

## ENGINEERING INVENTIONS.

A rotary engine has been patented by Messrs. Willis J. Fisk and Homer L. Phelps, of Lockwood, N. Y. Combined with a cylinder having a transverse valve chest, with supply and exhaust ports and reversing valve, is a piston body with a transverse mortise and sliding sectional abutment, each outer section of which is expanded longitudinally by the pressure of steam in the joints between the two parts, the invention also covering various other novel features.

A gas engine has been patented by Mr. I. Newton Hopkins, of Brooklyn, N. Y. Combined with a cylinder and hollow piston is a perforated disk near the ports, serving as a diaphragm for preventing the mixture of the products of combustion and gases drawn in during the forward stroke of the piston, and also as an abutment for the explosion. Another feature consists of an air supply pipe having two similar branches extending in opposite directions from the air port, their ends arranged opposite each other and a short distance apart, the object being to prevent noise at the air inlet.

## AGRICULTURAL INVENTION.

A grain binder has been patented by Mr. William M. Clark, of Boscobel, Wis. This invention relates to certain new and useful improvements in twine grain binders, simplifying their construction and making the machine compact and the operation more simple, the invention consisting in the construction and combination of numerous parts and details.

## MISCELLANEOUS INVENTIONS.

A hat and coat rack has been patented by Mr. Frank Clemens, of Lafayette, Ind. It is formed of a single wire bent in a novel form, with eyes and arms, and portions to bear against the wall or support, making a neat, strong, and cheap rack for hats and coats.

A sash weight has been patented by Mr. Milton L. Lissberger, of New York City. The lead body of the weight has a beveled recess, in which a shank with an eye and a pointed hook on its lower end can be inserted and made fast by driving a wedge into the recess back of the shank.

A hand cutter and feeder for thrashing machines has been patented by Mr. Karl G. Barcis, of McFarland, Wis. It is for cutting the bands of sheaves and feeding the loose grain to the thrashing cylinder, the invention covering various novel parts and details and combinations thereof.

A street curb has been patented by Mr. Abraham B. Koplin, of Hellertown, Pa. It is made of metal curb sections having an inner top flange and angular pockets or recesses along its inner margin, with an outer downwardly projecting gutter flange, making a curb of great strength, adapted for all climates.

A door securer has been patented by Mr. Frank T. Cladek, of Rahway, N. J. Combined with a pivoted latch is a pivoted cam lever arranged to act upon the door for closing it tightly after the latch has engaged with the keeper upon the door frame, the device being designed more particularly for refrigerator doors.

A button has been patented by Mr. Adolph Blumenkrohn, of New York City. It consists of a blank upon which there is placed a machine-embroidered inner cover partially surrounded by an outer knit or crocheted cover formed with a central opening, through which the ornamental work upon the inner cover is seen.

An antidote for venomous bites has been patented by Mr. Joshua T. Smith, of Coffee County, Ga. It is a medical compound designed to act as a powerful arterial stimulant, which in practice is said to have been found especially useful in the treatment of rattlesnake bites, to be administered in doses of a wine-glass every hour until the pain ceases.

A channel cutter for water ways has been patented by Mr. William H. Avey, of Columbus, Ky. It consists of barges timbered together and carrying opposite edgewise disposed boards or cutters capable of vertical adjustment, in connection with other novel combinations of parts and features of construction.

An umbrella has been patented by Mr. Edmund Q. Ison, of Long Island City, N. Y. The handle has a sleeve adapted to revolve thereon, whereby the umbrella is made capable of revolving upon its stick, thus breaking the force of the wind, and an improved catch is provided for retaining the umbrella in open position.

A clothes horse has been patented by Mr. Martin F. Dolan, of Brooklyn, N. Y. It consists of a tubular standard with a slotted or open top, and arms having locking parts, with other novel features, making a device capable of sustaining a large amount of line, and which when folded will occupy small room, and readily stand beneath a mantel or shelf.

Combination spectacles form the subject of a patent issued to Mr. Bernard Krause, of O'Fallon Depot, Ill. The invention consists of detachably connected spectacles, the focuses of the two sets converging exactly, the arrangement being such that the lenses usually employed for distances may be corrected by the other set to form reading spectacles.

An insulator has been patented by Mr. Lewis M. Neal, of North Middletown, Ky. It is formed of a solid piece of glass or other insulating material, with a post for receiving the telegraph wire, a channel around the post to increase the efficiency of the insulator, and a transverse aperture for receiving the wire by which the insulator is fastened to its support.

A propeller shaft bearing has been patented by Mr. John Richardson, of St. Mary's, Ga. The shaft is lengthened beyond the rear end of the hub of the screw, a bearing being secured to the stern post of the vessel and one to the rudder post, each having oil holes and upwardly extending pipes connected therewith, to the upper end of which oil cups are secured.

A candlestick has been patented by Mr. Hiram E. Lewis, of Gold Hill, Nevada. The candle-receiving tube has a spring for actuating the candle, and there is a lever pivotally connected with the tube, with other novel features, making an automatic feed for candlesticks and lanterns, to feed the candle upward as it burns down, so it may be entirely burned.

A photographic camera has been patented by Mr. Francis H. Patterson, of Norristown, Pa. The invention relates to cameras having swinging or reversible backs, and provides novel means for the adjustment of the lens end of the camera in rising and falling and rotatable directions, with special means for speedily releasing and securely holding it in position.

A mechanical movement has been patented by Mr. Benjamin F. Andrews, of Myers, Mo. It is designed to produce a high rate of speed in a rotary shaft from a slowly moving oscillating lever of greater power, within a limited space, the device being applicable for propelling vessels or vehicles and to various machines.

A pruning implement has been patented by Mr. Andreas Bosch, of Prairie du Chien, Wis. The invention covers a novel combination of parts in an implement for use in pruning trees and dressing their wounds, adapted for use on large and small limbs, and so arranged that it may be used upon trees of almost any height.

A vehicle spring has been patented by Mr. Edwin Jarrell, of Harper, Kansas. An important feature of this invention consists in torsional spring bars united or connected together at their inner ends and diverging from the point of connection, being suitably connected at their outer ends to enable their tension to properly operate.

An earth auger has been patented by Mr. Thomas Tow, of Miles City, Montana Ter. It consists of a novel form of spiral blade mounted on a rod to give great length of cutting edge, making an auger which can be easily and quickly forced down into the earth and at the same time will take hold of the earth to lift it.

A machine for regulating timepieces has been patented by Mr. William B. Farrar, of Greensborough, N. C. A galvanic battery and a regulating clock are mounted on a movable stand holding the watch to be regulated, and a magnet and battery circuit are used in combination with other mechanism to automatically adjust the regulator of the watch in accordance with the regulating clock.

A holder for advertising mediums has been patented by Mr. Philip Delano, of Brooklyn, N. Y. It consists of a rear bar adapted to be secured to a window casing, and provided with fastening pins for supporting the advertisement, clamping bars hinged to the rear ends of the bar being adapted to be locked together at their inner ends on the middle and in front of the rear bar.

An electric gas lighter and extinguisher has been patented by Mr. George L. Hogan, of Olmstead, Ky. The burner is provided with a poppet valve operated by a shaft and eccentric receiving rotary motion from the armature of an electro-magnet, with other novel features, the device being adapted for lighting a single lamp or a series of lamps at the same instant, and for street or office lighting.

A device for discharging coke ovens has been patented by Messrs. William T. Giles and William Booth, of Shamokin, Pa. It consists of a truck adapted to receive and hold the coal while in the oven, and a plow arranged outside of the oven, under which the truck is to be drawn to discharge its load, in combination with tracks and a windlass, being designed to save time and heat.

Facing brick for building purposes forms the subject of a patent issued to Messrs. Richard and Charles Steinau, of Brunswick, Germany. They consist of particular forms of angular bricks, to be laid in alternate reversed courses, the courses and the bedding joints of the facing bricks being laid opposite the middle of each bedding joint and course of the brick wall.

An automatic grain measure has been patented by Mr. Harry W. Cowan, of Gros, Dakota Ter. It has a box in which the grain is measured, and a vibratory measuring plate operating on the grain filling into the box for actuating tripping devices connected with the tilting bottom of the box, with other novel features, being adapted to accurately measure any kind of grain.

An animal trap has been patented by Messrs. La Fayette W. Page and Samuel Hardeman, of Franklin, Tenn. Combined with a striker connected with a rotary disk is a stop shoulder having eccentric approach and spring-actuated detent, the casing having circular top and bottom plates, with pivoted bait lever, and other novel features, whereby a large number of rats, etc., may be killed at one setting.

A sleeve button has been patented by Mr. Louis D. Frenot, of Newark, N. J. It has a threaded post surrounded by a sleeve, a nut engaging the post and sliding within the sleeve, with wings connected by hinge joints and to the sleeve, whereby the shank of the button may be passed through the button hole without subjecting the shank or the body of the button to excessive strain.

A watch case pendant has been patented by Mr. Peter Henry, of New York City. It consists of a bar with a winding shank at each end, the shanks being of unequal lengths, and the bar being adapted to be reversed in the rotating stem or holder, making a key for stem-winding watches which may be used with equal facility with "stem set" or "lever set" movements.

A holder for kegs, barrels, etc., has been patented by Mr. Cary A. Manker, of Louisville, Neb. It consists of a rope passing over a pulley held on the under side of a counter or other support, two clamps being connected with the rope, one engaging the bottom rim and the other the head of a barrel or

keg, being especially adapted to facilitate work in retail stores.

A bridle has been patented by Messrs. Edwin Crippen and William King, of New Orleans, La. To each cheek strap is secured a snap hook to receive large bit rings, and below the snap hook is secured to the cheek pieces snap hooks designed to receive small bit rings, the large or small bit rings to be used as desired, the arrangement being designed to do away with the necessity for curb, chain, and other harsh bits.

A buckle has been patented by the same inventors, in which the loop or shackle is attached to the main frame by a bolt, so that the buckle may be removed from or applied to a strap or web without ripping or stitching it, the tongue being pivoted upon the bolt, and there being an integral loop for holding the end of a strap.

A heating stove has been patented by Mr. Charles H. L. Schlapp, of Davenport, Iowa. The fire pot is continued at one side into a magazine, which is inclosed by a combustion chamber that extends over the top of the fire pot, the latter connecting at its upper end with a mixing chamber, into which opens at each end a branch pipe leading to the base of the stove near the grate bars, the upper end of the fire pot having apertures for admitting air from the base, the stove being especially adapted for the complete and economical combustion of bituminous fuel.

A combined table and sofa forms the subject of two patents issued to Mr. John E. Alden, of Lake George, N. Y. They provide a design for an inexpensive and self-contained structure which may be easily and quickly set up to serve either of its intended purposes, and be strong and serviceable, the inventions covering various novel features of construction and combinations of parts, including simple and effective means for locking hinged end parts of a table top in unfolded positions to serve as legs to a sofa, when the table, with its legs folded within its frame, is inverted to receive the adjustable sofa top.

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3. Elevations and floor plans of two dwellings of moderate cost.
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