

## ENGINEERING INVENTIONS.

A car coupling has been patented by Mr. Frank Vaughan, of Elizabeth City, N. C. This invention covers a novel construction and arrangement of parts for a coupling, intended to be inexpensive to make, and yet efficient in operation, and which can be used to couple with other cars not provided with the same kind of coupler, whether they be higher or lower.

An express car has been patented by Mr. John D. Condon, of Kingsley, Iowa. It is plated or covered with sheet iron, the windows have iron shutters, and the space inside is divided by vertical partitions into a large central space, with a small room or rooms at the ends, there being sliding or swinging inside iron doors, with other novel features, to make a substantial construction and promote safety.

A quieter for locomotive exhaust nozzles has been patented by Mr. Russell Thayer, of Philadelphia, Pa. It consists of a cup attached to a rock shaft journaled in and extended beyond the side of the smoke box, and having an arm connected with a rod extending to the cab of a locomotive, so that the engineer or fireman can readily turn the quieter down over the exhaust nozzle or swing it back out of the way.

An apparatus for converting motion has been patented by Messrs. John F. Loomis and Byron E. Wing, of Shelby, Iowa. It consists of a vertically reciprocating rack bar, in connection with two parallel shafts having gearwheels on their outer ends, and having rigidly secured upon them, near their inner ends, hollow flanged disks, the disks turning loosely on the inner ends of the shafts, with other novel features, for converting reciprocating in rotary motion.

## MECHANICAL INVENTION.

A centering device has been patented by Mr. John Irving, of Warren, Mass. It consists of a frame with two movable external and internal caliper heads, each attached to a rack which is in gear with a central pinion of an index and of a graduated radius bar, the device being for centering rods, shafts, pinions, etc., and for laying out cylindrical centers for holes in a circle at a given radius from the center.

## AGRICULTURAL INVENTIONS.

A self-binding harvester has been patented by Mr. Lucius A. Carson, of Uniontown, Pa. This invention relates to harvesters in which the pressure of the grain on the compressors is utilized, when enough grain has been packed for a bundle, to trip the binding devices into action for binding the bundle, and discharge the tied bundle from the machine.

A cultivator has been patented by Messrs. John C. McCandless and Orson King, of Randolph, Kan. This invention covers an improvement on a former patented invention of the same inventors, for cultivators for listed corn, and is designed to adapt them for use in cultivating all kinds of plants planted in rows or drills upon the surface of the soil.

A cultivator has been patented by Mr. Nicholas H. Vogt, of Goff's, Kan. This invention covers a novel arrangement and combination of parts in that class of listed corn cultivators which have twisted or spirally curved and inclined blades for cutting into the furrow and throwing the loosened earth toward the row of plants.

A seed planter has been patented by Mr. Louis S. Flatan, of Pittsburg, Texas. It is of the class of walking planters, being particularly adapted for sowing cotton seed, but also designed for planting corn and distributing fertilizers, and the principal feature of the invention is the novel construction of the seed-discharging device, arranged to rotate in the bottom of the seed hopper.

A bundle carrier and dropper for harvesters has been patented by Messrs. Luke and Charles H. Moffatt, of Verdale, Minn. Combined with the apron are standards in front of its lower edge, with connections secured at one end to the lower end of the apron, the other ends engaged with and movable on the standards, with other novel features, making a useful attachment for harvesting machines.

## MISCELLANEOUS INVENTIONS.

A ruler has been patented by Mr. William P. Sisson, of Garnett, Kan. It has attached to it a finger socket or clamp to facilitate the use of the ruler, and avoid its slipping and making false lines or blots.

A cuff button has been patented by Mr. William Riker, of Newark, N. J. This invention covers a special construction of the plate and the post in that class of buttons that are adapted to be screwed or turned into and out of the button holes of the cuffs.

A revolving exhibitor has been patented by Mr. William F. Miller, of Butler, Pa. It has a fixed circular base, which is hollow and has a motor for reversing an upwardly projecting pin, moving a vertical shaft and rods, for exhibiting dry goods, notions, jewelry, and other articles to great advantage.

A sprag for mining cars has been patented by Mr. John J. Newbaker, of Steelton, Pa. The car wheels have lugs, and the sprag is adapted to slide on the car body and engage with the lugs, whereby the speed of the cars can be checked or they can be entirely stopped while descending steep grades.

An obstetrical instrument has been patented by Mr. Frederick Hullhorst, of Yutan, Neb. It combines in one hand tool a clamping means for tying the umbilical cord, by closing metal clamps or ligatures on or about it, and an interposed cutter for severing the cord between the closed clamps.

An individual condiment holder has been patented by Mr. George D. Dowkontt, of New York city. It is made to be held upon the plate by a simple downwardly projecting flange, which also serves as a support when removed from the plate, the holder having one or more recesses to receive condiments.

An adjustable organ pedal has been patented by Mr. John T. Rowe, of Aylmer, Ont., Canada. A pedal-carrying frame is fitted to slide vertically on the organ case, with flexible webbing or bands connected to the bellows and the free ends of the pedal, with other novel features, whereby the pedals may be easily raised and lowered to suit children or adults, without affecting the working of the bellows or attaching or detaching any of the parts.

An upright piano case has been patented by Mr. Hermann Toaspen, of Brooklyn, N. Y. The invention consists in combining with the case a music holder arranged below the key board, and adapted to be swung outward for convenience in putting away and taking out sheets of music.

A music rack for pianos has been patented by Mr. James F. Conover, of New York city. Combined with an upright piano case, having an opening in its front, is a rack or panel with bars hinged near the bottom to the piano case, and with curved slotted arms, so that the rack, when lowered, is inclined some distance from the front of the piano, the rack, when up, filling the front opening like an ordinary piano panel.

A music leaf turner has been patented by Mr. William H. Fesler, of Columbiana, Ohio. This invention covers a novel construction and arrangement of parts designed to provide an efficient device for quickly turning the leaves of music or music books, or for turning single sheets of music.

An ant trap has been patented by Messrs. Robert H. Barnes and George C. Salles, of Cuero, Texas. It is made with a circular flanged pit and tubes leading therefrom to a central ant receptacle, making a cheap and effective device, whereby the ants are confined to a space within the circle of the trap, and may be speedily captured and exterminated.

A roofing retainer has been patented by Messrs. Ernest D. Owen and Homer Lichtenberger, of New Harmony, Ind. This invention relates to devices for holding the roofs on buildings, and preventing their being blown off, consisting of a novel arrangement of wires and saddles, especially adapted for holding on tin roofing and other similar styles.

An electric alarm for time pieces has been patented by Mr. Frank Glasgow, of Osceola Mills, Pa. The spring arbor of an alarm clock carries a crank, combined with which is an electrical contact lever, with a pivoted releasing lever extending into the path of the crank, whereby an electric circuit may be completed and an alarm sounded electrically.

A stereotype casting machine has been patented by Mr. John E. Caps, of Kansas City, Mo. This invention covers means whereby the upper and lower members of the casting box may be heated as desired, each section being chambered, and there being a steam pipe connection communicating between the sections and a supply pipe from the boiler.

A vegetable masher has been patented by Mr. Nils Johnson, of Superior, Wis. It is so made that in a suitable closed receptacle a shaft is revolved to carry knives or beaters through the material, to be beaten and mashed between the edges of beaters and of cross bars, whereby large quantities of potatoes, turnips, etc., may be quickly and thoroughly mashed.

An animal trap has been patented by Mr. Alphonzo Becker, of Waterford, Pa. Combined with a base having an edge-like rib, by the side of and below which is a bearing for the bail, is a spring-actuated bail, with a trip mechanism, easily operated by a trigger, with other special features, making a novel trap of simple construction.

A hitching strap holder has been patented by Mr. Edward R. Campbell, of Austin, Minn. It is a wire bent to form a loop with laterally projecting arms, there being a shank portion below the loop and attaching eyes in the free ends, it being designed to be attached to the back strap of a harness just in advance of the hip straps.

A wardrobe trunk has been patented by Mr. Zalmon D. Hinkley, of Grand Rapids, Mich. It is a traveling trunk, made with suitable folding and separate parts, to constitute convenient partitions and tills, when in position in the trunk in its customary form, which, by hinges, locks, and fastenings, are held in place as a trunk proper or to make a wardrobe.

A wrench has been patented by Messrs. John M. and William H. Parsons, of Great Western Mine, Cal. It has a lever arm with jaws to engage the nut, and arms with clamps to engage with the spokes of the wheel, being designed to hold a nut or burr to its place against the outer end of the hub when removed from the axle, when the latter is being lubricated.

A corset fastening has been patented by Mr. Louis Sanders, of New York city. It is a metallic spring loop fastening, of novel form, to engage with buttons or studs, intended to hold securely, but so it can be readily engaged and disengaged, and not liable to accidental engagement again when the corset is being taken off.

A water heater has been patented by Messrs. John H. Swager and Jacob F. Ferchen, of Astoria, Ore. It is intended to be fitted upon the ordinary form of cook stoves, and consists in one or more annular chambers in connection with a water supply tank, with certain novel arrangements of stop cocks and faucets.

A coal chute has been patented by Mr. James Jopling, of What Cheer, Iowa. It has a sliding and laterally adjustable scuttle, in connection with an inclined chute and an intermediate hinged curved plate, with devices for operating the scuttle and the plate, being designed as an improved coal heaver for loading box or flat cars with coal without moving the cars.

An ironing machine has been patented by Mr. Jean L. Mazoyer, of New York city. It has a reciprocating table and a reciprocating roller above it, both operated from the same shaft, so the machine can be run by a man turning the crank wheel with one hand and placing and removing the articles with the other hand, or it can also be operated by power.

A firewood drag saw has been patented by Mr. Benjamin F. Shinn, of New Iberia, La. Combined with a supporting frame and inclined ways is a reciprocating cross bar mounted on the ways, with a saw arm adjustably pivoted on the cross bar, and means for reciprocating, so that the saw will swing back and forth in an irregular curve, instead of in a horizontal plane.

A reversible carseat has been patented by Mr. John M. Sauder, of Harrisburg, Pa. The seat is made with its back rigidly connected with the seat frame and arms, but with a novel construction of reversing mechanism, whereby it can be moved inward and upward, swung through half a revolution, and moved outward and downward to its place, the seat being economical in space and inexpensive.

A loom for cross weaving has been patented by Messrs. George Oldham and William Dixon, of Philadelphia, Pa. The invention provides means for giving the heddles lateral horizontal movement for crossing the warp threads between the strands of filling, with a special construction of harness or plates to carry the warp threads, in looms for making chenille, rugs, mosquito netting, etc.

A night light has been patented by Messrs. James and William J. Stratton, of Brooklyn, N. Y. It has a support formed with a swinging joint, a burner which supports a screen having a cylindrical section and a lateral cone shaped section, with a lens supported by a swinging joint in front of the cone shaped section of the screen, whereby the light from a small lamp may be directed on any desired object, and the rest of the room be shaded.

Combined mast head and foot gears forms the subject of a patent issued to Mr. John H. Rushton, of Canton, N. Y. The invention covers swiveling devices applied to the head and foot of the mast, made free to rotate, and having the blocks through which the halyards or other ropes run attached to them in a free or loose manner, with other novel features, to allow sails, spars, and cordage to turn freely and without fouling.

A washing machine has been patented by Mr. Stephen T. Potter, of Marshall, Mo. It is of that class wherein a revolving perforated drum is used, and the drum is provided with a sliding door held at its ends in circular grooves formed at the ends of the drum, whereby the door may be opened by simply sliding it in the grooves, the design being to simplify and perfect the machine.

A washing machine forms the subject of a patent issued to Mr. Eaton K. Clark, of Sequiour, Iowa. The tub has vertical vibrating arms pivoted at their upper ends, and by operating a crank the clothes are pressed between corrugated plates to wash them, with a pressing and rubbing movement, in a machine designed to be simple in construction and convenient in use.

A cigar bundling machine has been patented by Mr. T. Wilson Haus, of Meadville, Pa. The invention consists in a box having a side and bottom follower, with a trestle to support and raise the bottom follower, a screw connected with the side follower, movable triangular corner blocks, and an apertured cover with a slide for closing the aperture, making a convenient device for bundling cigars and holding them while being tied.

A brake for children's carriages forms the subject of a patent which has likewise been issued to the above inventor. It is a bar or plate attached to the axle of the carriage, with a notched clutch plate on the hub of the wheel, with which the brake bar may be engaged, with other special features, making a simple and effective device that may be worked by the foot of the attendant to lock and unlock the wheel.

A compensation pendulum has been patented by Mr. John Gerhardt, of Montreal, Quebec, Canada. The compensating rod and pendulum are both made of the same metal, and are combined with pivoted connecting devices separated at one end by the compensating rod, and from which the pendulum is suspended, so that the contraction of the rod will lower the pendulum and its expansion raise it, exactly as the pendulum contracts and expands under the same temperature.

A barrel head cutter has been patented by Mr. Thomas McMillen, of New Orleans, La. The clamping disk against which the barrel head is held is formed with a curved surface, so that in applying the head it will be bent transversely to the grain and in the direction of its greatest diameter, the invention being an improvement on a former patented invention, but also adaptable to all machines in which the saw mandrel is made to swing toward and from the barrel head to cut it in oval shape.

## NEW BOOKS AND PUBLICATIONS.

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