

ENGINEERING INVENTIONS.

A hydraulic thrust block for propeller shafts has been patented by Mr. William Cousins, of New York city. It is constructed with a piston attached to the shaft, in a cylinder supplied at both ends with water by a force pump through pipes with valves opened by the movement of the piston, so the thrust of the shaft will be sustained by a water cushion, the escape of water around the shaft being prevented at each end of the cylinder by packing rings.

A steam boiler has been patented by Mr. Benjamin F. Wright, of Oneida, Kansas. This invention covers a special construction of boiler in which a cylindrical fire box is entirely surrounded by water, and the gases, smoke, and heated air from the fire are driven directly through the water in the boiler without the aid of flues, the object being to prevent the escape and loss of heat, and secure a higher degree of economy in combustion, while preventing sparks.

An adjustable crank shaft has been patented by Mr. Edward Barrath, of Brooklyn, N. Y. The shaft sections have upon their adjacent ends heads with eccentric female screws having different diameters and reverse screw threads, the male screws having oblong openings to receive the ends of the crank, the screws having exterior and interior screw threads to screw into the female screws of the heads, and upon the ends of the crank, and the crank having oblong ends and male screw threads, so the crank can be readily adjusted and will be securely held.

MECHANICAL INVENTIONS.

A nut lock has been patented by Mr. Jacob C. McAfee, of Dallas, West Va. The invention consists in making the recess for the threaded block entirely through the nut, and the threaded block of the same thickness as the nut, and combining with it a wedge which is driven in behind the block.

An oil cup has been patented by Messrs. Edward Mancort and Charles Thirion, of New York city. A diagonal passage is provided for, with a spindle set in line therewith, with other novel features, to prevent all varying of the flow after the spindle is once properly set to secure the desired feed of oil.

A means for connecting loom shuttle binders to shuttle boxes has been patented by Mr. Luman D. Bennett, of Jewett City, Conn. This invention provides a simple and efficient detachable joint, which allows of the binder being readily taken out or replaced, and in which the binder pivot shall be locked or held securely in its eye or socket when the binder is in its working position.

A chest for tools has been patented by Mr. John F. Zimmerman, of Washington Center, Mo. In combination with a chest and its lid is a series of trays, connected with each other and with the chest and its lid, so that when the lid of the chest is swung up and back the trays will be swung up and backward; a hinged front is also provided for, on the back of which a box is formed, so connected with the trays that it swings out when the trays swing up.

A clutch has been patented by Mr. Edward Barrath, of Brooklyn, N. Y. It is designed for presses and other machinery, and is especially for use where the clutches are to work both ways, the clutch bar being placed in a groove in a shaft and in recesses in collars attached to the shaft, pivoted at its ends to a link and lever, and connected at one end with a spiral spring to raise it into gear with the grooved pulley hub, with other novel features.

AGRICULTURAL INVENTIONS.

A cane planting machine has been patented by Mr. Charles Coleman, of Honolulu, Oahu, Sandwich Islands. This invention covers an improvement on a former patent issued to the same inventor, simplifying the construction of the machine, and rendering it more reliable in operation.

A reaper attachment for traction engines has been patented by Mr. William Kimmel, of Cambridge City, Ind. This invention covers a novel construction whereby a traction engine and one or more self-binding reapers are adapted to work together, the engine furnishing the power to work the reapers.

A grain cleaner has been patented by Mr. Bertrand Scott, of Keyser, W. Va. The machine is compact and simple in construction, and is for taking off the fuzz or beard from the small ends of grains of wheat, removing all dust and impurities from the grain, thoroughly scouring it, and polishing and cleaning without crushing or breaking it.

A land furrower and roller has been patented by Messrs. David, Levi S., and Thomas T. Holdaway, of Provo City, Utah Ter. The invention combines with the draught bar or pole and the plows, diverging arms, having their forward ends pivoted to the draught bar or pole, and with bearings at their rear ends, with a roller journaled in the bearings.

A harrow has been patented by Mr. Chas. P. Snow, of Lanark, Ill. Combined with the main frame is a sliding frame and swinging teeth, bent at their upper ends to form pivots, the bearings being secured to the sliding frame, and having apertures with upper and lower flared surfaces, and means for adjusting the sliding frame.

A combined harrow and cultivator has been patented by Mr. John R. Dunlap, of Sherman, Ill. The side beams have harrow teeth, and are secured at a little distance from their forward end to a cross bar, in such position that their forward ends will be at a little distance from each other, so the plants can pass between the ends, and there are other novel features.

A self-clearing revolving beam harrow has been patented by Mr. John D. Winters, of Davisville, Cal. It has a lower frame with rotating beams with teeth upon their opposite sides, and with cross rods at right angles with the teeth, and an upper frame with cross bars connected with the lower frame by hinged bars and a bail and lever, so the tooth beams can be allowed to rotate to clear the teeth of rubbish.

A horse hay rake has been patented by Mr. Adolphus W. Stevenson, of Troy, O. The draught frame and rake head are hinged to each other, and the seat standard is attached to a bar or other suitable device hinged at its forward end to the draught frame, and so connected at its rear end with the rake head that the driver's weight will assist in tilting the rake, and the rake head will be relieved of the strain of a downward impulse upon the seat bar, with other novel features.

MISCELLANEOUS INVENTIONS.

A plaque has been patented by Stella A. Jackson, of New York city. It is of glass, with a transparent spot in the center on which to mount a picture, the remainder of the plaque being frosted or made in imitation of porcelain by grinding, or by grinding and painting.

A scarf has been patented by Mr. George Lennig, of New York city. It consists of an embossed leather front, with stiffening and lining, making a scarf which is simple and durable, will readily take any desired shape, will retain its color, and can be readily cleaned when soiled.

A basin trap cleaner has been patented by Mr. James E. Kelsey, of Brooklyn, N. Y. The invention provides for a flexible pipe, with a hollow tapering stopper at one end, so the waste pipe and faucet may be connected, and the clearer is adapted also to be applied to basins with large or small outlets.

A combined satchel and pillow has been patented by Mr. Benjamin Kiam, of Houston, Texas. This invention combines with a valise or satchel an air bag permanently incorporated therewith to form one of its sides, and having a mouthpiece upon the exterior, so the bag can be inflated without opening the valise.

A buckle has been patented by Mr. Albert H. Mantley, of Mound City, Kansas. The buckle has a sliding tongue plate held in a slot or passage made through the lower cross piece of the buckle frame, and the tongue plate is curved to facilitate the insertion and removal of the tongue from the strap, with other novel features.

A bushing for sheaves has been patented by Mr. Willard F. Wellman, of Belfast, Me. This invention relates more especially to roller bushings for the sheaves of ships' blocks, and provides for such construction as to do away with the friction of the bearing rollers upon each other and upon the pintle of the sheave.

A rope reel has been patented by Mr. Ephraim M. Bishop, of Olive Bridge, N. Y. This invention provides a new and improved spool on which coils or balls of rope or cord of various sizes may be held, doing away with the necessity of rewinding when it comes from the manufacturer, before being sold by the dealer.

A flying target has been patented by Messrs. Elmer and Howard Ridge, of Philadelphia, Pa. It is formed of a flat ring in which a bulb is held which can be inflated to give the target body, the bulb being secured to the inner end of a tube passed radially through the ring, and retained by wires or bands pivoted in the ring.

A quilting attachment for sewing machines has been patented by Mr. William G. Humphreys, of Seneca, S. C. This invention covers a novel arrangement and construction of parts, the frame being moved backward and forward as the work progresses, and the goods shifted by rolling and unrolling rollers, being all the time kept taut edgewise and lengthwise.

A cant book has been patented by Mr. Geo. W. Lord, of Bloomington, Pa. This invention covers novel constructions of the hook proper and joint portion of the clip to which it is pivoted, so the hook is prevented from falling unduly forward or moving unduly back, and thus is always kept within a convenient range of motion for its work, with other novel features.

A windmill has been patented by Mr. Merritt W. Palmer, of Holland, Mich. This invention relates to self-regulating windmills, where two rock shafts, with steering vanes, are mounted on a wheel frame, and geared together at right angles, made to throw the wheel more or less edgewise to the wind about a vertical axis in proportion to the strength of the wind.

A gate has been patented by Mr. John A. Anderson, of Hepburn, Iowa. It is made with longitudinal and cross bars connected by pivots, with a sliding latch having recesses in its lower edge to engage with a pin attached to a pair of the cross bars, and connected with the lower part of the gate by inclined bars, so the gate can be raised and lowered, and will be held in place when adjusted.

A shelf for exhibiting goods has been patented by Mr. Norman Robertson, of Kincardine, Ontario, Canada. The invention consists in the combination, with a shelf, of one or more eccentric V-shaped clamps pivoted to the under side of the shelf, between which clamp and the next lower shelf the goods are held, it being convenient to hold the goods by one or more clamps according to size.

A sash fastener has been patented by Mr. John McPherson Lowrey, of Jonesborough, Ga. A sash lock is formed of two metal strips crossed and pivoted to each other out of the middle, provided at their ends with jaws, of which those on the short ends have smooth edges and those on the long ends serrated edges, making a detachable device for holding and locking window sashes in any desired position.

A wick trimmer has been patented by Mr. Robert Hoffman, of Cohoes, N. Y. This invention covers an improvement in addition to a former invention of the same patentee, whereby a wick trimmer is combined with a clamping frame for pressing and holding the wick to the edge of levers or blades of the wick trimmer, for trimming lamp wicks which are to have their upper ends rounded.

A combined wagon jack and tire tightener has been patented by Mr. Melzar W. Coon, of Walla Walla, Washington Ter. A chain lever is mounted be-

tween two standards, and connected by a chain with a sliding block placed between the standards, and provided with a pawl of engaging ratchet teeth formed on the back of the standards, to lift and expand the wheel in the tire without resetting the latter.

A thermostat has been patented by Messrs. Willey J. P. and George L. Kingsley, of Rome, N. Y. This invention relates to the class of thermostats where metals of different coefficients of expansion are employed to operate an electric circuit, being designed for use where changes of temperature are only slight, and being capable of adjustment by a screw to the required temperature; it may also be used in connection with mechanical devices.

A nut lock has been patented by Mr. Gwilym Bowen, of Murphysborough, Ill. The washer has curved grooves with inclined ends, so that when a locking pin is forced through one of the grooves its ends will be bent outward beyond the face of the washer; when the pin is properly driven into place both ends will project beyond the face of the washer, when they may be struck a light blow and bent against the nut.

A sash cord fastener has been patented by Mr. Frederick S. Heiser, of Brooklyn, N. Y. The invention consists in a rod or plate adapted to be held in the side bar of a sash, with means for fastening the cord or chain near its lower end, and of such length that in any position of the sash the cord will be free to pass over the pulley, and so the plate or rod can be withdrawn from the top of the sash, and the balance cord secured without removing the sash from its frame.

A clasp, for use as a stocking supporter, skirt and sleeve adjuster, etc., has been patented by Mr. Henry Binley, of Albany, N. Y. The clasp comprises a book with a tongue pivoted at one end, and having a bifurcated or forked end; in attaching the clasp the fabric is placed in the hook in a doubled condition, and the tongue then closed down upon it, so the material is caught and wedged between the end of the tongue and the body.

A ship's log has been patented by Mr. David Carroll, of Union City, Pa. The invention covers a contrivance for setting the wheels in the line of the well, for passing them through a well of small size, and afterward swinging them up horizontally and into position in advance of the supporting rod, to enable the water to act on them in advance of any disturbing effect of the supporting rod, the forward and leeway motions of the ship being indicated by pointers.

An artificial stone vessel has been patented by Mr. Alexander S. Johnson, of New York city. This invention relates more particularly to stone wash tubs, and provides a metallic lining therefor, for protecting the bottom and side walls, and also a method of making a water tight joint between the lining and the walls of the vessel, by moulding the vessel upon its lining, or with a groove upon the inside, into which the edges of the lining may be worked by a tool and cemented.

An improvement in barrels, tubs, pails, etc., has been patented by Mr. James W. Weston, of New York city. The invention consists in a combination of tapering or wedge shaped keys with each other and with a separated head section, with an inner support or follower, affording a novel means of securing the heads on barrels, etc., and allowing of their ready opening and closing without removing the hoops around the chime when removing the head.

A combined burglar alarm and door bell has been patented by Mr. Eugene B. Travis, of Peekskill, N. Y. The invention consists in two parallel plates with lever hammers and their springs and stops, in connection with a bell, a collar on a knob spindle having spring pressed pawls, so that an alarm will be sounded when the knob is turned, whether the door be fastened or not, and whether attached to a door or anything else.

A wick trimmer has been patented by Mr. Robert Hoffman, of Cohoes, N. Y. It combines two levers, one having a flat plate formed on one end, with a curved recess in its under side at the inner edge, and with a flange along the outer edge on the upper surface, the other lever having a plate on its end fitting on the curved part of the other plate, making a trimmer that is very simple in construction and one that need not always be held in exactly the same position.

An electric wire insulator has been patented by Mr. George W. Prince, of Brooklyn, N. Y. The insulator is formed with a special perforation and slots in its upper part, and upwardly inclined grooves in its lower part, whereby the electric wire can be readily inserted and secured in the insulator, and the wire and insulator will not be liable to become disconnected even if the insulator should be detached from its supporting pin.

A washing machine has been patented by Mr. Paul Maisonneuve, of Chicago, Ill. It is constructed with corrugated staves connected with each other and with a top cross bar by open annular rods and bolts, with an adjustable base bar to regulate the height and a rotary bottom with radial semicylindrical corrugated cleats, and rotated by shafts and gear wheels, the machine in use being placed in and secured to a wash tub.

A nut lock has been patented by Messrs. Isaac D. Weaver and Christian G. Singer, of Lebanon, Pa. The invention consists in a plate with apertures for nuts, and with a spring on the front of the plate having at its free end an aperture and with a flange, the plate being placed on the fish plate and over the nuts, or over some and against others of the nuts, one of the bolts being passed through the aperture in the spring strip, the device being specially adapted for locking nuts on rails.

A quilting machine has been patented by Mr. Evans Wood, of Lyons Station, Krohne P. O., Texas. Combined with a needle frame adapted to carry a series of needles is a feed plate, eccentric shaft, rock shaft, and various special features of construction, it being designed to operate the machine at the rear of a cotton condenser of a cotton gin, so that the thick bat of cotton as it issues from the condenser may be fed between the upper and lower webs of cloth used for making the quilt.

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