Recent American and Foreign Patents.

Improved Car Coupling.

Benjamin B. Harris, Lockport, Ill., assignor to himself and William B. Rouse, same place.—This invention consists of a pivoted drop latch with a slotted spring slide and recessed balance weight back of the latch for bearing therein, and holding it in coupled and uncoupled position. The link is carried against the drop latch, which is placed in position in the slot in front of the sliding spring plate. The drop plate is forced back thereby, together with the sliding plate, until the inclined end is released from the same and swings back, allowing the entrance of the link to the cavity, and simultaneously therewith the forward motion of the sliding plate into its former position. The link strikes then the balance weight, and causes thereby the pressure of the front end on the shoulder part of the drop latch, so that the same is carried down on the sliding plate and firmly bound thereon. The link slides along the drop latch up to the shoulder when pulled, and has thereby sufficient play for the oscillations of the cars. For uncoupling, the sliding spring plate is connected by means of a side slot of the drawhead and rod with a suitable lever mechanism, so that by moving the spring plate in a backward direction the drop plate may be released, and on swinging forward uncouple the link.

Improved Mode of Securing Plaster to Walls.

Patrick H. Power, New York city.—This invention consists of a support for preventing the plastering from becoming detached from the laths. A network of wire cloth or other suitable material is laid over the plastering and secured to the joists, through the mortar, by nails or screws. This wire is placed over the last coat of mortar, and the coat of hard finish laid over it.

Improved Process for Pulping Paper Stock.

Hector J. Lahousse, Prague, Bohemia, assignor to himself and Howard Lockwood, New York city.—This invention consists in subjecting the pulp and the bleaching liquor to the action of a grinding mill, in lieu of the ordinary beating engine, for reducing the knots and joints, and for raising the temperature to the required point. From the mill the stock can be conducted to an air blast, so that it may be cooled, and to complete the bleaching operation by being brought in contact with cool air.

Improved Mole Trap.

Thomas Brannan, Carrollton, Ill.—This device consists in a square upright frame, through the upper bar of which passes a rod carrying at its lower end a cross piece in which are a number of spikes. The trap is then placed lengthwise upon the mole track, and the dropper is worked down and up until the spikes pass freely through the ground. The drop is then raised and held by a slide, a trigger resting firmly upon the ground. With this arrangement, as the mole comes along in either direction, when his nose strikes the trigger the drop falls, driving the spikes through him, killing him instantly.

Improved Burglar Alarm.

Abraham Nevling, Glen Hope, Pa.—There is a lever to hold the escapement of a clock mechanism from working, and a slide to raise the lever and allow the escapement to work. This is so combined with a clock mechanism and an alarm bell that the slide may be set by a door or window, so as to be moved in case the door or window is opened, and lift the lever off from the escapement and allow the bell to sound. The connection of the slide and lever is such that they can be disconnected and allow the slide to be pushed back from the door or window during the daytime without allowing the bell to sound.

Improved Compost Distributor.

Edwin R. Cox and Gray C. Garriss, Goldsborough, N. C.—One wheel is loose on the axle of an ordinary cart frame, and the other is fast to the same. On the axle thus rotated is a manure-distributing wheel, the arms of which are provided with cutters to divide and with a hook to drag forward the manure, which is supplied to it from a feed box arranged above.

Improved Manufacture of Bone Black.

Solomon Billitz, New York city.—This invention consists of the arrangement of the fire chamber centrally between the scouring boiler for freeing the bones of the fatty, fleshy, and tendonous matters, and the calcining hearth, into which a suitable number of cylindrical retorts with sliding bottoms are placed for discharging the bone black into vessels below and charging from above without interrupting the fire. The fire is drawn by flues from the calcining hearth to the scouring boiler, and thence to the chimney, while the vapors or gases are conducted by pipes from the cylinders, to be cooled off in a coil for further utilization.

Improved Pulp Engine.

William Kennedy, New London, Pa.—This invention relates to a combination of sand trap and water conduit, the latter having an inlet aperture that communicates with the opening in the tub or engine, and a long slot through which the water is discharged. This slot is so arranged in relation to the perforated or open work top of the trap that, when the latter located in front of the roller, a current is created to quicken the speed the mingled water and stock. The stock, being thus exposed to the broad streams injected by considerable force, is separated and delivered to the roll in a good and uniform condition.

Improved Ash Can Receptacle.

Louis Greenbaum and Louis F. Winter, New York city.—This consists of a receptacle which is placed below the level of the pavement and arranged with a false sliding bottom for the ash can, to be raised and lowered by a swinging bail with suitable lever connections. The receptacle and ash can are closed by a hinged lid at the level of the pavement. The bottom of the receptacle is concaved and perforated for carrying off water. The unsightly ash can is thus located entirely out of the way, and the exhalation of any disagreeable odors is prevented.

Improved Sash Holder.

Thomas Hooley, Davenport, Iowa.—This invention consists in providing the lower corner of the sash with recessed grooves, inclined toward the corner, of which the lower one has an adjustable slide piece. The latter is carried along guide pins of the horizontal sash, on which a rubber ball rests until raised by the lifting of the slide from beneath for binding the sash by wedging in between the inclined part of the vertical sash rail and the casing.

Improved Sheet Metal Ash Barrel.

Thomas M. Bell, New York city.—This invention relates to an ash barrel provided with a corrugated metal plate secured to the side thereof. By this construction, the barrels, when being emptied, will always rest upon the corrugated plates, which will prevent them from being bruised or injured by the rough contact with the edges of the cart bodies, to which they are exposed by the careless handling to which they are subjected.

Improved Wire Straightening and Cutting Machine.

James Greenwood, Mount Carmel, Pa.—This invention consists of a pair of gripers and a lever combined in such manner that the gripers are caused to gripe the wire at two points, and then pull it for straightening it by tension. Shears between the gripers cut the wire in pieces of any length required after it is straightened, so that the present process of cutting and straightening wire from a coil for weaving or other purposes is simplified and cheapened.

Improved Apple Parer.

Solomon E. T. Dodson, Steubenville, Ky.—This invention consists of forks arranged on a revolving reel, to be presented in succession to the driving wheel and cutters, to allow of removing the pared apples and putting others on some forks, while others are performing work. It also consists of automatic trip and spring mechanism which throw the forks and utters out, and stop them when the apples are pared, and release the reel from its stop mechanism, to allow it to be shifted to remove the pared apples and present others to the cutters to be pared. There is also a contrivance on the reel for automatically gearing the cutters and fork again, when it is shifted; and a sliding carrier for the knives, worked by a crank shaft gearing with the driving shaft, and mounted on the trip slide, by which the reel is locked for being geared by the reel when it is shifted to change the forks.

Improved Locking Nut.

Casper Dittman, Leacock, Pa.—This invention consists in a nut lock which aims not only to prevent the backward rotation of a nut under the influence of jars and jolts, but to automatically take up the expansion and contraction of the bolt under different temperatures.

Improved Combined Cake Steaming and Washing Machine.

G. W. Mitchell, Baltimore, Md.—This invention relates to the preparation of crackers and cakes for market, and consists in novel means of removing all cohering flour, dust, and discoloring matter, and giving them a cleaned, polished, and attractive appearance.

Improved Valve Motion.

George Rickert, Eckley, Pa.—This invention consists of an air pump so combined with pistons for working the steam valve that air is compressed in the cylinder of the valve pistons on both sides until the moment it is required to have the valve shift. One side of the valve piston is then opened to the exhaust, and the piston is instantly thrown by the compressed air on the other side, thus producing an instantaneous motion of the valve by the aid of compressed air.

Improved Toy Swing.

George Küller and Charles Toelcke, Hoboken, N. J.—This invention consists of rods which suspend the swing from pivots on which they vibrate. They extend above the pivots, and carry a slotted cross bas in which the wrist of a crank turned by clock spring works imparts the vibratory motion to the swing. The machinery is hidden by a case, so that toy figures alone are represented to the eye as the means of impelling the swing.

Improved Carpet Lining.

Edward H. Bailey, Brooklyn, N. Y.—This invention consists of fastening the paper or cloth sheets and the enclosed filling of which carpet linings are made by slips of suitable textile material inserted in slits made through the fabric, and bent over or down on both of its sides, and pasted to the fabric. In practice the slips will be inserted by mechanical means. This mode of fastening does not, like stitching or tufting, draw the fabric together, but leaves it in the same state of elasticity at the points of fastening as in other parts; nor does it tear the paper at the holes.

Improved Cutter Head.

Benjamin Pearsou and Horace W. Pearson, Newburyport, Mass.—This invention consists of a rotary cutter, in which two blades are arranged side by side, and separated by a disk of thin metal projecting from the face of other disks, all so contrived that the cutters may be used for cutting the gains in the end of the felly for the ferrule by which they are connected. The disk of thin metal between the cutters runs against the ends of the felly, to gage the cutters to the felly lengthwise, and the disks from which the cutters project serve to regulate the depth of the cut.

Improved Permutation Lock.

Joseph Cassino, Greenville, Miss.—This invention consists of a combination lock with a suitable number of tumblers, which are set by a perforated combination disk and adjusting screw, in connection with a recessed sliding bolt carried into the tumbler slots by a key operating a pinion and rack of the bolt. The corresponding numbers on the dial plate of the knob produce the combination for setting the tumblers and throwing the main bolt into open position.

Improved Device for Moving Railway Carriages.

Christian Anderson, Paxton, Ill.—This invention consists of a little frame of metal adapted to be readily connected temporarily to a car. It has a crank shaft, reducing gears, and a chain wheel mounted in it, with a cham to work on the chain wheel, and a griper at one end. It is carried along the rail in advance of the car, and attached for holding fast, while the car is drawn along by winding the chain wheel. This, by holding fast to the chain as it rolls along it, pulls the car readily to the point where the chain is fastened to the rail. The frame also carries a box below the chain wheel into which the slack chain falls.

Improved Corn Harvester.

John I. McClintic, Monroe City, Miss.—The forward ends of guide bars are attached to a U fender, the arms of which are bent forward to form fingers to raise the cornstalks that may have been bent down outward, guiding them into such a position that, when cut, their top may fall upon an inclined platform. The fender may be adjusted to bring its fingers closer to or further from the ground. Guards attached to the forward parts of the beams project upward so as to prevent the forward ends of the cut stalks from falling against the fender into such a position as to interfere with the entrance of the standing stalks into the guide passage.

Improved Roofing Paper.

Rowell Colby, Freeport, Ill.—This is a covering for roofs and walls of buildings, formed of paper and sheet metal. Very thin sheets of copper are cemented to the paper, which is rendered waterproof, so that they form one sheet, convenient for handling, packing, transportation, and application to roofs and walls.

Improved Pelerine.

Jefta Popovits, New York city.—This invention consists of a pelerine which is cut of one piece of suitable fur, provided with shoulder-protecting flaps, fitted and connected at the waist, and arranged with rear extension, so as accurately and comfortably to fit the body.

Improved Wheel Harrow.

James F. Sayer, Macomb, N. Y.—The harrow is suspended from a truck frame, at its center, so that it may vibrate. At the front end the harrow has a tongue projecting into the zigzag cam groove of a large roller, at the front end of the truck, to be vibrated by said roller, which is to be turned by traction. The tongue is adjustable, as to hight, to correspond with the cam wheel, by a slotted wedge, and it is fastened by bolts in slotted holes, to allow it to be shoved backout of the cam groove when it is not desired to have the harrow vibrated by the cam.

Improved Ship's Pump.

Leonard Egleston, Seneca Falls, N. Y., assignor to Rumsey & Co., same place.—This is a double cylinder lifting pump, the pistons of which are operated by means of levers in a vibrating socket beam, to which the piston rods are attached. There is a conical tube at the foot of each cylinder, the lower ends of which extend down into reservoirs, and are always immersed in water. These tubes have each a surrounding flange, by means of which they are supported in the base on ledges, and are held in place by the cylinders, with packing between, to secure watertight joints. The water in the reservoir always stands above the lower ends of the conical tubes, and serves as a constant priming, the pistons always bringing water at the first strike.

Improved Mill Burr Dress.

John D. Mines, Moffett's Creek, Va.—This invention consists in burrs or stones for grinding grain, provided with faces having a center dress consisting of an annular concavity with square shoulder.

Improved Machine for Forming Sheet Metal Pans.

William A. Bacon, Lowell, Mass.—The object of this invention is to provide an improved machine for bending or forming the edges of tin sheets which are intended for use in the manufacture of rectangular pans and other analogous articles of tin ware. The improvement relates to making the hinged plates of the forming machine in two or more sections, which are detachable one from the other to vary the length of the former, according to the kind of work required to be done. It also relates to means for regulating the depth and shape of the flange formed on the edge of the tin sheets, and to providing a shallow groove in which the edges of the pan may be placed and bent for wiring.

Improved Cut-Off.

Peter J. Joecken, Cleveland, Ohio.—This invention consists in novel and efficient means for connecting a governor with a slide valve, so as to graduate the supply of steam to the degree of power required.

Improved Fifth Wheel.

Martin Christianson, Green Bay, Wis.—This invention relates to the arrangement of elastic blocks with the tongue and socket therefor, which latter is formed on the lower plate of the fifth wheel. The office of the elastic blocks is to lessen the shocks on the necks of the horses, which are occasioned by the swaying of the tongue as the front wheels encounter obstructions.

Improved Rein Holder.

Alphonso Applegate, Philadelphia, Pa.—This is a rein-holding device, formed of pivoted jaws which turn on pivots by action of springs and gripe the reins with pressure proportioned to the tension thereon. The more the horse pulls, the firmer becomes the hold on the reins. By pulling back the reins, they are easily removed from the holders.

Improved Collar.

Grigsby E. Thomas, Sr., Columbus, Ga., assignor to himself and James M. Handley, New York city.—This invention consists of material, of whatever the collar is made, on the side of a standing collar for neck wear, so contrived that it projects downward over the necktie, preferably at the back, as a holder or guard, to prevent the tie from working up above the collar. The said holder is itself held against turning or swinging up by the vest collar, to which it may be pinned or buttoned.

Improved Limekiln.

Francis Strayer, Clinton, Iowa.—The stack, in which the lime rock to be burned is placed, is built of stone or brick, and is entirely surrounded by the arch and ash pit, forming the base. This base is divided into two compartments, the upper one being the arch, and the lower the ash pit. Openings through the partition allow the ashes to escape into the ash pit. There are openings from the fire place through the wall of the cupola. When the kiln is in operation, the fuel is pushed to the right and left, and distributed around the cupola, so as to heat the lime rock in the cupola uniformly throughout.

Improved Steam Engine.

John W. Hayes, Chicago, Ill., assignor to himself, Thomas W. Twombly, Jacob G. Crockett, and George L. Chatfield, same place.—This is a contrivance of the piston, and the ports for employing the piston for the valve. The piston is made hollow, receives the steam into a hollow space, and discharges it therefrom to the cylinder. The motions for opening and closing the ports are effected by a stud pin projecting from the interior of the cylinder into a spiral slot in the piston. The stud for causing the oscillation of the piston is formed on the end of the steam pipe. The exhaust pipe is adapted for the application of a suction pipe, and the piston is adapted for being reversed endwise to convert the engine into a force pump by reversing the ports relatively to the inlet and exhaust. The invention also consists of an oil jacket surrounding the cylinder, with a valve for admitting the oil into the cylinder as it is needed for lubricating the piston.

Improved Gas Apparatus.

Joseph D. Patton, Trevorton, Pa.—This invention consists of a condenser in combination with the retort and gas holder, through which the gas passes directly from the retort to be cooled, and for separating the matters subject to condensation. The said condenser is a vertical pipe or cylinder, one or more, into which the gas discharges, with a surrounding water jacket, connected by pipes with the water chamber of the gas holder, in such manner that a circulation of water will be set up, as soon as the condenser is warmed by the heat taken up from the gas, by the warm water flowing out at the top and the cold water in at the bottom.

Improved Mirror Holder.

William Simpson, Berlin, Canada.—This invention relates to an improvement in the mode of fastening the mirror holder, patented by the same inventor under date of July 15, 1873, to the frame, so that the required friction of the pivot heads of the wire holder in its fastening clamps is readily obtained, and the position of the mirror at any angle secured thereby. The present invention consists of a hinge-shaped fastening clamp, in which the end of the wire holder is placed and firmly held by a binding screw, attaching the clamp to the mirror frame and bearing sidewise over the round part of the clamp and the end of the wire holder.

Improved Tachometer.

Robert H. Elliott, Atlanta, Ga.—This invention consists of a water gage and a mercury gage combined with a pipe extending through the hull of a vessel to receive the impulse of the water, with another to be acted on by the suction, and with suitable cocks, so contrived that either gage can be put in connection with the water pipes for using water or mercury for indicating the ship's speed—an arrangement which adapts the instrument for very low speeds, which will not effect much change in the mercury, and very high speeds, which will effect too much change for a water gage of practical length. The invention also consists of a filling attachment to the gage tubes for supplying water or mercury, and allowing air to escape, as a convenient means of rearranging and regulating the gage from time to time, as may be required.

Improved Food Steamers and Boilers.

Leroy S. Bunker, Newell, Iowa, assignor to himself and O. H. Hazard, of same place.—This invention relates to the arrangement of flues beneath furnace boilers so that the maximum of heat may be conveniently utilized. The base contains a passage for conducting the heat for a furnace in a tortuous course under all parts of the boiler to the escape flue.

Improved Sulky Cultivator.

William M. Coston, Quitman, Mo.—Several holes are formed through the side bars to receive the bolts or axles, so that the said bolts may be adjusted to enable the driver's weight, whether he be light or heavy, to exactly balance the machine. The ends of the side bars are held by cross bars. To the rear ends of the side bars is attached a cross bar, to which is attached a rearwardly projecting arm, which has also a number of holes formed in it to receive the bolt by which the driver's seat is secured to it, so that the said seat may be moved forward or back to adjust it so that the weight of the driver may balance the framework of the machine.

Improved Chair.

William Goforth, Windsor, Mo.—This invention relates to constructing the chair seat with rearward extended side bars, so that the seat can be attached to the back by inside as well as outside screws. The rear legs are brought forward at their top ends and attached about one fourth the distance to the front from the back ends of the side rails of the seat, so that they serve as braces and supporters of the seat. The lower ends of the back pieces are attached to the back legs by means of screws. By putting together the chair in this manner, it is rendered firm, durable, and superior in strength.

Improved Wood Type Cabinet.

Theodore C. Hacker, Brownsville, Neb., assignor to himself and Edgar W. Gibson, of same place.—The body of the cabinet is made with close top, sides, bottom, and back, and with an open front. The shelves are divided into compartments of various sizes, according to the sizes of the type which they are to contain. To the ends of the sleeves are attached gudgeons, which enter inclined grooves in the body, so as to pivot the said shelves to said sides, and so that they may be conveniently removed. To the sides of the cabinet, a little below the inner end of the slots, are attached stops, so as to support the shelves in proper position, both when open and when closed. With this construction, when the shelves are closed, the upper edge of the front of each lower shelf rests against the bottom of the next upper shelf, so as to effectually exclude dust and dirt.

Improved Cooking Range.

Peter J. Ackerman, Paterson, N. J.—By suitable construction, the products of combustion may be made to pass over as well as under the oven, and then into an exit flue, or they may be made to pass around the ends through other flues, thence over the top of the oven, and into the exit flue. Thus the heat may be distributed wherever wanted about the oven, and very quickly.

Improved Artificial Ivory, Corals, etc.

Julius Frauenberger, New York city.—This is a composition for producing artificial corals, ivory, and similar articles, made of caseine, mixed in suitable proportions and boiled, with a varnish-like solution of copal in concentrated liquid ammonia and alcohol, to be colored and prepared for the various applications in the arts.

Improved Toe Protector for Boots and Shoes.

Theodore Cook, Trenton, N. J., assignor to himself and J. F. Williams, of same place.—Toe protectors for boots and shoes are made with a raised circular rim and a skived or tapered welt, the former projecting beyond the upper, and the latter being secured between the inner and outer soles. The invention in this case consists in constructing the welt with a dovetail slot to adapt it to contract and expand, and thus fit boots and shoes of different sizes.