

Recent American and Foreign Patents.

Improved Fire Escape Ladder.

David Sanford, Ashton, Ill.—This invention is an improvement upon the fire escape ladder for which same inventor obtained letters patent dated January 19, 1875. The lower section of the square hollow ladder is connected to the frame by means of a gimbal coupling. By means of chains and windlasses, the ladder may be raised and lowered, and there are devices for holding it in any desired position. Swiveled brace bars are added to give a firm support, and may be easily turned out of the way.

Improved Boot or Shoe.

Wm. Meyer and Henry Freiburg, Quincy, Ill.—The invention consists in a boot or shoe having a wooden heel and shank with attached continuous insole, the latter being provided with flaps bent over and secured to the under sides of the wooden shank.

Improved Bale Tie.

A. A. Szabo, Houston, Tex.—The invention consists in an improved bale tie block having a laterally open side slot from whose end proceeds a hole that extends obliquely through the block together with cramping grooves, whereby the band can be tightened on the bale with great facility and without liability to slip.

Improved Harvester Knife Sharpener.

G. V. Phelps, Newark, Ohio.—The invention consists in combining, with a rotary grinder, a traveling pin in front, a guide on table, a folding frame, and a laterally moving frame.

Improved Boring and Mortising Machine.

Henry Neumann, Central City, Col. Ter.—The invention consists of a sliding support for a tool slide, contrived to be shifted around on its sliding base, in combination with feed racks on both sides, whereby the mortising tool may be fed up to both ends of the mortise. The invention also consists in a portable boring and mortising machine, having rollers for shifting it along the timber easily, and provided with clamps and screws for attaching it to the latter.

Improved Chair Base.

William T. Doremus, New York city.—This chair base is so constructed that it may be slipped in a knock-down shape, and conveniently put together by the buyer. By means of suitable devices the legs will be held firmly in place, even when made of narrower timber than the breadth of the leg sockets. When a person leans back in the chair, he brings into play the elasticity of two rubber blocks, an arm, and a long bolt. Several holes are formed in the arm to receive the bolt, so that the springs may be adjusted nearer to or farther from the bolt, which is the axis of motion to adjust the tension or strength of the springs to the weight of the person who will ordinarily use the chair.

Improved Chair Base.

William T. Doremus, New York city.—This invention consists in plates made with a central socket to receive a pivot, and with angular half sockets to receive the legs, and provided with pins and screw holes for securing said legs in place. The legs are made in two parts, jointed to each other by tapering tongues and grooves. Hollow pins are cast in the angles of the half sockets of the plates, to adapt them to receive bolts for securing the legs in said sockets, and clamping the plates to each other and to the legs.

Improved Lamp.

Joshua B. Godwin, Washington, N. C.—This is a taper tube, placed in a lamp burner parallel to, and in connection with, the ordinary wick tube, so that a constant flame of diminished size may be maintained.

Improved Reversible Plow Point.

Marcus M. Bowers, Richmond, Va., assignor to himself and John P. Schemerhorn, of same place.—This is a detachable and reversible plow point, made with lips upon the upper and lower edges of the sides of its shank, whether said shank be made tapering or with parallel sides.

Improved Sash Holder.

Patrick Mullane, Davenport, Iowa.—In the edge of the sash is an angular notch, the lower inclined side of which forms a smaller angle with the horizontal line than the upper side, the inclination of the said lower side being not enough to bind a fastening roller against the casing when the window is being raised. The inclination of the upper side of the notch is such as to wedge the roller between it and the casing, so as to hold the sash fastened in any position. The weight of the roller is such that the said roller will rest upon the lower side of the notch while the sash is being raised and lowered. When the sash has been raised to the desired point, a slight pull upon a cord will raise the roller into the upper part of the notch.

Improved Hose Spanner.

John Burke, Newburyport, Mass.—The jaws of a hose spanner are provided with slots at some distance back from the ends thereof in order to be enabled to obtain a closer bite and to be adapted to hose of any size.

Improved Stove Pipe Joint.

George D. Umland, Osceola Mills, Wis.—The object of this invention is to render the pipes of stoves and other heating furnaces less dangerous than they now are, and to make them so that they cannot work or be pulled apart when once put together; and it consists in spiral beads or grooves made to fit each other, so that the two parts may be put together by revolving either one.

Improved Butter Preserving Firkin.

John Wilhelm, Orrville, Ohio.—This is a butter firkin so constructed as to adapt it for receiving brine or pickle, which, by surrounding the butter on all sides, will prevent its becoming rancid.

Improved Cooling Apparatus for Rooms.

William Braeunlich, New York city.—Within a tank is placed a coiled pipe, the upper end of which passes out through the upper part of the tank, and is led into the room to be cooled. The lower end of the pipe passes out through the bottom, and is connected with a force blast rotary blower. In the center of the tank and coil is placed a cylindrical tank. The space around the coil is then filled with any freezing mixture which will cool the current of air passing through the coil, so that when introduced into a room it may reduce the temperature of the same. The inner tank is provided with a cover, so that it may be used as a refrigerator.

Improved Trileaf Scales.

Lucius H. Crane and Albert A. Miner, Brattleboro', Vt.—This is an improvement in measuring scales of trihedral form, used in drawing and in dividing spaces into equal proportions; and it consists in making the leaves detachable, and so that they, or any one of them, may be drawn out from a common central core to elongate the scale.

Improved Car Coupling.

William H. Bodenhamer, Xenia, Kan.—This invention consists of the coupling pin, fixed in a guide above the drawhead, to work up and down, and also fixed in the end of a spring for lifting. The spring is extended rearward along the drawhead, to which it is connected. Under the spring, between the coupling pin and the point where the spring is fastened, is a setting and tripping dog on a crank shaft, by which the pin can be held up to allow the coupling link to enter, and then let fall, for self-coupling, when the link strikes the dog.

Improved Photographic Vignetting Machine.

Chester C. Merrill, Port Jervis, N. Y.—This consists in the interposition of a serrated vignette between the sitter and the camera or instrument, and, by means of a frame or other support, suspending the name of the sitter or other written or printed name or words either above or below the impression or print at the same distance from the camera as that occupied by the sitter.

Improved Gas Fitters' Lamp.

Joseph D. Galloway, Philadelphia, Pa.—This invention consists of a gas fitter's lamp that is provided with a hollow handle, forming the blowpipe, in connection with a flexible tube, swiveled thereto. The white lead box is screwed on the wick tube of the lamp, forming thereby the cap of the same.

Improved Apparatus for Measuring Distances.

Francis Weldon, Mominabad, Deccan, India.—This invention proceeds on the principle of first dividing into equal parts a straight line, and then selecting a point at right angles to that line and at such a distance as to enable the observer to see distinctly each of the divisions on the range line from beginning to end. All the divisions being thus distinctly visible, a scale is made by setting up, at the point of observation and at right angles to the range line, a bar having a pointer hinged to it. This limb, when aligned on each of the divisions of the rangeline in succession, will exhibit a distinct movement, the registering of which is effected by an indicator and guide rod. The instrument is used as follows: Place the bar on a tripod and a support or other convenient rest, and from it measure the length of base for which the instrument may have been graduated. At that distance set up a staff to mark the exact spot at which an angle of ninety degrees is subtended by the instrument and the object whose distance is to be ascertained. This can be done with an optical square, reflecting telescope, or other suitable instrument. On this staff direct the fore and back sights of the bar, align the fore and back sights of the limb on the distant object, and the distance indicated by the index rod on the graduated scale of the bar will be the distance of the object from the staff.

Improved Pianoforte Case.

Harrison J. Baker, Chicago, Ill.—This is a cover for the key board for square pianos, which is contrived to be opened independently of the top cover of the case. Instead of coming forward to the front of the case, it terminates back of the key board and at the music rest, so as to expose the key board cover and other front portions of the top of the piano to view.

Improved Feed Cutter.

Thomas Webb, Elyria, Ohio.—This invention has for its object to improve the construction of the feed cutter for which letters patent were granted to same inventor August 5, 1873, so as to make it run steadier and with less friction, to enable it to be readily adjusted to cut the feed finer or coarser, and to enable it to hold the material more firmly while being cut, and thus prevent any of the said material from being drawn out uncut. When the machine is at work, a hand nut is screwed up with only sufficient force to hold the feed gearing in gear, so that, should any hard substance get into the feed box and be fed forward, a lever can be instantly thrown down to throw the feed gearing out of gear, and thus prevent the machine from being broken.

Improved Lock for Doors.

William Unverzagt, Memphis, Tenn., assignor to himself and I. A. Chase, of same place.—The drawing out of a slide piece changes the position of all the tumblers, so that their recessed extensions form a bar to the tongue pieces of the bolt, and render the opening of the same impossible, except by setting all the tumblers to the exact position by means of a graduated key, which brings the tumbler extensions so far back that they enter on the openings of the bolt immediately between the tongues of the same.

Improved Machinery for Raising and Transferring Hides from Vats.

William Coupe, South Attleborough, Mass.—The machine may be run from one tier of vats to another, or to any desired place. Two cross heads are placed upon the inner sides of uprights, and are connected. They may be raised and lowered by turning screws. To each of the cross heads are attached chains and hooks of galvanized iron. The hooks receive hard wood cross bars, upon which rest the ends of other bars, to which the hides are attached by hooks in the ordinary way. In using the machine, the green hides are hooked upon the upper bars. The machine is then run to the vat in which the pack is to be placed, and the gearing is operated to turn the screws and lower the cross heads. As the lower bars enter the tanning liquor, the hooks are detached, leaving all the bars and the hides in the liquor. To transfer hides from one vat to another, the cross heads are lowered, the hooks are hooked upon the ends of the bars, and the cross heads are again raised, bringing with them the bars and the hides. The machine is then moved upon the stationary or temporary track to the other vat, and the bars and hides are lowered into it in the manner before described.

Improved Liquid Mixer.

John B. Meyers, New Orleans, La.—This invention consists of a main mixing vessel or vat, with a revolving paddle or stirrer wheel arranged therein, in connection with the strainer vessels through which the liquids pass before entering the vat. Large quantities of liquids may thus be handled easily and mixed in a short space of time, while being also strained from any coarser impurities on the passage.

Improved Double-Acting Pump.

Charles Gordon, Savannah, Ga.—Each stroke of the double piston forces the water in the cylinder section at one side of the same through a pipe with a check valve into a longitudinal connecting pipe, and to the delivery pipe, while the vacuum formed in the other cylinder section draws the water through the suction pipe with check valve into the same, to be forced on the return stroke of the piston to the delivery pipe, while the other section is filled with water through the opposite suction pipe.

Improved Damper Mechanism for Pianofortes.

Edward Porter, New York city.—The object of this invention is to enable the dampers of the bass strings of a piano to be raised and held suspended without raising the dampers from the other strings—that is, the strings of the upper part of the scale—by means of the ordinary damper or loud pedal mechanism. The invention consists in the strip attached to the forward upper part of the lifter rail, and extending beneath the forward part of the damper levers of two octaves, more or less, of the bass strings; and in the combination of the spring with the damper pedal spring, and with the strip attached to the lifter rail.

Improved Padlock.

Henry S. Lockwood, South Norwalk, Conn.—The wards of the key correspond to the recesses of tumblers, so that, on the introduction of the same, all the tumblers are engaged and thrown back. The spear-shaped heads of the same are thereby released from the projecting end of a projection of a sliding ring, admitting the sliding of the ring for opening the lock. When a false key is introduced, some of the tumblers are not released, while others are forced back with the opposite hooks of their spear heads against the hook-shaped end of a guard arm, so that the obstructing action of at least one tumbler prevents the opening of the lock. For attaching the lock, no key is necessary, as the mere turning of the ring produces the throwing of the bolt and the connection of the lock with the staple.

Improved Peg-Cutting Machine.

Jeremiah F. Smith, Keokuk, Iowa.—The cutters are applied at the outer ends of two forward extending arms, which spread in the shape of a V from their common rear part, one being straight, the other being curved in upward direction. The straight arm is used for cutting out the heel of the shoe, while the lower curved arm reciprocates forward and backward, and is passed easily along the sole edge for cutting the pegs, being guided along the upper by a protecting casing. The pegs are rapidly and neatly cut off by the reciprocating knives.

Improved Hot-Water Heating Apparatus.

Ernest F. Wackwitz, New York city.—The heating pipes in the heater are made flat and thin, so that they afford larger surface in proportion to capacity than round pipes do. By practical tests, it is found that the flat form gives equal size of heating and radiating surface, with less than half the quantity of water that is contained in round pipes giving the same surface. A cross pipe is arranged on the top of a vertical overflow pipe with both ends open, and inclined a little to the horizon. The highest end discharges into the air, while the lower one returns into a funnel, from which a pipe leads down in the heater nearly to the bottom, for returning the water which may be forced up out of the overflow pipe by expansion, while the steam will have freedom to escape.

Improved Burglar Alarm.

Samuel Searight, Pettisville, Ohio.—This invention consists of the combination of bells, revolver, and other alarm devices with suitable mechanisms that set them in motion when their cord connection with the doors and windows is stretched or interrupted.

Improved Dental Plugger.

Candidus Bilharz, Pittsylvania C. H., Va.—Upon one side of the inner surface of the cavity of the head is formed a cam, which, as a rod and head are revolved, strikes against the end of a lever and turns it upon its pivot so as to draw the holder and point inward. As the end of the lever drops from the shoulder of the cam, the holder and the point are thrown out to give the blow by the elasticity of a spring.

Improved Steam Engine.

William Read, St. Cloud, Minn.—This invention consists of movable cylinder heads, with apparatus to cause them to follow the piston until the crank has passed the centers sufficiently to be acted on with good effect. The two heads of the cylinder are connected together by rods outside of the cylinder, so that, as the one follows the piston, the other will be returned to the end of the cylinder, out of the way of the piston. They are worked by a cam on the crank shaft, and stops are provided to fall in behind and hold them against the back action of the steam, to relieve the cam by which they are operated from such pressure.

Improved Plow.

Oliver P. Sanford, Dadeville, Ala., assignor to himself and Jacob Henry, same place.—The rear end of the plow beam is curved downward. The plow standard is made of a bar of iron bent into U shape, the parallel arms of the bar being at such a distance apart as to receive the rear end of the beam between them. The pitch of plow and the position of the handles may be readily adjusted as required. The plow plate rests upon the forward side of the standard, and is secured in place by a bolt that passes through the said plow plate and through the space between the arms of the standard, below the rear end of the beam, so that the said plow plate may be raised and lowered by loosening the nut. The bolt also passes through a washer, the lower edge of which is bent inward to enter notches in the standard, to prevent the plow from slipping downward.

Improved Grain Tally.

Aden K. Munson, Marysville, Kan.—In the ends of a box are formed openings to receive the measures, which are made of a single piece of sheet metal. To the upper part of the ends of the box is secured the striker, the lower edge of which is notched to receive bars, and which is secured to the box by bolts that pass through transverse slots in the said striker, so that it may be conveniently lowered or raised to strike off the measure more or less closely, as may be desired.

Improved Neck-Tie Fastener.

James H. Harrington, Providence, R. I.—This invention consists of a pair of gripping fingers pivoted together, and contrived to clutch round the shank of a collar stud or the thread fastening a button, and hold thereon by a spring. The fingers are so attached to the tie that it may hang down below the fingers to afford access to them for readily connecting them to the button, and, after the fingers are attached, be shifted up in front, and be adjusted under the collar.

Improved Corn Planter and Cultivator.

Philip S. Starnes, Pink Hill, Mo., assignor to Darnall & Womacks, same place.—The dropping slides are pivoted to an arched bar, so that both the dropping slides may be operated at the same time. The arched bar is made in three parts, so that it can be expanded or contracted to correspond with the adjustment of the plow beams. In the middle part is pivoted another bar, also made in three parts, so that the bar can be expanded or contracted to correspond with the adjustment of the first bar. By this construction, the plow beams will be held in their proper relative positions, and at the same time may be moved laterally or vertically in guiding them.

Improved Door for Grain Cars.

Frederick J. Kimball, Philadelphia, Pa.—This invention consists in the arrangement of a swinging bar, a pivoted latch for locking its free end, and permanent or fixed vertical bars, whereby the door is secured and also adapted to be opened outward.

Improved Press.

Jacob P. Kefauver, Madisonville, Tenn.—This consists in the combination, with follower levers, of arms having pulleys, ropes, and a windlass having two drums. One set of ropes, for pulling up the levers to press the bale, work on one drum, and other ropes work on the other drum for pulling the follower back, the latter ropes being arranged on the pulleys.

Improved Windmill and Watering Apparatus.

Ezra Richardson and Porter Harkness, New Rutland, Ill.—The wheel has rigid vanes, and is mounted on a vertical shaft, which carries a tail vane at its upper end, which is free to turn on the shaft. This vane has arms; and on the outer end of the upper one another vane is pivoted, so as to be held up to the wind by a weight. When the vane is forced down, the wheel and the tail vane will be turned into the same plane, and the wheel will be held by the tail vane with its edge to the wind. The weight is raised by heavy winds to relieve and regulate the wheel. When a trough is empty, the weight will open the valve; and when it is filled, the weight of the water will close it, and thus supply the trough with water as it is required, and without waste.

Improved Window Frame.

Elias Roth, New Oxford, Pa.—This invention is an improvement upon the construction described in patent No. 157,224. In that case the side of the casing is recessed opposite the lower sash to receive a strip, which is removable. When the strip has been detached, the lower sash may be readily taken out, and after that the upper sash. The improvement relates to forming an opening in the casing at the upper end of the recess for the removable strip, whereby the removal of the latter is facilitated.