

## Recent American and Foreign Patents.

## NEW MISCELLANEOUS INVENTIONS.

## COMBINATION LAP RING.

George W. Atkins and James C. Harris, Noble's Lake, Ark.—This lap ring is formed of two parts, each of which has an opening at one side. The parts are secured together by rivets working in slats, so that one part may be slid or adjusted on the other. When they are adjusted in one position, the opening in the respective parts coincide; but when adjusted in another position, the openings do not coincide, and hence the ring is closed or becomes entire. This adjustment adapts the ring to be readily attached to or detached from chain links and singletree or double-tree hooks, etc.

## IMPROVED WHIP.

Dexter Avery, Westfield, Mass.—The object here is to strengthen the whip at the joint, between the handle and stock, without increasing the cost of construction. The invention consists in a handle counterbored from its forward end to receive the end of the stock, and provided with a spike passing longitudinally through it from its lower end, and driven into the stock within said counterbore.

## IMPROVED TRUSS.

Winfield A. Turner, Hiawatha, Kan., assignor to himself and J. F. Roehm, same place.—This is a pad made of a ball and adjustable socket tube, the pressure on the ball being regulated by a spring and set screw. The ball socket slides on a fixed socket of the base plate, and is secured by small set screws. A belt and thigh strap secure the truss in position on the body.

## IMPROVED TRACE FASTENER.

Ephraim N. Banks, Wilkesbarre, Pa.—This consists of a socket having a deep ring groove formed around its outer end, and a notch formed in it at the side of said groove. There is also a hook having a circular head which fits into the groove of the socket. The hook can only be attached and detached by pressing the free end of a spring close against its side, to become detached accidentally.

## IMPROVED PARLOR SKATE.

William Lockwood, Danville, Mo.—This relates to spring brakes for parlor skates, an attachment which has been heretofore used so as to bring the brake to bear upon the front wheel and connect it with a lever operated by the leg. The brake in the present case is a spring, from which a string extends down through a guide and up to the band of the operator, in such manner that the brake is forced down on the wheel by pulling up the string.

## IMPROVED HOOF EXPANDER.

Charles H. Shepard, Elizabeth, N. J.—This has reference to an improved device for preventing and curing contraction of the hoofs of horses or mules, and consists of a V-shaped spring having inner opposite rings and projections, the whole secured by suitable devices to the interior of the hoof.

## IMPROVED HARNESS SADDLE AND SADDLE TREE.

Samuel E. Tompkins, Sing Sing, N. Y.—The first invention consists of a rib formed on the ends of the tree plate to make a finish at the ends of the flap or top leather, the said rib being raised up in the construction of the plate. The upper surface of the leather is flush with the top of the rib, and is made in concave form to facilitate the finishing of it with a file and to furnish room for the back band. The second invention is a saddle-tree plate, having a bridge for the terret screw, constructed with jogs or shoulders only, or the same and a bar. These are connected at the upper side of the bridge to support the flap against downward strain. There is also a flap, made solid the entire breadth of the tree above the bridge, and having support against downward strain by shoulders.

## IMPROVED BELLY PIPE NOZZLE FOR BLAST FURNACES.

Sigmund F. Vielhaber, Conshohocken, Pa.—This consists in a double walled nozzle made with a flaring inner end, and provided with a ring partition at the base of its flaring inner end, having two holes formed through it. Said apertures correspond with the holes in the outer end, in which the inlet and outlet pipes are inserted. There are two longitudinal partitions in the straight part, midway between the inlet and outlet pipes. There is a circulation of the water through the space in the flaring end of the nozzle, and said end causes the blast to enter the lower part of the furnace in every direction, so that there will be no dead places.

## IMPROVED POCKET BOOK LOCK.

Ernst Schnopp, East New York, N. Y.—This lock may be opened and closed by direct pressure. It consists of fulcrumed and spring-acted jaw levers that are operated by a top plate, which has a conical lug, entering recesses of the jaw levers, so as to release the knob on the flap part of the lock.

## IMPROVED TOY CARRIER.

John H. Adamson, Clifton, N. J.—This is a weighted carrier running by a pulley over a tight rope, and provided above the pulley and rope with a suitable spring clamping device, to which toy figures are attached.

## IMPROVED SCALE BEAM.

Edward A. Rock, Ludlow, Vt.—In these weighing scales, the beam and weight stem are so constructed that no obstruction will be offered to the eye upon the sides of the beam to prevent the position of the indicator from being readily seen. The scale beam is slotted longitudinally to receive the stem of the weight, and there is a T indicator, the knife edges of the arms of which rest upon the notched upper edges of the beam.

## IMPROVED SACK FILLER AND PACKER.

Edward M. Whitney, Batavia, N. Y.—This consists of a follower valve in the spout of a funnel, containing flour to be packed, which is made to rise up and let the flour descend into the sack, the mouth of which is attached to the funnel. The valve then closes over and presses down the desired quantity of flour into the sack, shutting the spout against the further escape of the flour while the filled sack is removed and an empty one put on. The contrivance is such that the quantity of flour can be varied at will for sacks of different sizes. The invention also comprises an adjustable platform for holding the bags when filling and pressing.

## NEW WOODWORKING AND HOUSE AND CARRIAGE BUILDING INVENTIONS.

## IMPROVED DUMPING CAR.

Eugene Davis, Clinton, Ill.—This has reference to certain improvements in car-unloading apparatus in which a tilting track section is used in connection with a main track for running a car on and off said section. The invention consists in the combination, with a centrally pivoted track section, of a segmental rack bar engaging with a spur wheel on a driving shaft. By the arrangement of the rack bar below the axis of the tilting track section, the same can be depressed at either end by simply turning the operating gearing in opposite directions, thus dispensing with two sets of devices for tilting the track.

## IMPROVED WINDOW BEAD FASTENER.

Hiram W. Stetson, Black Brook, N. Y.—This consists of a metallic fastening plate, having a key hole slot that is secured to a detachable strip or bead and connected to the window frame by a fixed screw. By tightening or loosening the fastening screws, the putting on or removing of the beads or strips is facilitated, while, at the same time, the reliable fastening of the beads to the window frame is obtained.

## IMPROVED WOOD-PLANING MACHINE.

Andrew M. Mortimer, Salt Lake City, Utah Ter.—This machine has novel mechanism, which operates in such a way that a board, after being passed through the machine and being planed upon one side, may be raised, passed back, or returned through the machine and planed upon the other side.

## IMPROVED DUMPING WAGON.

Francis M. Pennebaker and William F. Pennebaker, Pleasant Hill, Ky.—This consists of the combination, with the box contrived to slide back on the wagon bed and tilt down behind for dumping, of a windlass under the driver's seat, and cords so connected with the box that it can be run out and allowed to dump, and drawn back.

## IMPROVED COMBINED STEP AND HUB BAND.

Robert McDonald, Georgetown, Col.—This is a step, hub band, nut, and dust box combined in a single casting or piece of metal, or made in several parts, permanently fixed together. It provides a step at the desirable point and answers the purpose of a nut and hub band.

## IMPROVED SINGLETREE.

Louis Platau, Pittsburg, Tex.—This singletree has near each end a circular groove, and thence, running to the end, a longitudinal groove. With this construction, the trace rings cannot become accidentally detached, and can only be taken off by slipping the link into the longitudinal groove, and then slipping the ring off.

## NEW HOUSEHOLD INVENTIONS.

## IMPROVED MIRROR.

Ludger T. Berton, Paris, France, assignor to Pierre Leopold Brot, of same place.—This is a compound mirror, formed of a main glass having a frame, within which are hinged, on opposite sides, two other glasses, to fold within said frame.

## IMPROVED FOLDING CHAIR.

Frank F. Parker, Gardner, Mass.—This folding chair has arms extending from the back to the upper ends of the front legs, to which they are connected by links secured to the brace uniting the lower extremities of said arms.

## IMPROVED DOOR CHECK.

William Cassill, Reed's Mills, O., assignor to himself and James M. Henderson, of same place.—As the door is swung open it strikes against and pushes back a bumper, the rearward movement of which throws a catch forward to grasp the edge of the door and hold it open until released by turning back the said catch.

## NEW AGRICULTURAL INVENTIONS.

## IMPROVED BARBED METALLIC FENCE.

William H. Gilman, Belvidere, Ill.—This consists of a bar of metal, either flat, flanged, or corrugated, pierced by a series of pairs of holes arranged on a line either at right angles with the bar or diagonally, and provided with pointed wire barbs fixed in the said holes.

## IMPROVED WHEEL PLOW.

Edward T. Hunter, Hallsville, Ill.—This is an improved riding attachment for breaking plows, so constructed as to receive any desired kind of plow, to enable the plow to be placed between, or at one side of, the wheels, and may be adjusted to receive a left-hand or a right-hand plow, as may be desired.

## IMPROVED CORN PLANTER.

Henry J. Snyder, Adams, Evansport P. O., O.—This machine combines several new mechanical devices which enable it to furrow, drop the seed, cover it, and mark the hills and rows, so that the field may be planted in perfect check row.

## IMPROVED FRUIT PICKER.

John C. McEwen, Leesburg, Fla.—In this fruit picker a combination of wires is fastened to a disk, being free at their outer ends to admit the twigs between them. Shears are arranged so that the fruit is allowed to rest in the picker before the stem is excised.

## IMPROVED CHECK ROWER.

William L. Black, Virginia, Ill.—This consists of a pair of forked levers attached to a supporting frame, and connected by rods with the seed valve bar of a corn planter. It is operated by a rope having knots or buttons at regular intervals, which passes around a sheave at each end of the supporting frame and through the forks of the levers, and is attached to stakes at each end of the field.

## IMPROVED PLOW.

George T. Hedrick, Mill Springs, Ky.—The invention is an improvement in the class of sod or turning plows, and relates, first, to the construction of the stock whereby it is adapted for attachment of right and left shares and moldboards; second, to the construction of said shares and moldboards, whereby they are adapted for said attachment; third, to the employment of a detachable and adjustable L or T head brace for the share; and fourth, to the provision of an adjustable wheel which is so attached to the heel of the plow as to adapt it to be swung under the latter to support it while being drawn or propelled from one place or field to another.

## IMPROVED HAY RAKER AND COCKER.

Moses Manlove, Muscoda, Wis.—The object is to collect the hay and deposit it upon the ground in cocks. To an endless moving belt are attached crossbars, which are provided with teeth inclined forward, and by which the hay is taken from the ground, carried up the said elevator to its upper end, and dropped into a box, formed in the rear end of the machine and made of such a size as to contain enough hay for a cock. When enough hay has been collected for a cock, a lever is raised, and the weight of the hay forces the bottom and the door of the box open, and leaves the cock stand upon the ground.

## NEW MECHANICAL AND ENGINEERING INVENTIONS.

## IMPROVED RAILROAD CROSSING.

Darius Pierce, Tower Hill, Ill.—This is an improved crossing for railroad tracks, on which the main and guard rails may be changed to be worn out entirely on both sides, being rigidly secured in position on a suitable bed plate. The main and guard rails are secured at the ends by corner posts, applied by screw nuts to the bed plate. The concave base rail of the crossing is retained by the rail sections and the inner recessed corner posts.

## IMPROVED CAR COUPLING.

Leonard Fleckenstein, Cresswell, Pa., assignor to himself and Martin Miller, of same place.—This relates to improvements in the automatic car coupling for which letters patent were granted to the same inventor, so that the working of the same is facilitated, it being adjusted for cars of different height, and always kept in the center to interlock perfectly square on curves. It is an arrangement of spring hooks which couple readily when hung to the required height, and are applied to the car frame by a swinging plate and cushioned bar with the same degree of flexibility and adjustability as the common drawbars in general use.

## IMPROVED COTTON AND HAY PRESS.

William M. Penniston and William H. Penniston, Fox, Mo.—This includes a lever presser, in combination with one side of the pressing case, to press the hoops against the side of the bale to hold them in position while they are secured on the otherside; another lever presser, on the other side, to hold the hoops at one end while they are strained and fastened; and a lever contrivance for straining and holding the hooks for securing them.

## IMPROVED GOVERNOR FOR STEAM ENGINES.

Robert W. Gardner, Quincy, Ill.—This invention consists of pendulous arms, with inner extension toes, acting on double-link parallellograms connected to the valve rod and regulated by a top set-screw bearing on a top stud of the links. The valve chamber has two steam passages and two disks that are detachably applied to the valve rod, to obtain a uniform flow of steam, the valve rod being guided below the steam passages.

## IMPROVED STOP WATCH.

Henri A. Lugin, New York city.—This consists in a wedge-shaped lever and spring, arranged so that it will, when used, raise the center beveled wheel, and so, throwing it out of gear, will interrupt the connection with the watch train and stop the quarter second and split the quarter-second hands. When the lever is brought back to its former position, the beveled center wheel, with the aid of a small spring, attached to it and pressing against the bridge, is made to gear again with the other beveled wheel, and so with the train of the watch.

## IMPROVED FEED WATER HEATER.

John B. Mitten, Peru, Ind.—This consists of a series of chambers formed by longitudinal and lateral partition walls, of which the lateral walls have central openings, so that the water is compelled to pass from one longitudinal series of chambers to the next adjoining one, and so on to the boiler. Bottom plugs of each chamber serve for the purpose of cleaning out the impurities collected on the bottom of the chambers, the water being thus heated and purified in its passage from pump to boiler.

## IMPROVED BUNG MACHINE.

Charles Abel, Brooklyn, N. Y.—This is an improved machine for forming bungs with tapering sides and beveled heads, from wooden cylinders of the proper length. In using the machine a bung blank is placed in the holder, which is then moved forward by a cam, bringing the blank between centers. A sliding center is then forced forward, and the holder is drawn back. Cutters are now operated to taper and bevel the bung, and then, with the center, are drawn back by springs, and the complete bung drops. The holder then moves forward with another blank, and so on, the whole operation being automatic, except the single act of placing the blanks, one at a time, in the holder.

## IMPROVED MACHINE FOR ROLLING NUT BLANK BARS.

Henry Johnson, Haverstraw, N. Y.—This is a pair of rolls, each one of which is made up of sections that are detachably fixed to the shaft. One section of each roll is conical, and forms the flat of the bar, and another section is chambered out to receive the smaller end of the conical section, and has formed on its side the reverse of the form required in the edge of the rolled bar. By this arrangement the flat of the rolls passes through the rolls at an angle with the axis of the rolls between a line parallel with the axis and a line running at right angles thereto.

## IMPROVED SNOW PLOW.

Horace Resley, Cumberland, Md.—The improvements consist in the particular construction and arrangement of the scoop with respect to the supplemental plow for removing the crust of snow, in the means for adjusting the scoop, and in the arrangement of cutter blades at the points of the scoop where the divided columns of snow commence, to turn which, blades divide the columns into smaller parallel columns, which permits the more easy deflection of the same to one side.

## IMPROVED RAILROAD SWITCH.

Conzac S. Bastright, Lebanon, N. H.—This switch is so constructed that the movable rails may be adjusted into the required position by the wheels of the advancing engine, so that there can be no running off the track from a misplaced switch.

## IMPROVED WIND WHEEL.

John J. Kimball, Naperville, Ill.—This improved wind wheel has vertical fans pivoted at the ends in fixed horizontal arms of a vertical revolving shaft, so that they will turn edgewise to the wind, and the wheel will stand at rest. For holding them so as to take the wind sidewise, there is a stop bar extending along one side of each series from the outermost one to the center, where it is connected to a weighted cord hung around the shaft. This draws the bar, and stops the fans sidewise to the wind at one side of the wheel, while they are still free at the other side to turn edgewise, thus enabling the wind to take effect for revolving the wheel. A contrivance for lifting the weights, and thus freeing the fans to the wind on both sides of the wheel, is used for stopping it.

## IMPROVED BLOWER.

John M. Cayce, Franklin, Tenn.—The object of the invention is particularly to furnish a blower which shall be capable of being operated with the least possible friction in which the use of valves or other appliances liable to get out of order, and which necessarily add considerably to the cost of the machine, are dispensed with, and which shall be adapted to automatically regulate the amount of air forced through it in a given time. To this end the patentee employs, first, a hollow rotary cylinder having perforated heads, and provided with a series of curved tubular arms attached to its periphery; and second, an air eduction pipe, which forms the hollow axis of the wheel and extends upward within the chamber of the cylinder above the level of the water in which the latter revolves; and thirdly, an expansible, liquid seal air receiver which acts as a governor to regulate the speed of the blower.

## IMPROVED CAR AXLE BOX.

Marion Jansen and Josiah Mekeel, Garrison's, N. Y.—The journal box has a door, closed by a spring key. The oil cup has a half-round groove formed upon the lower side of its bottom, to receive and rest upon the journal. In the bottom of the cup are formed a number of small holes, through which the oil escapes to the journal, and in which are placed pins to keep them clear, and facilitate the escape of the oil. To the front side of the cup is secured an open glass tube, the lower end of which is connected with a hole in the cup, so that it can be seen, by simply opening the door, how much oil there may be in the cup.