with two cross bars, a fixed and a movable tongue, all arranged in such a manner that a strap may be secured in the buckle with a loop at each end of it so as to form a combined snap and buckle.]

42,690.—Water Gauge for Steam Boilers.—Theodore Scheffler, Paterson, N. J.:

I claim, first, In water gauges for steam boilers, the slender connection, e, subjected to a constant tensile strain, and arranged to operate substantially in the manner herein set forth.

Second, I claim in connection with the above the combination and arrangement of the guiding pulleys, F H, the wire or cord, e g, the index, M, and the tension pulley and weight, I J, or their equivalents, substantially as and for the purpose herein set forth.

Third, I claim, in a water gage, the passages, b b′ c, and the plug, D, with its several passages, combined and arranged in the manner and so as to serve the general purposes herein set forth.

Fourth, I claim in water gauges the tubes, F F′, and the intervening space, Q, arranged relatively to each other and to the slender wire, e, substantially in the manner and for the purpose herein set forth.

42,691.—Rose Engine.—Anton Schwitter, New York City:

I claim a rosette, A, for an engine-turning machine, composed of two or more adjustable notched rings, a b c, substantially as and for the purpose herein shown and described.

42,692.—Corrugated Beam.—S. J. Seely, New York City:

I claim, first, The combination of two or more corrugated metallic plates, having the inclination of their corrugations on opposite sides, in opposite directions, and diagonal relatively to a horizontal line, with a chord or tie, for the purpose of forming a truss beam or girder, or other similar structure.

Second, I also claim the use of T or angle iron or any other suitable form, in combination with diagonal corrugations, for the purpose of forming a truss beam or girder, or their equivalent, constructed and operating in the manner and for the purpose above described.

42,693.—Pump Valve.—William Sewell & Adam S. Cameron, New York City:

We claim providing or making an india-rubber or other gum valve with a disk of metal or other hard material adapted by coming in contact with the valve seat, or with a suitable guard, to limit or prevent the forcing of the gum into the aperture of the seat, substantially as herein described.

[The object of this invention is to combine in one valve all the advantages of a valve made wholly of india-rubber or other gum and those of a valve made wholly of metal, without the disadvantages of either.]

42,694.—Direct-action Steam Pump.—William Sewell & Adam S. Cameron, New York City:

We claim, first, The combination in direct-action steam pumps, of the separate steam and water piston rods, C D, having a detachable connection with the rock-shaft, H, and the extensible arm, G, or its equivalent, for connecting the said rock-shaft with the water piston rod, substantially as and for the purpose herein specified.

Second, The socket, E, connecting the steam and water piston rods for working the pump by steam, and serving as a guide to the water piston rod in working the pump by hand, substantially as herein described.

42,695.—Machine for making Slats and other Frames.—Francis Shenton, Slatington, Pa.:

I claim the arrangement of the saws, on the adjustable upright shafts, the saws on the horizontal shaft, with the adjustable and sliding carriages, when constructed as described and for the purposes set forth.

42,696.—Car Coupling.—Strickland Slack, Oxford, Pa.:

I claim the piece, B, and spring, b, in combination with the levers, G and K, the bolt, D, and the link, E, substantially as set forth and for the purpose specified.

42,697.—Lock of Fire-arms.—Eben T. Starr, New York City:

I claim, first, The frame having a circular cavity, b b, for the reception of the tumbler, B, and a concentric bearing for one of the journals of the main spindle or arbor of the lock bored out of the solid metal, and having the said cavity fitted with a cap, C, to receive the other journal of the said spindle or arbor, and secured by screws, g g′, which also serve to secure the sere and sere-spring within the circular cavity, as herein specified.

Second, The trigger composed of a straight sliding pin, E, held in place and having its movement limited by the screw, z, entering a groove, l, in combination with the sere, c, and spring, d, when arranged to operate in the manner herein specified.

Third, The employment for securing the check pieces, F F, to the stock of a plate, G, having an annular projection, I, on its face fitted into an annular groove in the frame and check pieces, and held in place by a screw, v, or its equivalent, substantially as herein specified.

42,698.—Repeating Fire-arm.—Eben T. Starr, New York City:

I claim, first, The sliding and rotating plunger, C, provided with a nose, a, ratchet teeth, c, and annular recess n, and fitted to work in the frame, A′, in combination with the hole, f, pawl, d, spring, g, tumbler, E, and hammer, D, when arranged to operate in the manner described.

Second, The notched stud, G, formed on the underside of the barrel, B, at its rear end, sliding bolt, H, and spring, I, in combination with the tilting four-chambered barrel, B, when arranged to operate in the manner and for the purposes described.

42,699.—Barrel-cover.—Hannah Steiger, Washington, D. C.:

I claim an attachable and detachable lock barrel or box-cover, constructed with its frame, bolts, and openings, whereby it can be attached and detached to and from a barrel or box, the whole constructed as and for the purpose specified.

42,700.—Carriage.—L. H. Thomas, Waterbury, Vt.:

I claim the arrangement, construction and combination of the grooved hook, E, flanged standard, D, adjustable spring, C, and dog, K, when arranged, constructed and combined as herein described for the purposes set forth

42,701.—Manufacture of Hoops for Cannons.—Daniel Treadwell, Cambridge, Mass.:

I claim the method herein described of preparing hoops for hooped cannon, or other similar purposes, by condensing and hardening the material thereof, when below an annealing temperature, by means of compression, or extension, or both, substantially as described; and also, in connection therewith, in heating the same, to a degree less than the annealing point for the purpose of placing them upon the gun, substantially as described.

42,702.—Cartridge-retractor for Breech-loading Fire-arms.—Frederick Trulender, Salem, N. J.:

I claim the fork lever, a, applied to the movable breech-block, and constructed, arranged and operating substantially in the manner described.

42,703.—Drop for hammering Sole Leather.—J. H. Walker, Worcester, Mass.:

I claim hardening, smoothing, and making of uniform thickness, sole and other thick leather, by subjecting it to the action of a drop and block, one or both of which shall be faced with vulcanized rubber, hard leather, or their equivalent elastic and durable material or substance, substantially as described.

42,704.—Medical Compound.—Jonathan Ward, East Hardwick, Vt.:

I claim the above-named compound in all its parts and proportions, fully prepared in the manner above specified.

42,705.—Pumps for Deep Wells.—John Warren, Buffalo, N. Y.:

I claim, first, Two or more valve pistons operated within the tube or pump barrel, when so placed or arranged that, in the up stroke, the liquid to be raised will be divided into equal columns (or nearly so) and the hydrostatic pressure thereby lessened, and so that each valve piston will be required to do an equal proportion of the work substantially as described.

Second, Constructing and operating the valve pistons so that the valve of the upper piston will close first, and the valve of the second piston immediately after, and so on through any number of pistons which may be used, substantially as and for the purposes described.

Third, The construction of the combined valve and piston, C, consisting of the hollow cylindrical part, C′, provided with perforations, C5, at the bottom, and openings, C6, at the top, and sleeve, C2, operating for the purpose and substantially as set forth.

42,706.—Tension-device for Sewing-machine Shuttles.—William Weitling, New York City:

I claim the application to the shuttle bobbin of a sewing-machine of a tension spring, a, when said spring constitutes part of, or is permanently secured to the loose frame, A, inserted within the shuttle, and constructed and operated substantially in the manner and for the purposes described.

42,707.—Boot-blacking Machine.—A. E. White, Rockford, Ill.:

I claim a boot and shoe-polishing machine, composed of two brush wheels, D, G, arranged to revolve relatively with different degrees of speed, in the manner substantially as herein shown and described.

[The object of this invention is to obtain a simple device by which

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boots and shoes may be blackened and polished far more expediently than it can be done by hand.]

42,708.—Water Wheel.—W. Whitney, Manchester, N. H.

I claim, in combination with the peculiarly shaped floats, F, the inverted conical centre, E, and hoop, G, to which the floats are fastened.

In combination with the concave disk or basin around the wheel, I claim the stationary guides, L and shutes, M, to direct the water on to the wheel, substantially as described.

I claim the cylindrical gate, N, arranged between the curb and the wheel, and fitted to traverse circularly around the wheel, and open and close the shutes or apertures which supply water to the wheel.

42,709.—Machines for making Horse-shoe Nails.—James White, Cleveland, Ohio, and John Malden, Youngstown, Ohio:

We claim, first, The herein-described devices for cutting off the blank and shaping the head at one operation.

Second, We claim the herein-described devices for throwing the blank forward into the lip, b, in the manner specified.

Third, We claim the herein-described devices for holding the nail, while it is being drawn into shape, and releasing the same.

Fourth, We claim the vibrating arms, M, N, O, P, S, T, in combination with the wheel, B, operating as and for the purpose specified.

42,710.—Car Coupling.—Geo. E. Wood, Providence, R. I.

I claim the pivoted pin, C, in combination with the fastening, D, arranged within the drawhead, A, to operate in connection with a link or shackle, B, substantially as and for the purpose set forth.

[This invention relates to an improved car coupling, of that class which connect or couple themselves, and are commonly termed "self-couplings." The invention consists in the employment or use of a pivoted pin in connection with a fastening arranged within a draw-head, in such a manner that the link or shackle in entering the draw-head will engage itself with the pin, and the latter adjust itself in a proper relative position, with the fastening so as to be retained by the latter, the pin being very readily released so as to free the link or shackle whenever it is required to disconnect the coupling.]

42,711.—Wagon Brake.—James F. Woods, 2d, Cohocton, N. Y.:

I claim the application of the straight lever, D, with its right angle arm, d, the same being pivoted to the wagon reach, and operating in the arc of a circle, in the manner as described, for the purposes herein set forth.

42,712.—Jug-top.—Homer Wright, Pittsburgh, Pa.:

I claim forming the body section of a tin jug-top, with the margin or rim, A, figures 3 and 5, of one solid piece of sheet tin, without seam, all for the purpose herein substantially set forth.

42,713.—Printing and Ornamenting Textile Fabrics.—Alexandre Adrien Despreaux, Paris, France:

I claim, as a new article of manufacture, fabrics with metallic threads interwoven therein, printed or ornamented in the manner substantially as herein before set forth.

42,714.—Mode of applying Lubricating Substances.—James Dougall, Stirlingshire, Scotland. Antedated May 3, 1864:

I claim the method herein above-described of applying lubricating matters, the same consisting in using in axle boxes, for railway carriages, &c., hay or straw, or both combined, substantially as herein above described.

42,715.—Bread-cutter.—James Oxley, Sheffield, England. Patented in England, October 30, 1862:

I claim, first, The general constructions, arrangements and combinations of apparatus for cutting, slicing, chopping or mincing bread and other substances, substantially as herein described and illustrated by the drawings.

Second, The combination of a knife-blade with a lever and inclined slotted bracket, so disposed as to give a downward draw-cut for the purposes herein before described.

Third, The combination of a knife with two links or levers, so disposed as to give a downward draw-cut for the purposes herein before described.

Fourth, The combination of an adjustable guage with a lever working or cutting blade, substantially in the manner and for the purpose herein-before described.

Fifth, The application and use of the bar or rib, O, or its equivalent, combined with the knife, C, for separating or clearing the slices when cut, substantially as herein before described.

Sixth, The application and use of an apparatus, constructed substantially as herein before described, for holding the substance to be cut firmly, and moving it forward, step by step, at right angles to the knife.

42,716.—Centrifugal Disks, revolving in Air and Water.—T. W. Rammell, London, England. Patented in England, Nov. 6, 1860:

I claim, first, The arrangement in centrifugal disks, as above described, of the separate radial passages or ducts, b b b, formed by the straight ribs, a a a, attached to the central shaft, A A′, and extending to the circumference; the said ducts having their respective sectional areas uniform, or nearly uniform, throughout, and equal, or nearly equal, to the areas of the corresponding openings which admit the air or fluid at the center.

Second, In combination with the foregoing, I also claim the arrangement of the secondary ribs, d d d, extending from the circumference towards the center, and forming the secondary ducts, b′ b′ b′, as above described, by means of which the centrifugal force of the revolving disk is greatly increased for the expulsion of the air or other fluid at the circumference.

Third, I also claim the improved disk, as above described, with or without a pressure chamber, in combination with the air-tight collars, E E′ E″, fitted around the mouth of the disk, and communicating by suitable tubes or pipes with any reservoir of air, water, or other fluid; all arranged in the manner and for the purposes above described.

42,717.—Gas Producer or Furnace.—Chas. W. Siemens, London, England, and Frederick Siemens, Berlin, Prussia. Patented in England, Jan. 22, 1861:

We claim the gas producer, constructed in manner and so as to operate substantially as described.

42,718.—Manufacture of Gun Barrels.—Jas. Thompson, Bilston, England:

I claim the manufacture of fire-arms, or ordnance, of iron, steel, or other desired metal, without weld or joint of any kind, and hollow, substantially in the manner and by the means herein before described.

42,719.—Safety Doors for Churches.—Alex. H. Wagner, Detroit, Mich.:

I claim the combination of a door, A, opening inward, with a frame, B, hung on hinges and opening outward, substantially in the manner shown and described.

Also, the application to the frame, B, and door, A, constructed as described, of a lever, D, or its equivalent, so that, by a slight touch of said lever, the frame is liberated and allowed to swing open.

[The object of this invention is to construct the doors of a church or other public building, so that the same, in ordinary cases, open inwardly, the same as doors of the usual construction; but, in case of a fire, or other accident whereby the assembly in the building is compelled to break up in great haste, by a slight touch of a lever, or other suitable contrivance, the door is made to swing outward with an increased area, and the obstruction offered by said door to the egress of the people from the building is considerably decreased.]

42,720.—Surface Condenser.—J. J. W. Watson, Paris, and W. H. Smith, Nantes, France:

We claim the use in steam condensers of tubes, or other vessels, filled with wire gauze or its equivalent, substantially in the manner and for the purpose specified.

42,721.—Appa atus for inhaling Gas.—Simeon W. Albee, Charlestown, N. H., assignor to himself and Henry Hodson, Charlestown, Mass.:

I claim the combination of the elastic, inflatable mouth cushion, C, with the mouth-tube or conduit, B, and its valve-case, A, provided with valves or a valve apparatus as described.

And I also claim the combination and arrangement of the two valves, valve-seats, and valve-stem together, and with the valve-case, and a mouth tube, arranged as described.

42,722.—Hydrostatic Balance.—Julius O. Baudissin, assignor to himself and S. Vangraafeiland, St. Louis, Mo.

I claim, first, The hermetical but elastic closing of my water-box by means of gutta percha straps secured to the frame, A, platform, E, and guide-rod, B, by metallic or other rings, f e, and square pieces, d d, as set forth.

Second, The guide-rod, B, and balancing rods, g g, as set forth.

Third, The regulating screws, g and x, as set forth.

Fourth, The gutta-percha bag, G, on top of the indicator, as set forth, all in the manner and for the purpose as specified above.

42,723.—Washing Machine.—Elliot Dickerman, assignor to Metropolitan Washing Machine Company, Middlefield, Conn.

I claim, in combination with the operative parts of a washing machine, the plunger staff, A, top piece, D, and adjustable piece, E, so arranged and applied as to shorten the cord, C, by the lowering of the adjustable piece, E, and to lengthen it by elevating it to the top piece, D, as herein specified.

42,724.—Coal-mining Apparatus.—G. E. Donisthorpe, W. Firth and R. Ridley, Leeds, England. Patented in England, Nov. 26, 1861.

We claim, first, The combined arrangement of mechanism herein explained, with reference to figures 1 and 2, of the drawings, whereby picks with lever handles are actuated by compressed air engines mounted on and carried by the same carriage as the picks.

And, secondly, We claim the combined arrangement of mechanism herein explained, with reference to figures 4 and 5 of the drawings, whereby cutters are connected with and moved to and fro by the piston-rods of air engines mounted on carriages as herein described.

42,725.—Wheat-cleaning Machine.—John Gaw (assignor to himself and Henry P. Chandler), Ellicott's Mills, Md.:

I claim the combination of the benter cylinder, J, constructed with openings at top and bottom for the passage of an upward current of air, with the bell-shaped fumel, K, for concentrating the draught and directing the air current, as described.

42,726.—Buckle-fastening.—Charles Goodyear, Jr., & Leonard A. Sprague (assignors to Charles Goodyear), New York City:

We claim the forming of a lever buckle in such manner that the same may be secured to leather straps or other articles by a direct hinge joint attachment, i.e., without the intermediary of a connecting strap, as set forth.

We also claim the combination of lever buckles when composed of two parts, as set forth, with a hinge connection on the face of the strap, applied as shown and described, so as not to interfere with the flexibility of the strap.

We also claim the method of securing or fastening lever buckles to straps and other articles by means of staples or their equivalent clamping or clinching devices, when the said staples or their equivalent clamping or clinching devices constitute one of the elements of a hinge.

42,727.—Manufacture of Sugar.—Frederick W. Gossling (assignor to himself, Henry F. Briggs & Lyman Bradley), Buffalo, N. Y.:

I claim as a new article of manufacture a sugar produced from corn and beets.

42,728.—Process of treating Indian Corn and Beet Root to produce Sugar and Sirup.—Frederick W. Gossling (assignor to himself, H. F. Briggs & L. Bradley), Buffalo, N. Y.:

I claim, first, The process of making sugar from corn and beets, substantially as herein described.

Second, The process of making corn sirup from corn in each successive step thereof preparatory to its conversion into sugar, substantially as herein described.

Third, The process of making beet sirup from beets in each successive step thereof, substantially as herein described.

42,729.—Tag Hook.—John Hawks (assignor to Henry Hawks), Brooklyn, N. Y.:

I claim the metallic hook attachment for tags and labels, consisting of the spiral or screw-formed portion receiving the straight or nearly straight part, as and for the purpose specified.

42,730.—Combination of Cradle and Chair.—Alonzo Hicks (assignor to himself and Henry Lewis), Flushing, N. Y.:

I claim, first, A cradle swinging on a frame or standard, in combination with a chair rocking upon stationary feet or legs, whereby the relative position of the cradle and chair may remain unchanged, so that a connection can be made between the chair and cradle, substantially as specified.

Second, I claim the combination of the table, e, on the arm, d, with the swinging cradle, substantially as specified.

Third, I claim the rocking chair on the legs or feet, f, in combination with the spring, l, extending from such legs, f, to the staple on the back, as specified.

42,731.—Machine for making Bolts and Rivets.—James Howden, Glasgow, Scotland, assignor to Wm. & John Galloway, Manchester, England. Patented in England Feb. 28, 1859:

I claim, first, The combination of two or more revolving die-tables having a vertical axis with a single lever for actuating the heading rams, when the parts are constructed and arranged as and for the purposes herein specified.

Second, In combination with the aforesaid die-tables, heading rams and lever, I claim the bell crank levers, Y, operated in the manner and for the purposes described.

Third, The combination of the oscillating cutting levers, P, eccentric, O, and shaft, K, when constructed and operated as described.

[This invention cannot be well explained without illustration, it appears to be a very ingenious and effective machine.]

42,732.—Oil Box for Railroad Cars.—Edwin F. Hurlbut & Ransom S. Potter (assignors to themselves and Nathaniel S. Bouton), Chicago, Ill.:

We claim, first, Casting or fastening a door or lid into a frame, substantially as shown and for the purposes described.

Second, The combination of the loose lugs or ears, letter D, with the oil box, substantially as shown and for the purposes described.

42,733.—Portable Wet Grain Elevator.—Daniel W. Kellogg & James W. McKee (assignors to A. B. Nimbs & John C. Clifford,) Buffalo, N. Y.:

I claim, first, The oscillating jaws, F, for the purpose of supporting and operating the elevating leg therein, substantially as described.

Second, Extending and operating the elevating buckets below the foot of the leg so that they may easily fill with wet grain and pass up the leg without clogging when combined with the raising, lowering and supporting tackle, H H′, and adjusting rod, I, substantially as set forth.

Third, The combination of the conveyor, T, with a portable elevator, substantially as described.

Fourth, The combination of the blower, M, and cleaning apparatus, L, with a portable elevating machine, substantially as set forth.

42,734.—Manufacture of Elevator Buckets.—A. B. Nimbs (assignor to himself and J. C. Clifford), Buffalo, N. Y.:

I claim an elevator bucket with its strengthening band, constructed and formed from one sheet or piece of metal, substantially as herein described.

42,735. Clamp for stopping Leaks in Hose Pipes.—C. Rubsam (assignor to himself and Charles P. Hall), Newark, N. J.:

I claim as an improved article of manufacture, a leak-clamp for hose pipes composed of the canvas or fabric, A, with attached metallic strips, B, and clamping screws, b, made and operating as herein shown and described.

[This invention consists of a clamp consisting of two or more pieces of metal which are fastened to the opposite ends of a piece of canvas or leather, or other suitable flexible material, and provided with lugs and screws or with other suitable means whereby the ends of the canvas or other flexible material can be drawn together in such a manner that in case of a leak occurring in the hose the clamp can be readily attached and drawn up tight and the leak can be stopped in a few minutes without taking up the hose.]

42,736.—Hoop Skirt.—Leopold Sanders, New York City, assignor to Thomas B. De Forest, Birmingham, England:

I claim a hoop skirt in which the overlapped ends of the hoops are secured to tapes, A′ and A″, or their equivalent, which slide freely around said hoops, substantially in the manner and for the purpose set forth.

[This invention consists in attaching the ends of the hoops to two tapes at the front of the skirt, said tapes being placed adjoining each other, or side by side, and each having every alternate hoop permanently attached to it, while the intermediate hoops are allowed to slide freely through.]

42,737.—Cultivator.—Samuel A. Tombs (assignor to himself and Samuel N. Purse), Ashley, Mo.:

I claim a cultivator frame constructed of the curved bar, A, united at its rear by the curved cross-bar, b, and provided with the stationary standards and cultivator teeth, a, and pivoted standards or handles, d, the whole constructed and arranged substantially as herein set forth.

DESIGNS.

1,939.—Slipper Pattern.—Edward K. Butler, of Boston, Mass.

1,940.—Clock Case.—Elias Ingraham, Bristol, Conn.

1,941 to 1,943.—Carpet Pattern.—Elemir J. Ney, (assignor to the Lowell Manufacturing Company), Lowell, Mass. (Three cases.)

1,944.—Trade-mark.—William Robotham (assignor to himself and Walter Greacon), Newark, N. J.

[The Re-issues belonging to the list of this date will appear in next week's list.]

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