

ENGINEERING INVENTION.

A lock for bolts of pistons has been patented by Messrs. Joseph Wormald and Joseph Wormald, Jr., of Missoula, Montana Ter. Combined with a fixed plate and studs is a lock plate, with circular slots adapted to engage the studs to hold the lock on the fixed plate, and projections on the rim of the lock plate engage one side of the bolt heads of the usual bolts, preventing the latter from turning. This invention has also been patented in Canada and in England.

MISCELLANEOUS INVENTIONS.

A vehicle spring attachment has been patented by Mr. Stephen M. Wier, of New Haven, Conn. The invention consists in yokes resting upon or suspended from the axles near the wheel bearings, with stirrups for receiving the ends of the springs, the stirrups capable of springing to permit of the elongation of the spring due to its compression.

An ironing table has been patented by Mr. Franklin P. Burcaw, of Hazleton, Pa. Its construction is such that the legs may be folded to have the device occupy only a small space when not in use, but the several connections are of such a character that when the table is opened and in position for use it will be perfectly steady and cannot accidentally collapse.

A drip trough for doors or windows has been patented by Mr. William W. Pitmon, of Waseca County, near Smith's Mill, Minn. The sill is made with a gutter or groove and a channel leading thence outward, a tube fitting at its inner end within the outer end of the channel, and having an outlet opening with a plug or knob.

A combined hook and clasp for horse collars has been patented by Mr. Louis T. Anderson, of Carroll, Iowa. The invention consists of a clasp made to be slipped upon the rim or front roll of a horse collar, with a tongue or hook stamped from the material of the clasp, making a cheap and convenient device for attaching sweat pads to the collars.

A wagon box lock has been patented by Mr. Nathan O. Calkins, of Elm Creek, Nebraska. It is for fastening an auxiliary wagon box on top of an ordinary one, and do away with the employment of siats and staples for such purpose, the lock consisting of a hook latch of peculiar construction and a retaining device for holding the latch in locked position.

A druggist's mortar has been patented by Mr. Edmund G. Purdy, of Ballston Spa, New York. It has one or more lugs projecting from its outer surface, and an annular frame is to be used therewith adapted to partly inclose the mortar, and having recesses for receiving the lugs, thus holding the mortar in a fixed position while in use.

A vehicle wheel has been patented by Mr. Robert A. Townsend, of Sibi, Beloochistan, India. The invention covers the application of an inclined plane at the hub to lengthen the radii of the wheel to compress the spokes, fellyes, and rim, with tire jacks, operated by the spokes, to bridge the space between the fellyes caused by the shrinkage of the latter.

A mouth harmonica has been patented by Mr. John F. Stratton, of Brooklyn, N. Y. It is to be played in the same manner as the mouth harmonicas now in general use, but is provided with an upper set of reeds, of which each reed forms a chord with the corresponding reed of the lower set, making a rich and harmonic tune when played, forming a duet.

An accordion has likewise been patented by the same inventor. It is constructed in accordance with the principle noted in the preceding invention, having an additional set of base reeds tuned to a higher or lower pitch than the ordinary bass reeds, but in harmony therewith, so as to produce harmony in the accompaniment when the accordion is played.

A cider press has been patented by Mr. Hiram P. Latham, of Denver, Col. A series of rollers is journaled in a case, combined with which is a feeding device of a tube opening to the rollers at the side of the case, with a hopper, a conveyer screw rotating within the tube to force the substances to be ground to the rollers, and other novel features, the press being also adapted for pressing and grinding other substances.

A rinsing and drying device for dishes and other articles of table use has been patented by Mary Purvis, of Plainview, Minn. It is designed to be used after the dishes have been washed, when they are placed in particular places or on racks provided therefor within a case, in such way that hot water poured through an aperture into a pan in which the utensil stands will thoroughly rinse and quickly dry them.

A flour bolting reel has been patented by Mr. Francis E. McMaster, of Millburn, Pa. The reel is provided with external cloth flaps at one edge of its periphery, in combination with the bolt chest, the flaps to brush the outer face of the bolting cloth, and also brush the bolted material from the walls of the chest, the device being simple and inexpensive, while making the action of the reel more quick and effective.

A mattress has been patented by Mr. Karmell Brooks, of New York City. The invention provides a detachable strip of non-heat-conducting material to protect the top and bottom of the mattress, such material being of rubber or paper backed with linen or otherwise, or other suitable substance, whereby a thinner mattress may be used, and cold will not so readily penetrate it.

A pocket knife has been patented by Mr. Carl Hollweg, of Barmen, Prussia, Germany. The handle has side plates immovable with respect to each other, there being also a locking lug and outer independent handle, with other novel features, whereby the blades can all be independently opened and closed, or locked in position, without touching them, and no springs are employed.

A kindergarten game for teaching children has been patented by Imogen B. Oakley, of Pittsburg, Pa. Combined with a copy book having illustrated objects and their names in printed letters are

detached cut or stamped letters made to form facsimiles of the printed letters in the book, the child forming the names or titles from the loose cut or stamped letters.

A gas burner has been patented by Mr. Josiah Burgess, of Zanesville, Ohio. It is principally designed to produce and burn gas from petroleum and its products, and for the burning of other gases, in laundries, coffee wasters, stove heaters, etc., providing means for vaporizing the oil supplied by a tank and distributing it through suitable burners in properly regulated amounts.

An improvement in folding furniture has been patented by Mr. Joseph B. Brolaski, of St. Louis, Mo. The invention covers especially the construction of an improved bureau, which may be easily knocked down and its parts closely packed, and in which the joints may be readily tightened or loosened in case of shrinkage or swelling of the different pieces, thus making each joint adjustable.

An adjustable coat holder has been patented by Mr. Hans Christian, of Vienna, Austria-Hungary. It consists of a single length of wire bent to form two sets of parallel bars, the ends of the wire being coiled at the inner ends of the bars to form hooks, in connection with shoulder supports that can be moved inward and outward to correspond to the width of the garment at the shoulders.

A device for converting motion has been patented by Mr. John W. Ledyard, of New York City. This invention covers a novel construction for converting reciprocating into rotary motion, which is designed to give more power with the same length of stroke, and so that the dead centers will be more easily and smoothly passed than when a crank is used in the ordinary way.

A wire cloth delivering reel has been patented by Mr. Silas E. Ratekin, of Kansas City, Mo. It has a vertical body and a vertical roll holder, with a horizontal pivot or shaft connecting the holder to the body, whereby the holder may be swung from a vertical to a horizontal position, a locking device upon the body engaging and holding the roll holder in either of its two positions, with various other novel features.

A pitman or pump rod has been patented by Mr. John F. Loomis, of Shelby, Iowa. It is designed especially for windmills, and the invention consists in the interposition of a spring or elastic cushion in the direction of its length, to render the rod elastic, and take up excessive strain and jar, causing a shorter stroke for the pump piston in proportion to the increased speed of the wheel.

A hair or mustache curler has been patented by Mr. Morris N. Posner, of New York City. The main body part of the device has a slot in one end, with a spring-pressed clamp bar mounted on the slotted end and normally pressed down thereon, to firmly hold the mustache or tuft of hair while it is being wound around the device, the spring clamp being readily lifted by pressing with the thumb on its rear end.

A vehicle tongue support has been patented by Mr. Alva N. Rooks, of Alpha, Mo. Two parallel and spaced semi-elliptical springs are pivoted to the under surface of the tongue, their inner ends bearing against the under side of the forward axle at each side of the king bolt, and so held adjustably that they will support the pole in any desired position, relieving the horse from such weight.

A road grader and leveler has been patented by Mr. John Skinner, of Newman, Ill. This invention covers an improvement on a former patented invention of the same inventor, providing a better method of elevating and lowering the framework carrying the harrow teeth and scraper, so that the machine can be easily supported at any desired height from the ground.

A coin or ticket receiving turnstile has been patented by Mr. Walter Peake, of New York City. The turnstile post has a cam and locking plate, combined with a locking dog and two pistons, one connected to the dog and the other acted upon directly by the cam, with other features, whereby the turnstile is operated only when a ticket, coin, or check, or other device, is dropped or pressed into the lock mechanism.

A washing machine has been patented by Mr. George W. Wilson, of Lanesborough, Minn. The tub has a false bottom, and secured to its side is a support for a lever designed to operate a pneumatic washing head or pounder in the tub, the action of which not only squeezes the clothes, but by pressure and suction forces air and water through them to quickly free them from dirt.

Saliva-proof mouth pieces for cigarettes form the subject of a patent issued to Mr. Joseph B. Underwood, of Fayetteville, N. C. The invention consists of a new method and machine to do work heretofore done by hand, the cigarette being made to rotate on its own axis in contact with a surface supplied with the material to be applied, such as paraffine, varnish, etc.

A horseshoe has been patented by Mr. Charles J. Le Roy, of St. Louis, Mo. It has a calk recess open at one end, with an independent calk fitting therein, there being a longitudinal groove between the calk and adjacent side of the calk recess, and the groove being enlarged and closed at its inner end, whereby a nail driven into the recess will have its point bent over or clinched against the closed end of the groove.

A photographic camera has been patented by Messrs. Nicholas Schroder and Edward G. Adams, of Brooklyn, N. Y. The patent provides for a construction whereby the front and back of the camera may be angled in various directions to adapt the focus to parts of the subject not lying in the same plane. An adjustable or sliding base frame may be dispensed with, while making a light and efficient camera and plate holder.

A device for swaging insertible saw teeth has been patented by Messrs. Nels H. Wheeler and Neil M. Newhouse, of Corvallis, Oregon. It is for restoring old and unserviceable teeth, the swage blocks

being adjustable in relation to each other for the proper size of tooth, and firmly seated in a vise or socket, when the old tooth, at a cherry red heat, is placed in position, and, by the movement of a cam-headed lever, is drawn and swaged to the proper configuration at the point, receiving a roll temper.

A wheel and axle form the subject of a patent issued to Mr. Henry Q. Maurino, of Albuquerque, New Mexico. The invention provides a wheel on which the tire may be placed without heating, and tightened when necessary, there being devices for expanding the felly sections by endwise pressure of the spokes at the felly joints, with retaining washers or plates held at the faces of the wheel to overlap the ends of the spokes and the felly sections.

A machine for making paragon umbrellaribs has been patented by Mr. Daniel M. Redmond, of Philadelphia, Pa. It is designed to flatten, re-enforce, and perforate the ribs in continuous lengths, instead of in separate pieces, as has been heretofore done, in connection with a method of manufacture by which they will also be tempered, annealed, and tested in the operation, without the aid of skilled labor, the machine presenting many novel features of construction and arrangement of parts.

An adding machine has been patented by Mr. James Richardson, of Tarrytown, N. Y. It has two series of numbered wheels, a series of numbered keys, with means for imparting motion to the numbered wheels from the keys, mechanism for insuring the operation of the numbered wheels in succession and for returning the wheels and the wheel-moving mechanism to the point of starting, together with a registering and summing mechanism and a disk for registering the number of the addition.

An improved card clothed roller and a machine for making card clothing forms the subject of two patents issued to Mr. Ernst Gessner, of Aue, Saxony, Germany. A strip of card clothing having its rows of teeth set obliquely to its length is wound spirally on the roller so as to bring its rows of teeth parallel with the axis of the roller and the arms of the teeth in radial position, improving the working effect and enabling the teeth to better withstand the working strain. The machine patented is for making the card clothing with the card teeth set in rows arranged obliquely to the length of the band.

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This is the eleventh edition of Mr. McCarty's work, each issue being more full and complete than its predecessor. It is a sort of *omnium gatherum* of matters pertaining to history, politics, geography, and trade, with much curious and useful information not classifiable under either of these headings, and to a large circle of readers cannot fail to fill a valuable place as a ready reference book.

IMPROVED PLUMBING APPLIANCES. By J. Pickering Putnam. Pp. 129; 94 illustrations. New York: William T. Comstock.

This book treats only of lavatories, including wash basins, bath tubs, and kitchen and pantry sinks, together with water closets, traps, and waste pipes. It presents forcibly the need of the best work in plumbing, with all the work so constructed that inspection will be easy, and urges the need of greater simplicity than has lately obtained in the fittings adopted in some of our more expensive dwellings. Illustrations are given of some of the latest patterns of water closet flushing arrangements, but the writer, who is an archi-