

## ENGINEERING INVENTIONS.

An improved car coupling has been patented by Mr. Charles W. Spencer, of Richmond, Mo. The invention covers a double hook or anchor-shaped link, with a balance weight, and means for raising or lowering it to disconnect it from another, making a simple means for coupling or uncoupling by men on the cars or on the ground.

A car truck has been patented by Messrs. James H. McClure and George F. Murdock, of Wells-ville, O. This invention provides means whereby cars of reasonable length may be mounted on three trucks each, and the central truck be enabled to follow curved tracks, so the length of a car may be doubled at only a small additional expense.

A car replacer has been patented by Mr. Joseph A. Hodel, of Cumberland, Md. This is for replacing on the track cars which have been derailed, and provides means for guiding the wheels while the car is moved, and means whereby the same device is adapted to be used in connection with rails of different heights, and so a portion of the device may be forced through the ground beneath the rail.

## MECHANICAL INVENTIONS.

A valve grinder has been patented by Mr. Harry W. Burleigh, of Franklin, N. H. The invention comprises improved clamps, centering devices, revolving gear, and coupling mechanism, making simple and efficient means for readily grinding globe and similar valves, and refitting them without disconnecting them from the pipes with which they are in use.

A circular sawing machine has been patented by Mr. John Van Patten, of East Tawas, Mich. This invention provides means whereby two ends of a piece of lumber may be sawed off in succession, means whereby the said frames may be adjusted to align the saws, different saw frames held up while their saws are at work, and so the throwing up of one frame will cause the others to fall, and generally improving sawing machines where two or more saws are used.

## AGRICULTURAL INVENTIONS.

A check row corn planter has been patented by Mr. Thomas J. Lindsay, of Lafayette, Ind. The invention covers a special combination and arrangement of parts to secure accuracy in check row corn planting, and promote convenience in controlling the planters.

A cotton planter has been patented by Mr. William T. Gardner, of Tarborough, N. C. The invention covers a special construction and arrangement, whereby the spout slightly spreads the seeds, so the plants can be more readily thinned than when the seed is deposited in the ground in bunches, the seed is covered with soil, and the top of the ridge is smoothed off by a covering block.

A corn planter has been patented by Mr. Hiram D. Layman, of Benton, Ark. This invention relates to wheeled corn planters having rotary dropping devices, and the wheels are so made adjustable on their axles by means of feathers that they may be set to act as guides in laying off rows of any desired distance apart. A seed sower has also been patented by the same inventor, the patent covering a novel construction in that class of devices where a perforated rotary cylinder is employed for distributing the seeds over the ground. A cotton planter forms another subject of a patent issued to the same inventor, the frame being combined with a series of plows arranged to throw up a ridge and open a furrow therein, in connection with which is operated a cylindrical seed drum with a series of uniform holes, with various special devices connected therewith. A cotton chopper has also been patented by Mr. Layman. This invention covers a novel construction in which the hoes are made readily removable, so that any desired number may be employed, according to the "stand" of cotton required, and there is a device for elevating the chopper, to hold the plows and wheels out of contact with the ground when desired.

## MISCELLANEOUS INVENTIONS.

An improved trunk has been patented by Mr. William J. Large, of Brooklyn, N. Y. The invention consists principally in the direct pivoting of the tray to the lid and connecting it pivotally to the body, with various subsidiary parts.

An odorless privy seat or chair has been patented by Mr. Franklin B. Kendall, of Tumwater, W. Ter. This invention is an improvement on a former patent issued to the same inventor, covering improvements in the construction and arrangement of parts.

A process of making zinc sulphide anhydrous has been patented by Mr. Thomas Macfarlane, of Montreal, Canada. The invention consists in mingling zinc chloride with hydrated zinc sulphide, to exclude air while it is being ignited or rendered anhydrous and converted into a valuable pigment.

An improved pencil has been patented by Mr. George C. Ward, of Girard, Kansas. The invention relates to automatic pencils, in which the lead or crayon is projected by pressure on the rear end of a spring tube, and provides therefor an improved construction and combination of parts.

A buck saw frame has been patented by Mr. Theophilus Larouche, of Williamstown, N. Y. This invention covers a special arrangement and combination of parts, whereby a buck saw frame is made firm and easily adjustable, and will not fall apart when loosened up for removing or replacing the saw blade.

An engraver's bangle clamp has been patented by Mr. Henry Carpenter, of Flushing, N. Y. It is made of a tapered and slotted block, with recessed clamping plates at its upper end, and with a tapered and slotted band working on guide pins for drawing the parts of the clamp together, and a spring for separating them.

A toy to be used with fire crackers has been patented by Mr. Charles Diener, of New York city. A

miniature house is so made, and provided with various images, that the explosion of a fire cracker therein will force the images into position for observation at various openings, such as at the top of the chimney and at the doors and windows.

An apparatus for stereotyping has been patented by Mr. Frederick J. Smith, of Brooklyn, N. Y. In combination with a novel which has its forward end slotted is a foot piece with its forward side notched and removable side bars engaging therewith, with other peculiarities of arrangement and construction to adapt the apparatus to a wide variety of work.

A mail bag has been patented by Mr. John S. Bailey, of Buckingham, Pa. In combination with the jointed frame of a mail bag is a shield plate attached to one of the center joints of the frame, with fingers on its inner face for bracing the frame and holding the labels, with which is connected a suitable hump, with other peculiarities of arrangement and construction.

An elevator for seed cotton and other materials has been patented by Mr. Sidney W. Bartholomew, of Castalia, N. C. In combination with a hopper having grooves is an adjustable feed board with ribs, so the quantity of seed cotton or other material drawn up the flue can be regulated to prevent clogging of the machine.

A wagon brake has been patented by Messrs. James Hocking and Clement R. Jones, of Deuton, Neb. The invention relates to wagon brakes which are automatically applied by the back thrust of the team, and consists in the special construction and arrangement of devices in a single horse vehicle for accomplishing this result.

A washing machine has been patented by Mr. Francis G. Powers, of Champaign, Ill. The invention covers an improved construction for securing a better connection between the pounder stem and its operating handle, and means for making a better joint between the pounder stem and the cover, as well as an improvement in the pounder itself.

A label holder for mail bags has been patented by Mr. Frank L. Herold, of Terryville, Conn. Combined with a strip having grooved flanges and a longitudinal slot is a slide adapted to receive the tag, and to pass it under the grooved flanges, thereby holding the tag on the strip, so the tags can be inserted or removed easily and rapidly.

A carriage top fastener has been patented by Mr. John J. Travis, of Carson City, Mich. The invention consists of straps attached to the bows of buggy and other falling carriage tops in a novel manner, for use in fastening the bows together, and to the braces of the top when the top is down, to protect them from breaking and wear, etc.

An automatic clock winding device has been patented by Mr. Nathan Silberberg, of Yassy, Roumania. The invention consists in a series of metallic rods or bars so connected that the variations in their length from changes in temperature can be utilized for producing the power necessary to wind up the clock works, the device being self-operating.

A churn cover fastener has been patented by Mr. Mark M. Maycock, of Buffalo, N. Y. In combination with the head, having a central opening and staples, is a cover with guides and a disk, with overlapping flanges, and handles and radially sliding bolts, making a specially advantageous construction, in which the wear is evenly distributed.

A fire escape has been patented by Mr. Reuben C. Rutherford, of Quincy, Ill. This invention relates to that class of fire escapes in which a metallic band, wire, or cable is wound on a drum held in a device with means for suspending a person. The apparatus can be stopped and started at will as desired, by simply pressing the brake levers.

An improved shirt has been patented by Mr. John H. Scriven, of Grafton, N. Y. After the bosom is cut to shape, a perfect hem is formed and stitched on the margin thereof, after which the hemmed portion is joined with the body or main portion of the shirt, so as to give the same appearance to the bosom as if separate binding strips were used.

An automatic incline pool ball rack and spotter has been patented by Mr. William A. Tea, of Clyde, O. The invention consists in providing a place for keeping a given number of pool balls, which can be placed on the table when desired, and spotted or bunched by simply moving the conductor or tube until it strikes the table, when the balls pass down an incline into the slotted tube.

An improved tongs for lifting spools of fence wire has been patented by Mr. William A. Hardin, of Leavenworth, Kansas. The invention consists of two bent levers pivoted together, with two of their ends adapted to lie close together, so they may be inserted in a central opening of a spool, and then spread apart to cause them to bind, by the act of lifting one or both the levers.

An apparatus for agitating the liquor in tan vats has been patented by Mr. Thomas A. Mayes, of Phillipsburg, Pa. In combination with a vat are boxes or compartments on the bottom with pipes and valves so connected therewith that fresh lime can be mixed with the liquid in the vats without requiring the skins to be removed, and they can be limed more rapidly than in the ordinary vats.

A stove jacket has been patented by Mr. William H. Benson, of Elston, Mo. It fits over the stove and connects with the draught flue, and has a heating closet within and supported by the jacket to inclose the stove top, the closet and jacket having independent connections with the draught flue, all to confine the heat radiated from the stove, and keep the apartment cool when desired.

A buoyant propeller for vessels has been patented by Mr. Nicolai Peterseu, of Charleston, S. C. This invention provides wheels which will float themselves and a superposed load, the wheels at the same time serving as propellers; a deck or cabin is so mounted on the wheels that one or more of them may be turned for steering the boat, and all are connected with one driving power.

A shutter worker has been patented by Mr. Leonard Tilton, of Brooklyn, N. Y. The invention consists principally of a jointed arm adapted to be attached to the blind, and to a stud fastened on the window sill, the arm and stud having means for locking the arm and its sections at any desired position for holding the blind open or closed or at any intermediate position.

An improved coupling for ropes or cables has been patented by Mr. George M. Green, of Sreator, Ill. A socket with two longitudinal grooves in the sides of its aperture and two notches at the inner end, has a key fitting in the aperture, with two opposite projections on the inner end, the socket having a loop or frame in which is a spring, thus making an easily operated coupling for ropes or cables.

Improvements in blocks for building purposes form the subject of a patent issued to Mr. Thomas L. Jowett, of Boston, Mass. The invention covers, in a wall, floor, or other like structure, the combination of a series of slab like blocks, with longitudinal tongues and shoulders on opposite sides, with which buildings may be constructed cheaply, made fireproof, free from damp, and of a solid and neat external appearance.

A butter package has been patented by Mr. John C. Brown, of Davenport Center, N. Y. The cover has an annular ridge, with a series of diametrically opposite notches, ears projecting from a ring surrounding the jar, can levers held to turn on the ears, and a cross piece pivoted in the can levers, the whole making a package which may be sealed air tight, with a handle forming part of the fastening.

A combined platform rocker and reclining chair has been patented by Mr. Peter B. Cupp, of Van Wert, Ohio. The seat frame has side grooves and arms with closed slots, the sliding seat has a rack with hinged back having studs projecting laterally into the slots, and there is a rotatable pinion shaft with a squared end, with other improved details of construction for adjusting the seat and limiting its movements.

A fire escape ladder has been patented by Mr. William Brannan, of Fredericksburg, Va. Combined with a wheeled frame is a sheath and ladder pivoted to a rear axle, a lazy tongs and operating screw connecting the sheath to the forward axle, and anchors adapted to be set in the ground when the ladder is elevated, the whole making an extensible ladder to reach the windows or roofs of houses from the ground in case of fire.

A hand power vehicle has been patented by Mr. Thomas A. Davies, of New York city. Hand levers are pivoted to the frame and connected with a chain wheel attached to the axle of the drive wheels, the axle and drive wheels being connected by ratchet wheels and pawls, so the vehicle will be forced forward by oscillating the levers. The driver rests his feet on the front bar of the frame, but to turn to one side operates a cross rod on that side. A further patent has been issued to the same inventor for an invention whose object is to simplify the construction and lessen the weight of hand power vehicles, secure a direct application of the driving power, and lessen the friction.

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## Notes &amp; Queries

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Correspondents sending samples of minerals, etc., for examination, should be careful to distinctly mark or label their specimens so as to avoid error in their identification.

(1) W. B. A. writes: I have some lard that is old and strong; is there any way to get the strong taste out, or any cheap way to get it into an oil for a lubricator? A. The following is given as an excellent method for trying out the lard: Set a large kettle over a fire in some sheltered place, out of doors, on a still day. It will cook much quicker in large quantities. Put into the kettle, while the lard is cold, a little saleratus, say one tablespoonful to every twenty pounds; stir almost constantly when nearly done, till the scraps are brown or crisp, or until the steam ceases to rise, then there is no danger of its moulding; strain out into pans, and the first will be ready to empty into crocks when the last is strained. Or, take of lard 2½ pounds; camphor, 1 ounce; black lead, ¼ pound; rub the camphor in a mortar, down into a paste, with a little of the lard; then add the rest of the lard and the black lead, and mix thoroughly for a satisfactory anti-attrition paste.

(2) J. A., of St. Petersburg.—Steer's opodeldoc is as follows: White Castile soap, cut small, 2 pounds; camphor, 5 ounces; oil of rosemary, 1 ounce; oil of origanum, 2 ounces; rectified spirit, 1 gallon; dissolve in a corked bottle by the heat of a water bath; and when quite cool, strain, then add ammonium hydroxide (aqua ammonia), 11 ounces; immediately put it in bottles, cork close, and tie over with bladder. It will be very fine, solid, and transparent when cold.