

ENGINEERING INVENTIONS.

A triple valve for air brakes has been patented by Mr. George B. Williams, of La Crosse, Wis. This invention covers a novel combination and arrangement of parts whereby the brakes may be applied simultaneously at the front, rear, and middle of a train, or may be applied sooner and with greater force on special cars in the train.

A valve gear has been patented by Mr. Robert Mackay, of Warren, Pa. Combined with a link is an upwardly extending rod, an operating lever, a swivel eye, and stops carried by the upwardly extending rod upon either side of the swivel eye, with other novel features, the design being to steady the position of the link, and to provide for its quick and ready adjustment.

A rotary valve has been patented by Mr. James O'Donnell, of San Francisco, Cal. It is a cylindrical oscillating valve, with two ports connecting alternately the steam supply with the ports leading to the cylinder, the valve having also an external cavity in its rim connecting the exhaust port alternately with the ports leading to the cylinder, the valve being simple, perfectly balanced, and dispensing with the usual steam chest.

AGRICULTURAL INVENTION.

A cleaner and gauge attachment for grain drills has been patented by Mr. John T. West, of Bowling Green, Ky. It is a rotary and vertically adjustable attachment designed to prevent the accumulation of trash in the form of grass, weeds, stubble, etc., and regulate the depth of the furrows made by the teeth or flukes, and thus facilitate the work of grain drills.

MISCELLANEOUS INVENTIONS.

A folding cot has been patented by Mr. John C. Porter, of New York City. Its cross pieces support coiled springs which support slats, while folding legs are pivoted to the side pieces, the construction being cheap, strong and practical, and the cot occupying but little space when folded.

A machine for excavating has been patented by Mr. Charles S. Jones, of Yates Center, Kansas. This invention covers a novel construction and combination of parts for an improved scavenger by which privy vaults can be conveniently emptied of their contents and the latter transported to any desired place.

A grindstone hanger has been patented by Mr. Dennis O'Leary, of San Bernardino, Cal. The invention consists of a split shaft supporting the stone, washers held on the shaft, and a nut screwing against one of the washers, while a key presses against the other washer to hold the stone securely in place on the shaft.

A strap edging machine has been patented by Mr. James N. Farlow, of Lander, Wyoming Ter. Combined with a frame having fixed and movable cutters, and a sliding clamping having similar cutters, is a tilting presser bar or lever adapted to bear upon the movable cutters, the machine being designed for beveling the edges of leather straps.

A screw driver attachment has been patented by Mr. Lee Kiblinger, of Jackson, La. The blade is provided with a lateral catch or projection, and a slide is fitted to the blade carrying a point orawl to make a hole for the screw, the slide being adapted to be engaged by the catch while in the position of use.

A wire fence has been patented by Mr. Jesse J. Buchanan, of Bridgeport, Ill. It is made with horizontal fence wires in combination with a hollow metallic post, through perforations in which are passed wire fasteners, bent and twisted to hold the fence wires in position, the post having also a heavy tile base.

A bottle filler has been patented by Mr. William H. Comstock, of Oskaloosa, Iowa. This invention covers novel parts and details in a device whereby bottles may be filled so that the liquid will not come in contact with the outside air, and with which both light and heavy bottles will be evenly filled without waste of the liquid.

A shaft coupling has been patented by Mr. Simon H. Barnes, of Lanesborough, Pa. It is made with a longitudinally split sleeve whose parts act as clamps or compressors to grip the meeting end portions of shaft sections to couple and hold them in line, the sleeve being inclosed by a tightening and loosening band.

A commode has been patented by Messrs. Gayger D. Tolman and Lorenzo D. Roberts, of Shawano, Wis. It is designed to be simple in construction and very compact, while furnishing various conveniences used in dressing, the invention covering a novel construction, combination, and arrangement of parts.

A drapery hook has been patented by Messrs. Ralph Tilton, of New York City, and Martin Cowen, of Chicago, Ill. It is a suspension hook made of a piece of spring metal bent into a staple and hook-like form, to be used in combination with a sliding drapery or curtain ring having an eye adapted to receive the spring prongs of the hook.

A rack for exhibiting goods has been patented by Messrs. Adolph Neuville, of St. Louis, Mo., and Albert Back, of New York City. This invention covers a novel construction, combination, and arrangement of parts, providing a device designed to be used in dry goods stores, whereby lace curtains and other goods may be exhibited to customers to advantage.

A breaker and crusher has been patented by Mr. Frederick L. Preston, of Darien, Wis. It has a fixed corrugated jaw and fixed side plates, with an inclined pivoted vibrating jaw in combination with a pushing plate, and other novel features, making a

simple, durable, and effective machine for breaking and crushing rocks, ores, etc.

A track lifter has been patented by Mr. Gavin Rainnie, of Portland, New Brunswick, Canada. It has a lever and ratchet arrangement in connection with a cast iron frame about sixteen inches high, with an extended base plate, being designed to hold itself in position when the rails and sleepers are lifted, thus saving the time and labor of track repairers.

An anti-friction bearing has been patented by Frank Corbett, of New York City. It is of that class in which a nest of bearing rollers are mounted to revolve in a chambered box, and provides for the ready introduction and removal of the rollers, being particularly adapted for ironing machines where the rollers are hollow and heated by steam.

A broiling oven for ranges has been patented by Mr. James G. Lyon, of Brooklyn, N. Y. The fire pot in which a nest of bearing rollers are mounted grate set back from the front of the range, and the space between the fire pot and the range front is floored over, forming a space in which vlands may be exposed to the live coals behind the front grate.

A fire escape has been patented by Mr. John Grant, of Beverly, Mass. It is a portable device which may be readily secured to a window, the invention covering a novel construction by which the descent of an occupant may be controlled from the window or street, accommodations being also provided for lowering an infant or disabled person with safety.

A type writing machine has been patented by Mr. George L. Ferris, of St. Louis, Mo. This invention covers an improvement in that class of machines in which a vertically and laterally swinging hand lever operates a printing type wheel and paper feeding mechanism, being designed to simplify the construction and give increased ease and rapidity of operation.

A horse detacher has been patented by Messrs. Walter L. and Philip M. Mittel and John Q. A. Haney, of Felton, Pa. The detaching devices are applied to the whiffletree, the ends of which are provided with spring-seated locking bolts that pass through the trace eyes and are operated from the vehicle to release the traces, whereby the horse may be detached from the vehicle.

A loading apparatus for ordnance cartridges has been patented by Mr. John T. Jefferson, of Annapolis, Md. It is for use with that form of cartridge which is built up from moulded blocks or cubes of powder having a central perforation, and is designed to enable such a cartridge to be built by one man in one-fourth the time required by two men in the old way, while a smaller bag may be used.

A Venetian blind has been patented by Mr. Samuel S. Patterson, of Wilkesbarre, Pa. This invention covers a novel construction and combination of parts, including the slats and side pieces, providing that when the rolling slats are closed the blind will effectually exclude the sun or rays of light, the slats having a closer joint and neater finish than heretofore employed in these blinds.

A hame has been patented by Mr. James N. Farlow, of Lander, Wyoming Ter. The invention consists in forming the hame with notches, and combining therewith a sliding clip with notches, a bolt or fastening for the hame tug, and a screw and nut to close the teeth of the clip into the teeth of the hame, to facilitate adjustment for raising and lowering the draught.

An artificial leg has been patented by Mr. Alexander Gault, of Medford, Minn. It has a socket for receiving the stump of an amputated leg, formed and suitably shaped of hard moulded India rubber or gutta percha, with other novel features, being especially adapted for use by one whose leg has been amputated between the knee and foot, and designed not to chafe the stump of the wearer.

A head block for saw mills has been patented by Mr. Irwin Swank, of Paris, Ill. This invention covers a novel construction, combination, and arrangement of parts to insure increased efficiency in machinery of this class, the improvement being applicable in the sawing of slab sides and tapering boards or planks, and the turning or rolling of logs on the knees therefor.

A drying attachment for tobacco barns has been patented by Mr. John M. Snidow, of Big Stony Creek, Va. It consists of a furnace with two dampers below the combustion chamber, and having a cold air pipe connected thereto between the dampers, whereby tobacco barns can be kept at the temperature at which tobacco is cured with the best results and in the least time.

A boom fastening has been patented by Mr. John H. Rushton, of Canton, N. Y. It is intended to take the place of the jaw on small craft, and for supporting sails extending past the mast, or from the mast aft, and consists of a ring to be received on the mast, with ears projecting from one side, a swiveled clamp for receiving the boom, and a spike to be driven into the boom where it extends from the mast aft.

A spokeshave has been patented by Messrs. James H. and Benjamin F. Polhemus, of Brooklyn, N. Y. This invention covers an improvement on a former patented invention of the same inventors, its object being to provide a tool capable of use as readily in curves of small radius as upon a flat surface, the invention also making a further improvement in the construction of the tool.

A tile machine has been patented by Messrs. Emil Puchtaand Robert Hoffmann, of Washington, Mo. This invention covers a mould press of novel form, combined with a movable former, for moulding and pressing bottles, jars, and other articles with closed bottoms, out of clay or analogous substances, and has for its object to facilitate the removal of the completed article from the press.

A receptacle and heater for tea, coffee, milk, etc., has been patented by Mr. Charles W. Hellen-

brand, of Salem, Oregon. It consists of three superposed tanks or jars, the lower one to contain hot water, and having a lamp or gas jet beneath it, the intermediate jar, resting thereon, to receive milk, and the top jar for coffee, etc., a pipe from this jar leading through a coil in the hot water jar or tank to a cock at the bottom.

A pool registering device has been patented by Mr. Charles S. Kraft, of Albany, N. Y. It is constructed with a lock for holding the triangle, the lock being connected with a mechanism arranged to register the detachment of the triangle upon a dial, strike a gong, and at the same time drop a check into a box, the register being adapted for connection with a distant bell by an electric circuit on the detachment of the triangle from the lock.

A wheel has been patented by Mr. Henry Q. Maurino, of Albuquerque, New Mexico. The hub block consists of a casting having grooves or slots for the inner bifurcated ends of the spoke, while the felly has a polygonal inner face, with angles corresponding to the number of spokes and their angular outer ends, with other novel features, the construction being designed to secure cheapness, lightness, and durability.

A school slate and ruler therefor has been patented by Maybury W. Fleming, of New Brighton, N. Y., and Charles R. Le Sauvage, of Brooklyn, N. Y. The slate frame has grooves in its inner edges above the surface of the slate, combined with a ruler having rabbeted ends adapted to slide in the grooves, with a centrally recessed under surface whereby a bearing surface is provided at the ends only, making a straight edge or ruler which may be moved over the surface of the slate.

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