

ENGINEERING INVENTIONS.

A railroad rail fastener has been patented by Mr. Charles Netter, of New York City. It consists essentially of a clamp plate formed with a recess in one edge, in combination with a keeper of novel form having enlarged lower end and inclined side recesses, for fastening the rails to metallic or other ties.

A rotary engine has been patented by Mr. James I. Friar, of Pascagoula, Miss. It is made with a cylinder having a concentric longitudinal opening and a cam held on such opening at each side of the cylinder, in combination with a piston traveling in the opening, and gates adapted to slide radially in the piston and carrying friction rollers traveling on the cam.

A car coupling has been patented by Mr. Thomas J. Eddleman, of Fort Worth, Texas. The link has a lateral hook and vertical perforation, while a laterally swinging gate extends part way across the mouth of the drawhead, the invention also covering other novel features, whereby the car may be uncoupled from the sides, and a car provided with this coupling may be coupled to one having the ordinary link and pin coupling.

MISCELLANEOUS INVENTIONS.

A portable house has been patented by Mr. Drummond Welburn, of Orlando, Fla. The invention covers novel features of construction and combinations of parts, the principles of which may be employed in building two-story houses, or in the building of outhouses and houses for birds and beasts.

A thill coupling has been patented by Messrs. Enoch F. Drake and Alfred C. Wait, of Salina, Kansas. This invention covers a novel construction and combination of parts designed to overcome all rattling, and to effectively and securely hold the thill or pole against accidental displacement or detachment.

A water wheel has been patented by Mr. Selden B. Lard, of Waterville, Kansas. It is made with a series of overlapping leaves or buckets pivoted a little at one side of their center, and with a series of loosely pivoted and sliding catches for engaging the leaves or buckets when folded, to lock them closed.

A hand truck has been patented by Messrs. Wiltshire Sanders and John B. Rafferty, of Reno, Nevada. It is especially designed for handling large boxes and baggage, having a frame located intermediately between the wheels, with a roller having projecting handles supported to turn freely in bearings.

A fire escape has been patented by Mr. Louis P. Santy, of Clements, Kansas. This invention consists principally of three systems of lazy tongs connected together and arranged to be elevated and lowered by a screw mounted in the platform of a truck, to which the device is adapted to be attached for use in streets.

A wrench has been patented by Mr. Joseph G. Hoffman, of Ste. Genevieve, Mo. This invention relates to a socket wrench, the jaws of which are designed to safely withstand torsional strains, and be readily locked to fit nuts or other articles of any given size, or be made self-adjusting to fit articles of various sizes.

A velocipede has been patented by Mr. Francis M. Wolf, of Springfield, Mo. It has two large drive wheels and two small wheels adjusted to a frame of novel construction, being designed as a simple and inexpensive vehicle with which a high rate of speed may be attained on ordinary roads, and which may be readily steered and controlled.

A shoe clasp has been patented by Mr. Herbert S. Pullman, of Rockville, Conn. It is especially adapted for use with arctic overshoes, the object of the invention being to economize in metal and produce a simple, easily manipulated tongue adapted for use in connection with the ordinary form of keeper and in essentially the ordinary manner.

A stove pipe drum has been patented by Mr. Mark J. Liddell, of South Englewood, Ill. It is made with an outer cylinder, an intermediate cylinder, and an inner draught pipe, the latter having near its lower end an opening and a damper, the device being adapted to facilitate the radiation of heat passing through a draught pipe from a stove or heater.

A washing machine has been patented by Mr. Jacob L. Martin, of Leo, Ind. The machine is of that class in which one washboard is reciprocated with its face in proximity with the face of another washboard, to secure durability and easy operation of the machine, and holding the articles to be washed to the action of the washboards.

A well boring apparatus has been patented by Mr. Benjamin Andrews, of New Orleans, La. Combined with a non-rotating well tube is a boring head which rotates on the lower end of the tube, and a rube working within the latter and detachably connected with the boring head, so that it may be utilized for rotating the latter, with other novel features.

A shutter worker has been patented by Mr. Franklin W. Kelly, of Vermontville, Mich. This invention covers certain novel combinations of parts and details of construction to prevent the outside gearing from becoming clogged or injured by rain, ice, or snow, to provide for the ready detachability of parts, and to render the clutch mechanism safer to work and more durable.

A line holder for bricklayers has been patented by Mr. Julius C. A. Vogelsong, of Ardmore, Pa. It consists of a flat pin with a shoulder to engage the corner of a wall, a bearer to rest upon the face of the wall, a recess at the inner end of the shoulder, a handle, and guide holes for the line, by which a gauge line may be readily applied when either a corner or flat surface is available.

A mast hoop has been patented by Mr. Charles S. Mott, of Patchogue, N. Y. It is of that description in which two separate sections are hinged to each other and provided with a spring catch for locking them together, the object of the invention

being to simplify, strengthen, and improve the construction both of the hinge joint and the locking and unlocking joint.

A knockdown box has been patented by Mr. Casbar G. Krikorian, of Smyrna, Turkey. It is preferably made of wood, with sides and ends so hinged to a bottom piece that when thrown up at right angles they will rest on the upper face of the bottom piece, the invention also covering other novel features in the construction of a box specially designed for transporting fruit, etc.

A combined scarf tip and fastener has been patented by Anna L. Seibert, of New York City. Its body has a toothed tongue and a slide, and is also provided with an opening for the reception of a scarf band and a spur for engaging the band, the device effecting a saving of cloth and dispensing with the use of the ordinary pin for engaging the neck band to the shield.

A case for surgical or other instruments has been patented by Mr. William R. Leonard, of New York City. Combined with the bed of the case are sockets or clamps pivoted to the bed to move laterally, and hinged to swing vertically, with other novel features, whereby an instrument may be conveniently and expeditiously extracted or replaced without the fingers coming in contact with the blade.

A music box has been patented by Mr. Emile Bornand, of Ste. Croix, Switzerland. The main spring case has a gear wheel meshing into the pinion of the wind wheel, and a second gear wheel meshing into a pinion on the cylinder shaft, there being also other novel features, by which the cylinders can be easily and accurately placed in position in the box and quickly interchanged.

A ventilator has been patented by Messrs. George and David Lemley, of New Orleans, La. The body has an open upper end, above which is held a conical cap, a series of circumferentially arranged bell-mouthed pipes projecting through the body below the top, and having inclined and converging inner ends, the construction being designed to create an upward draught capable of counteracting any draught having a downward tendency.

Two kinds of plastering composition form the subject of two patents issued to Mr. John H. Fitzgerald, of Frankford, West Va. That to be used for the first coat consists of sand, sawdust, plaster of Paris, slaked lime, sugar, and carbonate of soda, while that for the second coat is made of cream of tartar, pumice stone, sugar, lime, and plaster of Paris, each composition being compounded and applied in proportions and after a manner described.

A double acting force pump has been patented by Mr. Winfield S. Shahan, of Russell, Kansas. At the upper ends of side standards a lever is fulcrumed to which the plungers are pivoted, so that by operating the single lever both plungers are alternately raised and lowered, the lower end of each plunger having a flexible packing formed with a concave cup at its lower surface, so that the pressure of the water in the cup will expand its lower edge and thus automatically pack the plunger.

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