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48,637.—Door Bell or Gong.—Horatio H. Abbe, Chatham, Conn.:

I claim the use of a sliding groove, or its equivalent, in combination with the clapper, E, and the spring, b, for the purposes specified.

48,638.—Foot Rest.—Charles S. Adams, Hillsdale, Mich.:

I claim, First, The combination of the section, C, and slides, a, with the spring catches, d, or their equivalents, constructed and arranged so that the section, C, or foot rest, may be raised or lowered to the desired height, substantially as herein shown and described.

Second, The combination of the section, C, spring, E, and spring catches, d, arranged and employed in the manner and for the objects herein specified.

[This invention consists in making the top of a foot-stool or ottoman in three parts or sections, the center one being so arranged that it can be raised or lowered for the purpose of providing an adjustable foot-rest. The appearance of the stool or ottoman, when the foot rest is lowered, is not in the least marred or changed by the application of the invention.]

48,639.—Hot-air Engine.—Cyrus W. Baldwin, Boston, Mass.:

First, I claim in a hot-air engine the arrangement, substantially as described, by which a single cylinder is supplied on one side only of its piston from two or more furnaces, which are separate from each other as to the means for the reception in each of fuel and air, but which discharge their gaseous products of combustion into said cylinder, as stated, through a common valve chamber.

Second, Also providing at the top of the fire box of a hot-air engine a passage around the same for conducting the gaseous products of combustion to the cylinder, so as to cut off therefrom and from the valve chamber actual flame, and cause to deposit of solid matter, substantially as specified.

Third, Also the arrangement for supplying the air for the support of combustion, and to be heated to fill the cylinder, by passing the whole of it into the fire box above the fuel, instead of passing the whole or a portion of it through the fuel, as previously practiced.

Fourth, Also incasing the valve chest, and passing the cold air from the force pump on its way to the fire box into said casing and around, and for the purpose of cooling the chest, substantially as specified.

Fifth, Also the arrangement of the lower part of the cylinder without any metallic inner boundary, and of fire brick or other suitable non-conductor, supported by a metallic casing, substantially as specified.

48,640.—Railroad Switch.—Milton Ball, Canton, Ohio:

I claim, First, So constructing a railroad switch that when the operator opens it he will be unable to leave it without closing it again, substantially as described.

Second, Surrounding a railroad switch with an inclosure having one or more entrances, which stand open while the switch is closed, but which are closed in the act of opening the switch, substantially as described.

48,641.—Sheep Rack.—Milton Barnard, Unionville, Pa.:

I claim the pyramidal partition, B, extending upward beyond and between the ends of the pivoted sides, b b, for the purpose of forming two separate hoppers and troughs, substantially as herein described.

[The object of this invention is to obtain a trough by which a number of sheep may be fed equally, that is to say, each have an equal share of the feed.]

48,642.—Compound Explosive Shell.—Henry Barton, Baltimore, Md.:

I claim the construction and arrangement of the independent chambers, J, within an external shell, A, so as to form a central chamber or magazine, K, communicating with each fuse pipe, L, as herein described and for the purposes set forth.

48,643.—Truss for Bridges.—William Batchelder, Newburyport, Mass.:

I claim as my invention the truss made substantially as described, that is to say, of the rods, a a b b d d d e e e e f f f f g g h h r r t t t t, the hangers, o p p q, and the connections, A A A A C C D E F F and G, arranged and applied together in manner as specified and represented.

And, in combination therewith, I claim the series of rings, c, or their equivalents, applied at the intersections or crossings of the rods.

I also claim the combination of two of the said trusses and two series of parallel rods, u u, diagonal rods, i k, and bent rods, l, arranged with the said trusses as specified.

48,644.—Measure for the Human Body.—George Beard, Salineville, Ohio:

I claim an extensible measure for the human body, applied thereto and operated substantially as herein described.

48,645.—Medicated Candy.—B. H. Bener and M. H. Burgess, Erie, Pa.:

We claim a medical compound, made as herein described.

[This compound or medicated candy is intended particularly to rectify coughs, or affliction of the lungs of any description; it is also a good remedy for bronchitis, sore throat, and similar complaints.]

48,646.—Feed-regulating Mechanism for Hoppers.—John S. Bodge, Bath, N. Y.:

I claim a hopper provided with a sliding slide, b, and operating as herein shown for the purpose of being raised and lowered to regulate the feed or the discharge of the contents of the hopper from the same, as set forth.

[The object of this invention is to obtain a means whereby grain and other substances may be fed from hoppers to the machine designed for them in greater or less quantity, as may be desired, and the feed regulated from a distance, that is, from stories below that in which the hopper is placed.]

48,647.—Pump.—John Boley, Baldwinsville, N. Y.:

I claim the concave extension wings, D', the flange, C*, the bar, E, securing the step to the flange, the whole arranged and operating substantially as and for the purposes herein set forth.

48,648.—Damper for Violins.—Aug. F. H. Braun, San Francisco, Cal.:

I claim the combination and arrangement of the springs, D K, with the sordine, C, as operated by the spring or lever, I, and button, E, substantially as described and for the purpose set forth.

48,649.—Straw Cutter.—Joseph Brockway, Cambria, N. Y.:

I claim the attaching the knife to the lower part of a pendulum or swinging frame, for the purpose as herein set forth.

48,650.—Shears for Cutting Paper.—Chas. Brombacher, New York City:

First, I claim the combination of a stationary shear, a moving cutter and a clamping bar, actuated by springs, to hold the material to the bed while being cut, as and for the purposes specified.

Second, I claim the combination of a stationary shear, a moving cutter, a spring clamping bar, and mechanism, substantially as specified, between the moving shear and the spring clamping bar, whereby the upward movement of the shear releases the spring clamping bar, substantially as set forth.

Third, I claim forming the clamping bar with a beveled edge next to the shears, for the purposes specified.

Fourth, I claim the sustaining slide rod, t, fitted substantially as specified, in combination with the spring clamping bar, for the purposes set forth.

Fifth, I claim the movable sustainer, v, in combination with an adjustable gage, e, for the purposes specified.

48,651.—Boot Counter Machine.—John Brooks and Charles F. Sylvester, North Bridgewater, Mass.:

We claim the combination and arrangement of the edge cutters, y y', the main cutter or knife, D, and mechanism for feeding the strip of leather to such cutters, the same being in order that such strip may not only be separated into counters, but each counter be reduced or trimmed on its opposite longer or curved edges, substantially as specified.

We also claim the combination of the rotary platform, C, and its elevating and turning mechanisms, with the stationary foot, B, the tilting knife, D, its stationary abutment, m, and movable supporter, P, the whole being arranged and the knife provided with springs, substantially as described.

48,652.—Governor Valve.—Oliver L. Brown, Manitowoc, Wis.:

I claim the combination of the projecting valve stems, d d', arms, F, screws, l l', conical valve, D, formed with trapezoidal openings, i, annular seat, H, with rectangular openings, h, steam chamber, B, inlets, a, and outlet, b, all arranged to operate as specified.

[This invention relates to a valve which is provided with a series of cavities and works in annular seat, which is surrounded by a steam chamber, and perforated with a series of apertures or slots corresponding in number and position to the cavities in the valve, in such manner that by turning the valve in its seat said cavities can be made to register partially or wholly with the apertures in the seat, and more or less steam passes through the valve.]

48,653.—Coupling for Carriages.—John Bundy, Irondequoit, N. Y.:

I claim the combination of the coupling with the reach from the rear axle by means of an arm or rod extending through the upper circular plate in such form that the plate revolves around it, substantially as above set forth.

48,654.—Corn Planter.—Robert Burns, New York City:

I claim the tubes, F, provided with vertical rods or a grating at their outer or rear sides, in connection with the adjustable seed retainers or holders, G, arranged to operate substantially as and for the purpose set forth.

I also claim the plates, I, in combination with the seed retainers or holders, G, all arranged to operate conjointly, substantially as described.

I also claim the wheel, N, provided with teeth, g h r, at one side, and arranged as shown so as to be readily thrown in and out of gear with the wheel, R, in combination with the levers, M O X, for operating the plates, I, seed retainers or holders, G, and knockers, Y Y, for the purposes set forth.

I further claim the frames, U, suspended by the pendents, m, in combination with the furrow openers, T, and adjustable coverers, consisting of the flaring plates, n, and plate, o, arranged to operate in the manner and for the objects specified.

[This invention relates to a new and improved corn planter for planting corn in hills and in check rows, and it consists a novel construction of the seed-distributing device, whereby the quantity of seed in each dropping may be varied as desired, the device prevented from choking or clogging, and the seed-distributing apparatus rendered inoperative whenever desired, as for instance in drawing the machine from place to place, turning the ends of rows, etc.]

48,655.—Seeding Machine.—Robert Burns, New York City:

I claim the perforated reciprocating slides, D, provided with pendent tubes, E, and having removable plates, D, placed within them, in connection with the adjustable or pivoted tubes, F, substantially as and for the purpose herein set forth.

48,656.—Car Coupling.—Samuel S. Cheney, Hillsboro, Ohio:

I claim the method of controlling the motions of the piston in the draw head by the shoulder in the rear of the head, B, and the pin, F, which traverses the slot, G, the whole arranged substantially as described and represented

48,657.—Cider Mill.—William and Lewis Clayton, West Philadelphia, Pa.:

First, We claim the combination of the cylinder, g, sectional pieces, f, adjustable metallic slips, h, with sharpened edges and flexible flap, d, in a cider mill, as and for the purposes herein set forth.

Second, The flexible flap, d, arranged as and for the purposes described.

[This invention relates to a peculiar arrangement of knives and scrapers for cutting the apple into thin slices or pieces, in connection with a flexible flap for cleansing the knives as they revolve, whereby the cider mill is rendered very effective and expeditious in operation.]

48,658.—Harvesting Machine.—Isaac H. Collar, Poughkeepsie, N. Y.:

I claim the application of the sleeve, D m, with the crank shaft, A, pitman, C, and sickle, B, to harvesting machines, substantially as and for the purpose herein described.

48,659.—Artificial Arm.—John Condell, Morristown, N. Y.:

First, I claim the appendage, Fig. 4, which is adapted to maintain its place by means of its auxiliary attachment, so as to afford two definite and practically rigid points, D' D'', to which the flexor and extensor straps or cords are to be attached, so as to produce those motions by the forward and backward movement of the stump.

Second, The cord, a c e, or its equivalent, with or without the intervening lever, d, and attached substantially as described, by which the forward motion of the metacarpus is obtained.

Third, I claim attaching the flexor and extensor cords or straps to points on the front and rear of the shoulder joint, so as to be brought into action by the forward and rearward motions of the stump.

Fourth, I claim the combination of the flexor and extensor straps with the rocking frame, L, or its equivalent, which connects by link or otherwise with the fore-arm.

Fifth, I claim the flexor spring, L, attached to the socket and to the rocking frame, L, or its equivalent.

Sixth, I claim the combination of the spring, N, with the arm, P, on the axial bolt, and the rocking frame, L.

Seventh, I claim the spring, Z, with its tendons, Y F, or their equivalent, and extending from a point in the fore-arm to a point back of the center of vibration of the metacarpus, substantially as described.

Eighth, I claim articulating the metacarpus to the end of the fore-arm by a pivoted point or points, so as to be moved in either direction by appropriate springs or cords, which are attached to the metacarpus at points on opposite sides of the axis of vibration.

Ninth, I claim constructing the fore-arm as described, with a sleeve portion, V, which is capable of rotation, so as to change the presentation of the hand.

Tenth, I claim operating the fingers or thumb by the motion, however induced, of the metacarpus.

Eleventh, I claim pivoting the frame piece, m, of the fingers to a point on the metacarpus, and the rods which, under the motion of the metacarpus, primarily induce the deflection of the fingers to a point on the fore-arm.

Twelfth, I claim pivoting the second joint of the frame pan, q, to a point on the frame piece, m, and the rod which gives the additional deflection due to the second joint to a point attached to or connected with the metacarpus.

Thirteenth, I claim giving the additional deflection due to the terminal section or first joint of each finger by a rod attached to it, and to a point on the frame piece, m.

Fourteenth, I claim governing the motion of the thumb by a rod attached to the end of the fore-arm, which, under the vibration of the metacarpus, influences the frame piece, x, and gives the deflection due to the second joint of the thumb.

Fifteenth, I claim giving the deflection due to the first joint of the thumb by means of the rod, y, which performs that office, as the frame piece, x, is vibrated by the rod, Z, when the metacarpus is moved.

48,660.—Artificial Leg.—John Condell, Morristown, N. Y.:

First, I claim the adjustable pad, B, or plate within the socket, for the purpose of adapting the capacity of the socket to the stump, substantially as set forth.

Second, The bridge piece, K, which is supported on the frame, G, and upon the bolt, F, and affording the superior point of attachment for the extensor spring, I I' I'', substantially as described.

Third, I claim the hamstrings, N N, arranged substantially as described and attached to the posterior portions of the thigh and leg, to act as checks to the forward motion of the leg, in combination with the arrangement for adjusting their tension.

Fourth, I claim the extension spring, consisting of the muscular or spring portion, I, the tendon, I', and the bifurcated tendon, i'', the insertion of the upper tendon being at the bridge piece, K, which bears up the knee belt, and the lower insertion being in the toe piece, substantially as described.

Fifth, I claim the construction of the ankle joint, consisting of the socket in the foot, and the ball, P, attached by its neck, and the iron frame, Q Q', to the leg, and having a stud upon it, fitting its appropriate recess in the socket in the foot, so as to prevent vibration in a horizontal plane, while leaving the joint free for motion in vertical planes, as described.

Sixth, I claim the elastic straps, a b, proportioned as to length and strength, substantially as and for the purpose described.

Seventh, I claim the yoke, Fig. 4, which derives its rigidity and freedom from tendency to displacement from its ultimate point of auxiliary attachment, from whence the straps proceed over the shoulders, so as not alone to bring the weight upon the frame work of the body, but also to enable the shoulders, by their motion, to influence the motion of the artificial limb.

48,661.—Wood-bending Machine.—Matthew F. Connett, Evansville, Ind.:

I claim the combination of the uprights, b, carrying rollers, a, the curved formers, J, and the sliding blocks, e f, arranged and operated substantially as described, for the purpose set forth.

48,662.—Instruments for Ripping Sutures in Cloth.—F. B. Converse, New York City:

I claim the implement for ripping seams herein shown, constructed substantially as above described.

[This invention relates to a very convenient and important implement, by means of which seams of sewing in cloth or other materials can be readily and with ease ripped, with no danger of cutting the material; it is applicable both to machine and hand sewing.

48,663.—Carpenter's Gage.—B. T. Currier, Boston, Mass.:

I claim ranging the adjustable stand, I, which carries the marking wheel, L, to traveres in the slot, G, of the gage bar, B, substantially as described.

48,664.—Photographer's Decanter.—G. W. Doty, Ravenna, Ohio, and E. A. and W. F. Stein, Portage, Ohio:

We claim the above-described decanter, when provided with the stop-cock tube and cork, substantially in the manner and for the purposes set forth.

48,665.—Hay-fork.—Charles L. Driesslein, Chicago, Ill.:

First, I claim in combination with an ordinary rigid fork and its handle, a hinged and swinging fork or shield, D, actuated by a cord or rope, substantially as and for the purpose described and represented.

I also claim weighting or overpoising the tines or arms of the swinging fork by means of the ball, E, or their equivalents, to cause it to fall with more readiness and quickness as and for the purpose described.

I also claim, in combination with the permanent and swinging forks, the arms, G, for preventing the fork from entering the material to be moved by it too far, and thus interfering with the free and unencumbered action of the swinging fork, substantially as herein described.

48,666.—Churn.—Worden Edmister and Stephen Johnson, Mount Vernon, Ohio:

We claim the dasher, C, composed of two parts, constructed as shown, connected together and applied to the shaft, D, so as to admit of being adjusted higher and lower thereon, substantially as and for the purpose specified.

[This invention relates to a new and improved dasher, and a particular means for operating the same, whereby butter may be produced from the cream in a short space of time, and with but a moderate exertion or expenditure of power on the part of the operator.

48,667.—Coupling for Shafts of Boring Tools.—James Esler, Brooklyn, N. Y.:

I claim preventing the lower section of the boring rod, A, from turning away or being disconnected from the rod, C, by means of the sleeve, E, and the key, H, the said key passing through an aperture in said sleeve, by and past one of the squares formed, or said section, A, as and for the purpose set forth.

48,668.—Flour Sifter.—Horatio Fairbanks, Boston, Mass.:

I claim the revolving shaft, C, carrying a series of angular projections, in combination with a box or hopper, A, and selvc, B, substantially as and for the purpose set forth.

I also claim, in combination with the above, attaching a rubber strip to one or both sides of the seive, B, substantially as and for the purpose described.

48,669.—Excavator.—H. W. Farley, Hannibal, Mo.:

First, I claim the shaft, G, with its scoops, H, in combination with the block and tackle devices for raising, substantially in the manner and for the purpose described.

Second, The partially rotating scoops, operated by a lever or levers on the shafts, to adjust their position or discharge their load.

Third, I claim the combination of the crank, W, and its connecting gearing with the rope, S, and counterbalance weight, T, for raising the shaft, G, and its scoops.

48,670.—Corn Sheller.—G. W. Fitts, South Hampton, N. H.:

I claim the arrangement of the discharging throat, G, and its back board or part, X, with the curved chute, F, and the wheel, C, to operate as specified.

48,671.—Camp Bedstead.—Christian Fostensen, Hans Iverson and Charles J. Skow, Racine, Wis.:

I claim the combination and arrangement of the sacking, a, side bars, b b, short end pieces, c and d, bars, f and g, rod, l, plates, n n, arms, p and q, plates, t t, bars, y, and legs, u u, substantially as described.

Second, attaching the two ends of the mattrass or sacking used for the bedstead to and within a swinging frame of its sidebars, arranged and operating substantially in the manner and for the purposes specified.

[This invention relates to improvements in bedsteads, whereby when not in use they can be neatly folded up into a compact shape and thus be convenient for transportation or storage.]

48,672.—Apparatus for Distilling.—C. F. Frederici, New York City:

I claim a distilling apparatus, composed of a series of hollow drums, (two or more) connected by oblique pipes, and provided with gudgeons on which it revolves, substantially as and for the purpose set forth.

Also, the combination of the pipe, E, and hollow gudgeon, a', with the drums, C, with or without oblique pipes, D, constructed and operating substantially as and for the purpose described.

48,673.—Cock.—J. P. Gallagher, St. Louis, Mo.:

I claim, First, The tube, F, arranged relatively with the body, A, of the cock or faucet, and the chamber or barrel, D, and the valve, B, in connection with the tube, c, disk, G, and escape spout, H, substantially as and for the purpose specified.

Second, The groove, b, in the periphery of disk, G, when used in connection with the parts specified in the first claim for the purpose of affording an annular chamber around the disk, G, as described.

48,674.—Pipe Coupling.—Annin M. George, Nashua, N. H.:

I claim the combinations of the projections, heads or buttons, b b', of the bolts, B B', and the inclined surfaces, k k l' k k' l', with the two parts of the coupling, substantially as and for the purpose set forth.

48,675.—Chain Holder.—Samuel Gladding, Providence, R. I.:

I claim, First, The movable fingers, d d, in combination with the catch, b, and the mortises, c c, substantially as described and for the purposes set forth.

Second, The combination of the fingers, d d, jointed at, f, mortised at, c c, with the catch, b, provided with the pins, i, in connection with the wedge, h, constructed and arranged substantially in the manner described for the purposes set forth.

48,676.—Tool for Lifting Stove Covers, Etc.—Porter J. Gladwin, Boston, Mass.:

I claim the within described tool consisting essentially of the handle, A, with its stationary jaw, B, and slot, b, in combination with the movable jaw, C, and its arm, c', the whole arranged and operating as and for the purpose set forth.

48,677.—Band for Head Dresses.—Nathaniel Grant and George Downs, Providence, R. I.:

We claim the improved band for ornamental head dresses made of the material herein described as a new article of manufacture.

48,678.—Combined Lamp and Stove.—C. B. Guy, Lybrand, Iowa:

I claim a lamp combmed with a stove and register in the manner substantially as herein shown and described, so that the smoke and odor emitted from the lamp may be carried off by the stove pipe, and the rays of light admitted into the apartment or shut off from the same when desired, substantially as set forth.

[This invention consists in combining a lamp with a stove in such a manner that the smoke and offensive odor emitted from the lamp will be carried of by the tube of the stove. The invention is more especially designed for sick rooms, as the odor from lamps is not only very disagreeable but also injurious to persons in ill health.]

48,669.—Gang Plow.—A. Hammond, Jacksonville, Ill.:

I claim, First, The segment rock, L, pawl, M, and foot lever, O, all arranged and applied to the plank or timber, D, and beam, A, substantially as and for the purpose specified.

Second, The button, P, when applied to the plank or timber, D, and used in connection with the rack, L, pawl, M, and foot lever, O, for the purpose set forth.

[This invention relates to a new and improved gang or trench plow and it consists in a novel constrnction and arrangement of parts, whereby the plows may be readily adjusted higher or lower as may be desired, and also readily raised temporarily out of the ground when necessary, as for instance turning at the end of the furrow or field.]

48,680.—Machine for Granulating Tobacco.—J. H. Harris, Newark, N. J.:

I claim the combination in a machine for granulating tobacco of the vibrating vessel, D, having open sides, with a corrugated roller revolving therein, substantially as above described.

[This invention consists in an improved machine for granulating or dividing the leaves of tobacco into minute divisions for smoking in pipes, wherein a corrugated beater roller is made to revolve within a vibrating vessel, whose sides are composed of wire cloth on a mesh of like character, so that the tobacco is broken up and delivered in small pieces, through the meshes of the wire cloth, into a box below.].

48,681.—Cryptographic Alphabet.—K. H. Hawley, Signal Corps, Army of the Potomac:

I claim a cryptographic alphabet, arranged substantially in the manner and for the purpose specified.

48,682.—Boot Heel.—Francis D. Hayward, Malden, Mass. and Pascal Stone, Charlestown, Mass.:

We claim the improved heel or parts, A B, as made with the dovetail connection, elastic as described, or with the circular or polygonal elastic dovetail connection as explained, the whole being so that the tread part, B, may be either revolved or adjusted relatively to the part, A, substantially as and for the purpose specified.

48,683.—Washing Machine.—John Heinlein, Galena, Ill.:

I claim, First, The air chamber, E, arranged relatively with the wash board, C, to operate in connection therewith, substantially as and for the purpose specified.

Second, The combination of the swinging rollers, e, wash board, C, and air chamber, E, all arranged and combined to operate in the manner as and for the purpose set forth.

[This invention relates to a new and improved clothes-washing machine of that class in which a swinging pressure roller frame is employed in connection with an elastic wash board. The invention consists in a novel construction and arrangement of the parts above specified in connection with an air chamber whereby the clothes are acted upon in the most efficient manner both as regards the pressure and friction to which the clothes are subjected as well as to the turning of the clothes in the suds box in order that the whole mass may be properly acted upon.]

48,684.—Flour Bolt.—Samuel Heflebower, Alexandria, Va.:

I claim making a radial prolongation, e, to the wings of the fan at the tail end of the horizontal or nearly horizontal bolt, the said radial extension of the wing or wings beyond the main portion of the fan being adapted to cause a current of air to be drawn through the bolt in the manner and for the purpose described.

Second, I claim the plate, N, fig. 3, in combination with the scooped shaped dippers.

48,685.—Disk Knives.—Anton Hehniger, New Haven, Conn.:

I claim the combination of two blades, B and C, with the spring, g, when the parts are constructed, arranged and fitted for use, substantially as herein described.

48,686.—Metallic Packing Boxes.—H. Z. Hopkins, San Francisco, Cal.:

I claim the tapering spilit or sectional lining, C, with expanding wedge, D, in combination wtth the box, A, and follower or cap, B, constructed and operating substantially as and for the purpose described.

48,687.—Machine for Making Wagon Wheels.—J. M. Howe, Portland, Oregon:

I claim the annular slide, G, with the ring, H, attached, and the latter provided with the arms, f, and the slides, g, in connection with the shafts, C C' and D, provided with cutters, C and C', all arranged substantially as and for the purpose herein set forth.

[This invention relates to a new and useful machine for manufacturing parts of wheels for vehicles, to wit. boring the felloes, sawing them to the correct level, tenoning the spokes at both ends, sawing them to the required length, and planing the felloes simultaneously, at three sides, and for planing and moulding other articles or work.]

48,688.—Carriage Top.—K. Thomas Hurlbert, Lyons, N. Y.:

I claim the combination of the pivoted socket, D, guide, a, and plate, C, so arranged as to allow the carriage top to be easily applied or removed and to be turned half way back, substantially as described.

I also claim the construction of the top consisting of the jointed bows, E E E' E', single toggle levers, G G, and suitable covering, A, the whole so arranged as to be compactly folded up, substantially as herein set forth.

I also claim the arrangement of the pivoted socket, D, and guide, a, of the seat, and the bows, E E', toggle levers, G G, and covering, A, of the top, substantially in the manner and for the purpose herein specified.

48,689.—Process of Curing Tobacco.—W. W. Huse, Brooklyn, N. Y.:

I claim the process, substantially as herein described, of curing tobacco, which process consists in subjecting it to the action of artificial heat and steam to induce the required fermentation until nicoline is revolved, and then stopping the further progress of fermentation by opening the packages and thoroughly drying every part, substantially as described.

48,690.—Binding Attachment to Reaping Machines.—John S. Jones, Covington, Ind.:

I claim, First, The combination of the rack, a, pinion, b, wheel, C, bevel pinion, d, curved wings, G, spring, A, hand, N, fork, T, and triangle, q, for the purposes set forth.

Second, I also claim the rod, I, or its equivalent in combination with twisting devices, J and K, for the purpose described.

Third, I also claim the arrangement of the sheaf bed, F, and its wings, G, in combination with the elevator, X, that lifts them, the device, Y, that operates that elevator, the rods, m, that lay over the sheaf bed holding the straw down while the wings press it.

48,691.—Pump.—Horace M. Keith, Commerce, Mich.:

I claim the reservoir, B, the valves, m and n, the cut off, S, the swipe pole, I, and the bucket, F, and the cylinder, C, the whole constructed, arranged and operating as and for the purpose, substantially as herein set forth.

48,692.—Piston Packing.—Edwin Kendall, New Lebanon, N. Y.:

I claim a packing for pistons consisting of a coiled spring, C, secured between the heads, B B, and adapted to operate substantially as herein described.

48,693.—Construction of Glass Cases.—E. D. Kinney and Caleb Wright, Philadelphia, Pa.:

We claim the within described case composed of the plates of glass arranged in respect to each other, held by the angular slips of the frame, and supported by the bent pieces, e, all substantially as described.

48,694.—Water Wheel.—Dr. J. Kindleberger, Springfield, Ohio:

First, I claim the springs applied to the opening and closing mechanism of the gates, where a plurality of gates are used for a single wheel, so that any one of said gates in case of being prevented from closing will not prevent the closing of the others as herein set forth.

Second, The arrangement of the bent arms, C, and levers, D, with the set screws, c, springs, g, plate, E, the pendant pins, h, the segment, G, and pinion, H, for operating the gates, B, as set forth.

Third, The arrangement of the buckets, I, of serpentine form, substantially as described.

Fourth, The cap, I, through which the shaft, j, of the pinion, H, passes, and which covers and protects the parts for opening and closing the gates as herein set forth.

48,695.—Damper.—John Knickerbocker, Hartford, Conn.:

I claim as a new improved article of manufacture, viz. The combination of the plates, b, with the damper, c, and adjusting rod, g, with their connections, substantially as and for the purpose described.

48,696.—Gang Plow.—J. H. La Boyteaux and C. A. Ashton, Jacksonville, Ill.:

I claim the adjusting of the axle, A, and consequently of the plow beams and plows, by means of the lever, j, connected with the axle through the medium of the chain, G, arranged substantially as described, for the purpose of adjusting the plows to suit the surface of the ground over which they work.

Second, The pivoted plow beams, N M, in connection with the bar, S, lever, T, and chain, N*, all arranged to operate in the manner substantially as and for the purpose set forth.

[This invention consists in a new and improved means for raising the plows out of the ground when required and also for adjusting the same so that they may be made to work in a proper relative position with the ground when the latter has an inclined or uneven surface.]

48,697.—Method of Preparing Flour and Meal for Transportation.—Edwin B. Larcher, New York City. Antedated June 28, 1865:

I claim the preparation of flour or meal for its preservation, by compressing the same, as and for the purposes specified.

48,698.—Self-acting Gate.—John Lee, Massillor, Ohio:

First, I claim sliding block, E, and pivot, d, or their equivalent, constructed and operating as set forth.

Second, Hinging the weight, H, to the top of the upper rail, in the manner described, or its equivalent.

Third, Operating the latch bar, G, by means of the picket, F', and slots, Y, or their equivalent, as set forth.

Fourth, The cast-iron piece, P, or its equivalent, operating as described.

Fifth, The combination and arrangement of shafts, L and N, and lever, Q, or their equivalent, operating as described

48,699.—Method of Forming Blank Clips for Singletrees.—Michael Loughran (assignor to himself and James B. Loughran), Pittsburgh, Pa.:

I claim a new article of manufacture, bars of iron having a raised brad running longitudinally on one or both sides, whether said brads are in the center of the bar or near one edge, and with flattened spaces on one or both sides at regular intervals along the body of the bar, made by depressing the brads in certain places, without regard to the shape of the brads, so as to form clips and clevises, in the manner herein shown.

48,700.—Vegetable Slicer.—Thomas Mason, Boston, Mass.:

I claim the combination of the series of conductors, b, with the single rotary cutter stock, d, arranged to operate together substantially as set forth.

48,701.—Portable Fence.—John M. May, Janesville, Wis., and Edwin B. Godfrey, Oshkosh, Wis. Antedated June 23, 1865:

We claim, First, Picket, C, or its equivalent, when used in constructing a fence, substantially as and for the purpose described.

Second, Braces, F F, or their equivalent, when made substantially as described, and used in combination with picket, C, or its equivalent, and base, B, substantially as and for the purposes described.

Third, A hinge or joint, when formed by means of picket, C, or its equivalent, and the perforated ends of rails, and supported by base, B, and braces, F F, substantially as and for the purpose described.

48,702.—Feather Renovator.—Wm. McArthur, Philadelphia, Pa.:

I claim, First, The casing, B, its shaft, C, and arms, h and h, in combination with the case, A, and the pipes, b c f and g, or their equivalents, the whole being arranged and operating substantially as and for the purpose described.

Second, The combination of the casing, B, chamber, d, and perforated or gauze plate, e,

Third, The frames, D and E, with their gauze or perforated plates adapted to the two halves of the casing, B, substantially as and for the purpose herein set forth.

Fourth, The long and short tapering arms, h h', arranged on the shaft, C, as set forth.

Fifth, The combination of the steam-tight box, A, and its pipes, f and b, or their equivalents, with the casing, B.

48,703.—Carpenter's Gages.—James McCrum, Locust Grove, Ohio:

I claim the employment or use of the loose head, D, and spring, E, or its equivalent, in combination with the bar, B, and adjustable heads, A C, constructed and operating in the manner and for the purpose substantially as herein shown and described.

[This invention consists in the employment or use of a loose head and spring, or its equivalent, applied in combination with the adjustable head and bar of a gage, in such a manner that by the action of said spring and loose heads the cutters or marking points will be guarded when the gage is used to mark any material.]

48,704.—Device for Cutting Cornstalks on the Ground.—Thos. W. McDill, Perry, Ill.:

I claim the knives, E, attached to triangular heads, D, keyed on a shaft, C, which is placed within a suitable frame, A, and all arranged to operate in the manner substantially as and for the purpose set forth.

[This invention relates to a new and improved device for cutting down standing cornstalks in the field, and into pieces of such length that they may be plowed under the soil with an ordmary plow. It consists in the employment or use of a suitable frame, provided with a draught pole, and a shaft having trylateral heads upon it, to which knives are attached at the angles or corners, all being arranged in such a manner as to operate very efficiently for the purpose specified.]

48,705.—Wool Press.—T. N. Morse, Grattan, Mich.:

First, I claim a machine for binding fleeces of wool, constructed and operated as shown, having bands, C, which are attached to and detached from the windlass by means of a bar, W, and groove, Y, substantially as and for the purposes above set forth.

Second, The combination of the side leaves, a a, transverse leaves, C', and grooves, d' d', all constructed, arranged and employed, substantially as and for the purposes set forth.

[The object of this invention is to put up fleeces of wool in square' or nearly square forms, so as to be easily handled, and be capable of being packed for storage or transportation in less space than is now required.]

48,706.—Apparatus for Carbureting Air.—J. F. Brichard, Milwaukee, Wis.:

First, I claim the vertical tubes, b, for exposing the fluid of the hydro-carbon to the current of air, substantially as herein recited.

Second, The arrangement of the vertical metal tubes, c, or their equivalents, in relation to the tubes, b, as herein described.

48,707.—Pump.—Aron Carver, Little Falls, N. Y.:

I claim the piston, constructed substantially as described; that is to say, with a supplementary upper valve, restraining the downward pressure of the contents of the piston rod or pump tube upon the lower valve of the piston, substantially as described and represented.

Second, I also claim so fitting the piston rod of a double-action pump to the working cylinder thereof, as that it can be detached and withdrawn thereout and replaced thereon at pleasure, automatically, by increasing the length of the stroke substantially as described.

Third, I also claim separating the cylinder of a pump from the pump tube above by a removable inner collar, within which the piston top works, and which is capable of being detached, so as to allow the piston to be withdrawn and replaced again after the piston is replaced, by means substantially as described.

Fourth, I also claim connecting the valve box, I, forming the lower part of the working cylinder to the outer cylinder, A3, by means of the screw, p, constructed and applied substantially as above described.

48,708.—Dental Hammer.—James C. Dean, Chicago, Ill.:

I claim, First, The combination of the hammer, D, with the device for holding dentists's plugging points, substantially as described.

Second, Providing for regulating the force of the blow of a hammer when the latter is applied to the holder of a plugging point, by the means substantially as described.

Third, The combination of a tool holder, c, spring hammer, D, and the device or devices for actuating said hammer, substantially as described.

48,709.—Pipe Coupling.—Chas. W. Emory, Dorchester, Mass.:

I claim the combination of the thimble, a, with the screw cap, c, constructed and operating as herein described.

48,710.—Condenser.—Addison C. Fletcher, New York City:

I claim the arrangement of the fan, G, or its equivalent, and the inlet openings, a a, of the air box, B, substantially as herein described, in relation to the upright steam radiators, A A, of an apparatus for condensing steam and heating air, whereby there is produced over the surfaces of the said radiators an artificial upward circulation, in which the natural upward circulation is taken advantage of, substantially as herein set forth.

48,711.—Distillation of Alcohol, Etc.—Alexander Fries, Cincinnati, Ohio:

I claim the mode substantially as set forth of distilling purified spirits direct from the mash.

48,712.—Cooking Range.—E. G. Niles, Cincinnati, Ohio:

I claim, First, The supplemental fire-grate, E, fitted in the top plate of the range directly over the fire-chamber, B, and supplemental grate, E, substantially as described.

Second, The water chamber, G, cast with the top plate, D, and placed in relation with the fire chamber, B, and supplemental grate, E, substantially as described.

Third, The arrangement of the flues, b c, provided with partitions, d, substantially as and for the purpose specified.

[This invention relates to certain improvements in cooking ranges, whereby air may be heated for warming apartments other than that in which the range is placed, and an economical water-heating attachment obtain and perfect control over the fire, so as to economize in fuel, and to heat perfectly the ovens for baking purposes.]

48,713.—Drying and Preparing Crucibles.—Geo. Nimmo, Jersey City, N. J.:

I claim, First, Drying and preparing crucibles, by gradually moving them from the cool part of a flue toward the fire, either inside or outside said flue, on a carriage, or shifted by hand.

Second, The construction of a flue, in combination with carriages, as described, and for the purpose specified.

48,714.—Manufacture of Gas.—Chas. Noble, New York City:

I claim the employment or use in the manufacture of gas of lumps produced from coal dust or waste coal, substantially in the manner and for the purpose set forth.

48,715.—Wheel for the Propulsion of Vessels in Shoal Water.—Otia Olds, Aurora, N. Y.:

I claim the combination of the traction or ground wheel, H, with the compound frame, A B (including the hand wheel, I, and lifting ropes and pulleys), so that a purchase may be obtained to lift upon the bow of the boat, substantially as described.

48,716.—Stove Pipe Drum.—Joseph C. Paine, Dubuque, Iowa:

I claim the combination of cone, A2, within the drum, with the hot air chamber, B" B", the tubes or pipes, D" D" and E" E", the double deflectors, G" G", and the double damper, F1 F2, for the purpose and in the manner set forth.

48,717.—Pen Distributor.—Stephen A. Potter, Philadelphia, Pa.:

I claim the peculiar construction and combination of a case of drawers, so arranged with partitions, H H, divisions, A A, catches, C C, or their equivalents, for the purpose and in the manner substantially as shown and described.

48,718.—Washing Machine.—S. Safford Putnam, Dorchester, Mass.:

I claim a receptacle having a series of buckets so arranged and inclined upon its sides as that the series on one side shall incline upward, while the series on the opposite shall incline downward, and the series on the bottom incline from right to left, while the series on the top shall incline from left to right, so as to form buckets for dipping up and throwing the water over the clothes, as well as to turn and rub them, as herein set forth.

48,719.—Preparation of Dessicated Vegetable Extracts.—William J. Rand, Brooklyn, N. Y.:

I claim as an improvement in the process of obtaining dessicated

or highly concentrated juices or soluble extracts of animal or vegetable substances, first obtaining the juices or soluble extracts of such substances by heating or boiling them under a pressure greater than that of the atmosphere, and afterward straining and concentrating the juices or extracts so obtained by evaporation in vacuo, substantially as herein described whereby I am enabled to obtain in the concentrated or dessicated product all the soluble or reducible matters contained in the substances.

I also claim forcing the juices, extracts or reducible substances obtained by the digestion of animal substances through strainers, by means of the pressure of steam in the digester, substantially as herein specified.

I also claim the steam pipe, H, and its cock, a, and the stop valve or cock, G, applied in relation to each other and to the digester and receiver, and in combination with the pipe, C, substantially as and for the purpose herein specified.

And I further claim the combination of the digester, A, pipe, C, one or more strainers, E, receiver, D, and vacuum pan, I, the whole arranged and operating substantially as and for the purpose herein specified.

48,720.—Pump.—Franklin Ranson, Buffalo, N. Y.:

I claim the arrangement of the inlet valves, I I', and the divided chamber, C, having two compartments of greater capacity than the displacement of the piston, in combination with each other and with the cylinder of the pump, substantially as and for the purpose herein specified.

48,721.—Cock.—Joseph Regester, Baltimore, Md.:

I claim, First, The elastic capsule as arranged with the valve stem of a stop cock, substantially as described.

Second, Seating the lower end of a valve stem loosely upon a valve, d, having its support upon a soft packing, substantially as described.

48,722.—Ventilating Apparatus.—E. Y. Robbins, Cincinnati, Ohio:

First, I claim the arrangement for warming the floor or portions of the floor by causing the hot air from the furnace to circulate through a hot air chamber, C, and return to the bottom of the furnace through the return pipe or flue, D, substantially as set forth.

Second, I claim the construction of the outer fresh air or warm air channel, x, Fig. 1, entirely separate and distinct from the inner or hot air channel, y, the air in the latter, heated by contact with the hot surface of the iron, being excluded from the room, and only used for carrying heat to the hot air chamber beneath the floor or in the wall, while the air from the former, x, being warmed entirely by contact with the outer surface of the brick or earthen wall or casing, a, is conducted into the room for respiration.

48,723.—Apparatus for Curing and Drying Fish.—Benjamin Robinson, East Gloucester, Mess.:

I claim the combination with a fish flake of a screening frame, arranged to operate substantially as and for the purpose set forth.

48,724.—Water Wheel.—Timothy Rose, Cortlandville, N. Y.:

I claim the central angular floats or brackets, b b, in connection and combination with the reversed end brackets, e e, as above set forth, and working in the manner herein described.

48,725.—Winding and Setting Watches.—Henry Rothfelder, New York City:

I claim, First, The combination of the winding lever with the ratchet wheel and spring barrel, in the manner specified.

Second. I claim the shank fitted to slide in a mortise through the periphery of the case, in combination with the winding lever, spring barrel and ratchet, as set forth.

Third, I claim the arm or crank, z, affixed to the square for the minute hand, by which to set the watch, as specified.

48,726.—Chronometer Escapement.—Henry Rothfelder, New York City:

I claim the arm, J, jointed to the lever, F, and provided with a spring, as set forth, in combination with the change pin, D, detent, E, and escapement, as specified.

48,727.—Pocketbook.—Louis Saarback, Philadelphia, Pa.:

I claim the elastic metal band or strip, B, combined with and arranged in respect to a pocketbook or portemonnaie, in the manner described, and having bent ends adapted to each other, as and for the purpose set forth.

48,728.—Process of Imparting Age to Wines.—John Searle, San Francisco, Cal. Antedated June 15, 1865:

I claim the introducing the heat by steam or otherwise to the wine itself by means of metallic pipes or chambers passing through the casks or vessels, substantially as set forth.

48,729.—Projectile for Rifled Fire-arms.—Christian Sharps, Philadelphia, Pa.:

I claim the within described projectiles, having a body tapering from the rear toward the front end, in combination with the wedge-formed projections, a, the whole being constructed and adapted to the bore of the barrel and to the case, B, substantially as and for the purpose herein set forth.

48,730.—Low Water Signal.—Thomas Shaw, Philadelphia, Pa.:

I claim the described apparatus, in combination with described animal or vegetable substance, when used for the purpose set forth.

48,731.—Flax-pulling Machine.—John Silvers, Lambertsville, N. J.:

I claim, First, The use of one or more elastic belts or bands, made of india-rubber or gutta percha, or of any of their respective elastic compounds, or of any other suitable elastic material, for the purpose specified.

Second, Coating the drum between which and the belt the plants are clasped, as described, with a sheet or surface of india-rubber or any other suitable elastic material, for the purpose specified.

Third, The use of the covered bar. X, attached to or forming a part of the platform of the machine, and arranged with regard to the drum thereof by which the plants are pulled substantially as herein described and for the purposes specified.

Fourth, Passing the elastic belt around a pulley or pulleys, when fixed within the frame, a, and adapted to be turned by means of the shaft, b, and retained in the desired position by the ratchet wheel, c, and pawl, a, whereby the tension of the said elastic belt may be varied, as described.

[This invention relates to some important improvement in flax or ihemp gathering machines whereby their effectiveness in operation s greatly increased and the flax is pulled or gathered with no injury to its fiber.]

48,732.—Petroleum Stove.—Hamilton E. Smith, Cincinnati, Ohio:

First, I claim the series of petroleum or coal oil burners, B B' B'' B''', in connection with a corresponding number of separate hot air chambers or series, G and N, having ventages for spent air at their bottom portions only, substantially as set forth.

Second, I claim in connection with two or more independent burners, B B', the oven, G, capable of vertical subdivision in the manner and for the purpose explained.

Third, In the described combination with a petroleum stove, I claim, in this connection, the tubular hot air chambered boilers, whose ventage for the spent air is at the bottom of the air chambers, as set forth.

48,733.—Fruit Dryer.—Adam Snyder, Clyde, Ohio:

I claim the employment of one or more fruit-drying sections in combination with the regulating diaphragm, substantially in the manner and for the purpose herein shown and described.

This invention relates to a novel arrangement and construction of a fruit-drying apparatus to be applied to cooking stoves, etc., whereby the currents of heated air passing through it can be regulated at pleasure, and the fruit dried with the utmost dispatch and economy.]

48,734.—Meat Chopper.—Alfred F. Spaulding, Winchendon, Mass. and Salmon M. Scott, Worcester, Mass.:

We claim as our invention in the above described meat chopping machine the combination of the four cranks, k l m p, and the connecting rod, a, or the mechanical equivalents thereof, with the remainder of the mechanism, or its equivalent, for operating the knives, the whole combination being productive of a compound motion of each knife, substantially as described.

We also claim the combination of the plow, g, or the same and the guard, r, with the rotary tub and one or more knives provided with mechanism for moving such knife or knives up and down in the tub.

48,735.—Horse Collar Fastener.—A. Steinbach, Evansville, Ind.:

I claim the plate, A, attached to one side or part of the upper part of the horse coller, and provided with the slot, C, having an enlarged part, and an inclined ledge, c, at each side as arranged with the plate, D, attached to the other side or part of the collar, and having a bar or arm, E, provided with a projection or lip, g, at each side of its outer part, substantially as and for the purpose set forth.

[This invention relates to a new and improved lock or fastening for connecting together the upper ends of a horse collar. The object of this invention is to obtain a lock or fastening of the kind specified which may be readily manipulated, that is to say, fastened and unfastened, and which may be constructed and applied at a trifling expense and be superior to the buckles and straps hitherto employed for such purpose.]

48,736.—Sleigh.—Isaac Stephenson, Maranett, Wis.:

First, I claim hinging the ends of the runners to each other, substantially as herein set forth and shown.

Second the guide bars and traversing pieces constructed and operated as herein recited and shown in combination with the hinging of the runners to each other, as herein described.

48,737.—Water Wheel.—J. E. Stevenson, New York City:

I claim the curving of the lower parts of the buckles, K, of the wheel, substantially as and for the purpose herein set forth.

Second, The exposing of the lower parts of the buckets by having the rims, m m, of the wheel at their lower ends cast or formed with recesses, substantially as described to admit of a free lateral discharge of the water from the issues.

Third, The spiral or coil shaped step, G, in connection with the tubular shaft, E, fixed spindle, A, and screw, H, with or without the bearing, J, substantially as and for the purpose specified.

Fourth, The laterly enlarged helix, B, provided with the beveled or inclined plates, l l, or their equivalents, for the purpose set forth.

Fifth, The employment or use of a screw, J, when applied to or used in connection with a wheel provided with a tubular shaft and a helix, in such a manner that the joint or space between the wheel and helix may be regulated as occasion may require.

Sixth, The combination of the wheel, d, provided with the buckets curved at their lower ends or issues and laterally exposed, the tubular shaft, E, fixed spindle, F, screw, H, and bearing, J, all arranged substantially as described.

48,738.—Coal Stoves.—Thomas L. Sturtevant, Boston, Mass.:

I claim the improved stove, as constructed not only with the radiator, B, and smoke space, D, about the same, arranged with the fire-place, T, and ash-pit, F, as specified, but as provided with a series of air-pipes, H H H, leading into the radiator and going through the fire-place, and with respect to the fire-proof lining thereof, substantially as specified.

And, in combination with the stove so made, I claim the series of lateral air-pipes, b b b, leading out of the lower part of the ventilator and opening through the sides of the case, as specified.

48,739.—Furnace for Melting Metals.—Wm. A. Sweet, Syracuse, N. Y.:

First, I claim so constructing a melting furnace that the temperature of the crucibles can be increased from a minimum to a maximum degree by transferring them from the cooler to the hotter chamber, substantially as described, and for the purposes set forth.

Second, I claim the combination and arrangement of the conical grate and feeding aperture, substantially as described, and for the purposes set forth

48,740.—Process for Tanning.—William E. Terry, Wyoming, N. Y.:

I claim the process of tanning by means of liquors composed of the several ingredients herein named, when combined in the projections and employed substantially in the manner herein described.

48,741.—Piano-forte Action.—Jonathan H. Tibbets, Omaha City, Nebraska Territory:

I claim the use in piano-forte actions of a rotating wheel, arranged and operating substantially as and for the purpose specified.

[This invention relates to piano-forte actions and consist of a novel arrangement of the parts composing them, whereby a much quicker, easier and better feeling action is obtained than those hitherto in use, the importance of which is obvious.]

48,742.—Hay Elevator and Stacker.—A. W. Tooker, Harvard, Ill.:

I claim, First, The combination of the crane beams, g g, with a tripod, which is supported upon a foundation frame, when said beams are supported by and applied to their frame substantially as described.

Second, The arrangement of the rope, h, upon a stacker which is constructed without a central turning post, in such manner that the movements of the horse can be made to effect the raising of the load and the turning of the crane arms, substantially as described.

Third, The use of an adjustable hitching hook, A, in combination with a crane, g g, or its equivalent, and the rigging, h, arranged to operate substantially in the manner and for the purpose described.

48,743.—Wick Trimmer.—Cyrus L. Topliff, New York City:

I claim, first, The combination of the fixed cutter, m, and movable cutter, f, arranged in parallel planes, and operating substantially in the manner and for the purposes specified.

Second, In combination with the aforesaid cutters, f, and m, I further claim the handle when so pivoted as to move in a plane parallel or coincident with that of the knife, f.

48,744.—Artificial Building Block.—George E. Van Derburgh, New York City.

I claim as a new article of manufacture blocks of artificial stone, formed substantially in the manner herein set forth.

48,745.—Silicated Building Block.—George E. Van Derburgh, New York City.

I claim as a new article of manufacture a silicated building block, formed substantially in the manner herein set forth.

48,746.—Artificial Stone.—George E. Van Derburgh, New York City.

I claim my specified improvement in the production of blocks, tubes, tiles, and other articles of artificial stone, by the use of finely pulverized sand, marble, or other equivalent, analagous substance in combination with the other materials employed in the formation of such artificial stone, for the purpose of filling the interstices between the individual particles thereof, substantially as herein set forth.

48,747.—Solution for Saturating Natural and Artificial Stone.—Geo. E. Van Derburgh, New York City:

I claim the within described silicated composition for the purpose of saturating natural and artificial stones, or as an ingredient in the formation of the latter, substantially as herein set forth.

48,748.—Stump and Grub Extractor.—Izaak Van Kersen, Kalamazoo, Mich.:

I claim the combination of the grub or stump pulling lever, L, and its attachments, with the two-horse cart or dray, the whole being arranged, constructed and operated, substantially as and for the purposes herein specified.

48,749.—Windows.—Sigourney Wales, Boston, Mass.:

I claim the combination and arrangement of the bar, D, and its fastening bolts and catches, or their equivalents, with the window frame and the sash, the same being for the purpose as specified.

I also claim the combination of the flange or rib, f, with the bar, D, and the sash, applied together and to the window frame, as described.

48,750.—Corn Harvester.—Samuel Ward, Lane, Ill.:

First, I claim the bars or beaters, J J, arranged to operate in vertical planes in front of and above the sickle, D, substantially as and for the purpose specified.

Second, The arms, K K, arranged to operate in horizontal planes, and in the described relation to the sickle, D, for the purpose set forth.

Third, The bed, G*, composed of the two shafts, g g, provided with the arms, h, and arranged with cords or chains, H H, for the purpose of discharging the cut cane or corn in gravels from the machine, substantially as described.

Fourth, The arrangement of the bars or beaters, J J, arms, K K, in combination with the sickle, D, and bed, G*, with or without the gnard, N, combined and arranged to operate in the manner substantially as and for the purpose set forth.

Fifth, The knife, P, arranged to operate at the rear of the bed, G*, substantially as and for the purpose specified.

48,751.—Coal Stove.—Marshall D. Wellman and James Old, Pittsburgh, Pa.:

First, I claim making the fire-pot of close stoves with its greatest diameter at the level of the fire-bed or grate, and contracting upwards, substantially as and for the purposes hereinbefore described.

Second, The use in close stoves, in combination with a fire-pot constructed as hereinbefore described, of a double perforated grating, the lower part of which is stationary, the upper part turning thereon, for the double purpose of raking the fire and regulating the admission of air to the fire, substantially as hereinbefore set forth.

48,752.—Fire-place.—Marshall D. Wellman and James Old, Pittsburgh, Pa.:

First, I claim the use of recesses in the back and side walls of the fire-place, or in either of them, the top of which is below the level of the top of the fire-basket, in combination with flutes in the fire walls, for the purpose of preventing the packing of the fuel at the back and sides of the fire, and thus giving the air access to the back part of the fire, and allowing it to pass up the flutes so as to mingle with the unconsumed gas and smoke, substantially as described.

Second, The combination of a low grate or fire-basket, p, having slats between its bars, with the air spaces or recesses, v, in the back wall and overhanging back plate, d, for the purpose hereinbefore described.

Third, The arrangement of a hot-air chamber or chambers in the back and side walls of a fire-place, and the sloping or overhanging back wall and air passages in the rear of the fire chamber, for the purpose of more readily heating the air passing through such chambers to warm the apartment, substantially as hereinbefore described.

Fourth, The use of one or more hot-air chambers, constructed substantially as described, and placed in the throat of the chimney, so that the smoke and hot-air passing up the chimney shall play around or upon them, and thereby heat the air passing through them, for the purpose hereinbefore set forth.

48,753.—Construction of Soap Frames.—Daniel Whitaker, Roxbury, Mass.:

I claim, as a new and improved article of manufacture, a soap frame, made of wrought iron, having its side plates corrugated, and formed in two parts or sections, substantially in the manner described and for the purpose specified.

[This invention relates to a novel manner of constructing soap frames, whereby much strength is secured, and its buckling or twisting from the weight and heat of the soap contained in it obviated; and also, it is much less in weight and more convenient to handle than the styles heretofore used.]

48,754.—Toy Gun.—Newton P. Whittelsey, West Meriden, Conn.:

I claim, first, The combination of the barrel, b, enlarged at its inner end, arranged within the stock, a, having the depression, t, with the ferrule, i, substantially as and for the purpose described.

Second, I claim as an improved article of manufacture of a toy gun, the combination of the stock, a, barrel, b, spring, c, rod and hammer, d, e, with the ferrule, i, arranged and operating substantially as described.

48,755.—Knife Polisher and Grinder.—George L. Witsil Philadelphia, Pa.:

I claim, first, The arrangement and construction of the frame, A a, with the rubber springs, g g, discs, C C', h, and shaft, c, substantially in the manner described and represented.

Second, The arrangement of the bevel-faced grindstone, B, with the several parts named in the first claim, as herein described.

48,756.—Ruler and Paper-Cutter.—Joseph Woodward, (assignor to J. S. Uttey), New York City.

I claim the ruler and paper-cutter herein described, having a straight outer ruling edge, a, and two united straight inner cutting edges, b c, forming a continuous rectangular cutting edge.

48,757.—Manufacture of Felted Cloth.—Charles T. Young, Lawrence, Mass.:

I claim the felted cloth herein described, the same being a new article of manufacture.

48,758.—Cultivator.—L. G. Youngs, Wilmington, Ill.:

I claim the plow-bars, E E E' E', and shaft, J, provided with the loops, I I, and arms, f, f, all arranged and applied in connection with the levers, K', to operate in the manner substantially and for the purpose set forth.

[This invention relates to a new and improved device for planting corn, and also for plowing and cultivating corn and other crops which are grown in hills or drills, and it relates to a new and improved means for adjusting the plows laterally, so that the same may be made to conform to the sinuosities of the rows of plants, when the device is used as a cultivator, and also in a novel and improved seed-dropping device when the device is used as a corn planter.]

48,759.—Revolving Mortising Tool.—William Zimmerman, Quincey, Ill.:

I claim the new article of manufacture described, to wit, a rotating mortising or slotting tool with teeth on the cutting edges, substantially as described.

48,760.—Lamp.—Joseph K. Andrews, Antrim, Ohio, assignor to himself and J. C. Tilton, Pittsburgh, Pa.:

I claim the application of the two cylinders, C D, made of perforated sheet metal, or other equivalent material, and secured one inside of the other, on a lamp-burner, A, of the ordinary construction, substantially as and for the purpose herein shown and described.

[This invention consists in the employment or use of two perforated cylinders, one inside the other, and connected together by wires extending from the inner to the outer cylinder, in combination with an ordinary kerosene lamp burner, in such a manner that by the air admitted through the perforations of the two cylinders, and by the draught occasioned by the same, the smoke and surplus carbon is consumed, and a burner is obtained which gives a brilliant and odorless light, without the use of the ordinary glass cylinders.]

48,761.—Annealing Furnace.—Edwin Bennett (assignor to himself and W. T. Gillinder), Philadelphia, Pa.:

I claim, first, Placing the furnace so as to discharge its heat at such a point between the feed and discharge ends of the leer, as that the heat shall be graduated towards both ends, for the purpose described.

Second, The use of the trays, F, for the purpose of receiving the ware and for charging and discharging the leer.

48,762.—Manufacture of Water-proof Fabrics.—Thomas Crossly, Bridgeport, Conn., assignor to The American Water-proof Cloth Company, Brooklyn, N. Y.:

I claim, first, A fabric composed of a back of linen, jute, or other material, having a coat of rubber or other gum, upon which is fastened a face of yarn, of silk, worsted, woolen, fur, or other material, the same being looped or tufted as described.

Second, A fabric made as described, and colored, dyed, or printed, or colored and dyed and printed, either before or after the face is applied, in the manner and for the purposes herein set forth, as a new article of manufacture.

48,763.—Tool Stock.—William W. Draper, (assignor to himself and Alonzo Parke.), Greenfield, Mass.:

I claim the combination of the screw-shank, constructed as specified, and conical wedge, with the inclosed nut and clasping jaws, f, the whole arranged to operate as described for the purpose set forth.

I also claim the peculiar shape of the arm-piece, B B', as shown for the purpose set forth.

48,764.—Sizing and Finishing Covered Skirt Wire.—W. E. Frost (assignor to I. Washburne and P. L. Moen), Worcester, Mass.:

I claim sizing and finishing covered wire (or covering strips of metal of considerable length) in causing it to pass continuously through a sizing mixture, and over rolls, or their equivalents, while subjected to heat, and thence on to a reel, or other receiver, substantially as described.

48,765.—Sizing and Finishing Covered Skirt Wire.—W. E. Frost (assignor to I. Washburne and P. L. Moen), Worcester, Mass.

I claim passing the wire through the starch or size, and thence directly in contact with ironers or polishing surfaces substantially as described for the purpose set forth, whence it may be passed over rolls and heaters previous to its being reeled.

48,766.—Sizing and finishing Covered Skirt Wire.—W. E. Frost (assignor to I. Washburne and L. P. Moen), Worcester, Mass.:

I claim causing the covered or braided wire to pass from the supply reel, through the the "sizing" medium, and back and forth over drums, and thence back through the "sizing" medium again, to the second coat, and so on, any number of times desired; for the purpose of applying successive coats of "size" one over the other, in the manner substantially set forth.

48,767.—Mast Coat.—Andrew J. Gove, San Francisco, Cal., assignor to himself and William Gerard, New York City.:

I claim the metallic shield, E, and the flexible joint formed by the rings, G G', or their equivalent, attached to the shield and the deck respectively by the metallic rings, S" S", or in any other suitable manner, substantially as described, and for the uses and purposes hereinbefore set forth.

48,768.—Beehive.—D. S. Gray (assignor to himself and M. H. Messer), Onorga, Ill.:

In combination with the inclined bottom, B, and sliding-door, E, constructed and arranged as described, I claim the slides, D, for facilitating the removal of filth, &c., from the hive, as explained.

48,769.—Machinery Clutch.—T. F. Hammer, Branford, Conn., (assignor to Gilbert J. Hine, New Haven), Conn.:

I claim, first, The combination of the clutch, E, and bar, G, when constructed and arranged with the tongue, c, or its equivalent, to operate in the manner and for the purpose specified.

Second, The combination and arrangement described of the clutch, E, inclined groove, d, and tongue, c, substantially as and for the purpose specified.

48,770.—Rotary Air Pump.—George B. Hill (assignor to Ellis S. Archer), New York City.:

I claim the combination in a rotary air or gas pump of the buckets, M, curved as described, so as to gather in the air or gas, with the space or chamber, O, substantially as described and to the effect set forth.

48,771.—Paddle Wheel.—G. Martin, (assignor to himself, and Watson Sanford, Thomas M. Davis, L. H. Walton), Philadelphia. Pa.:

I claim the smooth-faced friction slide or roller, d', on each of the floats or paddles, D D, and the smooth-faced, irregularly curved bearing E, on the vessel; the said parts being constructed and arranged to operate together substantially as and for the purpose described.

48,772.—Apparatus for Carburetting Air.—Patrick Mihan (assignor to Oliver P. Drake), Boston, Mass.:

I claim as my invention or improvements in the above described air-forcing apparatus the construction of each bucket educt with the pointed triangle or tapering form substantially as and so as to operate as described.

I also claim the arrangement of the back of each bucket, relatively to the shell of the drum and the educt of the said bucket, the said back in such case springing from the base of the educt and being arranged at an acute angle, or substantially so, with such educt, the whole being as and for the purpose specified.

I also claim the arrangement of the several bucket educts, viz., so that one may lap or extend by that or those next contiguous to it, substantially as and for the production of results as specified.

48,773.—Grates for Cooking Stove.—James B. Clarke (assignor to S. H. Burton & Co.), Cincinnati, Ohio.:

I claim, First, In the described combination, the stationary grated bottom, A B C C', and the folding grate, E D D', or their equivalents, for a convertible wood and coal fire-place, as set forth.

Second, The stationary grates, B and F, and the hinged and folding grate, E, combined and operating as set forth.

Third, The parts A B, C C', D D', E F and G, or their equivalents, arranged and combined to form a convertible wood and coal fire-place, as herein described.

48,774.—Fence.—David L. Pettegrew, (assignor to Sylvester Davis and Jacob Smith,) Claremont, N. H.:

I claim the double posts, B, with the key, D, and the adjustable brace, C, combined and arranged substantially as and for the purposes specified.

48,775.—Revolving Fire-arm.—Louis C. Rodier, (assignor to Samuel Norris,) Springfield, Mass.:

I claim, First, The arrangement of a repeating fire-arm, having a many-chambered cylinder hung upon a central axis, in such manner that the said cylinder shall revolve or oscillate between two given points, i. e., between the first and last chamber, substantially as set forth.

Second, Combining with an open frame, provided with a projecting stud, a cylinder movable upon its axis and grooved between two points of its circumference, so as to allow of its revolution or oscillation, as herein set forth.

Third, Providing the skeleton frame plate or retractor on the end of the sliding pin, when located in the rear of the cylinder, with ratchet teeth, in combination with a pawl actuated by the lock to operate the sliding pin together with the cylinder, as herein described.

Fourth, Holding the cylinder and sliding pin within the open frame of the arm by means of a hollow axle upon one end of the cylinder, in combination with a central socket at the other end thereof, and wrought into the skeleton frame of the sliding pin, together with a short movable pin fitting into the said socket, substantially as herein set forth.

Fifth, The combination with a cylinder held in the frame, as set forth, of a spring lever bearing the movable cylinder holding pin, under such an arrangement that the same may be operated from without, for the purpose of releasing the cylinder and enabling it to be disconnected from the hinder stock of the arm.

Sixth, Combining with a cylinder held in its frame, as hereinbefore described, the method of mounting the frame, carrying the barrel and cylinder upon an axle, so as to allow of the disconnecting of the cylinder and barrel from the lock and stock by shifting the same sideways, as herein described.

48,776.—Lubricating Cups.—James Sangster, (assignor to Harvey Ball and Wm. H. Bonnell,) Buffalo, N. Y.:

I claim the brace, B, when constructed to operate as herein substantially set forth and described.

48,777.—Steam Engines.—Wm. Mont. Storm, (assignor to himself and R. Charlton Mitchell,) New York City:

First, I claim an engine constructed as follows, to wit: Of a cylinder containing two single acting pistons, rigidly connected by open "cross-heads," substantially as described, to the crank, both the latter (crank and crosshead) being located within the body of such cylinder and between its pistons, the whole being proportioned and arranged to this end, as set forth.

Second, I claim, in combination with the above, the superposed cylinder or engine, B, to act upon a crank parallel to the first and on the same shaft, also, through the mediation of a "crosshead" located in the same chamber, between the pistons of the horizontal cylinder, substantially in the manner and for the purposes described.

Third, I claim the arrangement whereby the stroke of the piston of such superposed engine is made considerably less than those of the horizontal one, so that the length of its "cross-head," as will be understood, may not render necessary an undue separation of the horizontal pistons, thus occupying unnecessary space, while the combined action of the whole device obviates a dead point, etc.

Fourth. I claim making the pistons of the horizontal cylinder with an overhang, for the purpose described.

Fifth, I claim the pin, d, projecting longitudinally with, but eccentric to the shaft, and rotating with it, to operate the valve by fitting slots, X X', in their tails, at right angles to the lines of their motion, all as explained.

Sixth, I claim the combination of the parts, e f, h i', j l, constituting the reversing gear, as described.

48,778.—Measuring Faucet.—Shephard H. Wheeler, (assignor to Richard Hedden, James T. Stillwell, C. T. Lee, Thomas J. Martin, A. G. Townsend, James Sullivan, Daniel Henderson and S. H. Wheeler,) Dowagiac, Mich.:

I claim, First, The adjustable cap, g, and thimble, f, in combination with the valve, d, for tightly closing the discharge orifice, a, of the faucet tube, substantially as described.

Second, The valve chamber, b, provided with a valve, d, which is acted upon by a spring, e, in combination with a reciprocating valve-piston, D, and the tube, A, substantially as described.

Third, The combination of tube, A, piston, D, valve chamber, b, and nozzle, C, constructed and operating substantially as described.

48,779.—Machine for Skinning Vegetables.—Oscar Hase, Mecklenburg Schwerin, Germany:

I claim the combination in a vegetable or fruit skinner of a stationary cylinder, having an internal roughened surface, with a rotating roughened disk, to impart centrifugal motion to the commodities to be skinned, substantially in the manner described.

48,780.—Transmitting Motion.—Edward Wadhams, (assignor to Edward Robert Kent,) Hamilton, Canada West:

I claim the double segmental rack, A, on the rock shaft, C, in combination with pinions, b b', ratchet wheels, d d', and pawls, e e', said ratchet wheels being keyed to the shaft, D, substantially as and for the purpose set forth.

[The object of this invention is to transmit motion from an oscillating or rock shaft to another revolving shaft, or, in other words, to convert the oscillating motion of one shaft in a continuous revolving motion of another shaft.]

REISSUES.

2,026.—Curtain Fixture.—Edward T. Briggs, Boston, Mass. Patented May 19, 1863:

I claim the combination composed of the tubular curtain roller, A', its stationary shaft, a, and helical spring, e, as set forth, and a friction apparatus (substantially as described), or its equivalent, for the purpose or to operate as set forth, the whole being for application to a shade and a weighted tassel, and co-operative, as explained.

I also claim the combination of the nut, E, and the screw, c, with the shaft, a, the roller, A', and its spring, e, they being arranged and applied as described, and the purpose of such screw and nut, irrespective of their use with the remainder of the friction apparatus, being to prevent the spring from unwinding further than is necessary to cause the roller to wind up the shade.

I also claim the friction apparatus constructed or composed of the screw, c, the disk, F, the nut, E, the spring, i, and the nut, H, and arranged with the roller, A', and its shaft, a, so as to operate therewith substantially as set forth.

2,027.—Truck for Street Railways.—Robert H. Lecky, Allegheny, Pa. Patented April 5, 1864:

First, I claim arranging the axles with relation to the wheels so that the inner end of the axles of the wheels which travel on the short or inner curve of the track will, in turning curves, move more than the inner end of the axles of the wheels which travel on the long or outer curve of the track, said axles and wheels being operated substantially in the manner and by the means herein described and for the purpose set forth.

Second, The combination of the swivel bearings, 6 and 20, with the disks, m (or their equivalents—levers), axles, l, wheels, i, and connecting rod, 19, operated by the means and in the manner substantially as described, for the purpose set forth.

Third, Securing the tongue, a', to the bottom, b, by means of the flanged tube, x', and support, x, as herein described and for the purpose set forth.

Fourth, The use of the catch, 17, and guide, q, when used in combination with the tongue, a', flanged tube, x', bottom, b, and lever, b', arranged and operating substantially as herein described and for the purpose set forth.

Fifth, The arrangement of the brakes, z cups, w, plungers, v, and levers, 9 8 18 and 12, arranged and operating substantially as herein described for the purpose set forth.

EXTENSIONS.

Lanterns.—Hugh and James Sangster, Buffalo, N. Y. Patented June 10, 1851. Reissued Aug. 21, 1855. Extended June 8, 1865:

We claim constructing and arranging the spring catches, I, in the manner described or its equivalent, to cause the attachment of the lamp to the lantern by the operation of pressing the lantern down upon the spring catches.

Also arranging the thumb pieces, L, within the flange, G, at the base of the lamp by extending the springs, I, towards each other horizontally as described, and thus forming the elbow catch to rest against the shoulder of the flange, E, of the lantern in the manner and for the purposes specified.

Regulaters for the Pen Beam in Ruling Machines.—W. O. Hickok, Harrisburg, Pa. Patented June 17, 1851. Extended June 14, 1865:

First, I claim the pieces, G H A B, in combination with the hinge-joints, 1 2 3, arranged and combined substantially and for the purpose as herein described.

Second, I claim the sliding piece, B, the bearings, C C C, and the finger wheel, F, in combination with the pieces, G H A, uniting by hinge joints, or in any other manner, substantially the same; using in the construction of the whole machine any material adapted to the purpose of forming, as herein described, a pen beam regulator, for ruling machines.

Printing names of Subscribers upon Newspapers, Etc.—Henry Moeser, Pittsburgh, Pa. Patented June 24, 1851. Extended June 14, 1865:

I claim the arrangement and construction of a machine for printing names of persons or places on newspapers and other papers after the manner substantially as described, viz. of a form containing the column of names to be printed, set up in types, and being brought under the action of a stamp by means of a slide, moving by degrees; together with the application of a slitted plate, allowing the paper to be printed to be pressed down on the line, right beneath the slit of the plate, and shielding the paper from the lines, adjoining that under action of the stamp, as herein before described.

Railroad Car.—Lawrence Myers, Philadelphia, Pa. Patented June 24, 1851. Reissued March 21, 1865. Extended June 16, 1865:

I claim, First, The combination substantially as described, of a hollow vessel with flanged wheels or tires adapted to the rails of a railroad for the purpose specified.

Second, One or more partitions combined with the said hollow vessel, substantially as and for the purpose described.

Machinery for Cutting Files.—John Crum, Ramapo, N. Y. Patented July 1, 1851. Extended June 24, 1865:

I claim connecting the file blank to be cut with a bed, which has a positive feed motion, substantially as described, in combination with an incidental rolling motion depending upon the shape of the blank and the angle which the cutter forms therewith, substantially as described.

I also claim connecting the chisel with its stock by a joint, as described, in combination with a rolling bed, as described, by which they are rendered self-adapting, as described.

I also claim holding the file down on to the bed during the operation of cutting, by means of a roller, or its equivalent, combined with the rolling bed, substantially as herein described, but this I only claim when the end of the file is so connected with its bed that it shall be free to move up and down that the pressure of the roller may keep that part of the file that is being cut firmly down on to the bed, as herein specified.

Portable Hydraulic Press.—Richard Dudgeon, New York City. Patented July 8, 1851. Extended June 23, 1865:

I claim a hydraulic press, quite portable, in which the ram is hollow, and serves as the reservoir to supply the cylinder with water or other liquid, while the force pump and its appendages are contained within the ram, so that by working this force pump the ram is forced up until the liquid in such ram is exhausted, and by moving the handle of the pump down it will come in contact with a rod attached to a valve in the pump piston, and the latter comes in contact with a valve in the end of the ram, opening them both, and allowing the water to return into the ram again through passages.

Harvester.—(A.)—Aaron Palmer, Brockport, N. Y., and Stephen G. Williams, Janesville, Wis. Patented July 1, 1851. Reissued April 10, 1855. Again reissued Jan. 1, 1861. Extended June 29, 1865:

We claim discharging the cut grain from a quadrant-shaped platform, on which it falls as it is cut, by means of an automatic sweep rake, sweeping over the same, substantially as described

Harvester.—(B.)—Aaron Palmer, Brockport, N. Y., and Stephen G. Williams, Janesville, Wis. Patented July 1, 1851. Reissued April 10, 1855. Reissued Jan. 1, 1861. Again reissued May 31, 1864. Extended June 29, 1865:

We claim the combination of the cutting apparatus of a harvesting machine with a quadrant-shaped platform, arranged in the rear thereof, and a sweep rake operated by mechanism, in such manner that its teeth are caused to sweep over the platform in curves when acting on the grain, these parts being and operating substantially as hereinbefore set forth.

We also claim the combination of a quadrant-shaped platform, a sweep rake operated by mechanism, which causes the rake to move in alternately opposite directions, an inclined rail to raise the rake, and a switch, these parts being and operating substantially as hereinbefore set forth.