ENGINEERING INVENTIONS.

Mr. Robert L. Stevens, of Albany, Oregon, has patented a double oscillating engine, which is an improvement on a patent granted to the same inventor October 18, 1881, No. 248,524. The object of this invention is to avoid the downward pressure upon the slide and the friction resulting from such pressure.

In a gravity steam engine patented by Mr. Robert L. Stevens, of Albany, Oregon, the power to rotate the shaft is obtained by weights that are hung upon the ends of reciprocating piston-rods moved by steam or compressed air to shift the weights in the proper order for obtaining a continuous rotary movement.

Mr. William H. Reece, of Springfield, Mo., has patented an oiler for engine cylinders, which secures a steady and uniform supply of oil to the engine, and also provides for the regulation of the supply according to requirements. The invention consists in the combination, with an oil receptacle, of a pressure-cup operated periodically by the engine to force a regulated supply of oil from the reservoir.

An improved car brake has been patented by Mr. Svend Lykke, of Omaha, Neb. The brake beams are coupled to the drawbar in such a manner that when the hand wheel brake is promptly set for the purpose, the back-pressure on the drawbars when the engine slows will apply the brakes, the arrangement being such that such application of the brakes is prevented whenever it is required to "back up" by letting off the hand brakes.

MECHANICAL INVENTIONS.

Mr. Delbert G. Miller, of Waterville, Minn., has patented an improved bob-sled, in which the standards have arched tops and inclined braces secured to the runners and standards. The transverse beam is recessed to secure the arched tops. The runners move independently of each other with an easy rocking motion.

An improvement in baling presses has been patented by Messrs. William M. Penniston and William H. Penniston, of Fox, Mo. The object of this invention is to improve the construction of the presses for which Letters Patent No. 155,671 were granted to William H. Penniston, October 6, 1874, in such a manner as to make them more reliable and more effective.

Mr. Joseph Spooner, of New York City, has patented a machine for scoring and cutting of paper for making paper boxes, and for other uses, and to economize time in setting and adjusting the cutters as the work may require. The invention consists in the combination, with the cutter-stock and the cutter-holder, of hinged right and left screws, a right and left nut receiving the said screws, and a lever whereby the cutters can be readily and quickly thrown into and out of a working position.

An implement for laying bricks in baking ovens, has been patented by Mr. Martin Boessler, of St. Louis, Mo. The invention consists in a plate or frame to which jaws for holding the bricks are hinged, the jaws being pressed apart at the upper ends by springs, and capable of being separated at the lower ends to release the brick by a pivoted lever and arms. The lever can be operated from the outside of an oven by a cord passing along the handle rod of the implement.

Mr. Joseph Laroche, of New York City, has patented an improved machine for removing pieces of fat, flesh, clotted blood, and like matter from the wool on sheep skins. The machine has a rotary brush for brushing the wool on the skin. The skin is placed on a movable platform resting on a vertically-adjustable truck frame. An inverted trough-shaped box covers the brush, and water flows upon the brush from spouts projecting through this box. The scraps of flesh, fat, skin, and like matter removed by the brush are thrown into a basket below the platform.

Mr. Edgar N. Gore, of Elkhart, Ind., has patented an improved panel raiser, which consists of a pair of rotary cutter-heads placed side by side for raising panels on both sides of the board at the same time, the cutter-heads having their axes arranged obliquely to the plane of the boards to be dressed, and the edges of the cutters beveled to correspond with the inclinations of the axes to said plane, so that the cutters dress the panels parallel to the plane of the board, but at the same time act obliquely on the wood in such manner as to shave across the grain in a way that enables them to cut much smoother and better than when the axes are in a plane at right angles to that of the board and the cutting edges at right angles to the arbor.

AGRICULTURAL INVENTIONS.

An improved straw cutter has been patented by Mr. Orsemus M. Sacket, of Shippensville, Pa. This is an improvement in feed cutting machines, consisting in the application to such machines of a simple and effective driving arrangement that may be operated either by hand, foot, or other power.

Mr. Thomas M. Smith, of Batesville, Ark., has patented a machine constructed so as to scrape and cultivate a row of cotton or other plants at one passage along the row. This combined scraper and harrow can be readily adjusted to cause the scrapers and the cultivator teeth to work at any desired distance from the plants, and to work at any desired depth in the ground.

Mr. Andrew J. Grady, of Pecatonica, Ill., has patented an improved manure distributer, consisting of an open-bottom wagon-body provided with ways in its sides, extending downward at the rear and forward under the body nearly to its forward end, and a sectional bottom moved by a pawl and ratchet operated by the driver. The machine is provided with a toothed rotary distributer driven from one of the wheels of the wagon.

An improved harrow has been patented by Mr. Knude Tharraldson, of Ida Grove, Ia. The improvement consists of the attachment of the teeth to the harrow bars by means of cast metal sockets and heads on the teeth, the sockets being bolted on the under side of the bars of the harrow and holding the teeth by their heads in the sockets. By this construction the boring of the bars is avoided, and the expensive material of the teeth is economized.

MISCELLANEOUS INVENTIONS.

Mr. George J. Record, of Conneaut, O., has patented an improved sap spout. This invention consists in a sap spout made with a tapering tube having upon it a band provided with a radial projection, whereby the spout is strengthened and the sap pail kept in place upon the spout.

An improvement in that class of school desks in which the seat for one desk is attached to the front of another desk, and in which the seat is arranged to swing upward and the desk to swing downward, has been patented by Mr. Frederick E. McKinley, of Wellington, Kan.

Mr. William C. Nelly, of Brooklyn, N. Y., has invented an improved clothes frame, which is constructed in such a manner that it can be compactly folded for storage and transportation, and when extended will have a large clothes supporting capacity.

Mr. Horace F. Neumeyer, of Macungie, Pa., has patented an improvement in electric burglar alarm apparatus for preventing interference with the continuous sounding of the alarm by quickly closing the circuit by the burglar after entering.

Mr. James H. Street, of San Francisco, Cal., has patented an improvement in that class of fruit driers in which the trays are carried by suitable mechanism from the place of entry up through one section of the drying chamber, and transferred thence to and down a separate section to the place of delivery.

A novel felly clip has been patented by Mr. John Wheeler, of Denver, Col. The invention consists in a metallic device made to receive the adjacent ends of the felly sections of a wagon or other vehicle wheel within it, and to support the felly ends from their inner sides, for the purpose of keeping said ends from bending inward or from splitting.

A novel gold foil annealing apparatus has been patented by Mr. John William Smith, of Newport, R. I. This invention consists of an apparatus contrived for heating a plate of metal or other suitable material whereon gold foil or other preparations of gold for filling teeth may be annealed more uniformly than by the means at present employed.

Mr. Christian W. Hergenroeder, of Baltimore, Md., has patented an improvement in counting machines in which a ratchet disk having numerals thereon is rotated by means of a pawl and lever to bring the numerals successively to view through an opening in the case. The improvements render the machine more efficient and more easily operated.

An improvement in stove tops has been patented by Mr. Owen F. Evans, of Columbus, O. This invention consists of making the cross pieces of cook-stove tops, of double plates, with spaces between the plates calculated to afford protection of the upper and supporting plate from the heat, and thereby effectually prevent its bending by the heat.

An improved broiling and roasting attachment for ranges has been patented by Messrs. Louis F. Duparquet and Peter Huot, of New York city. This invention consists of a movable partition placed between the fireplace and the oven, which can be swung aside so as to expose the contents of the oven directly to the heat radiated from the fire.

Mr. William H. Maxwell, of Rochester, Pa., has patented a new process for the manufacture of paper weights and other articles from glass, and containing names, designs, or pictures in colors, which consist in first painting or printing a design upon colored glass with vitrifiable colors, and then covering the same with clear glass by moulding or casting.

A nail made in such a manner as to ornament the object into which it is driven has been patented by Mr. John Hyslop, of Abington, Mass. The nail is made with a head having a raised center and an ornamental flange. With this construction the head has a wide holding surface, and will also be ornamental. The nail is especially adapted for upholstering and for harness.

A separable button made with a heed having a rigid stem provided with an oblong disk, and a foot having a recessed aperture and an oblong hollow stem, has been patented by Mr. Najah Taylor, of New York city. Upon the head stem is placed an oblong sleeve and a spiral spring, whereby the parts of the button can be readily locked and unlocked, and when locked will be held securely in place.

An improved method of and apparatus for press dyeing has been patented by Mr. Alphonse Tavernier, of Paris, France. The object of this invention is to provide an apparatus in which textile or fibrous substances in the form of ribbons or slivers can be clouded by means of dyeing in a practical, simple, and inexpensive manner, and with a small quantity of dyeing liquid.

An improved mill, designed for grinding all kinds of grain and for breaking and degerminating wheat, has been patented by Benjamin Nichols and George E. Watson, of Kennedy, N. Y. This grinding mill consists of a grinding roller, a grinding plate, and mechanism for adjusting these parts. The mill will pulverize or grind all kinds of grain, will degerminate wheat, and will grind wet or damp grain.

An improved skirt protecting coat has been patented by Katharine S. Lathrop, of San Francisco, Cal. The invention consists in a lady's coat provided on the inner side with a folding edge along the lower end of the coat, adapted to cover the lower parts of the skirts and dresses to protect them from mud and moisture, this edge being supported by a series of tapes fastened around the waist under the skirts that are to be protected.

Mr. Madison P. Briscoe, of Bairdstown, Ga., has patented a device for preventing a horse from getting the driving reins under his tail. The device consists of one or more upright rods secured at their lower ends to the tongue or shaft, on the upper ends of which is attached a horizontal frame, connecting the uprights. The device is placed over the hips of the horse and keeps the lines up, and also prevents the horse from kicking.

In a picture exhibitor, patented by Mr. Geo. W. Shirk, of Van Orin, Ill., the chain of pictures is passed around blocks and between the rollers, and the main part of the chain of pictures is folded between a guide partition and the rear side of the box. By means of a key the rollers are rotated, and they draw the pictures from between the partition and the rear side of the box, and carry the pictures across an opening in the front of the box, where they can be viewed.

An improved mechanical telephone has been patented by Mr. Francis R. Shaw, of Chatham Center, O. The object of this invention is to obtain a more perfect operation of mechanical telephones in respect to clearness of sound and length of line over which they may be operated, for which purpose the inventor combines with the vibrating diaphragm a vibrator of wood or other suitable material supported from the diaphragm and to which the conducting wire is connected.

Mr. L. P. Jeanne, of New York, has patented a new diamond setting. The setting is made of platinum, having a gold covering on the outer surface of the cramps. The outer cover gives the setting the appearance of gold, and the bright polished surface of the platinum at the inner surface of the setting reflects the light upon the diamond, enhancing its beauty. One of the cramps has a transverse aperture, through which a loop secured to the ear wire is passed, bringing the setting close to the ear.

Improvements in trunk locks, by which they are better adapted to stand the heavy strain to which they are subjected, have been patented by Mr. Frank W. Mix, of Terryville, Conn. A hinged hasp is formed at its free end with a key aperture, and with lugs on its back at opposite sides of the aperture, grooves being grooved in the inner sides of the lugs. The lock case is secured to the trunk, and on the turning plug of the lock is a button that enters the grooves in the hasp and retains it closed.

Messrs. Richard Simmons and William Tyack, of Beacon, Mich., have patented improvements in hand wrenches. The handle portion consists of a taper metal bar, its larger end being curved and serrated on its outer surface, and forming one jaw of the wrench. Near its front end is an opening to receive a pivot bolt which passes through openings in the forked end of a bent arm, which forms the other jaw of the wrench, and is opened by a rod pivoted to the jaw and to a sliding block in the handle of the wrench.

Mr. Fred Wisner, of Olean, N. Y., has patented an improved fastener for the end boards of wagons. A bar attached to the top edge of the end board extends through notches on the top of the side board, and also through notched plates secured to the side boards, and are provided with a curved rib below the notch. Nuts which screw on the extensions of the top iron have grooves which the ribs engage, and prevent the end board from rising from the sides of the box.

A combined kitchen table and cabinet for holding cooking kettles and utensils has been patented by Mr. John W. Wolcott, of Clyde, O. Beneath the top of the table is a deep chamber, a portion of the top of the table being hinged to give convenient access to the chamber. In the bottom of the chamber is a central upright pintle that supports in a horizontal position a circular iron rack whose central hub rotates on the pintle. The rack consists of rings in which the utensils may be placed when taken from the stove.

Improvements in brick presses and moulds have been patented by Mr. Edward Fales, of Keokuk, Ia. A shaft having bearings in heavy vertical standards supported on a frame has at each of its ends cranks and pitman bars, one of the cranks having a shorter stroke than the other, and giving greater pressure. The material is placed in a snitable hinged mould, and placed first under the lightest pressure. The hinged part of the mould is then removed and the mould placed under the heavy pressure and the brick completed.

Mr. John B. Frazer, of Rushville, Ind., has patented an improved sulky seat, spring, and foot-rest. The seat is secured to the rear end of two bars that are pivoted on top of the thills in front of the axle. The front ends of the bars are connected to the upper ends of links that extend down through apertures in the thills, and connect with springs secured on the under side. The links are also connected to the front slat of the foot-rest, the opposite end being extended back under the seat, the seat and foot-rest moving together.

An automatic heat regulator and alarm apparatus for furnaces has been patented by Mr. John M. Dolen, of Wiconisco, Pa. The apparatus consists of a device that holds the damper open, that will be released by melting apart in case the heat rises above the normal temperature, allowing the damper to be closed by a spring or weight. When the weight or spring operates it also operates an alarm apparatus. The alarm device is adapted to be set in motion by a melting block in case the damper should not be set free.

Mr. Jesse P. Bentley, of Sabina, O., has patented an improved washing machine. The tub is semicircular in form and made of sheet metal, and suspended from a rectangular frame, and a rubber of similar form is pivoted to the tub and rocks forward and backward to rub the clothes. In the bottom of the tub is a removable rubber consisting of cross bars, and a semicircular bottom bars suitably arranged with spaces between them, the whole resting on ledges to support the weight of the clothes from the sheet metal bottom.

Mr. Davis K. Hall, of Unity, Wis., has patented an improved device for imparting rotary motion for driving light machinery. Two hand levers are pivoted on a bed frame, and are connected by rods with the crank of a shaft journaled in uprights on the frame. The cranks are set at right angles to overcome the dead center, and to the outer ends of the shaft are secured longer cranks that operate levers that are attached to a band and balance wheel at the opposite end of the machine, and from which the power is transmitted by a belt.

An improved device for pumping oil wells has been patented by Mr. Eli S. Williamson, of Bradford, Pa. A working barrel of a diameter smaller than the well, is anchored near its bottom, and a pumping tube extends from above the top of the well hole to near the bottom of the barrel. On the lower end of the tube is a valve seated upward, and in the lower end of the working barrel is also a similar valve. The pumping tube works in a packing that prevents the oil from passing up around it when the tube is pressed down, but forces it into the tube and ultimately to the top of the well.

Messrs. Daniel J. and Lucius D. Norris, of Odell, Neb, have patented an improved weighing wagon. The platform of the wagon has attached to it a compound lever weighing apparatus arranged to fit upon the wagon bed. The apparatus is coupled with cranked rods, so arranged in bearings that when the rods are turned in one position the platform will be suspended on the weighing apparatus, and when turned back it rests upon the wagon bed. A suitable index and connections are provided for indicating the weight.

A device for destroying animals that burrow underground has been patented by Mr. Austin D. Palmer, of Abilene, Kan. The device consists of a furnace for the generation of sulphurous vapors or suffocating gases, having an outer cover that is open at the bottom. An air pump is connected with the furnace. The furnace and cover are placed over the hole of the animal and earth placed around the bottom, and when the air pump is operated the gases are forced into the burrow and the animals suffocated.

Improvements in trunk handles that prevent the handles from twisting upward and out of shape have been patented by Mr. Joseph Welter, of South Pueblo, Col. The handle of the trunk, consisting of a leather strap sliding in keepers, is attached in the usual manner across the ends of the trunk. A vertical strap is secured to the center of this strap at its midlength, its lower end working in a keeper. When the handle is grasped to lift the trunk the vertical strap prevents the handle from rising to pinch the hand.

A portable folding derrick has been patented by Mr. John P. Edmonds, of Jacksonborough, Tenn. The legs of the derrick are made in pairs, connected by stays and blocks, and diverge downwardly from each other to give a firm base. The upper ends of the pairs are connected to each other by braces, and between the braces, and centrally between the legs, is placed a pulley for the hoisting rope, which is connected to a windlass placed near the bottom of one of the pairs of legs. Constructed in this manner a wagon may be driven between the legs and loaded or unloaded.

Mr. John Brown, of Memphis, Tenn., has patented an improved baling press that is operated by steam and is compact and durable. The follower of the press is moved by the pistons of two steam cylinders. The frame of the press has four main posts, and at the base of these are shorter posts that are connected by plates, so as to form an angular frame surrounding the cylinders. The posts of the frame are hollow, and are united and held together by rods and keys. The head is firmly secured in the upper end of the frame. This construction of frame is strong and durable.

Improvements in tellurians for showing the operation of the phenomena of day and night and of the seasons have been patented by Mr. Jeremiah Spicer, of Taylor's Island, Md. Upon a suitable base a standard is mounted that is inclined from a vertical position at about the angle that the "equator" and the ecliptic make with each other, and having in its upper end a spindle. Arranged to rotate upon and around this spindle is an arm that carries a globe representing the earth, and on top of the spindle is placed a lamp representing the sun, the rotation of the arm giving the different positions of the earth in relation to the sun.

In furnaces for rolling mills the action of the heat causes the fire bricks lining the same to crack into very small pieces within a very short time, and as a matter of necessity the pieces of brick drop upon the bars of iron being heated and render them unfit for being rolled. Mr. Edwin A. Kern, of Girard, O., has patented a fire brick which will remedy these defects. This brick is made of the form and size usually employed, and provided with a series of small corrugations in its faces, so that any small particle of brick which becomes severed from the main part shall be held securely in its place by one or more corrugations.

An improved smoke stack for marine vessels which prevents backdraught and does not interfere with the sails and booms, has been patented by Mr. Edgar M. Hallock, of Huntington, N. Y. The invention consists in a longitudinal box adapted to be fastened on the deck of a vessel, and provided with a horizontal transverse partition having an aperture for receiving the upper end of the stove pipe, the edge of this aperture being provided with teeth or serrations. The smoke passes into the upper part of the box, and is carried off at the ends of the same by the draught through the recesses between the serrations of the edge of the stove pipe opening in the horizontal transverse partition in the box.

A regulator for dynamo electric machines has been patented by Mr. Achille de Khotinsky, of St. Petersburg, Russia. This is an automatic current regulator which is based on the following principles: first, to establish by means of a conductor with variable resistances a derivation in the circuit of the current operating upon the bobbin of a dynamo electric machine (either an exciting or a generating machine) before its entrance into the coils of the inducing electro-magnets, and so provide means for varying the electromotive force of the principal current; secondly, to establish a derivation with variable resistance in the circuit of the current operating upon the bobbin before its entrance into the coils of the electro-magnets, and at the same time to place in the circuit of the current which excites the electro-magnets of the inductor another resistance, whereby variations in the intensity of the principal current can be obtained.