

Recent American and Foreign Patents.

Improved India Rubber Horseshoe.

Amzi J. Dean, Newark, N. J., assignor to himself and George D. Dean, same place.—This is a rubber horseshoe having an upper extending to the ankle, and drawn in on the rear part to overlap the heel. A full description with illustrations will be found on page 166 of this issue of the SCIENTIFIC AMERICAN.

Improved Horse Collar and Hames.

Martin Hubbell, Mount Kisco, N. Y.—In this device the hames are pivoted adjustably at the top, and are connected at the lower part by a pivoted adjustable latch, which slides, with its forked and notched end, over a guide bolt, and is locked thereon by a spring pawl.

Improved Machinery for Dressing and Finishing Hides and Skins.

John Pullman and John R. Edmonds, Womersley, England.—This invention relates to improved machinery for "fritzing," "fleshing," and "scudding" hides and skins, and for staking and grounding leather. The machine consists of a suitable frame, in which is mounted a shaft, on which a long knife or a rubber is carried. Motion is imparted to the shaft, and to the knife or rubber which it carries, from a main shaft suitably disposed. The skin is laid upon a travelling apron, by which it is fed between a pair of rollers in proximity to the knife shaft and parallel therewith, the skin, after having passed through these rollers, being held by the operator against the knife or rubbers. Means are provided to stretch the skin and keep it flat when on the apron, and prevent it falling into folds or wrinkles in passing between the rollers.

Improved Means for Adjusting Knitting Burrs.

Geo. Campbell, Cohoes, N. Y.—This invention consists of an arm which supports the rotating loop, or stitch adjusting or discharging burr, of a knitting machine. It is fitted on a vertical screw stud of the permanent arm, and has a thumb nut below and a jam nut above, together with a steady pin in one of the arms working freely through the other, whereby the vertical adjustment of the burr relatively to the needles, and to the other burrs, can be easily and accurately effected, and the arms be rigidly and permanently fastened.

Improved Button Hole Bouquet Holder.

J. Albert Kimball, New York city.—A hooked plate is attached to the under side of the lapel of the coat, just below the button hole, through which the stems of the flowers are to be passed. An elastic strap is then passed around their stems, and secured by a loop passed over a projecting hook on the plate.

Improved Blacksmith's Tongs.

Daniel Kunkel, Oregon, Mo.—This is an improved instrument for use for a drill extractor, a blacksmith's tongs, a vise, a wrench, and for various other uses. It consists in a pair of pivoted jaws, arranged in suitable frames with a screw shaft, and so combined that the jaws are worked by moving the shaft out or in.

Improved Hog Elevator.

William Kelly, Susquehanna Township, Dauphin county, Pa.—Two posts are set in the ground and cross bars are passed through mortises in them. The upper sides of the cross bars receive longitudinal bars, a pair of which is connected with each pair of cross bars. The longitudinal bars are notched upon their upper edges, to receive the gambrels when suspending the carcasses. The upper ends of the posts are connected by a beam, in which is a pulley, around which passes a rope; in one end is an eye, to receive a hook attached to the gambrel. The rope is passed around a bar, which is pivoted in a mortise in the lower part of the post. With this construction, by raising the outer end of the bar, the end of the rope runs down, so that its eye may be placed upon the hook. Then, by lowering the free end of the bar, the animal will be raised, so that the gambrel may be turned to rest upon the bars.

Improved Cotton Press.

William H. Walker, Charleston, S. C.—The follower works up against a stationary press head, and is connected by rods with the crosshead. The under side of the latter is cam-shaped, and rests on friction rollers in the upper ends of segmental wheels, turning on axes, and having the power applied at the lower end for working them. Slotted heads connect with the wheels by pins in the slots, the heads being worked by an engine, to the rod of which they are connected, and the slots are curved so that the diminution of the throw of the head, which takes place as the wheels approach the vertical lines of the pivots, is to some extent compensated by the pivots being forced up said curves.

Improved Fluting Iron.

Charles Anderson, Boone, Iowa.—The upper surface of the bed piece is an arc of a circle, with grooves therein of any desired form. The lower side of the upper portion of the device is grooved to correspond. In this upper portion is a cavity to receive a heated flat iron, so as to allow the heat from the flat iron to be transmitted to the fluter indirectly through a stratum of air, and thus to be tempered.

Improved Wind Wheel.

George Candee, Paddy's Run, Ohio.—The wings consist of a frame and panel, the said panel fitting snugly into said frame. The ends of the panel are pivoted eccentrically to the ends of the frame. A weight of sufficient size is arranged to hold the panel in line with the frame, under ordinary circumstances; but should the wind greatly increase in force, the panel will turn upon its axis, presenting its edge to the wind, the weight bringing it back to its place as soon as the force of the wind abates. The wings are held against the wind by another weight, and mechanism is provided so that, should the wind increase in force, stop blocks will be pushed back, raising the weight. The wheel will thus be stopped by an excess of wind, and will start again automatically as the wind abates. There is also a vane with suitable wings, adapted to serve as a governor, and so arranged that, as the wind increases in force, the outer ends of the wings are forced back, which raises a belt shifter and prevents the machine from being driven any faster by the increased velocity of the wind wheel. Should the wind still increase in force, the other devices are operated to throw the wings of the wind wheel out of the wind. As the force of the wind abates, the belt shifter drops downward, which increases the relative velocity of the machinery.

Improved Car Brake.

Stephen C. Taft, Franklin, Mass.—Triangular brackets are attached to the truck frame, the angles of which are down, and directly below one of the axles. There is a friction wheel on a shaft, the latter entering a bent lever attached to one bracket. This shaft is free to revolve, one end in the bent lever and the other in the bracket. A chain wheel is fixed on another shaft, which shaft revolves in the brackets. A loose friction chain passes around the chain wheel attached to the lever. A rod is attached to an arm on the chain wheel shaft, which extends to the locomotive, and is connected with a windlass shaft and wheel, which is under the control of the engineer, by means of which he can apply the brakes to all the cars in the train. When the rod is drawn toward the locomotive, the friction chain is tightened on the wheel, which draws on the bent lever. One end of the friction wheel shaft being confined in this lever, this movement will raise the friction wheel, and cause it to come in contact with the axle. The axle being revolved rapidly will cause the friction wheel and shaft to revolve, winding up chains, one of which connects with the brakes of the cars in front, and the other with the brakes of the rear cars. As the wheels cease to revolve, the friction wheel will cease to act, and the cars will stop. The back motion of the rock shaft is produced by a spiral spring.

Improved Treadle.

James W. Staples, Biddeford, Me.—The treadle rod is pivoted to the sewing machine table, and hangs down to a point a little above the frame connecting rod, where it is provided with a foot piece. A bell crank is pivoted at its angle on the connecting rod, and connected by one arm by means of a rod to the crank, while the other arm is attached to the treadle rod. The driving pulley turns in a plane at right angles to that in which the treadle rod swings, and a link is employed for connecting the bell crank with the rod attached to the crank, to allow the former to vibrate in two directions.

Improved Devices for Preventing Children from Falling Out of Windows.

Gabriel Konigsberg, New York city.—Horizontal rods are placed across the lower part of the window, and supported in wooden blocks. Each block has a central perforation for the rod, which is cut exactly to the width of the window, the blocks being placed between the sash-guiding strips. A sufficient number of blocks and rods are arranged in the window to prevent any possibility of accident or danger to the children looking out. The uppermost block is secured, so as to bind firmly the whole series of blocks together. By detaching the fastening device or sash, the uppermost blocks may be raised and carried on the rod toward the center, so that the upper rod may be readily taken out of the sash strips, and then the other rods with their blocks raised from their connecting blocks and detached from the window.

Improved Call Bell.

Samuel G. Levey, New York city.—This invention consists of a movable rack for holding advertising cards or bills, connected with a call bell for hotels and the like places, and provided with mechanism for moving it, so arranged that each time the bell rod is operated for sounding the bell it will cause the rack to shift the breadth of one or more of the cards or bills, to change them about and present different ones to view, in a manner calculated to attract attention.

Improved Telegraph Insulator.

Chas. L. Le Baron, Pensacola, Fla.—This invention consists in a peculiar construction and mode of fastening telegraph wire insulators, whereby security and facility of appliance may both characterize the same device.

Improved Cooking Lamp.

George P. Houston, Washington, D. C.—This invention relates to and consists in means by which alcohol may be utilized as fuel upon excursions, hunting, or other expeditions, and in localities or seasons where but little fire is desired. This is accomplished by means of a folding stand, constructed to receive the cooking vessel and heater in a novel and convenient manner.

Improved Tool for Charging Piles of Railroad Rails and other Iron into Furnaces.

Smith W. Kimble, Springfield, Ill.—This invention relates to and consists in means for charging railroad rail piles into heating furnaces with convenience, facility, and economy of human labor.

Improved Piano Sound Insulating Attachment.

Wm. R. Miller, Baltimore, Md.—This invention relates to a novel mode of applying a non-conductor of sound to a piano, so as to prevent its diversion and partial escape by way of the legs.

Improved Pipe Mold Drying and Casting Pit.

Benj. S. Benson, Baltimore, Md.—This improvement relates to the floor of the oven and casting pit, and consists in providing the plates or sections which compose the same, with a series of apertures, peculiarly arranged for the upward passage of the hot blast to act on the pipe mold, both interiorly and exteriorly.

Improvement in Metal Pipe Manufacture.

Benj. J. Benson, Baltimore, Md.—The object of this invention is to provide an improved pit or oven for drying pipe molds and casting pipe therein, together with improved appliances or apparatus connected therewith for hoisting, carrying, adjusting, supporting, and locking or fastening the mold flasks.

Improved Combined Looking Glass and Photographic Frame.

Isaac N. Shatto, Newport, Pa.—An inner frame is hinged to the outer frame. The hinged frame has the glass inserted in it, and is provided with a back, which is covered with velvet. The main frame is also provided with a back and with a glass, between which and the back photographs or records are to be placed. By this construction, the device, when closed, presents no appearance of being anything but an ordinary looking glass.

Improved Mill Burr Dress.

John D. Miner, Moffett's Creek, Va.—This invention relates to means whereby a mill burr may be dressed so as to prepare the grain for flouring at the eye of the stone, and thus save a large percentage of the power ordinarily required under like circumstances, as well as permit the mill to be operated by twenty-five per cent less water.

Improved Cream Suet Compound.

John Hobbs, Boston, Mass.—This invention consists in a novel and valuable process, by which tallow may be so prepared and intermixed with partially churned cream that the product will subsequently granulate and assume a waxy appearance. It will then have the odor and flavor of cream, while it possesses the property of remaining solid up to a temperature of 90°, and of allowing a clean cut at all times.

Improved Low Water Indicator.

Charles N. Myers, Chicago, Ill.—A float controls the valve by which the whistle or alarm is sounded when the water becomes too low. The valve rod is extended horizontally, and supported in a socket formed in one side of the float case, and in the fork of an arm of an elbow lever connected with the float. This forked arm moves or slides the valve rod, when the float rises or falls, by engaging fixed collars on projections on the rod. The rod is also adapted for application of a device for turning it and grinding the valve to its seat.

Improved Surface Planer.

William C. Margedant, Hamilton, Ohio.—This invention relates to surface planers, and consists in causing the apron, which prevents the collection of shavings on the rollers, and the bonnet, which catches the shavings and throws them on the apron, to serve together as an upper table.

Improved Vehicle Rein Guard.

William Levy and William H. Christian, Ashland, Pa.—This invention relates to harness, and consists in means whereby the entanglement of driving reins with swingle trees, and many other accidents, may be effectually prevented.

Improved Machine for Molding Pipe Molds.

Benjamin S. Benson, Baltimore, Md.—This invention is an improvement on the machine for preparing the molds for casting metallic pipes, for which letters patent No. 33,178 were granted, September 3, 1861. The improvement relates to an adjustable counterbalance for the flask holder, whereby an equilibrium is maintained during the vertical movement of the latter; also, to the arrangement of radial revolving fingers in the sand hopper, to act in regular succession, to throw a constant and equable stream of sand into the flask; also, to a revolving cone for equalizing the distribution of sand within the hopper; also, in a spring balance or weighing attachment for determining, in advance, the weight of the molds.

Improved Fertilizing Compound.

Benjamin G. Carter, Oatlands, Va.—This invention relates to fertilizing compounds that are intended to take the place of stable manure, yielding to the plant all those elements of its composition in which the soil is liable to be deficient. It contains, in a cheap and easily transportable form, all the ingredients which give value to stable manure.

Improved Combined Ventilator and Chimney.

Walter R. Hinkley and Charles J. Dibrell, Dallas, Tex.—This invention consists of an iron-lined inner flue, secured within an outer casing with suitable bottom and top perforations for establishing a ventilating air current around the flue. The casing is securely attached to the ceiling and roof, and supported on suitable hangers or straps. A detachable extension flue is set into the upper end of the inner flue, and provided with rain-protecting caps or sheds at its top and above the upper perforated end of the ventilator.

Improved Hot Air Register.

Edward A. Tuttle, New York city.—This invention consists of the moving device for operating the fans of a register. It forms part of the register front or top, and is fitted, arranged, and secured in the stationary part by lugs in front of and behind flanges on which the movable part slides to work the fans. The said lugs and the flanges are so contrived that the parts subject to wear are hidden from view. The said moving part is connected with the fans, so that, when all parts are adjusted in place, its escape through the notches, by which the lugs going behind the flanges are introduced, is prevented.

Improved Lid for Closing Gas Retorts, Sugar Filters, etc.

James Dunseith, New York city.—This is an improved lid for gas retorts, sugar filters, and other vessels that require to be closed airtight, and in such a way that they can be readily opened and closed, as required. By suitable construction, should tar, coke, or other substance get upon and adhere to the mouth of the vessel, a few turns of the lid back and forth will bring said lid to its seat, and the said substance, instead of doing any harm, will be a positive benefit by serving as a seat to the lid. Afterward by turning the lid in the direction to cause the rollers to roll up inclined beads, the lid will be forced firmly into its seat. This construction also enables the lid, should it become worn, to be readily ground to its seat, so as to always shut airtight.

Improved Corn Planter.

James W. Simpson, Dry Ridge, Ky.—The wheels carry the axle with them in their revolution when turning forward, and allow the axle to be stationary when the wheels are turned backward. To the axle are attached cams, which, as the said axle revolves, strike against a bar and push it forward. In the upper arms of bars, connected with the bar last mentioned, are formed holes to contain seed enough for a hill, and in such positions as to enter the hoppers to receive the seed as the bar moves back, and to pass out of said hoppers, and over holes in the platform as the bar moves forward. As the seed drops through the holes in the platform, it is received upon lower arms of the second bars, and held until the first bar moves back, when it drops to the ground. The driver, from his seat, by operating a lever, can raise the furrowing plows from the ground when desired. The covering plows are placed a little in the rear, and at one side, so as to fill the furrows opened and cover the seed. The covering plows may be raised from the ground with and by the furrowing plows. Small V-shaped barrows are drawn in the rear of the covering plows. The same movement of the lever raises all the plows and the harrows from the ground. By operating another lever, the axle may be turned by hand to adjust it with respect to the dropping device, and to the wheels; and by means of a third lever, the dropping device can be operated by hand, or held from operating, as may be desired.

Improved Cotton Press.

John H. Simonson, East Norwich, N. Y.—The followers are fitted to slide up and down inside of the case, the lower one having the long projections extending through slots, to be connected to racks for being raised and lowered by gears. The upper one has the short projections extending through slots, to be connected to racks which are also operated by the gears. The racks move the heads in opposite directions by one and the same movement of the wheels. The latter are geared with the driving shafts by a pair of eccentric toothed wheels, so adjusted that the leverage of the power increases progressively as the work progresses and the resistance increases. The driving shaft is worked by a hand lever, pawl, and a ratchet wheel. The ratchet wheel is made eccentric to increase the gain of leverage. The projections of the other follower connect with racks by sliding under blocks, by which the follower is pulled down. They have a hook projecting over the said hooks, by which the follower is raised when the racks are forced up. The racks also have a hook, by which they engage with the cross bars when raised up to be held properly for the projections to engage with them when the follower is moved back over the press when it is filled.

Improved Spring Rocking Chair.

Stephen Fallon, Brooklyn, N. Y., assignor to himself and Joseph A. Hodgson, of same place.—The base frame consists of two side frames connected at their upper middle parts, and at their rear parts by rounds. To the seat frame are attached two or more springs, which are coiled around, and their other ends are attached to the round, the ends of which work in sockets in the frame. Thus the springs form the only connection between the seat and frame, so that the seat is both supported and rocked on them. By withdrawing a pin and turning the round, the tension of the springs may be increased or diminished, as desired.

Improved Fluting and Smoothing Iron.

Benjamin F. St. John, Shelbyville, Ind.—The handle has a base with a flange, which latter surrounds the smaller upper section of the iron when the handle is attached. The upper section is cast on and forms a part of the iron. A spring hook, attached by a pivot pin to the handle, works through a hole in the front of the flange and enters a hole in the upper section. At the rear end, the handle is attached by means of a pin in the upper section and a hole through the flange.

Improved Sewing Machine.

John Speirs, New York city, assignor to himself and Henry F. Cox, same place.—This is a novel means for operating the looping hook of that class of sewing machines in which an under looping thread is used. It consists in the mechanism for imparting a rocking lateral movement to the looping hook, for moving the hook to and from the needle in a longitudinal direction.

Improved Paper Bag Machine.

Truman Hotchkiss, Stratford, Conn.—This machine is for making satchel bottom bags of various sizes. The paper is drawn down over the guide roller, and forced along under the movable shear, over the stationary one, to a table in front of the forming roller and the folding roller. One margin of the paper strip also passes under the pasting roller to receive the paste, by which the edges, joined in the forming of the tube, are fastened. It also passes between the former and folder and under the presser bar. As soon as the end of the paper strip comes to a gage, it stops and is cut off by the fall of a cutter. The folders then commence to turn, and at the same time the pressure bar springs down and presses the paper against the forming roller, so that it will be drawn in between the folding rollers and folded. By the same operation, the margin of the paper at the knife is drawn under the pasting roller on the cutter and pasted, for securing the folds of the bottom of the bag. When the roller folders have made one revolution around the tube and united the edges, they rest, while the sliding horizontal end folders go forward just in front of the end of the former, and fold in two sides of the extension of the tube beyond the former to form the bottom. Then the vertical sliding folders move forward and fold in the other two sides, and complete the bag. An ingenious device, lastly, flattens the bag down at the sides, and folds the bottom down flatwise on the upperside, so that it will pack into bales or boxes economically, without injury to the bottom.

Improved Corn Husking Machine.

Edward Ellison, Waverly, Md.—This invention relates to means whereby corn may not only be denuded of the shuck, but at the same time relieved of the stem, and whereby the ear, the leaves of the shuck, and the excised stem may be discharged separately, the leaves being left in a state ready to be used for mattresses and kindred purposes.

Improved Floor Clamp.

James Carille, Springfield, Mass., assignor to himself and J. H. Haskins, same place.—This invention consists of a pair of gripping levers pivoted to a hand lever, or to a pressure plate or board on it, for acting upon the edge of the flooring. It is arranged in connection with cam grooves in a plate also attached to the lever, so that the grippers being placed on the joist with the points near the lower edge, and the hand lever above, with the pressure plate against the flooring, and the hand lever being pressed forward in the direction to clamp the flooring together, such action will cause the grippers to bind firmly against the joist, and hold for a fulcrum for the hand lever, and will let go and release the hand lever when the latter is moved back after pressing the flooring.

Improved Staging Clamp.

Charles E. Richards, Orange, Mass.—The clamps are made of iron rods one half inch, more or less, in diameter. The bodies are of a length equal to the breadth of the ledger boards, and are bent at right angles to pass across the edges of the same and the sides of the poles. They are bent again at right angles to overlap the outer side of the poles, and their ends are bent inward at right angles, and are made sharp so as to be driven into the said outer side of the poles. They are also arranged diagonally across the inner side of the poles, and their ends are bent inward in opposite directions to overlap the outside of the poles from the opposite sides, so that the strain will come against the said poles. The ledger boards are kept from slipping in the clamps by wedges. By this construction, the scaffold is put up without the use of nails.