

RECENT AMERICAN INVENTIONS.

Centrifugal Governor.—This invention, by C. T. Porter, of New York city, relates to the employment of the resistance of a spring as a counterpoise to the centrifugal force of the balls and arms of a centrifugal governor, by which means such a governor is made capable of working in a horizontal or other position, and hence suitable for marine engines. The improvement consists in so applying and combining the balls and arms, and the spring, that in all positions of the balls and arms, the distance through which the spring is deflected shall bear a nearly constant ratio to the radius of the circle described by the center of gyration of the balls and arms, thereby making the governor extremely sensitive to the slightest variation in the speed of the engine.

Distilling Oil.—This invention consists in the arrangement of a series of retorts, one above the other, in the same furnace, in combination with a suitable supply pipe, overflow pipes and a steam pipe, the steam passing through which is superheated by running it down through the interior of the furnace, and which communicates with each of the retorts in such a manner that the crude oil supplied to the uppermost retort, and running from the same by the overflow pipes to the lower retorts, is gradually heated, and the vapors of the oil, mixed with the superheated steam, is carried into one or more condensing chambers, where both the vapors of the oil and the steam are condensed by the action of one or more jets of water introduced through suitable noses, and thus mixing the vapors of the oil with steam; and, condensing them simultaneously with the steam, the oil is refined and deodorized by one operation. It also consists in connecting the several retorts, by means of pipes, in such a manner that the vapors formed in all the retorts are returned to the highest retort, from which they pass off into the condensing chamber. The credit of this invention is due to E. G. Kelley, of New York city, and A. H. Tait, of Jersey City, N. J.

Slide Valves.—The object of this invention is to obviate the great objection to the use, in steam engines, of a slide valve with a long lap, viz.: the compression of the steam on the exhaust side of the piston by the closing of the port before the stroke of the piston is completed, and, by enabling the valve to be made with a larger lap than has been heretofore considered practicable, to provide for a greater degree of expansion of the steam in the cylinder; and to this end, the invention consists in what may be denominated an "anti-compression valve," fitted to a chest provided for it on the main valve, and operating in combination with passages opening into the face of the main valve. A. J. Stevens, of Aurora, Ill., is the inventor.

Steamer Burned.

The steam propeller *Cataract* was burned on the 16th ult. on Lake Erie, near Erie, Pa. It is supposed the vessel took fire under the boiler deck. She was loaded with provisions, and was burned to the water's edge.

A quantity of alcohol had been stowed away not above 12 feet from the boilers; it is supposed that this caught fire, as an apparent explosion took place at about the time the fire was first observed. The crew were saved by boats from Erie. Had the steamer been protected from fire by having the boiler room lined with iron plates, this accident would not have happened. The Inspectors of Steamboats should not grant a license to any boat running on our lakes, rivers or seas, the boiler room of which is not lined with iron plates.

Ages of the States.

The following chronological table may be interesting to our readers at the present crisis:—

SETTLEMENTS.		
1607. Virginia, by the English.	1635. Rhode Island, by Roger Williams.	
1613. New York, by the Dutch.	1639. N. Carolina, by the English.	
1620. Massachusetts, by Puritans.	1670. S. Carolina, by the English.	
1624. New Jersey, by the Dutch.	1676. Pennsylvania, by Wm. Penn.	
1628. Delaware, by the English.	1682. Georgia, by Oglethorpe.	
1635. Maryland, by Irish Catholics.		
ADMITTED INTO THE UNION.		
1792. Vermont.	1818. Illinois.	1845. Texas.
1792. Kentucky.	1819. Alabama.	1846. Iowa.
1796. Tennessee.	1820. Maine.	1848. Wisconsin.
1802. Ohio.	1822. Missouri.	1850. California.
1811. Louisiana.	1836. Michigan.	1858. Minnesota.
1816. Indiana.	1836. Arkansas.	1858. Oregon.
1816. Mississippi.	1845. Florida.	1861. Kansas.

Fifteen hundred acres have been planted with cotton this year, in Jamaica, as an experiment.



ISSUED FROM THE UNITED STATES PATENT OFFICE

FOR THE WEEK ENDING JUNE 18, 1861.

Reported Officially for the Scientific American.

** Pamphlets giving full particulars of the mode of applying for patents, under the new law which went into force March 4, 1861, specifying size of model required, and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

1,548.—J. J. Adams, of New York City, for an Improved Flexible Back Brush:

I claim my improved mode of constructing a leather flexible brush, the same consisting in securing all the rows of bristles, except the outer one, in the body of the brush, as set forth, then cementing the cover or upper plate to the body and finally securing the outer row of bristles and the leather portion of the brush at the same time by a single line of wire, as specified.

1,549.—C. T. Anderson, of Hyattstown, Md., for an Improved Churn:

I claim, first, The combination with the bellows, A, and vertical nozzle, G, of the pivoted reciprocating dasher, M, constructed and operated substantially as and for the purposes set forth.

Second, The described combination of the nozzle, G, detachable dasher, M, and eccentrically pivoted disk, I, arranged and operating as explained.

[The object of this invention is to inject air beneath the cream by the action of the same lever which operates the reciprocating dasher, and the invention further provides means for readily detaching the parts for purposes of cleansing.]

1,550.—Edward Badlam, of Ogdensburg, N. Y., for an Improvement in Seeding Harrows:

I claim the arrangement of the transverse harrow, M, seed sowers, U, U, and roller, C, all receiving their motion from roller, C, and combined and arranged for the purposes set forth.

1,551.—A. D. Briggs, of Springfield, Mass., for an Improvement in the Mode of Connecting the Braces of Iron Bridges:

I claim my improved mode of constructing and arranging the clamp plates and braces, by which improvement each brace is made to lock into but one of the clamp plates, and simply lap over or across, the other brace, but not interlock therewith, the whole being substantially in manner and for the purpose set forth.

1,552.—Robert Brown, of Frederick, Md., for an Improvement in Harvesters:

I claim, first, Securing both the finger bar and the rake frame to a hollow shaft, L, the journals, I, of which run in bearings, M, in the main frame and themselves constitute bearings for the journals, H, of the crank shaft, all as shown and explained, and for the purposes set forth.

Second, The reel attachments, N, N, N, constructed, combined and arranged in the manner specified, to enable the attachment of any desired number of arms.

[In this machine a combined reel and rake, revolving as a vertical shaft, are employed to hold the grain to the cutters and discharge it from the platform. The standards in which the rake revolves are rigid with the finger bar, and by mounting both on journals concentric with and surrounding those of the driving shaft. The rake is made to work equally well in any position of the finger bar. Great facility is afforded for changing the number of rake arms and for detaching the raking apparatus and platform so as to convert the machine into a grass harvester.]

1,553.—J. G. Collins, of Boston, Mass., for an Improvement in the Mode of Securing Bottoms to Stills:

I claim the ring or clamp, I, in combination with the bottom, A, and the flange, B, each formed and constructed substantially as above described.

1,554.—L. H. Gano, of Ripon, Wis., for an Improvement in Buggy Tops:

I claim, the employment of the lever, A, rod, D, disk, E, spring, D, and rods, B, B, together with the wheel or its equivalent, upon the lower portions of the front rib or bow of the top, the several parts being arranged and used as and for the purpose specified.

1,555.—Charles Gregg, of New York City, for an Improved Automatic Regulator for Steam Heating apparatus:

I claim regulating or varying the supply of cold air to the steam heating surfaces automatically, to suit the condition of said heating surfaces, by means of a spring damper, in the supply pipe, connected to the piston, or diaphragm, the whole arranged to operate as and for the above described purpose.

1,556.—Joseph and St. Clair Gum, of Marseilles, Ill., for an Improvement in Cultivators:

We claim the combination of the lever, I, the levers, P, P, to control the lateral and vertical movements of the cultivators, while in use, with the upright hooked metallic rod, R, by use of which to adjust the cultivators from the ground, for removing the machine from place to place, when the machine is not used in cultivation, substantially as described.

1,557.—S. S. Hersey, of Farmington, Maine, for an Improved Apple Parer:

I claim, first, The arrangement of the spring, L, knife bar, M, sector, J, and wheel, I, substantially as shown, so that the spring, L, may perform the double function of keeping the knife, M, to its work, and throw back the knife to its original or starting point after the completion of its work, as set forth.

Second, The employment or use of the projection, H, on wheel, C, in combination with the lever, P, arranged in relation with sector J, to operate as and for the purpose set forth.

[This invention consists in a novel and improved arrangement of a spring, knife bar, and gearing, whereby a very simple and efficient apple-paring device is obtained. The invention also consists in the employment or use of a deflector attached to the cutter head, for the purpose of turning or casting off the parings from the machine. The invention further consists in the employment or use of a lever so applied and arranged as to serve as a stop or guard to insure the harmonious action of the working parts.]

1,558.—Ralph Hill, of New York City, for an Improvement in Daguerreotype Cases:

I claim providing daguerreotype cases with metallic rims, B, swaged or struck up with flanges, A, A, and notches, as shown at H, to form miter joints at the corners of the case and connected by wires, C, to form hinges or joints for the cases, substantially as and for the purpose set forth.

[This invention consists in encompassing the case with a metal rim, whereby a strong and durable case is obtained and also a very ornamental and economical one.]

1,559.—J. J. Hirschbühl, of Louisville, Ky., for an Improved Padlock:

I claim, first, The employment or use of the dogs, D, E, F, and slide,

G, when combined and arranged with the bow or shackle, B, substantially as shown, so as to secure both ends of the same.

Second, The employment or use of the pin, K, placed in the bit-plate of the key, J, and used in connection with the slotted plate, Q, for the purpose of actuating the slide, G, as set forth.

Third, The arm, W, attached to the outer end of the slide, G, in combination with the slide, A', on the bow or shackle for the purpose of throwing the notch, N, of slide G, out of the reach of the pin, T, of the key, J, as set forth.

[The object of this invention is to obtain a padlock that will be un-pickable and still comparatively simple in construction, and one that may be constructed at a moderate cost.]

1,560.—T. C. Hooker, of Kendall, N. Y., for an Improvement in Harrows:

I claim connecting the two parts, A, A, of a harrow together by means of the links, B, B, and the rod or hasp, D, when the latter is of a greater length than the former, and all arranged substantially as and for the purpose set forth.

[This invention relates to an improvement in that class of harrows which are formed of two or more parts connected by joints or hinges, and which are generally termed flexible harrows. The object of the invention is to give, by a very simple means, a harrow of the class described a greater degree of flexibility than usual, so that the parts may not only rise and fall to conform to the inequalities of the surface of the ground, but also leave a general or universal movement to a certain extent, and the parts of the harrow, at the same time, kept in a proper relative position with each other at all times.]

1,561.—S. S. Howard, of Milton, N. Y., for an Improvement in Grinding Mills:

I claim having the support or bracket, E, of the bearing, D, cast with a basin or bowl, F, substantially as shown, for the purpose of forming the lower part of the hopper, G, the upper part of which registers with the basin or bowl, F, when the two boxes, A, C, are secured together, by which arrangement the bearing, D, is cast with the box, A, and a strong and durable connection obtained.

[This invention relates to an improvement in that class of grinding mills which are composed of a conical grinder fitted within a corresponding conical shell or bed enclosed within a suitable cast-metal box having a hopper at one end of it.]

1,562.—John P. Jamison, of New York City, for an Improved Drawing Instrument:

First, I claim the slide, I, pencil holder, J, and beam, A, the same shall be combined and operated in connection with the beam, A, as shown, for the purposes specified.

Second, In combination with the same, I claim the pointer, E, and circular plate, C, arranged and operated in the manner described for the purpose shown.

Third, I claim the pencil holder, M, operating as described, in combination with the pencil holder, J, slide, I, beam, A, and tube, D, arranged and operated as shown for the purpose set forth.

Fourth, I claim the point, F, inserted in the tube, D, in combination with the slide, I, and pencil holder, J, arranged and operated as described for the purpose set forth.

1,563.—John Keezer, of Chillicothe, Ohio, for an Improvement in Cultivators:

First, I claim adjusting the distance between the teeth, F, F, or those used in their stead, by means of the adjustable fastenings, H, H, and G, G, and stay rods, I, when used in combination with the gallews frames, B, and C, and stay rods, A, A, constructed and arranged substantially as and for the purpose set forth.

Second, In combination with the foregoing I claim the stays, F, and E, swivel, G, screw, B, and nut, C, when arranged in relation to each other and operated in the manner and for the purpose described.

1,564.—E. G. Kelley, of New York City, and A. H. Tait, of Jersey City, N. J., for an Improvement in Apparatus for Distilling Oils:

I claim, first, The arrangement of a vertical range of retorts, A, in an upright furnace, B, in combination with the supply pipe, G, all connecting overflow pipes, E, steam pipe, D, and branch pipes, G, all constructed and operating in the manner and for the purpose shown and described.

Second, The combination of the vertical range of retorts, A, steam pipe, D, and one or more condensing chambers, E, E, substantially as and for the purpose described.

Third, The arrangement of the pipes, E, in combination with the vertical range of retorts, A, and connecting pipes, E, as and for the purpose set forth.

1,565.—M. J. Knox, of Knox Corners, N. Y., for an Improved Clothes Frame:

I claim the clothes frame described and represented, consisting of the bars, A, A, and B, B, extension slotted bars, b, b, A', A', B', B', tightening screws and nuts, c, d, and clothes line, D, all arranged, combined and operating substantially as set forth.

[The object of this invention is to construct a double quadrangular clothes rack or frame in such a manner that it can be extended or contracted at pleasure for adapting it to contain and support a large or small quantity of articles for drying.]

1,566.—F. W. Krause and G. W. Strong, of Chicago, Ill., for an Improvement in Grinding Mills:

We claim the arrangement on the same horizontal shaft, C, of a toothed cylinder, E, working in a jointed spring concave, G, in combination with the self-feeding, spirally-toothed cracking cylinder, J, self-adjusting runner, L, a cup-shaped toothed clutch, M, with a corresponding semi-spherical projection, m, on the back of the runner, L, constructed and operating as and for the purpose specified.

[This invention is particularly intended for grinding corn, and consists in arranging on the same horizontal shaft a toothed cylinder working in a longitudinally slotted jointed spring concave, and a self-feeding corn cracker, together with a grinding disk, or runner of peculiar construction, so that the same machines serves for shelling, cracking and grinding the corn in an easy and perfect manner. Second, in arranging the teeth of the corn cracker in a spiral line and with beveled cutting edges, in combination with a series of teeth of a similar form placed spirally in a corresponding concave or shell, so that the corn or other substance to be cracked is fed up to the grinding disk through the action of said teeth. Third, in the arrangement of a cup-shaped toothed clutch in combination with a corresponding semi-spherical projection on the back of the grinding disk or runner, and with a suitable spring, in such a manner that the runner is free to adjust itself to the stationary surface.]

1,567.—George Lane, of New York City, for an Improvement in Rulers:

I claim a ruler having a capillary groove, e, formed in one or both of its straight edges, substantially as and for the purpose described.

[The object of this invention and improvement in rulers is to effectually prevent ink from the pen running over the edge of the ruler, and getting on the paper which is being ruled. The nature of this invention consists in forming in a suitable beveled straightedge of a wooden or metallic ruler, a deep groove of a suitable depth which will absorb any ink running over the edge of the ruler, and prevent it from getting on the paper which is being ruled.]

1,568.—Geo. Mann, Jr., of Ottawa, Ill., for an Improved Safety Guard for Steam Boilers:

I claim, first, The employment of one or more explosive disks or plates, D, constructed as described, with a concentric groove or groove, F, formed in the margin, and applied substantially as specified, in combination with the fusible plug, G, as set forth.

Second, The valve, E, applied below and in combination with the explosive disk, D, substantially as and for the purpose set forth.

Third, The alarm whistle, G, and pressure valve, I, employed in connection with the disk, D, substantially as and for the purpose herein described.

Fourth, The guard pin, L, applied in combination with the valve, E, and disk or plate, D, substantially as and for the purpose specified.

This invention consists in a novel construction and arrangement for application to a steam boiler of a metallic disk or plate weaker than any part of the boiler, to be burst and blown away when the pressure in the boiler rises to near a dangerous point. It also consists in the arrangement of a fusible plug on said plate, and also in the employment below and in combination with such disk, disks, plate or plates of a valve so applied as to be capable of closing the boiler after the blowing away of such disk or plate, to permit the said disks or plates, to be replaced by a new one, without waiting for the steam to subside in the boiler. And it further consists in a certain arrangement of a steam whistle or other alarm, and a pressure valve, in combination with such disk or plate, whereby an alarm may be given before the pressure of the steam becomes so high as to cause the explosion of said disk or plate. This requires an invention to give a good explanation of it.]

1,569.—O. W. Marshall, of Windsor Locks, Conn., for an Improved Railroad Switch :
I claim the employment of the shaft, c, dogs, b, arranged in connection with the chairs or head blocks, A, and rails, a, and a', substantially in the manner as and for the purpose described.

1,570.—F. B. McGregor, of Commerce, Mich., for an Improvement in Water Elevators :
I claim the arrangement of the receiving trough with the windlass, B, hooks, G, buckets, E, and short bars, F, in the manner and for the purpose shown and described; and in combination therewith I claim the arrangement of the bail, K, with the pawls, J, J, and double ratchet wheel, L, in the manner and for the purpose shown and described.

1,571.—Christopher Meyer, of New Brunswick, N. J., for an Improvement in Boots and Shoes :
I claim a shoe of which the upper is made of cloth or other fabric permeable to moisture, coated with rubber in the manner described, in such parts as may be desirable, and having its sole made of sole leather or some substance other than india rubber or gutta percha.
I also claim an upper, prepared as above described, to be used for the purpose above set forth.

1,572.—Nathan Miller, of Finley, Ohio, for an Improvement in Water Elevators for Cattle :
I claim the combination of the tilting platform, H, with the platform, F, when the latter is connected to the plunger, C, which is fitted within the cylinder, B, and provided with the eduction or water discharge tube, I, all arranged to operate as and for the purpose set forth.
[The object of this invention is to obtain a pump of simple construction that will admit of water being readily elevated by stock.]

1,573.—Nathan Miller, of Finley, Ohio, for an Improvement in Pumps :
I claim the combination of the platform, I, box, A, and plunger, B, provided with the tube, C, when the platform and plunger are connected by the levers, E, and uprights, G, H, arranged substantially as and for the purpose set forth.
[This invention relates to an improvement in that class of pumps in which the water is elevated by a direct pressure of the piston, instead of the pressure of the atmosphere. The object is to obtain a pump of the class specified which may be operated with facility, be simple in construction and capable, by manual operation, of elevating water to any desired height in dwelling houses for domestic use, or capable of elevating it in out-buildings or other localities, by means of the cattle or stock, the latter raising their own water.]

1,574.—S. G. Morrison, of Williamsport, Pa., for an Improved Mode of Cleaning and Feeding Grain to Buhr Mill Stones :
I claim the hopper, T, constructed and used as described, the cylinder, H, with its rubber, and the cylinder, K, in combination with the horizontal exhaust fan, and the feed regulating device.
1,575.—S. G. Morrison, of Williamsport, Pa., for an Improvement in Ventilating Mill Stones :
I claim the pipe, c, surrounding the curb and having openings, as shown and described, in connection with the fan blower, the parts being arranged and operated as set forth.
1,576.—Eli Mosher, of Flint, Mich., for an Improvement in Water Elevators :
I claim, first, The adjusting shaft, y, in combination with the hoisting apparatus described, all being arranged and operated in the manner set forth.
Second, I claim brake x, serrated plate, v, adjusting shaft, y, ears, a, a', stops, c, c', and hoisting apparatus, when all shall be arranged and operated in the manner and for the purpose specified.

1,577.—Mortimer Nelson, of New York City, for an Improvement in the Mode of Selecting Balls for Games of Chance :
I claim the tally board, g, arranged in the manner substantially as shown, in combination with the selecting wheel, a, and sets of numbered balls, as specified.

1,578.—W. P. Penn, of Belleville, Ill., for an Improvement in Thrashing Machines :
I claim, first, The arrangement of the concave, b, over the cylinder, a, in combination with two close separator belts and two beaters, as and for the purpose described.
Second, The two metallic deflectors, in combination with the two separate belts, the riddle shoe and the tailings thrasher, arranged in the manner described, for the purpose of depositing the grain upon the riddle in the shoe, so that the unthrashed heads will chiefly fall in the rear of the thrashed grain upon the apron on the back part of the riddle.
Third, The combination of transverse crank shaft and blower, with the riddle shoe constructed as described, by which the heads may be transmitted from the upper sieve to the tailings thrasher.
Fourth, The construction of the riddle shoe, as described, with an apron on the rear end in combination with the spout of the tailings thrasher, occasioning the delivery of the unthrashed heads to the tailings thrasher.
Fifth, The small cylinder, u, and concave, v, constituting a tailings thrasher, arranged as shown, with a spout, w, passing under the apron of the riddle shoe, and delivering the thrashed grain upon the lower sieve.
Sixth, The arrangement of the fan and the nozzle of the fan chest, the riddle shoe and tailings thrasher, in the manner described and for the purpose specified.
Seventh, The combination of the two thrashers and two separator belts and beaters, arranged as described, with the concave b, and springs, c, in the manner and for the purpose specified.

1,579.—C. T. Porter, of New York City, for an Improvement in Centrifugal Governors for Steam Engines :
I claim giving to the spring of a centrifugal governor an initial deflection of such amount that in every position of the balls, the radius of the circle described by them, and the distance through which the spring is deflected, shall bear a nearly constant ratio with each other when constructed and operating substantially in the manner and for the purposes shown and described.

1,580.—Abel Post, of Henrietta, N. Y., for an Improved Mode of Ventilating Hay, Grain, &c. :
I claim the method of forming ventilating shafts in mows and stacks of hay or grain, by the employment of movable tubes or boxes, G, G, which are gradually raised through and retained in the same during the act of building up, substantially as set forth.

1,581.—R. B. Pullan, of Cincinnati, Ohio, for an Improved Bestead Drapery Fastener or Suspender :
I claim the uniting of three or more arms radiating from a common center by means of hinges, B B B, substantially as and for the purposes described.

1,582.—John Robinson, of Andover, Mass., for an Improvement in Picker Motion for Looms :
I claim the above specified arrangement and application of the picker carrier, C, and the spring, b, with the pickerstaff and the shuttle box. I also claim the combination and arrangement of the tailpiece, c, and the shoulder or stop, e, with the carrier, C, the shuttle box and the pickerstaff, as described.
I also claim the combination and arrangement of the supporting rod,

h, the adjustable fulcrum supporter, g, the adjustable spring case, k, and the arm, m, the whole being applied to the pickerstaff and its spring as specified.

1,583.—Augustus Sanborn, of Glover, Vt., for an Improvement in Hillside Plows :
I claim the combination and arrangement of the auxiliary moldboard or wing, B, with the hillside plow, or its reversible moldboard, A, and to operate therewith substantially as specified.
I also claim the combination and arrangement of the bent arm, d, with the wing, B, and the reversible moldboard, the said arm being to enable a person to move the wing under circumstances and by means as described.

1,584.—J. S. Smith, of New York City, for an Improvement in Officers' Shoulder Straps :
I claim an officers' shoulder strap having its border and bars, or other devices, composed of plates of metal stamped or otherwise wrought to give their surfaces the form, and gilt or silvered and burnished, to give them the appearance of bullion embroidery.
[The shoulder straps worn by commissioned military and naval officers have heretofore always had the border and bars, or other devices denoting the officers' rank, embroidered upon them with bullion, which is very expensive, and soon becomes disfigured by constant wear; and owing to the little demand for this kind of work in ordinary times, and the consequently small number of persons capable of performing it, very much difficulty is found in meeting the demand at a time when, like the present, a large military force has to be clothed and equipped with the utmost expedition. This invention relates to a new article of manufacture to constitute a substitute for the embroidered bullion shoulder strap, which will be cheaper, more durable, capable of being renovated when tarnished or otherwise disfigured by wear, and which can be quickly made in large numbers whenever required, such new article of manufacture consisting in a shoulder strap having its border and bars or other devices composed of plates of metal stamped or otherwise wrought to give their surfaces the form of bullion embroidery, and gilt or plated and burnished to give them the desired appearance.]

1,585.—A. J. Stevens, of Aurora, Ill., for an Improved Slide Valve for Steam Engines :
I claim, first, The anti-compression valve, C, inclosed in a chest, D, secured to or formed upon the back of the main slide valve, and operating in combination with passages, C', in the latter valve, substantially as and for the purpose specified.
Second, The tube, I, serving at the same time as a means of connecting the counter-pressure plate, H, with the main valve, and as a means of communication between the anti-compression valve chest, D, and the atmosphere or exhaust pipe.
Third, Combining the anti-compression valve, C, with the main valve by means of a bell crank or elbow lever, E, connecting their stems as described, and having one of its arms furnished with a friction roller, k, or its equivalent, working between stationary curved guides, m, m, substantially as and for the purpose specified.

1,586.—Amasa Stone, of Philadelphia, Pa., for an Improved Apparatus for Inserting Stoppers in Bottles :
I claim making the piston or traverse rod which inserts the stopple in the bottle to revolve, and providing it with a crank and a device to couple it to the stopple to turn it, when it is inserted in the manner and for the purpose set forth.

1,587.—G. L. Turner, of New York City, for an Improved Car Spring :
I claim having the surface of the plate on which the rubber rests made inwardly descending from periphery to hub, as and for the purpose shown and described.
I also claim the arrangement of the guiding stop bars, b, b', and pins, e, f, with each other and with the guides, c, c', springs, C, beams, A, and draw bar, B, all as shown and described.
I also claim having the guiding stop bar, b, arranged to swing upon a central axis upon the draw bar, B, as shown and described.
[This invention relates to an improvement in that class of springs which are composed of india-rubber and metallic plates, and has for its object, first, the preventing of the rupturing of the rubber under compression, a contingency of frequent occurrence in this class of springs; and, second, the preventing of an undue compression of the rubber.]

1,588.—V. Weitz, of Cleveland, Ohio, for an Improvement in Pumps :
I claim the arrangement of one piston rod within and concentric with another hollow piston rod, when used in combination with a pump cylinder containing two pistons working opposite to each other, in the manner and for the purpose described.
Also, the relative arrangement of one piston rod working through and concentric with another hollow piston rod, and of a vibrating arc, chains and guide rollers, in the manner and for the purpose described.
Also, in combination with the preceding, the relative arrangement of a discharge tube perforated at the bottom end, an elastic reservoir and hose, as described.

1,589.—Jerome Wheelock, of Worcester, Mass., for an Improved Rotary Valve for Steam Engines :
I claim, first, The packing rings, M, when used in connection with the end chambers, C1 C2, and apertures, f, f', in the manner and for the purposes explained.
Second, The combination of the centering screw, J, and steel bushings, d, e, j, with the conical plug valve, F, substantially as and for the purposes set forth.

1,590.—J. M. Whittall, of Philadelphia, Pa., for an Improvement in Preserve Jars :
I claim, as a new and improved article of manufacture, a jar with a groove around its mouth, provided with an india-rubber ring and provided with a top beveled on the underside, as described, for the purposes set forth.

1,591.—Robert Crenzbaur, of Travis county, Texas, for an Improvement in Air Chambers :
I claim, first, The combination and arrangement of the diaphragmed air chamber, a, b, replenishing pump, F, jointed piston rod, s, t, and detached cap, d, substantially in the manner and for the purpose described.
Second, The manner, substantially as described, of constructing a condensing or replenishing pump of an air chamber, so that the pump cylinder, when the piston is within it, can be closed airtight by a lid or cover, d, for the purpose set forth.

1,592.—Andrew Dray, of Portland, Oregon, for an Improvement in Devices for Leveling Millstones :
I claim the band or hoop, A, in connection with the clamp formed of the plates, C, C', the latter being applied to the former, and provided with the cloth or other color-absorber or retainer, E, as and for the purpose set forth.
I further claim, in combination with the band or hoop, A, and plates, C, C', the spirit levels, B, applied to the band or hoop, as and for the purpose set forth.
[The object of this invention is to obtain a superior and efficient device that will supersede the ordinary workingstaff, proofstaff and spirit level, tools hitherto used for facing and leveling millstones.]

1,593.—Eli Duncan, of West Hilton, Ohio, for an Improved Fruit-drying Apparatus :
I claim the flues, d, d, the apertures, g, g, and valves, h, h, when used in connection with the fruit trays, G, G, all substantially arranged as and for the purpose set forth.

1,594.—John and Samuel Fahrney, of Washington county, Md., for an Improvement in Seed Drills :
We claim the set of levers, D E G, forming a flexible lever or system of levers, for the purpose of regulating the pressure upon the drill tubes or openers, substantially as set forth.
We also claim the arrangement of the weighted lever, I, and the lever, S, substantially in the manner and for the purposes specified.

1,595.—J. T. Foster, of Jersey City, N. J., for an Improvement in Harrows :
I claim suspending separately and loosely each one of the oscillating bars, E, so that it will adapt itself to the inequalities of the face, constructed and arranged substantially as described.

1,596.—R. J. Gatling, of Indianapolis, Ind., for an Improvement in Machines for Paving and Pulverizing the Soil :
I claim the shares or cutters lettered K, when made, constructed, a, arranged and operated substantially as shown and specified, for the purpose set forth.

1,597.—Charles Bush (assignor to himself and James Wygant), of Newburgh, N. Y., for an Improvement in Horse-hitching Posts :
I claim combining with a hitching post a casing, A, substantially as and for the purposes described.
[The object of this invention and improvement in horse-hitching posts is to combine with the post a barrel or casing, which, being sunk below the surface of the pavement, will form a guide for receiving the post, and keep it in a firm, steady position, and, at the same time, allow the entire post to be dropped down into it so that the top of the post will be level with the surface of the pavement; and when the post is not in immediate use, it can thus be put out of sight and out of the way.]

1,598.—Franklin Clark, of Charlotte, N. Y., assignor to himself and N. Coomes, of London, C. W., for an Improvement in Harvesting Machines :
I claim the combination of the internal serpentine groove, a, swinging arm, B, shaft, H, slotted bracket, G, and lever, E, operating in connection with the driving wheel, A, and the connecting rod, I, of the cutter, J, in the manner and for the purposes set forth.
[This invention consists in an improved mode of transmitting motion from the driving wheel to a reciprocating cutter in grain or grass harvesters. Its leading advantages are the avoidance of unnecessary friction, tremor and elasticity in the parts, and preventing liability to choke or clog.]

1,599.—Samuel Nowlan (assignor to Charles Mettam & Co.), of New York City, for an Improvement in Galvanic Soles :
I claim, as a new article of manufacture, the described galvanic boot or shoe sole, the same consisting of copper and zinc plates, united in separate relations to their contiguous sections by means of a flexible insulating strip or strips and eyellet fastening, substantially as described and for the purpose set forth.

1,600.—Joel Webster (assignor to himself and G. C. & T. H. Hotchkies), of Brooklyn, N. Y., for an Improved Journal Box :
I claim the employment of the sleeve, C, with one-half circular groove, a, in combination with the shafts, A, balls, D, and box, B, the latter being provided with one-half circular groove, b, and the whole being arranged, constructed and operating substantially as and for the purpose set forth.
[The object of this invention is to reduce the friction of a journal in its box, by making said journal unwholly and entirely on balls interposed between it and the box.]

RE-ISSUES.

93.—Lewis Moore, of Ypsilante, Mich., for an Improvement in Seeding Machines. Patented August 31, 1858 :
I claim, first, The zigzag-shaped strip, D, in combination with a seed hopper, substantially as and for the purpose set forth.
Second, The combination of the thin zigzag-shaped strip, D, reciprocating bar, C, and adjustable perforated gage plate, B b' c', and hopper, A, a, substantially as and for the purposes described.
Third, The combination of the gage plate, B, which has its ends, s, extending beyond the ends of the hopper, and has two different-sized sets of seed cells, b, c, with the stationary perforated bottom, A, and a vibrating seed-agitating bar, substantially as and for the purposes set forth.

94.—Christian Sharps, of Philadelphia, Pa., for an Improvement in Breech-loading Repeating Firearms. Patented Jan. 25, 1859 :
I claim, first, Exploding in succession a number of cartridges of the class described, by means of a projection caused to revolve by the movement of the hammer, when the said cartridges are so arranged, in respect to the projection, that the latter shall strike the edge only of each cartridge in succession, as set forth.
Second, The lever, M, with its projection, V, and the rod, N, in combination with the barrel block and its stock, when the whole is arranged as set forth, and when the lever, M, is so formed as to serve the purpose of a trigger guard.
Third, Causing the spent cartridges to be withdrawn from the barrel during the moving out of the latter, by means of a clip or clips, t, applied and operating substantially as set forth.

95.—Wm. N. Whiteley, of Springfield, Ohio, assignee of J. L. Hardeman, deceased, late of Arrow Rock, Ill., for an Improvement in Machines for Cutting Hemp. Patented August 20, 1850 :
I claim, first, In combination with the arm or finger bar, d, and main frame, o, when constructed substantially as described, the projecting point, f, constructed and connected as shown, for the purposes specified.
Second, In combination with the shafts, or their equivalents, and a cutting apparatus projecting out from one side of the main frame, the adjustable olevis, or its equivalent, arranged for shifting the point of draught, for the purpose specified, substantially as described.

96.—Wm. N. Whiteley, Jr., of Springfield, Ohio, assignee of J. L. Hardeman, deceased, late of Arrow Rock, Ill., for an Improvement in Machines for Cutting Hemp. Patented August 20, 1850 :
I claim, first, In combination with a cutting apparatus which projects out from one side of the main driving wheel frame, the sustaining rod, h, or its equivalent, arranged and operating substantially as described, for the purpose set forth.
Second, In combination with a cutting apparatus which projects out from one side of the main driving wheel frame, the sustaining rod, h, wedge, a, a, Fig. 4, and revolving cone, substantially as described, for discharging the cut grain in the manner specified.

97.—Wm. N. Whiteley, Jr., of Springfield, Ohio, assignee of J. L. Hardeman, deceased, late of Arrow Rock, Ill., for an Improvement in Machines for Cutting Hemp. Patented August 20, 1850 :
I claim, first, In combination with the main ground wheel frame and cutting apparatus of harvesting machines, the rack or comb which has no shaft passing through its center, and the ribs or fans of which have no connection with each other at their ends projecting over the cutting apparatus, substantially as described.
And, second, The use of the rack or comb as a substitute for the reel of the harvesting machine, the ends of the ribs of said rack which are projected out over the cutting apparatus having no connection with each other or with said apparatus, substantially as described.
And, third, In combination with the main ground wheel frame and cutting apparatus of harvesting machines, the latter of which projects out from one side of the former, the rack or comb, the ribs or fans of which move backward, or nearly in, a horizontal plane, instead of in the arc of a circle, substantially as described.

NOTE.—The above list of patents, issued on the 13th of June, numbers fifty-two. Out of these, twenty-four patents—almost ONE-HALF—were solicited through the Scientific American Patent Agency.
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