# Recent American and Foreign Patents.

### Improved Sprinkling Nozzle.

Biddle R. Moffett, Swedesborough, N. J.—This invention consists of a nozzle with spout, cut off under suitable inclination, to be closed by a tightly fitting packing at the end of a spring lever, which is partially opened or closed by the hand to throw out the required quantity of water.

### Improved Imitation Embroidery.

Henri François Timothée Mégrand, Paris, France, assignor of one half his right to Edward Vernon, same place.—A strip of any suitable fabric such as tape, is first impregnated with a strong gum, in order to impart the necessary stiffness. It is then cut on one or both edges, according to any desired pattern, by means of machinery already patented by this inventor. The strip is then passed through another machine, also patented by M. Mégrand, whereby it is covered with threads, which are wound by a rotating thread-carrying arm as it is drawn through the machine; or the strip may be covered by a machine, described in another patent of the inventor, in which rotating arms wind threads around the strip at the same time that shuttles carrying other threads form with the first named a kind of woven edge to the strip. In either case, the surfaces of the strip are so covered with threads as to resemble satin stitch when sewed to any fabric.

### Improved Curd Worker.

Willard C. Smith, Norway, N. Y.—To a shaft are attached wheels, to the rims of which are attached perforated sheet metal plates which form the curved wall of the cylinder. In the opposite sides of the latter are formed openings, which are closed by doors formed by attaching sheets of perforated sheet metal to suitable frames to stiffen them. By suitable construction the cylinder is revolved slowly, while a fan wheel is rotated rapidly so as to force a strong stream of air through the said cylinder. To wheels are secured longitudinal bars with cross pins to break up the curd as the cylinder revolves. The whey trough fits upon the lower side of the cylinder, and is so arranged as to be raised and lowered by turning the shaft. The upper edge of the end of the trough is notched directly above the spout, so that, should the trough overflow, the whey, as it runs over, may flow into the spoue, and thence into the receiving vessel.

### Improved Corn Planter.

Francis Bolduc, St. Anne, Ill., assignor to Joseph Dalpay, same place.—The axle carries a bevel gear wheel with it in its revolution, and thus gives motion to gear wheels, pins on which strike alternately the rear ends of the forks of a lever at each revolution, thus oscillating the same. The lever is pivoted to the frame, and its forward end is attached to the center of the slide bar, the ends of which enter the seed hoppers and connect with the dropping disks, operating them to drop the corn. The size of the dropping openings, and consequently the number of kernels dropped at a time, may be regulated at will. By the downward movement of a bar, the driver can determine the exact space passed over by the machine while the dropping device is out of gear. This enables him to throw the dropping device out of and into gear at such times as will cause the hills to be planted in perfect check row.

### Improved Hot Air Furnace.

David Boyd, New York city.—The products of combustion pass up through a dome space into a flue. The upper compartment is occupied by a concentric flue which communicates with the flue first mentioned at the center of the compartment, and also at the periphery or outside. A pivoted damper is located in the latter, between the inner and outer portion of a flue, to cause the products of combustion to take either a circuitous an dreturn course or a direct one, thus, in large measure, controlling the egree of heat radiated by the heater, and also the rapidity of combustion.

### Improved Game Board.

John Butt, Brooklyn, N. Y.—This is a toy ten pin alley, in which the ball ay be projected, by a spring plunger hung upon a pivot against pins placed upon a table, knocking down more or less of them according to the skill exercised in aiming.

### Improved Spike Extractor.

Michael Biglin, Pleasant Valley, Pa.—The spike hook is of hollow shape with a recess in the bottom part, the sides of the latter being tapered off toward the recess, so as to be placed under the projecting parts of the spike head and close around the shank. A curved hook-shaped rail plate fits over the top part of the rail, and forms the fulcrum, by which the lever turns when raising the spike. The straight upward motion of the hook draws the spike completely out of the cross tie without breaking or injuring it, so that it may readily be used again.

### Improvement in Treating Cotton Seed Oil for Paint.

Henry Goldmann, New York city.—This is a process of converting cotton seed oil into a drying oil by adding aqua regia, bisulphuret of carbon, and sulphate of baryta, and by heating and agitating the liquid compound.

### Improved Water Wheel.

Jeremiah J. Dodson, Greensborough, N. C.—This consists of a wheel made with buckets whose width increases from the central conical entrance part toward their middle sections, and diminishes toward the issuing ports the circumference. The water enters through diametrical chutes at the top, and an enlarged water space of the cap piece, to the conical center and the buckets. A considerable pressure of the water in the buckets is thereby produced, and the wheel rotated with increased utilization of the power of the water head.

### Improved Dust Catcher for Thrashing Machines.

Rudolph Z. Bader, Papillion, Neb.—This invention consists of side tubes or channels, which pass at both sides of the thrasher to the fan openings and are tightly attached thereto. A laterally connecting tube passes in front of the cylinder, and is connected with a detachable center piece having perforations at the bottom and side facing the cylinder, for the purpose of drawing in the dust produced by the feeding operation and the cylinder, and conducting the same, by the suction of the fans through the side tube, to the rear part of the thrasher.

### Improved Door Securer.

Augustus Rebetey, Newark, N. J.—A face plate is applied by an inner flange and the spring to the hasp, the door being open at the time. The door is then closed and a sliding bolt carried forward over the lock as far as a rear shoulder or projection of the same admits. This shoulder passes along the outside of the hasp to or nearly up to the rim of the same, and throws the bolt with wedge-like pressure on the lock, forming a strong, safety device to the same, by resisting any attempt to open the door from the outside.

### Improved Car Coupling.

William M. Underhill, Oconto, Wis.—Each drawhead has a hook above and a printed link below. Before coupling, the links are thrown back; and when the cars come together the concussion is sufficient to cause the links to swing forward and catch over the hooks. Spring pushers also arranged in the drawheads then force the cars apart, tightening the coupling.

### Improved Automatic Gate.

Jefferson Ellis, Detroit, Mich.—By suitable construction, when the platforms and cross bar, which form the base of the gate, are forced downward by the weight of a horse, carriage, or other object passing upon them, the downward movement of rack bars will turn gear wheels, and thus raise or open the gate, which gate will be held raised until the platforms are released from the depressing weight, when the elasticity of the springs underneath will raise the cross bar and platforms to their former position, closing the gate.

### Improved Compound for Cough Sirup.

Jesse G. Coombs, Millville, N. J.—This consists of tincture of lobelia, tincture of myrrh, tincture of capsicum, tincture of blood root, alcohol, oil of anise, and wintergreen, mixed with molasses.

### Improved Washing Machine.

Gille F. Lecrenier, Stockport, N. Y.—This washing machine is formed of a large fluted or corrugated roller, and a series of small rollers with a suitable arrangement of springs to exert the requisite pressure on the clothes as they pass between the rollers. Extension leaves are supported in horizontal or inclined position during the time the washing machine is in use, for conducting the clothes over the feed roller and leaf to the main and friction rollers without injuring and squeezing the fingers.

### Improved Draft Equalizer.

Henry H. Stevens, Riley, Ill.—To the rear side of the draft bar is bolted an iron bar, in which are formed holes to receive the draft, one of which is in the center line of the lever, and the others at different distances upon each side of said line, so that, by changing the point of draft attachment, an advantage of leverage may be given to one of the three horses or one pair of the four horses. To the under side of the end parts of the lever are pivoted two pairs of pulleys, and to the upper side of the middle part is pivoted a third pair of pulleys, upon the opposite sides of, and equally distant from, the center of the lever. There are three tugs, one of which is passed around each pair of pulleys, and to their ends are attached the traces. To the right hand ends of the right hand and center tugs are attached the traces of the first horse. The traces of the second horse are attached to the left hand ends of the said right hand and center tugs. The traces of the third horse are attached to the ends of the left hand tug; or the hitch may be reversed by commencing with the left hand horse. By this construction, by changing the point of draft attachment, the third horse may be made to draw more or less than one third of the load, while the two other horses will draw equally.

### Improved Lathe.

John H. Sinkinson, Newark, N. J.—In order to apply spool blanks automatically to the lathe, and thus save the labor of feeding them by hand, a pair of spring fingers are employed, connected to a collar, so as to slide out and back on said arm, and open and close. The collar has a spring to pull it back, and an arm for forcing it out by running over a cam on a disk. When the spring pulls the fingers back, it opens them; and when they are pushed out by the cam, they close on the blank and hold it. The spool blanks are delivered to the fingers from the vertical conductor, into which they descend from an inclined conductor, one being let fall into it each time the fingers come to their position under it. The arm, on which the carrying fingers are mounted, is mounted on a rock shaft, which is turned by a tappet, to swing the carrier down between the lathe centers to present the block to them; but just before the carrier is thus swung down, it is pushed outward along the arm by the cam, so as to extend it to reach the spool blank to the axis of the lathe, and also to allow the fingers to escape from the spool blank by sliding back on the arm after the blank is secured. The arm escapes from the cam the moment the spool blank is secured by the tail center and swings back to the place for receiving the blanks.

### Improved Car Brake.

Charles Mathews, Fredericksburgh, Ohio.—This invention consists in connecting the main or central brake lever of the series to the bottom of the car by a flexible medium, to adapt it to cooperate with the other parts of the brake mechanism, with minimum strain and friction. By the turning of the brake rod at either end of the car, the brakes or rubbers are simultaneously applied to the wheels by means of the symmetrical lever connections of the main lever and brake bars.

### Improved Oil Rock Preserver.

Henry A. Snow, St. Petersburgh, Pa., assignor to himself and Wesley Chambers, of same place.—This is an oil rock preserving tube, incasing the pump, whereby the water column below the influence of the suction will maintain the oil, or oil and water, as high as the top of the oil rock, or thereabout, to protect it from paraffin deposit. There is also a water packing, in combination with the oil rock preserving case, to prevent the flow of the oil to the pump under or through the lower portion of the case.

### Improved Combined Hand and Standard Mirror.

Abel M. Rontey, New York city.—This invention consists in the handle of a hand mirror, made in three or more parts, hinged, all or part, at their upper ends, to adapt them to be opened out to serve as a stand for the mirror. The upper ends of the two rear parts of the handle are hinged to each other by a hinge, so that their lower ends may be spread apart.

### Improved Churn.

Thomas H. Herndon, Verona, Miss.—A pail or can with closed top is simply made fast in each one of the hollow heads of a box, which is then rotated by clockwork mechanism, arranged in a suitable frame, until the butter comes.

### Improved Spring Back Rest for Vehicle Seat.

John L. Giessler, Clinton, Iowa.—This invention relates to novel means whereby the jar, shock, or jolt to the back of an individual, resulting from the sudden starts of horses in a vehicle, or from unevenness in the roads, may be completely taken up and neutralized. The invention consists in providing the seat of a vehicle with a pivoted back and spring arms.

### Improved Test Valve.

Edwin A. Wood, Utica, N. Y.—The nature of this invention consists in giving to the valve opening a definite area, as, for instance, a square inch, and loading the valve so that it will be equal in pounds to the pressure at which the steam or pressure gage is to be tested, with the parts so arranged that, when the slightest pressure greater than such weight operates on the valve, it will instantly rise; and if the gage to be tested is attached to the same pump, the index on the gage will, at the instant the gage rises, show whether the gage is correct or not.

### Improved Machine for Graining Pails.

Lyman Jennings, Winchendon, Mass.—This invention consists of tapered printing and inking rolls, and a roller block for holding the pails, etc., combined and arranged to apply two or more colors to a pail or tub. The type rollers have type portions and vacant spaces, and they are so geared by a wheel, which also turns the block supporting the pail, that the type of one roller prints in the spaces left by the spaces of the other roller. As the ink rollers have inks of different colors, the patterns are thus applied to the pails in alternate order, when two printing rollers are used. By the same plan, three or more printing rollers may be employed.

### Improved Neck Yoke.

Michel Krebs, Assumption, Ill.—This is an improved neck yoke, by which the wearing out of the breast straps, both on the flat side and the edges, is prevented, while it allows the breast straps to work freely, and obviates the jerking of the horse's neck and the injury frequently caused by it. The invention consists of a bracket attachment to the ends of the neck yoke, which supports a loose roller, and side washers for the ready adjustment of the breast strap.

### Improved Wash Boiler.

Joseph H. Jenkins and Elijah W. Jenkins, Liberty, Mo.—To the side edges of the cover of a square metal-lined wooden box, near its rear edge, are provided short rods, the lower ends of which are pivoted to the sides of the box. The pivoted rods thus serve as hinges to the cover, and also enable it to be slipped forward after being turned back, so that its rear edge may project over the boiler, to conduct the water draining from the clothes back into said boiler. The movement of the pivoted rods is limited by two stop pins. The cover, when turned back, is supported by an arm or bracket, detachably secured to the box.

### Improved Ball and Instep Stretcher for Boots, etc.

Frank A. Fay and Rudolph Spahn, Brooklyn, N. Y.—Two side pieces, arranged between a bottom piece and the instep piece, and pivoted at the heel, are provided with a tapered screw plug, a little in advance of the pivot for forcing them apart at the ball for stretching it. A divided nut is formed, half in each piece, for the plug, and the plug is provided with a stem and a handle for turning it. The instep stretcher is pivoted to the bottom piece at the toe, and it is connected behind the instep by a yoke to the nut of a hollow screw resting on the stand, which is supported on the bottom piece. This hollow screw surrounds the rod and allows it to extend down in the same axis to the plug, and it has a handle for turning it. This forms a stretcher both for the ball and instep of a shoe.

### Improved Hedge Trimmer.

Andrew J. Heavner, Pittsfield, Ill.—The rear end of the frame, being suspended, may be raised and lowered, as desired; and by operating a lever the forward part of the suspended frame may be raised and lowered as required, and, when adjusted, will be held securely in place. A sickle bar, which is made in two parts, meets at the angle of the cutter bar and works in bearings in the rearwardly projecting ends of some of the fingers, or in bars attached to the cutter bar. Each part of the sickle bar is vibrated by a zigzag wheel, which works in notches formed in the said sickle bar. The zigzag wheels are attached to shafts, which work in bearings in the rearwardly projecting ends of some of the fingers.

### Improved Running Gear.

Celestin Jackman, Georgia City, Mo.—This invention consists of a connection of a bolster, by a concave wheel, with a convex follower and a pivoted brace attached to the front axle and the pole. The king bolt forms the connection of axle and bolster, and may, in smaller wagons, be entirely dispensed with; while, in heavier wagons, the same forms, in connection with the sliding wheel and follower, perfect security of the king bolt coupling.

### Improved Bung Hole Lock.

Carl Faubel and Friedrich Knorr, New York city.—This invention consists of a lock plate attached to the bung hole, which is provided with a hinged hermetically sealing bung hole cover, to be locked by a suitable bolt, and retained in open position in a recess of the base plate by a band spring catching thereon. The device dispenses with the use of bungs and the injury to the barrel by driving them in.

### Improved Locomotive.

Thomas Benton Smith, Nashville, Tenn.—The object of this invention is to prevent the drive wheels of a locomotive from slipping upon the rails by using the weight of the train being drawn to give a downward pressure upon the said wheels, causing them to hug the rails, thus increasing the traction power of the locomotive. Pivoted bars extend along the sides of the locomotive, and connect with longitudinal bars passing under the tender and fastened to the first car. At the joints of the first mentioned bars are connected vertical rods which communicate with the piston of a steam cylinder situated above the locomotive. With this construction, when the engineer admits steam into the cylinder, the piston is forced upward, drawing the bars upward into an angular position. The weight of the train then tends to draw the bars downward into a horizontal position, which throws the weight of the train upon the drive wheels of the locomotive, causing them to hug the rails.

### Improved Roller Skate.

John Fenton, Indianapolis, Ind.—The wheels revolve in forked bracket pieces attached by loose rivet connections to hinged plates. Bed plates are provided on each side with wedge-shaped ears which extend down on each side of the skate. Rubber springs allow the foot piece to rock from side to side, while the wedge-shaped ears keep the brackets and wheels in position. On the weight being thrown upon either side, the skater is enabled to turn and change his course at will, and perform all the movements and evolutions on a smooth floor that he could on ice with the ordinary ice skates.

### Improved Metal Planing Machine.

Joseph L. Hewes, Newark, N. J.—A case is attached to the bed with a cap screwing on the front face, to enclose the worm gears to protect them from dust and to hold oil. There is a fast pulley and a loose one for the belt which gives a forward motion to the bed, and the same for the belt for giving the back motion. The shifters are alike in form, but reversed in position, and have a loop at one end, to receive the belt, and a notch at the other, which latter interlocks with angular projections on a slide, while the side faces of the slide act upon the sides of the levers at points opposite to the notches. In the slide are spaces which allow it always to move so as, by one projection, to shift one belt from a fast pulley before the face of the slide begins to shift the other belt from the loose pulley.

### Improved Grain Separator.

John T. Hicklin, Olympia, Wash. Ter.—There is a horizontally shaking shoe in which fingers are mounted for separating the straw, chaff, etc. Said fingers are pivoted at the upper end, and rests near the front end upon a bar, so as to be allowed to rise and fall. A bar attached to the under side of the fingers carries a couple of cams on its under side, which, in passing forward and backward over rollers on fixed bearings supported on the case, give to the fingers a quick up-and-down motion in addition to its horizontal motion with the shoe, which increases its efficiency in separating the light matters from the grain.

### Improved Curtain Fixture.

Charles E. Howard, Philadelphia, Pa.—This device is used in connection with curtains secured to rings which slide on wires. A cord passes through a pulley on the window case, thence up through a pulley secured at one end, and above the curtain wire, thence along the same around a second pulley at the opposite end, back and over the same route to the first pulley, where the ends may be secured together. One end of one curtain is attached by a clamping ring to one part of the cord, and the similar portion of the other curtain by like means to the other, so that, by pulling one or the other lower end of the cord, the curtain may be brought together or opened.

### Improved Milk Receptacle.

George C. Greenleaf, Moira, N. Y.—This invention relates to a means of cooling and preserving the sweetness of milk; and consists in a milk pan fastened to a frame with a second frame or tray divided into compartments by partitions. Said pan rests upon these partitions, and into the central compartment formed thereby is introduced cold water, which, after cooling the central portions of the milk, circulates, through holes in the partitions, around the edges of the pan, and is finally discharged through an outlet.

### Improved Molding Flask for Cement and Clay Pipes.

Joseph F. Andrews, Nashua, N. H.—The core is constructed of two parts, which are connected horizontally by a tapering socket joint, the lower or bottom part of the core having a large flange, which is secured to the bed plate of the mold, so as to support the same in an upright position. The cement for forming the pipes is filled in from the top, the end section being then placed on the top end and pressed on the material after the mold is completely filled. After the pipe is sufficiently dry the upper core section is drawn out by suitable hoisting mechanism, the lower core being drawn out in the opposite direction by hoisting end section, pipe, and flask, which produces, by the draft of the core sections from the center, a smooth core, of equal diameter along the full length of the mold. The top and bottom sections remain on the pipe until the ends are perfectly dry, when the outer flask and end sections are removed.

### Improved Machine for Facing Tiles.

George Barney, Edward P. Parsons, and Rufus L. Barney, Swanton, Vt.—The rubbing disk is cast in sections with a recess in the center, and the sections are locked together by dovetail notches and projections to prevent them from throwing off by centrifugal force. A vertically adjustable center piece is fixed on the shaft by a collar and a set screw, over the central recess, for shifting down as the disk wears down and to be kept level with it. A friction wheel on the upper part of the shaft turns another shaft by a wheel to revolve the tiles upon the disk, the tiles being confined in holders connected to the lower end of the shaft by bars. The shaft is supported in bearings in the arms of another shaft, on which it and the holders are swung from a platform or table, after receiving the tiles on the disk, and back again for applying the stones to the disk and removing them. The last mentioned shaft is stopped in a bearing in the short arm of a foot lever, so as to be lifted a little, to take the weight of the tiles off from the table and disk, so that they will swing free in turning forward and backward.

### Improved Car Coupling.

Leonard Fleckenstein, Creswell, assignor to himself and Martin Miller, Highville, Pa.—This invention consists of two spring bars with arrow heads, which interlock firmly with similar heads of the connecting coupling. The spring bars are pivoted to a standard at the bottom of the car and supported in a surrounding guide piece with vertical spring rod, having operating treadle and adjusting mechanism for uncoupling, raising, and lowering the coupling arrow heads. When the arrow heads are adjusted and centered correctly, they will couple automatically on the approach of the cars, and may be instantly and readily uncoupled by the action of the foot on the treadle, or, in case of accident, by a change of their relative position.

### Improved Automatic Fan.

Paul Magnus, New York city.—This consists of two fans attached like wings to a vertical spindle, which is rotated by suitable mechanism in a pedestal case. The apparatus moves without noise and is a convenient portable device for cooling the person.