

## IMPROVED PAPER-CUTTING MACHINE.

James Harding Brown, Porter's Mill's, Wis.—This consists of a lever fixed to swing horizontally around a vertical axis in a fulcrum standard over a cutting table, and carrying two roller cutters. The latter are adjustable for cutting wider or narrower strips. There is also a roller gage for pressing on the sheet of paper to hold it in place.

## IMPROVED RAILROAD CAR TRUCK.

Laban B. Lyons, Chillicothe, Ohio.—This invention relates to the construction of the metal side frames of the truck, to the means for connecting and suspending the brake beams, and also to the form, construction, and arrangement of other parts. For particulars, see patent.

## IMPROVED TIRE UPSETTER.

Edward W. Holt, Corinna, Me.—In order to easily and quickly upset the tires of wagon wheels without changing the form of the tires or cutting them apart, this inventor provides a pair of arc-shaped jaws, with fluted cams, that engage with fluted lugs on the jaws to clamp the tire. One of the jaws is fixed to the bed piece, and the other is capable of being moved in ways in the bed by an eccentric pivoted to the bed and bearing against a roller in the movable jaw. The jaws are forced together to upset the tire.

## IMPROVED ROAD SCRAPER.

Addison Shanklin, London, Ohio.—This invention has reference to such improvements in road scrapers that the handles may be locked securely to the scraper bowl by bolts, which may be readily lengthened when worn, so as to keep up the reliable locking of the parts.

## IMPROVED STEAM VACUUM PUMP.

William V. Dubois, Covington, Ind.—This relates to the construction and arrangement of the working chambers, air chambers, and valves, and particularly to the contrivance of the valve for changing the admission of steam to the working chamber, and to a vacuum chamber for relieving the jar at the foot valve in the end of the pipe in the wall.

## IMPROVED RAILROAD SWITCH GUARD.

Frank B. Peace, Maryville, Tenn., assignor of one third his right to Elijah Walker, same place.—This invention consists of guard rails, with projecting parts or heads pivoted at both sides of the switch rails. The engineer is enabled to see readily, by the projecting guard rails, whether the switch is set or not, and has time to slacken speed and put on brakes, so that the catches or heads serve as stops to the train without throwing the same off the track.

## IMPROVED MACHINE FOR STRIPING PAIS.

Samuel R. Henry, Stillwater, Minn.—This invention consists of a chuck for holding the pails, striping rollers, a roller for supplying them with paint from a paint box, carrying and guiding rollers, and a contrivance for raising and lowering the chuck to facilitate the application and removal of the pails.

## NEW HOUSEHOLD INVENTIONS.

## IMPROVED FOLDING TABLE.

Wilber F. Bartholomew, St. Louis, Mo.—The legs of this table slip into standards, and are supported therein by spiral springs. They thus may be, by spring catches or like devices, adjusted so that the table will remain at any desired height. With this construction, it can readily be raised to a convenient height for use as a cutting table, and, when in use for ironing or sewing, can be lowered and drawn over the lap.

## IMPROVED NURSERY CRIB.

William H. Thompson, Columbus, Ohio.—This is a crib having two sides hinged to bottom, two sides hinged to the corner posts, and two divisions hinged at the bottom. This allows of the device being folded into small compass.

## IMPROVED FLAT IRON HEATER.

Franklin A. Powell and Susanna L. Robinson, Pontiac, Ill.—The body of the sadiron has an angular socket which receives the lower portion of the handle. The part of the handle that attaches to the iron is made to fit the socket, and is cut down to allow a latch to swing over it and under a hook attached to the iron.

## IMPROVED WASHING MACHINE.

Micajah D. Martin, Marietta, Iowa.—This is a novel lever contrivance to a rocking rubber pivoted in the axis of a tub. The object of the lever is to enable the operator to work the rubber by an easy purchase, and, at the same time, to stand sufficiently distant from the tub to avoid the steam rising up from the soapsuds.

## IMPROVED HANGING SPITTOON.

John C. Winton, Muddy Creek, Tenn.—The object of this invention is to provide a spittoon, so constructed as to adapt it to be suspended upon a wall or other vertical support. The device consists of a saliva box or receptacle of suitable form, provided with or attached to a plate extended upward, and having a flange around its edge to prevent the saliva ejected against the plate from escaping over its edge and to guide it into the aforesaid receptacle.

## IMPROVED STARCH BOILER AND STRAINER.

William H. Whitlock, New Albany, Ind.—This device admits of the starch being strained instantly after boiling without being poured into another vessel, dispensing thereby with straining through a cloth, and burning of hands. It consists of a vessel with interior strainer, sliding therein by a bale. When the starch is ready for use the strainer is placed into the vessel and pushed to the bottom of the same, so that the liquid starch will flow through the strainer, while the lumps will be carried to the bottom of the boiler.

## NEW AGRICULTURAL INVENTIONS.

## IMPROVED HAY LOADER.

Caleb Loader, East Pennard, England.—This relates to certain improvements in that class of hay raking and loading devices in which the frame which carries the endless elevator is made jointed, and with an upper movable section; and it consists in the means for operating the said jointed section. Said section is adjusted as required through arms, by means of cords and pulleys, worked by a handle. The section is also arranged in connection with a suitable elevating device.

## IMPROVED FLOOD FENCE.

Wiley C. Barber, Rockmart, Ga.—In this device an eccentrically pivoted log, with a number of upright pins or stakes, forms a rack that gives readily for the passage of drift wood, and readjusts itself automatically.

## IMPROVED POULTRY COOP.

Markus Ehlbert, Greenville, Ala.—This inventor arranges the bars or grating forming the sides and top of a coop in such a way that they may be folded compactly together. The object is to provide a coop which may be used for shipping poultry, or a crate for other articles, which may be folded in small compass for reshipment.

## IMPROVED WHEEL HOE.

Rudolph Vampill, Mullins, S. C.—This consists of a pair of hoe plates secured in a diamond-shaped frame. At the forward end of the latter a wheel is journaled. The wheel may be adjusted to cause the hoes to work at any desired depth in the ground. A suitable handle is attached to the frame.

## IMPROVED ADJUSTMENT FOR HARVESTER PLATFORMS.

Samuel Noxon, Jr., Ingersoll, Ontario, Canada.—The novel feature in this device is a simple arrangement of a lever and gearing which serves to lower the grain table, thus adjusting the cutters to any desired height.

## IMPROVED SEED PLANTER AND FERTILIZER DISTRIBUTER.

John C. Fooshe, Greenwood, S. C.—This relates mainly to the construction of the hopper, the bottom of which is made in sections, which are caused by suitable mechanism to rise and fall. The effect is to work the guano out of the hopper and also to crush all lumps. The material is afterwards guided to the ground by a suitable guide plate.

## IMPROVED CIDER MILL.

John Thomas Griffin, Grant, Tenn.—The essential features here are a perforated crib, resting on a platform, in which the juice is expressed from the crushed fruit by a follower, operated by a lever hooked under a yoke, and prevented from driving the yoke together by a bar.

## IMPROVED PLOW.

Stephen M. Harris, Forest Grove, Oregon.—The new feature here is a clearer for preventing the clogging of the colter or standard, where it is connected with the beam, with stubble, weeds, and the like. The said clearer is a kind of shovel blade fixed on a spring support over the beam. The support couples with a wheel fixed so as to roll along the ground and work the clearer forward and backward.

## IMPROVED PLOW.

Robert C. Traweek, Blanco, Tex.—The plows are attached to bars which may be turned on their pivots so that the plows will always be equally distant from each other, and will be square with the line of draft. The bars may also be adjusted to any desired angle with the beam, and are held securely in place when adjusted.

## IMPROVED PLOW.

Judson S. Hartzell, Addison, Pa.—This plow is so constructed that the parts most subject to wear can be readily detached when worn, and replaced with new ones, and when in use will be held firmly to their places. A flange is formed upon the standard and mold board, and recessed upon its inner and outer sides to receive the two parts of the landside, which are bolted to each other and to the flange.

## IMPROVED CULTIVATOR.

John C. Bannigan, Dunleith, Ill.—This includes a variety of new mechanical devices. By means of one, the draft may be attached in such a way as to protect the plants from being injured, by another the plows and beams may be adjusted, and by another the driver's seat is caused to balance the forward draft.

## IMPROVED HORSE HAY RAKE.

Henry H. Hathaway, Clockville, N. Y.—This invention is a horse hay rake, so constructed that it may be used for heavy raking, and for light raking or gleaming, may be easily dumped to discharge the collected hay, will adjust itself to uneven ground, and will not scratch or catch upon the ground. The novelties here are all in mechanical construction. The rake is susceptible to a variety of uses including heavy as well as light raking or gleaming. The revolution of the wheels acts to cause the teeth to drop collected hay. Devices are provided whereby the machine adjusts itself to uneven ground, and the hay is prevented from rolling or twisting in the rake.

## IMPROVED LAND DRAG AND CLOD CRUSHER.

John M. Crockett, Dallas, Texas.—This invention is an improvement upon the clod crusher and drag for which letters patent No 177,476, were granted to the same inventor, May 16, 1876. In that implement a series of flat metal bars are secured, in ranks or rows, to front and rear wooden crossbars, each of said metal bars having two curves so arranged that they alternate in position with the curves of the contiguous bar or bars, for the purpose of more quickly reducing the clods to a pulverulent condition in passing over them. The object of the present invention is to simplify the construction, reduce the cost, and increase the efficiency of the drag. The metal bars are divided into two parts, and each part curved and attached separately to a crossbar.

## NEW WOODWORKING AND HOUSE AND CARRIAGE BUILDING INVENTIONS.

## IMPROVED SPOKE SOCKET.

Henry Oldendorph, Waterloo, Ill.—This invention consists of plates provided with shanks, and so formed as to fit upon the side of a felly and spoke, to fasten said spoke when broken off at the shoulder of its tenon.

## IMPROVED GATE.

George W. Calkins, Milton, Wis.—This gate is so constructed that it may be opened and closed by a driver without his leaving his seat in the vehicle. A slotted lever receives a pin attached to the lower part of the gate, and passes through a space between the parts of one post and is pivoted to said post. The upper end of the lever passes through a slot in the upper bar of the gate frame and is pivoted to a bar that slides thereupon. To the sliding bar, toward its ends, are attached the ends of two cords, by pulling upon one of which the gate will be opened, and by pulling upon the other the gate will be closed.

## NEW MISCELLANEOUS INVENTIONS.

## COMBINED GLOVE STRETCHER AND HAND MEASURE.

Moses Greensfelder, Harrisburg, Pa.—This consists in the combination of a hand measure with a glove stretcher, the measure being so arranged within the handle of the stretcher as to be capable of being drawn out for use. It is caused to regain its position in the handle by means of a suitable spring.

## IMPROVED REVOLVING SPOW STAND.

Orange P. Gould, Lewisburg, Pa.—Threecorner frames are mounted on a spindle at suitable distances apart, for holding shelves, on which the goods are to be placed. The said frames are made of cast iron, and made to revolve on shoulders of the spindle, which keep them in their respective positions. Arch bars are provided for connecting the spider frames outside the shelves, and are arranged with loops and pins for that purpose.

## IMPROVED ARTIFICIAL MARBLE.

Richard Guelton, New York city.—This is a process for imitating fine black marble without veins, and also for reproducing artificial incrustations on the marble. A cement is mixed with animal black, and after it is set the pores are filled with more cement, previously colored. Then follows the application of nitrate of iron, etc., and polishing. There is an ingenious method for imitating veins, and a process for rendering the marble acid-proof.

## IMPROVED METHOD OF TANNING.

Alpheus M. Barnes and William F. Yocom, Weston, Mo.—The hides, after being limed, are bated in a mixture of soft water and corn meal. They are then strained out and are ready for the dress liquor, which is prepared of soft water, salt, sulphuric acid, sulphate of potash, and buttermilk. After handling, the hides are placed in a tan liquor, prepared by adding to each 100 gallons of extract of bark liquor, suitable quantities of salt, sulphate of potash, and sulphuric acid. Then follow strengthening, scouring, soaking in gambler liquid, and lastly preparing in sumac liquor. The invention also includes a process of tanning hides with the hair and fur on, by subjecting them to the action of a dress liquor, and then treating them with a composition of half-strength lye.

## IMPROVED ADJUSTABLE ARM REST.

Moses Shoemaker, Plattsburg, assignor to himself and Charles J. Nesbit of Platt City, Mo.—This is a device for supporting the arm when writing upon the lower part of the page in large, thick books. It may also support the side of the book in a level position when writing upon the thinner part of the book, or upon a page of a book so bound that its sides will drop or incline when said book is opened.

## IMPROVED CARBURETER.

Martin Schmidt, Houston, Tex.—This invention is an improvement in that class of carbureters in which air or gas is forced through a chamber filled with absorbent material that has been saturated with hydrocarbon. By a novel arrangement, by opening a stopcock, more or less gas will pass to the burners without passing through the carbureter. By opening it fully, none of the gas will pass through the carbureter; and by closing it fully, all the gas will pass through the carbureter.

## IMPROVED LARD OIL LAMP.

John Roemer, Champion, Mich.—This invention consists of pipes for receiving the heat of the flame, and conducting it down into the oil chamber for warming the oil: the object being to make lard oil lanterns capable of use in very cold weather.

## IMPROVED ELLIPSOGRAPH.

Henry C. Root, San Francisco, Cal.—This is an ingenious instrument, excellently suited for the uses of architects, engineers, and others. By turning a crank the pen will describe an ellipse, with the long axis coinciding with the face of one standard, and the short one in similar relation to the face of a second standard. By adjusting the centers so as to coincide, that is, one above another, a true circle may be struck. The size of the figure described by the pen may be closely regulated.

## IMPROVED BARREL STAND.

David Scott, Olney, Ill.—This device furnishes a storage place for barrels, protects them from dust, etc., and is so constructed as to allow of their being tilted easily. The barrel can be adjusted to any desired height for drawing off its contents.

## IMPROVED ADJUSTABLE POCKET BOOK FASTENING.

Daniel M. Read, New York city.—This consists of top and bottom plates, having each a corrugated channel, in combination with a face plate, having a catch on both sides. The shoulders of the channel receive the catch between them, so that the catch can have no lateral movement, and cannot slip out from between the plates.

## IMPROVED HITCHING POST.

Charles F. Roth, Winterset, Iowa.—This invention consists of a bell-shaped metallic case, in which a vertical bar, slotted at its upper end for the attachment of a halter or bridle, is retained by a spring catch bar; the latter being released from the vertical bar by means of a key so constructed as to press when turned on its upwardly inclined inner end. A spiral spring surrounds the lower end of the vertical bar, and presses it up, exposing the slot when the spring catch bar is released from it. The hitching bar has a rounded hemispherical head, which, when the device is closed, rests upon the bell-shaped case.

## IMPROVED MACHINE FOR STRINGING TOBACCO LEAVES.

Louis Strasser, Columbus, Ohio.—This consists essentially of a needle lying on a bed, so arranged and being so confined that a vibrating pusher, worked rapidly by a foot-power mechanism, is made to push the leaves on the needle and along it to the string attached to the head, and also along over a rod or wire, from which the leaves are to be hung, half from one side and half from the other. The arrangement is such that the leaves can be strung as rapidly as two persons can present them from opposite sides in front of the needle.

## IMPROVED BRIDLE.

Daniel T. Van Antwerp, Prophetstown, Ill.—This is an improved attachment for bridle headstalls, to enable the horse's head to be raised or lowered, as desired, and to enable an unruly or vicious horse to be more readily controlled. The invention consists in adjustable straps attached to the headstrap of a bridle headstall, and in overdraw straps which are drawn together at their middle parts, their lower ends being secured to the bit rings. The overdraw straps have gag runners attached to their ends to receive the check rein.

## IMPROVED BUSTLE.

Mrs. Alwilda Swallow, Shelbyville, Ill.—This consists of a bustle, made of one piece of spring wire, and bent to form two bows, of which one is larger than the other. Said bows are arranged at a suitable angle and connected by coiled springs, to which the belt is attached. The bustle has no sharp edges to cut the clothing, and is light, cool, and strong.

## IMPROVED BALE TIE BUCKLE.

Thaddeus Bunker, Cuero, Tex.—This consists in half-ring bars, having small half-ring hooks formed upon their ends in the opposite direction, which secure the ends of a bale band by clamping the inside end of the band edgewise, in a manner not to cut or strain the band, but to make it an impossibility to slip or give way.

## METHOD OF TIPPING AND PATCHING BOOTS AND SHOES.

David T. Cooper, Jackson, Mich.—By the old method of putting on tips or patches, the tip or patch is retained by sewing through the outer sole all around, which presents an unfinished appearance, while requiring a great deal of labor. By the present method a tip, patch, or foxing may be put on the shoe in a few moments, and without ripping up the heel seat. The invention consists in doubling up the edge of the tip, patch, or foxing, inserting a wire into the folded part, and fastening the wire by forcing the ends through small awl holes of the outer sole, and by intermediate wire clips, which are drawn up tightly, twisted, and clipped off or clinched on the outside of the sole.

## IMPROVED TOBACCO STICK HOLDER.

Thomas A. Eanes, Leesville, Va.—This is an implement for holding the stick on which the tobacco leaves are hung after cutting, saving thereby the labor of the hand required for holding the stick while the cutting hands hang the tobacco. The invention consists of a metallic post, driven in the ground, with retaining fork or foot piece, and top bracket and clamp, to support the tobacco stick.