

Recent American and Foreign Patents.

Improved Hay and Cotton Press.

Evilee T. Armstrong, Baker City, Oregon.—The case cover is arranged to slide over the press head and under a pressure roller. The follower is also the front portion of a movable frame, which slides forward and backward in the case, and carries a windlass. The windlass moves the frame and the follower by winding ropes on it, the ropes being attached to the press head. It also turns the tying cord reel to wind the tying cords and take up the slack caused by the moving of the follower and the reel toward the press head, the cords being adjusted before the operation begins. The top of the press case is detachably connected to the follower in a groove, so that it can be taken off readily after the bale is pressed, for tying the cords and detaching the bale. When the cover is removed and the bale tied, the hooks are detached and the head turned down to allow the bale to be discharged, by pushing forward in the same direction that the follower is moved to press the bale. The frame and the windlass are then moved back, and the windlass turned backward to unwind the cords. The press, being arranged in this manner, is adapted for use as a portable machine, and is mounted on truck wheels.

Improved Weft Stop Mechanism for Looms.

Thomas Isherwood and William Nuttall, Westery, R. I., assignors to the National Fancy Woolen Loom-Stop Motion Company, of same place.—This invention relates to looms having one or more wires to be presented to the weft and comb it against the weft fork or latch to insure the proper action when the weft is present, and so prevent the slipper from being thrown off. It consists of a new arrangement of devices for causing the tripping of the slipper lever when the weft is not present, by which an apparatus arranged in front of a cloth roll is dispensed with.

Improved Mode of Compressing Cotton.

John T. Burr, New Orleans, La.—This invention consists in the combination with the plain faced platen and follower, belonging to a cotton press, of a suitable device pivoted to the sides of the follower, and adapted to hold the bale bands.

Improved Instrument for Measuring Distances.

James B. Thomas, Montgomery, Ohio.—This invention consists in a very simple and efficient instrument for measuring distances, the same being easily portable, and yet enabling the work to be performed with greater accuracy than usual and with much less labor.

Improved Pianoforte Sound Insulating Attachment.

William R. Miller, Baltimore, Md.—This invention consists in novel means for connecting a musical instrument with its legs so that the transmission of sound to the floor shall be arrested and effectually prevented.

Improved Bee Hive.

Thomas Robinson and George W. Robinson, Lumberport, W. Va.—This invention consists in a sectional bee hive that entirely dispenses with the usual honey frames, has a slatted base, slatted sections, and cover, provided with a ventilator and cap, so that the bees, through the slats and ventilator, have always a circulation of pure air, while the honey is readily taken without destroying the bees.

Improved Rail Drilling Device.

John S. Lane, Falls Village, Conn.—This invention consists in constructing the sliding head of a drill clamp for railroads so that, by reversing its position, the clamp may be applied to either the head or flange of the rail.

Improved Sash Fastener.

Samuel W. Couch, Cold Spring, N. Y.—A lever pawl has a notch formed in its upper end, to take hold of the teeth of a bar let into the sash, and is held forward against said toothed bar by a spring attached to the window frame. The pawl is operated by a key which is inserted through a notch in the inner side of the window casing. A bolt, placed in a case, is let into and secured to the top bar of the lower sash, and is made with a shoulder, against which rests the end of a coiled spring, the other end of which rests against the case to hold the bolt out. The forward end of the bolt enters a hole in the side bar of the upper sash. The bolt is pushed forward by the lever pawl, the upper end of which rests against its outer end.

Improved Car Coupling.

William Glendening, Van Wert, Ohio.—When the pin is raised ready for coupling, the same rests on a sliding top plate, and drops as soon as the spring acting drawhead strikes a projecting arm, by which the plate is carried back and the entering link coupled. On raising the pin, the weight carries the top plate back into the forward position, ready for coupling again.

Improved Feed Water Heater and Condenser.

Erik G. Frykberg, Gipsin's Point, Md.—This invention consists in separators and guides for causing the contact of the opposing elements of heat and cold as the substance to be heated or cooled passes along the separators and guides through the shell containing them. The shell is made in two parts, bolted together, one part having its end closed by a head bolted on the head of the other. The separator consists of a series of pipes fixed to each other at the ends by doubling the arc of different sizes and shorter than the shell. The guiding part consists of a series of hollow cases, bolted to both ends of the shell, arranged in the spaces between the different parts of the separator.

Improved Bottle Stopper.

Edward Clark, Newark, N. J.—This invention consists of a stopper for still liquors, made of a ball of cast metal, having a wire spring passing transversely through the upper portion, and a packing disk, of elastic material, with a hole in the middle, stretched over the lower portion, into an annular groove a little above the bottom. This is pressed down airtight into the nozzle by the spring being jointed at one end to a wire fastened to the neck of the bottle, and at the other end sprung under a hook of said wire. The wire has twisted projections on opposite sides of the neck, extending upward suitably for so connecting the spring. The ball is made of soft metal, and is cast on the spring.

Improved Means for Propelling Canal Boats.

Charles Howard, New York City.—A cable is placed on the bottom of the canal, near one side, extending the whole length of each level and firmly secured at each end. When the commerce is large, two such cables can be used, one at each side of the canal. These cables are kept in position around curves by spars shackled at the banks, and by other suitable means. The propelling wheel is placed on the side of the boat, near the bottom. The periphery is grooved to fit the chain cable, so that, when the wheel is turned while the chain is lying in its groove, the boat is propelled by the traction of the wheel on the chain. The wheel is also so constructed as to allow the boat to pass the spars and guy chains without hindrance. A binding wheel is used whenever great traction is needed. For steering, a regulator, to which the tug line is attached, is fastened on the side of the deck over the propelling wheel, so that the boat has perfect freedom to swing around on this center of power, and to be quite easily governed by her helm. There is also attached to said regulator a lever, by means of which the end to which the tug line is attached may be moved to right or left. This motion pulls the boat's head around to right or left when desired. In order to apply (to the side of a boat that is so wide as to fill the lock) a projecting wheel, the wheel is made to slide in automatically flush with the side of the boat while going through the locks, and to move back to its projecting position without any attention of the crew. The shaft is in two pieces. The inner piece is hollow, and contains a spring which pushes the outer piece outward and allows it to be pressed in by a shifting lever. To render it self-acting, when struck or pressed from the outside, the driving wheel is placed in a case. The wheel is secured to the shaft, but the case is loose thereon. On the periphery of this case is a cam entering a groove in the boat, thus keeping the case from turning while the wheel is in motion. Whenever the flange is pressed on its outer edge, by going into a lock or otherwise, the wedge-like form of the flange shoves back the case and wheel into the circular recess and flush with the outside of the boat.

Improved Medical Compound.

Shadrach Dixon, San Marcos, Tex.—This invention consists of a composition formed of alcohol, assafoetida, tincture of camphor, laudanum, tincture of yellow jessamine, oil of sassafras, and soft water. It is said to be a cure for cholera, cholera morbus, and kindred complaints, such as diarrhoea, flux, etc.

Improved Sewing Machine.

Edwin D. Smith, New York City, assignor to Howe Machine Company, of Bridgeport, Conn.—This is a graduated scale, applied to the adjusting device by which the head is adjusted for setting the needles of different sizes in proper relation to the shuttle race. The mark on the adjusting device corresponds to the size of the needle in the bar requiring to be adjusted to the race, and is so placed that, when it stands at the index point, the needle will be in its required position relative to the shuttle race.

Improved Sulky Plow.

William Starling, La Prairie, Ill.—One wheel may be adjusted to keep the machine level while the other wheel runs upon the surface of the ground, or in a furrow of a greater or less depth. The tongue may be readily altered as required, for the attachment of two or three horses. The plow may be adjusted to take more or less land, or to cut a wider or narrower furrow, as may be desired. The cutter may be adjusted to work deeper or shallower in the ground. A jointed lever enables the rider, with his foot, to hold or lock the forward end of the plow beam down or to raise it.

Improved Manufacture of Whips.

Dexter A very and Charles C. Pratt, Westfield, Mass.—A tapered mold is used, consisting of a tube of sheet metal somewhat larger than the complete body of the stock is to be, with overlapping edges not fastened together. The material of which the body of the stock is composed is placed into said tube, and the latter is then pressed to compress the material, which consists of the vegetable fibers built on the core, either in the form of loose fibers of jute, flax, or hemp, laid lengthwise, or a triangular piece of woven cloth rolled on and prepared with cement to stick the body together in a solid mass when dry.

Improved Mitering Machine.

Edwin Everett, Andover, N. Y.—A strip slides in grooves in the slide bars of the machine frame, and is moved to and fro by a screw and nut. To its forward part is attached a square block placed diagonally. To the forward corners of the frame are attached triangular blocks, the inner edges of which are exactly parallel with the forward edges of the square block. To the upper side of the square block are attached two parallel strips, parallel with, and equally distant from, the central line of the sliding strip. The strips thus form a deep groove directly above the central line of the device. The strips of molding are clamped, while being sawn, between the forward inclined edges of the square block and the inclined edges of the triangular blocks, by tightening the nut upon the screw, and when sawn, the two inclined ends of the molding are brought together and clamped in the same way. They are thus held securely, while being nailed, rendering the use of a vise unnecessary for this purpose.

Improved Churn.

George Shoup, Williamstown, Mo.—This invention consists in inclined plates, made convex upon their outer edges, concave upon their inner edges, and provided with holes and channels, fastened to a cross bar attached to the lower part of a dasher shaft. Upright flanges are attached to the upper ends of these plates. In using the churn, the latter are carried around, the lower end forward, which causes the milk to pass up the plates to the flanges, by which it is projected against the cover and sides of the churn, and thrown into violent agitation. A portion of the milk that falls back, and a part of that that is passing up the plates, pass through the holes in the said plate into the space behind them. The milk is also carried outward, so as to leave a clear space around the shaft down to the bottom of the churn through which space, when raised by the plate, it passes back to the bottom of the said churn, to be again raised.

Improved Lamp Trimmer.

Daniel B. Altenderfer and Joseph C. Wright, Monocacy Furnace, Pa.—This is an extension wick tube, to be temporarily applied to the permanent tube of a lamp, to extend it above the cone. The tube has its edges split for a short distance down from the top, so that the sides can be pressed together. The wick is raised through the tube so as to project above the top about as much as it is required to be cut off. It is firmly compressed between the sides to hold it for trimming by another shorter tube, with converging inside walls, so adjusted that, when put on the top of the extension tube and pressed down, it will spring the sides firmly on the wick, and thus hold it securely for trimming.

Improved Construction of Hulls of Ships, etc.

Carl G. K. Hennig, Paterson, N. J.—This invention is based on the principle that weight acting on an inclined plane promotes locomotion. The vessel is provided with a series of inclined projections below the water line, placed in such a manner as to bring the same in a position to receive the pressure of the waves, and thereby cause a forward motion, and so that these projections shall not add much to head water resistance.

Improved Car Coupling.

Bernard Almonte, Great Barrington, Mass.—This invention is a ball, by means of which the link is supported at any desired height, usually in a horizontal position, but higher or lower, according to the height of the opposing car. The ball is confined to the drawhead, and is adjusted to the desired height by means of the ratchet blocks on the two sides of the drawhead, with which hooks engage. When the link is supported, the cars will couple automatically. Previous to coupling, the pin is drawn up and is supported on a lip of the bumper. When the cars come together, the bumper is pushed back by the link, which allows the pin to drop. At the same time the ball is pushed back on pins, which disengage the hooks from the ratchet block, and thus allow the ratchet blocks to drop to nearly a vertical position. The ball, when disengaged from the ratchet blocks, is supported by the pins until it is again raised for the adjustment of the link.

Improved Stamp Case.

Paul J. Lefebvre, Opelousas, La.—This consists of a number of light frames, of the size of a sheet of postage stamps, hinged together at one side, and having cross bars crossing the interior space, at suitable intervals apart to hold a sheet of stamps between the frames. The object is to provide post office officials and others requiring to keep large quantities of stamps on hand with means of preserving them from damage by sticking together.

Improved Thrashing Machine.

William Christie, Hackensack, N. J.—This is an improvement on the flail thrasher for which letters patent No. 104,503 were granted to William Schnebley, June 21, 1870. To the framework of the machine is attached a floor or table, upon which the grain is laid to be thrashed, and which should have holes formed through it for the grain to escape through. To the frame, at such a distance above the floor as to give sufficient space for the passage of the unthrashed grain and the straw, are pivoted two rock shafts, to which are attached cranks to which power is applied. Spring bars, the rear ends of which are attached to the floor near its rear edge, are so formed as to stand up a little from the floor. Flails, which are rigid bars, are so formed as to strike squarely upon the grain as it lies upon spring bars, and are actuated to come down upon the straw with a whip blow. The grain may be thrashed when thin as well as when thick, and the straw comes straight and whole from the machine, and may be readily bound into bundles.

Improved Addressing Machine.

John Blocher, Franklin Grove, Ill.—After a rocking galley is set with addresses, it is inked and rocked over a stiff strip of cardboard two inches wide and twenty-four inches long. This operation prints the addresses on the gage strip. This strip and galley are then numbered with a corresponding number, and always used in connection with each other. In mailing, the gage strip is slipped into grooves on the side of the mailing board, the papers to be addressed folded into quarters and placed on the board, and the top edge of each paper placed to a name on the gage strip. This leaves about half an inch of the top margin of each paper exposed. The galley corresponding in number with the gage strip used is then taken and rocked over an inking cushion, then placed on the papers and rocked forward over the papers, and the operation is finished. About six seconds is all the time required to ink a galley and address each fifty papers.

Improved Carriage Curtain Eyelet.

William H. Stickle, Miamisburg, O.—In this invention an apertured elastic disk is secured between annular metal plates applied to opposite sides of the curtain. The annular metal plates are secured by staples which pierce the curtain so that by the elastic washers moisture is perfectly excluded.

Electro-Magnetic Governor for Steam Drying Apparatus.

Julien M. Bradford, Portland, Me., assignor of one third his right to Zebulon K. Harmon, same place.—This invention comprises an engine for working a cut-off valve and a throttle valve of steam heating apparatus with automatic apparatus for opening and closing the valves, also for reversing and stopping and starting the engine, controlled by electric currents. The latter are closed and broken by the variations of the heat through the medium of thermometers in the heated room, the arrangement being adapted to ensure a uniform temperature of any required degree.

Improved Rotary Engine.

August Dietz, New York City.—This invention relates to improvements in rotary engines with variable cut-off, and consists of a cylindrical casing with radial spring slides which are suitably packed and acted upon by the elliptic piston, rotating tightly therein by means of combined spring and steam-packed strips. The piston is keyed to the hollow shaft through which the steam enters, and provided with variable cut-off and distribution valve at one side, and with an exhaust valve at the opposite side, both being closely pressed against the cylinder heads by spring and steam packing devices. The ports of this distribution valve conduct the steam through entrance ports of one cylinder head into the interior of the engine, where it causes the rotation of the piston in connection with the spring slides exhausting the steam simultaneously therewith by perforations of the piston at opposite sides from the parts acted upon, and is then conducted through the exhaust valve and ports of the opposite cylinder head to the exhaust pipe.

Improved Car Mover.

Noah A. Lewis and Eli Overton, Utica, N. Y.—A lever and stud are hinged together at the fulcrum. When the implement is applied to the car the stud is inclined forward from the stem, while the long end of the lever is raised from the horizontal to any desired angle. A jaw projects from the underside of the lever, to which is affixed a point. On the end of the lever is a fixed point. When the implement is applied for moving a car, the fixed point is forced into the wood and holds fast, while the pressure is on and the car is moving, at which time the other point attaches itself and assists in holding the mover and prevents it dropping when the operator is getting a new point of leverage with the stud.

Improved Ash Sifter.

Alfred A. Liscomb, Jersey City, N. J.—This invention consists in a sifting drum rotating in a box. The latter has a stationary wing plate connecting with the side tube of the drum, and an inclined wing plate pivoted near the circumference of the drum. This allows the passage and sifting of the ashes when the drum is turned in one direction, while producing upon reversing the direction of rotation, contact with the stationary wing plate. The unburnt sifted coal particles are then conveyed along the latter to the side tube, whence they issue to the outside by an inclined connecting perforation of the casing.

Improved Furniture Spring.

William T. Doremus, New York City.—This is an improved spring for furniture and other uses, so constructed as to be elastic under a heavy or light weight. It will take the lighter springs out of pressure before they are compressed enough to injure their elasticity, and may be adjusted to regulate the elasticity, as maybe required. There is a tubular rubber block the base of which rests upon a rigid disk, upon which, around the base of the rubber, is formed a tubular case. A nut in the latter is screwed up so as to regulate the compression of the rubber. The disk has a tubular projection to enter the rubber block, and it rests upon the upper end of another tubular rubber block similarly entering the same. A rigid disk forms a ring seat for the said rubber tube, and in turn rests upon another rubber block. The lower end of the latter rests upon another rigid disk which serves the same purpose as the disks before mentioned. A guide bolt may pass up through the center of the spring, to connect the two objects between which the spring is placed.

Improved Combined Harvester and Thrasher.

Alfred Collins and Arad Maynard, Janesville, Iowa.—The concave of the thrasher is secured to the frames so as to be adjusted as required. The concave is provided with spikes, and its forward edge is grooved longitudinally to receive a rod which is provided with fingers to raise bent or broken stalks, and bring their heads into proper position to be operated upon. The thrashing cylinder consists of a series of radial wings, to the edges of which are attached teeth bent backward, to prevent thrashing the grain before it has come upon the concave. The wings of the wheel are made wide to cause them to act as the wings of a fan wheel for causing a blast for clearing the grain. The wheel is partially covered with a hinged lid to enable the blast to be more readily controlled. The rear part of the wheel is enclosed by a box, the back board of which may be adjusted also for controlling the blast. The thrashed grain and the chaff pass from the concave to a screen which is jarred by a lever actuated by the drive wheel.

Improved Pianoforte Attachment.

M. Waldo Hanchett, Syracuse, N. Y.—This is a mechanical attachment suited to all pianofortes, whereby it is designed to enable a performer to sustain or permit the continuance of the sound of a single one, two, or more strings or unisons after a key or keys by which the vibrations were produced have returned to their place of rest. The attachment consists of a bar suspended near the ends of the dampers, so as to swing forward and from them, and having a series of any desired number of tongues attached to it. These tongues project toward the dampers, and are placed the same distances apart as the latter, the bar being connected with a pedal, so that after the dampers have been raised they may be caught by the tongues and held off the strings after the keys go back. This is effected by causing the bar to swing forward by the pedal and swing the tongues under the dampers. When the bar is allowed to swing back, the tongues will withdraw, and leave the dampers unaffected by them. The tongues are also hinged to the bar so as to swing upward and allow the dampers to rise and fall under them without obstruction, while holding other dampers up. By this improvement, the sound produced from a single unison of the pianoforte may be prolonged after the key has returned to its normal position, and the key by which the sound is thus prolonged may be struck repeatedly without interrupting the tone; thus rendering possible a smooth crescendo of the same tone similar to that produced by the swell of an organ. The sustaining of the sound of a single unison, we are assured by the inventor, interferes in no way with the use of the remaining tones of the instrument, which may be played with or without the damper pedal, producing the same effect as before. The ordinary damper pedal may be used in connection with the sostenuto pedal, producing the same effects as at present upon all the unisons of the instrument, except such as are affected by the sostenuto pedal, which will continue independent of the damper pedal. By the application of the sostenuto attachment, the piano is claimed to approximate the advantages of the pedal brass of an organ and the pianist is enabled to sustain a fundamental tone, while both hands and the damper or harp pedal are still at liberty to produce melodies changing harmonies, legato and staccato passages without the necessity as at present, of mixing the various tones into unintelligible discords. We hope to illustrate, by engravings, at some future time, this novel invention.

Improved Process for Treating Copper Ores.

Francis Zwickl, Jersey City, N. J.—This invention is an improved process by which argentiferous, auriferous, or other copper ores may be treated either independently or in auxiliary manner to other processes for the extraction of gold, silver, and copper therefrom. It consists of a combination of operations, namely, smelting of the ores in a reverberatory furnace to a mat, with admixture of sulphate of soda, for the purpose of disintegration; oxidation of the disintegrated mat in a furnace similar to a common roast furnace, suitably adapted to prevent the heat from rising above the desired degree; repetition of this oxidation after the first is finished, and the product of it has been soaked with water; dissolving the sulphate of copper formed during said oxidation in a tank with water, and, after removal of the solution, dissolving the copper still left in residue with a solution of sulphate of iron, this latter process to be repeated as long as any copper is left in the residue, and the copper in solution to be precipitated with iron. The residue, containing peroxide of iron and all the gold and silver, being much reduced in bulk, can be treated by any known method for the extraction of the gold and silver, or used as flux for smelting the ores, and to accumulate the bullion as far as desired.