

## ENGINEERING INVENTIONS.

A steam engine has been patented by Mr. Benjamin C. Waite, of Brooklyn, N. Y. This invention relates to engines having two pistons in one cylinder, their movement to be in opposite directions, and both connected to the same crank shaft, the object being greater simplicity of construction and economy of operation, whether the power in use is the full or only the partial capacity of the engine.

A car brake and starter has been patented by Mr. Johann H. Muller, of Gravesend, N. Y. A lever is pivoted at its center at each side of the car between the wheels, with slides on the ends of the lever with brake shoes pivoted thereto, in connection with which springs are so arranged as to be brought in tension by the action of the brake shoes in such manner that their power will be utilized in starting the car.

An electric railway signal has been patented by Mr. Albert G. Warren, of Mayesville, S. C. It consists of a construction for making a continuous circuit through a train, in combination with keys, a battery, and bell to enable the engineer to be signaled by the conductor from any part of the train, and to automatically transmit a signal to the conductor should the train break.

A marine engine governor has been patented by Mr. Aspinwall Fuller, of New York city. It is made in two parts, connected by a pivoting bolt, a clamping bolt, and a slotted quadrant, whereby the governor can be readily adjusted to operate when the vessel is loaded more heavily at one end than at the other, the invention being an improvement on a former patented invention of the same inventor.

A locomotive engine has been patented by Mr. James A. Longridge, of Westminster, England. Where the weight of the boiler is distributed on adjacent bogie frames by a balance beam, the point of support on one end of the balance beam is made as a ball and socket or universal joint, with other novel features, to facilitate the passage of the engine round sharp curves, and to avoid undue strains by changes of gradient or inequalities in rails.

## AGRICULTURAL INVENTIONS.

A plow has been patented by Mr. Chas. D. Adams, of Geneva, Ga. Combined with the beam and its curved foot bars is a curved bar pivoted to the clip and having an arm and a brace bolted to the foot bars of the shovels, making a plow which can be easily adjusted for one or two horses, or as a cultivator, and its draught easily arranged.

## MISCELLANEOUS INVENTIONS.

A scissors sharpener has been patented by Mr. James W. Hilton, of New York city. It consists of a longitudinally grooved block with beveled ends and having angular grooves, with a triangular fill having one wide and two narrow sides and fitting in the grooves of the block.

A hand strap for cars has been patented by Mr. James McManus, of New York city. It is made with the bend of its hand loop rounded and stiffened by a rigid rod having its ends bent upward, whereby the hand loop will be kept open and in proper shape to be conveniently grasped.

A pneumatic tool has been patented by Mr. James S. McCoy, of Brooklyn, N. Y. It is for working in stone and other purposes, and a current of air or steam forced into the tool causes a piston or striker to deliver rapid blows upon a rod or bar to the outer end of which the cutting point is attached.

A chair commode has been patented by Mr. Barney Rubenstein, of East Saginaw, Mich. This invention provides a light and easily moved chair for especial convenience in the sick room, calculated to prevent the escape of foul air.

A churn has been patented by Mr. James M. Champe, of Litchfield, Ill. The dasher consists of a cone with flange, perforated with a series of holes, a rod passing through the lid from the cone for working the dasher, when the milk passing back and forth through the holes is violently agitated, making butter in a short time.

A safety lock for spindles on jennies has been patented by Mr. Michael Furst, of Brooklyn, N. Y. This invention covers a novel construction and arrangement of parts for locking the spindles in such manner that the machine cannot be started until the spindle is in its proper place, thus obviating a common cause of accidents.

A calculator has been patented by Messrs. William B. Kennedy and Watson M. Nesbit, of Silver Reef, Utah Ter. A rotating disk is so combined with a numbered dial, a slate being also attached to the device, as to make a convenient mechanical calculator for use in teaching the fundamental rules of arithmetic to children.

A traveling emery wheel for card grinders has been patented by Mr. Joseph H. Loudon, of Westerly, R. I. It is a grinding wheel so mounted on a shaft as to turn and slide longitudinally thereon, and having an adjustable hub to take up the wear, the wheel being capable of nice adjustment and fit on the shaft without impeding its longitudinal movement.

A wagon brake has been patented by Mr. Adam M. Garman, of Sinking Creek, Va. Bent rods are pivoted to the axle, with hooks at their ends to bear upon or hug the wheel tires, and there is a rod operating chain looped through a ring or aperture of an upright on the axle, the device being applicable for locking the wheels of all vehicles running on wheels.

A spring motor has been patented by Mr. William H. Ostrander, of Newburg, N. Y. The device combines several springs and levers, which can be used separately or together according as more or less power is required, making a construction convenient for use to drive coffee and spice mills, sewing machines, and other light machinery.

An advertising medium has been patented by Mr. William C. Rogers, of New York city.

Combined with a plaque having advertisements on its face, a clock is held in the middle of the plaque, a wire held on the clock casing back of the plaque forming legs for supporting the device, and the advertisements surrounding the dial.

A bran duster has been patented by Mr. Joseph W. Wilson, of Brookville, Kan. This invention covers a special construction and arrangement for more effectively rubbing the flour off the bran as the latter is passing down through the machine, the invention being an improvement on a former patented invention of the same inventor.

A scraper attachment for removing calcimine and the like from ceilings has been patented by Mr. Himan C. Dexter, of New York city. Combined with a stick is an inverted umbrella-like receptacle which can be held directly below the part of the ceiling being scraped, so that the scrapings must drop therein and will not soil the floor.

A padlock has been patented by Mr. Samuel McCarter, of Lancaster, Pa. The invention covers particular constructions and combinations of parts intended to make a simple and cheap lock, with parts which may be interchangeably assembled to produce finished locks which can be opened only by special keys.

A machine for covering, measuring, and cutting off strips has been patented by Mr. William Croal, of Brooklyn, N. Y. This invention consists in the combination, with a cutter, of devices for covering strips, rods, or wires, and a rotary feeding device, both operated from the same shaft, the machine being adjustable to cut the pieces any desired length.

A belt fastener has been patented by Mr. George W. Southwick, of Stamford, Conn. It consists of a plate with two or more teeth having longitudinal ribs on one or more of their faces, the ribs projecting beyond the upper edge of the teeth, so the belt does not need to act as a fulcrum as in other teeth, and its grain or fiber is not destroyed by clinching the ribs.

A swing has been patented by Mr. John T. Dees, of Goldsborough, N. C. The swing frame has segmental tracks, and the swinging car has rollers on its bottom, there being a rocking elbow lever connected with the wires or ropes by which the car is suspended, making a very safe swing, which can be easily operated and quickly stopped.

A device for opening doors has been patented by Mr. Samuel H. Law, of Brooklyn, N. Y. The push bolt has a pivoted link, and there is a crank arm, operating wire and spring, whereby the catch bolt of a door can be pushed back and the door unfastened by operating the wire, making a device easily operated and not liable to get out of repair.

A quilting support for sewing machines has been patented by Mr. Joseph A. Coppock, of Norwood, Ga. A frame is arranged to hold a sewing machine and pivoted to a suitable stand or support, so that a quilt stretched upon a frame may be passed through the arms of the sewing machine in position for stitching.

A wheel harrow has been patented by Mr. Thomas B. Fagan, of Van Wert, O. To the axle bar is pivoted a lever, the rear end of which is connected by links with tooth frames, the forward end being arranged in position to be engaged by the driver's foot, so that it may, when depressed, be held by a latch suitably arranged to be turned over it, with various other novel features.

A lathe for wood turning and making polygonal forms is the subject of two patents issued to Messrs. De Witt C. and Spencer E. Smith, of St. Paul, Minn. The inventions cover special constructions of lathes for making many sided objects, such as stair newels, piano legs, etc., being easily adjustable to receive timbers of different sizes, quickly clamp them, and readily remove them after the work is done.

A vest protector has been patented by Mr. Thomas S. Beals, of Detroit, Mich. This novel attachment to protect the vest from wear or from being soiled, consisting of cloth or other fabric, either of the same material as the vest or otherwise, cut generally in the form of a strip to extend up and down the front, or over the most exposed parts, and which can be readily attached and removed.

A carbon cutting machine has been patented by Mr. Mathew Egan, of Cleveland, O. This invention covers a construction by which the carbons are simultaneously separated from one another, and have all of the web by which they were joined together completely removed, also a mechanism by which the carbons are guided and carried forward while being acted on by the separating mechanism.

A painter's scaffold has been patented by Mr. William T. Howes, of White Heath, Ill. It consists of a frame with a seat, and having a pivoted pulley block, with clamps, pulleys, and ropes, and levers attached to the pulley block for fastening the ropes which hold the frame, so the operator can easily raise or lower himself to any place on the side of a house to which the device is attached.

A music leaf turner has been patented by Mr. Thomas H. Hathaway, of New Bedford, Mass. The music rack is supported by a standard with a suitable base, in connection with which is a foot lever whereby the frame is swung from the right to left hand side of the rack or desk, metal clips on the uppermost leaves being held by magnets so as to properly hold and release the leaves.

A steam boiler has been patented by Mr. Benjamin F. Wright, of Oneida, Kan. This invention covers an improvement on a former patented invention of the same inventor, whereby the gases, smoke, and heated air are driven directly through the water without the aid of flues, to prevent loss of heat, promote the rapid generation of steam, and obviate the escape of sparks.

A creaming can has been patented by Mr. George W. Millner, of Charlottetown, Prince Edward Island, Canada. Combined with a can is an arrangement by which a tube may be held in position therein, with its upper end above the surface of the milk, and when the cream has formed the tube may

be depressed below the cream, and the latter withdrawn without affecting the milk.

A pipe system having auxiliary leakage conduit has been patented by Mr. Conrad Lutomski, of Pittsburgh, Pa. It is more especially designed for natural gas and oils, and combined with the main pipe joints are casings with chambers which receive the leakage, and an auxiliary pipe to carry off the leakage to a point of discharge, the joint casings also having a tendency to stiffen and strengthen the joints of the pipe.

An apparatus for burning and preparing plant beds has been patented by Mr. James H. Horner, of Oxford, N. C. It consists of a furnace with a flue laterally extended therefrom which may be rested flat upon the ground, the flue being bottomless, so the heat will be directed in close contact with the ground surface, to destroy insect life, weeds, etc., near the surface, and thoroughly pulverize the soil.

A stove has been patented by Mr. Alexander T. Young, of East China, St. Clair County, Mich. Combined with the magazine of the stove is a ring held to move vertically therein, and downwardly projecting prongs forming a basket to hold the coals, to be opened and closed by raising and lowering the ring and prongs, with other novel features, whereby the quantity of coal to be fed to the fire can be easily regulated.

An angle indicator has been patented by Mr. Charles Schofield, of Chicago, Ill. It is a weighted or balanced pointer, with a graduated disk for getting a plumb, level, or any angle, without adjusting; the weights hang on inside of the cup, back of dial, or disk, and it can be placed in a spirit level, straight edge, or any other instrument, the weights being so adjusted in the device as to prevent all vibration of the counter.

A brick press has been patented by Mr. Hiram Lapher, of Tallahoma, Tenn. It is a simple duplex contrivance of moulds, clay feeders, pressing rams, and dischargers, to be operated by a pendulum lever so as to alternately press the bricks in one mould while discharging them from the other, a brick being pressed and another being discharged at each swing of the lever to which the power is applied.

A gate has been patented by Mr. Geo. A. Barlow, of Hamilton, Mo. An angle lever is pivoted on the swinging end of the gate, a bar connecting the lever with a hanger, with a rod pivoted to the hanger and having at its free end an eye forming part of the top hinge, with a latch bar secured to the elbow lever, so the gate can easily be raised at its free end to clear snow or other obstructions on the ground.

A machine for separating warp yarn chains has been patented by Mr. Andrew Mungall, of Manchester, N. H. It consists of a reciprocating comb or heck, with one or more drawing and shaking rollers and delivering rollers arranged for drawing the chains from boxes in which the yarns are brought to the machine or directly from the machinery of the dyeing, washing, and bleaching apparatus, separating the single chains and laying them in separate boxes or receptacles.

A cartridge shell extractor for fire arms has been patented by Mr. Frank Rushton, of Provo City, Utah Ter. A lever is pivoted on a cross pin in the shell chamber, and has at its end on each side a curved shoulder, against which the shoulders of extracting jaws rest, the latter mounted to turn on the cross pin, and arranged at the sides of the breech in such way that the shell cannot bind, and the extractors are not apt to break.

A well-pipe closing clamp has been patented by Mr. Habbe L. Aden, Jr., of Rising City, Neb. Combined with two grooved blocks hinged together a shaft is held to turn in the free end of one block, a chain or cord being secured to the rod and the free end of the other block, making a device for closing the holes in well tubes that are provided to let the water flow out of the upper part of the pipe, and prevent freezing.

An inkstand has been patented by Mr. Frank B. Woodhouse, of Utica, N. Y. An ink well is supported on a base, and an elbow lever pivoted to standards connected by one arm with the cover of the ink well, and so arranged that by a rest of the hand holding the pen the ink well cover will be drawn back, to allow the pen to be dipped in the ink, and when the lever is released a spring acts to automatically close the cover.

The manufacture of hydraulic cement forms the subject of a patent issued to Mr. John Dimelew, of Post Oak Grove, Travis County, Texas. The object of this invention is to utilize waste mineral or rejected hydraulic matter, as decomposed limestone, river deposits, clays, etc., by pulverizing or grinding the calcareous material, the invention being an improvement on a former patented invention of the same inventor.

A lamp is the subject of two patents issued to Mr. Charles Pabst, of Philadelphia, Pa. This invention covers a combination of a lamp for burning kerosene, with standard, reflector, and smoke bell, so arranged as to be convenient in use, simple in construction, easily adjusted on its support, and ornamental in appearance. The lamp may also be made double, to be held on a standard, hung on a wall, or placed on a table or other support.

A knoter for grain binders has been patented by Mr. Edward Ebl, of Cedar Rapids, Iowa. It is designed to be attached to the platform of a reaper beneath a low platform which serves as a binding table, and which is connected at its forward edge with the platform by an inclined apron, being made in such a manner as to occupy but little space, and be thus adapted for use on the ordinary sweep or table rake reapers.

A barrel has been patented by Mr. James Cosgrove, of Flatbush, N. Y. The blank for making the barrel is formed of paper with two or more re-enforcing strips of veneer incorporated therein transversely to the barrel, lateral triangular incisions extending to the strips, the hoop being made of alternate layers of paper and veneer rolled to a flare or taper, and the head of two or more layers of paper or strawboard with a re-enforcing rim or veneer or stiffening material incorporated between the layers at the edges.

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