

ENGINEERING INVENTIONS.

A car coupling device of improved form has been patented by Mr. Nathan M. Hale, of Grand View, Tex. This invention relates to improvements in self-acting car couplings, and consists essentially of contrivances for setting the buffer or drawbar and a pin setting, tripping, and uncoupling device higher or lower for adapting the coupling to couple self-acting cars differing in height.

Mr. James H. McLeary, of San Antonio, Texas, has patented an improvement in car couplings. This coupling is automatic in its coupling operation and readily uncoupled at the side of the cars or upon the top, so that the operator is not required to go between the cars to couple or uncouple them. It consists in the employment of a handled shaft hung in suitable bearings or buffers at the end of the car, and having a wheel provided with a series of pins or arms adapted to be automatically projected and retracted, the shaft also having ratchets engaged by holding pawls.

MECHANICAL INVENTIONS.

An improvement in feed roller gear for wood planers has been patented by Mr. Paul Stoerger, of Chicago, Ill. The invention consists of a chain-belt contrivance to be used in substitution of the toothed gears now employed, by which is obtained economy of driving power, a wider range adjustment for the upper rollers, and other advantages.

Mr. William B. Farrar, of Greensborough, N. C., has patented a new turbine water wheel. The invention consists in certain changes in the construction and arrangement of portions of the wheel case, whereby the casting of the same and its repair in case of injury are greatly facilitated; and also in the pivots of the gates of the case and the lever for operating them.

An improved grain weigher and tally has been patented by Mr. Jesse Beeler, of Girard, Kan. This invention consists of a tilting hopper, a couple of weigh beams, a recording tally, and shifting apparatus contrived to automatically shift the hopper from one delivery spout to another each time the bag fills and swings up, the weigh beam from which it is suspended at the same time shifting the recording tally.

A separating and drying apparatus has been patented by Mr. Howard Newlin, of Brooklyn, N. Y. The invention consists in a novel construction of the screen or drier, which is formed with a series of inclines and shoulders extending transversely for insuring the forward movement of the substance in the frame or chute, and separating the different materials. This is also employed for drying and cooling grain.

A novel runner for casting steel ingots has been patented by Mr. Theodore G. Wolf, of Scranton, Pa. The molten steel, instead of being passed into the mould directly in the ordinary way, is caused to flow through a runner, whereby the ingots have fewer air holes and will be more solid and the steel of a better quality, and the casting will be done in less time and with less waste of steel.

An improved fire grate designed to stir the fire and open up a space in its center to allow the discharge or escape of pieces of slag or clinkers has been patented by Mr. Edward F. Johnson, of Troy, Pa. The invention consists in the employment of curved radial arms pivoted to the grate, and having pins moving in oblique slots or apertures in the grate supporting frame, whereby the desired results are attained.

Mr. Theodore A. McDonald, of New Albany, Ind., has patented a novel gauge for rip saws. This invention relates to gauges used principally with small circular saws on a saw table where boards or planks are ripped up into strips of various sizes; and it consists of a lever and link contrivance for holding and moving the gauge bar, whereby the bar may be easily and quickly moved to its different positions and its parallelism with the saw always maintained.

An improved speed and motion regulator for machines has been patented by Mr. Christ Adler, of Milton Center, Ohio, the great advantage of which device is that the speed and the motion can be changed without stopping the machine, whereby a great loss of power is avoided, and the parts are not subjected to great or sudden strains. This invention can be applied to any machinery, but is best adapted for use with sawing machines.

Mr. Merritt W. Palmer, of Holland, Mich., has patented an improved planer knife grinder. The invention consists of an attachment to be temporarily applied to wood planing machines for grinding the cutters or knives on the machine as set for work, and without removing or disturbing them. The difficulty of resetting the cutters after being removed for grinding in the common way is thus wholly avoided and much better work secured.

An improved method of manufacturing wood stirrups has been patented by Messrs. James Woolworth and Wilber F. Cowles, of St. Mary's, Ohio. The invention consists of a slat bent into the desired shape and slitted in the direction of the grain of the wood, said slat being bent at its upper ends vertically, where the roller and connecting crosspiece is connected thereto, whereby the stirrup is not weakened at the neck or bend, as is the case in the ordinary method of manufacture.

A novel process of facilitating the cutting of nails, tacks, etc., has been patented by Mr. Seth Robinson Foster, of St. John, New Brunswick. The invention relates to a process for preventing the scale on iron or steel plates used in the manufacture of nails, tacks, brads, and shoe nails from wearing into the knives, dies, and other tools of the machine while cutting, without removing the natural scale on the surface of the iron or steel, thereby avoiding the waste of metal, facilitating the cutting action, and avoiding the necessity for sharpening the knives so often.

A stock loading chute of novel device has been patented by Mr. Daniel E. Hogbin, of Ellinwood, Kan. It consists of a movable platform supported upon rollers and connected with the ground by an inclined platform or chute. The movable platform is so arranged that it may be projected through the door of the car as far as desired, so that the stock may be

readily transferred to and from the inclined platform and the car, or when not in use the platform is drawn back out of the way, so as to clear the car. There is no liability of the movable platform becoming hindered in its operation by dirt or mud freezing beneath its bottom, as the supports beneath are left open so as to permit the dirt to fall.

Mr. Abram N. Ackerman, of Passaic, N. J., has patented an improved winding shell for calico, etc. The invention relates to the hollow wooden shells which are used for winding long strips of calico or similar material into large rolls; and it consists of a metal casting consisting of a central portion which has a square passage through it and a surrounding ring connected with the central portion by fins, the casting to be forced into the ends of the shell for strengthening it and for connecting the ordinary power shank by which the shell is revolved.

Messrs. Edward C. Shaw and George H. Flinn, of Lewiston, Me., have patented a clearer for lifting rods of spinning frames. In spinning cotton the floating fibers, termed the "flyings," collect upon the lifting rods, and as these rods move up and down in their bushings the flyings are carried into the bearings and frequently become wedged so tightly as to bind and stop the rods, thus preventing the movement of the ring rail and the proper winding of the yarn upon the bobbin. Their invention is to obviate this difficulty, for which purpose they provide lifting rods with clearers that prevent the flyings from passing into the bearings of the rods.

A device for the measuring of belting, bands, or pieces of fabric has been patented by Mr. Thomas A. Bell, of Trenton, N. J. The process is substantially as follows: A large wheel of some suitable and definite dimensions, and divided into feet and inches, is journaled upon supporting bars, and connected with this is a registering wheel of small dimensions, which notes accurately every revolution or partial revolution of the measuring wheel. On opposite sides of the measuring wheel are placed two rollers, one of which holds the material to be measured, the other being the roller upon which the material is to be passed. In the process of passing the material from one roller to the other, the measuring wheel is set in motion, and by means of the registering wheel connected therewith, the amount of the material is readily ascertained.

AGRICULTURAL INVENTIONS.

A colter fastener of novel invention has been patented by Mr. Enoch C. Eaton, of Pinckneyville, Ill. It consists of an attaching device for connecting the colter to the plow beam, contrived so that it may be shifted so as to set the colter vertical upon any plow beam, no matter how untrue it may be, and thus avoid the tedious method of wedging, at present in use, or fitting the iron true to the beam.

An improved adjustable and detachable handle for plows, etc., has been patented by Mr. James M. Clark, of Lancaster, Pa. The invention consists in the employment of adjustable handles consisting each of a handle and an attaching and adjusting plate, the handles being pivot bolted to the handle beam, whereby it may be applied readily to any plow or other like implement, placed in any position and adjusted to any height required.

An invention relating to an improved cotton chopper, scraper, and cultivator combined in the same implement, has been patented by Mr. John P. Dever, of Batesville, Ark. It consists in the peculiar relations of parts whereby abstracting certain screws and bolts the cultivator teeth may be removed, and the machine used simply as a chopper and scraper; and on the other hand, by removing the gear holding the chopper and scraper to the vehicle, it may be readily converted into a cultivator.

MISCELLANEOUS INVENTIONS.

A new and improved millstone dress has been patented by Mr. Fredrick W. Dove, of Jonesborough, Tenn. The invention consists of a novel form of the furrows adapted to cause a free passage of the grain between and of the chop from between the stones.

Mr. Antonio di Mariano, of New York city, has invented an ornamental bracelet. The object of the invention is to provide bracelets constructed in such a manner as to serve as a receptacle for a glove button hook, pencil, or other implement.

An improvement in breech-loading fire arms has been patented by Mr. Alexandre Picard, of Montalgu, France. This invention consists in certain improvements upon the fire arm patented to the same inventor, February 7, 1882.

A novel paper scoring machine has been patented by Mr. Albert E. Elmer, of Springfield, Mass. The invention relates to a machine for forming the "scores" or "breaks" in sheets of straw board or other paper preparatory to bending the sheets for forming paper boxes for other purposes.

An improved pitcher has been patented by Mr. George Gough, of New York city. The invention consists of a pitcher constructed with two spouts, and so pivoted on its stand that it is adapted by means of the handle or bail of the stand to be tilted in either direction; also of a novel means of locking the cover in place upon the pitcher.

Mr. Joseph Imler, of Forest, Ohio, has patented a device which provides means whereby the point or section of the tube to which the strainer of a pump is attached may be introduced into the well after the tubing is inserted, and also to provide improved valves and seats, which can be removed without removing the tubing.

Mr. Herbert Ludlow, of Brooklyn, N. Y., has patented an improved folding box. The special advantage of the invention is that the waste of material is very slight, that the box may be easily set up for use, and that the cover may be made of one piece of material, so that any number of them may be placed one inside the other for economy of space in packing.

An improved apparatus relating to the separation of gold and silver from gravel and sand has been patented by Mr. John T. Long, of Monsey, N. Y.

It consists in a series of amalgamated trays fitted for vibration and arranged one above the other, and so inclined that the material is passed in succession from a higher to a lower tray and the different materials readily separated.

Mr. Alexander D. Bertier, of Hannibal, Mo., has patented an improved wagon brake. The invention consists of ratchets applied to the hubs of the wheels, and a latch to fall into them to automatically chock the wheels and hold the wagon from running backward when the horses stop for rest on steep hills, and thus avoid the labor of applying and releasing the brakes by the driver.

Mr. Charles H. Gilbert, of Andover, Mass., has patented an improved swinging adjustable bracket for holding dentists' instruments and for other purposes. The invention consists in a pivoted sleeve carrying two parallel arms which support the table. The arms are sustained at any desired elevation by an ingenious ratchet arrangement.

A patent has been obtained for an improved hopple for animals, whereby the ordinary end links for connecting the chain with the leg bands shall be dispensed with, and greater ease and freedom of movement between the said parts shall be secured. The inventor of this useful device is Mr. Charles J. Gustavson, of Salt Lake City, Utah.

Mr. Joseph Herzog, of New York city, has patented a novel slide for chain bracelets and other chains. The invention consists in a slide for ladies' chain bracelets and other chains, constructed with a base plate having flanges upon its ends and one side, and provided with a catch whereby the slide can be readily adjusted upon its chain without friction and wear.

Mr. Henry R. Wright, of Albany, N. Y., has obtained a patent for the manufacture of an artificial butter called creamine. The process consists in mixing together the oils derived from animal fat at low temperatures with sweet cream, the oil of butter, vegetable oil, and coloring matter, then allowing these ingredients to become sour while together, then removing the whey, and finally churning the mass.

Messrs. Alonzo Russell and Andrew J. Russell, of Burr Oak, Mich., have patented an improvement in that class of fences that occupy a comparatively small space in width, that are set up without the necessity of digging holes, and that are firm both longitudinally and transversely. The fence consists of posts, side stakes, longitudinal rails, and braces, all wired together.

Mr. Isaac Samuels, of Denver, Col., has patented an improved watch pocket. The invention consists of a pocket of chamois skin or other approved material, within which is arranged a wire spring of semicircular or semielliptical shape, which stretches the pocket flatwise, closing the mouth. The ends of the spring terminate in points which serve as pins by which the pocket may be attached to the garment.

An amalgamator, the object of which is to facilitate obtaining the gold contained in the sand of the beach and the bottom of the sea, has been patented by Mr. William H. Leiminger, of Salem, Oregon. The invention consists in a device to which a series of amalgamated plates are attached, which device is drawn through the auriferous sand, which is thereby stirred and raised, so that it passes between these plates, the gold being retained on these plates.

Mr. Isaac Van Zandt Jones, of Salado, Tex., has patented a useful improvement in churn powers. The invention consists principally in providing means whereby a churn may be attached to a sewing machine, so that both sewing and churning may be done at the same time; also, of the combination of a power to be operated by hand or some other motor, for running the sewing machine and churn both at the same time or either alone, as desired.

Mr. Samuel N. Silver, of Auburn, Me., has patented an improved velocipede. The object of the invention is to provide a velocipede which can be propelled easily, and in which the power of the impetus of the machine in going down hill can be stored and utilized at the proper time, and also in so arranging belts over the shoulders of the operator, that extra weight may be brought to bear upon the treadles of the machine.

Mr. John G. Schill, of Hoboken, N. J., has patented an improved trap for preventing sewer gases from escaping from the waste pipe of a sink into the room. The invention consists of a funnel projecting from the bottom of the sink, a casing provided at its inner surface with recesses, and attached to the sink bottom, and a cup provided with lugs fitting in the recesses of the casing, and surrounding the lower end of the funnel attached to the sink.

An improvement in the manufacture of dextrine, glucose, and grape sugar has been patented by Mr. Charles Lauga, of New Orleans, La., assignor to himself and Alexander Charles Landry, of same place. This process of manufacturing glucose and grape sugar consists in attacking the cereal or starchy matter with a weak oxygenated glucose liquor mixed with phosphoric acid, then neutralizing the product with one of the saccharates of the alkaline earths, and then filtering, decolorizing, and concentrating it.

An improved heel for boots and shoes has been patented by Mr. Charles Dranly, of La Salle, Tex. The object of this invention is to furnish substantial and durable heels for boots and shoes, and costing but little in comparison with leather heels. The heel has a metallic shell provided with a bottom rim, turned inwardly, an inwardly turned lip at the upper edge, and a vertical projection, whereby the filling is securely held, and the shell attached to the shank, as well as between the sole and upper.

An invention to facilitate the folding of benches, tables, and settees has been patented by Mr. Robert B. W. Pinckney, of New York city. The invention consists in a bench or settee constructed with grooved top and side boards and hinged legs, and with rods placed loosely in said grooves, so as to drop by their own weight against the legs and lock them in place, and to drop back by their own weight into the said grooves when the bench, table, or settee is inverted, and thus leave the said legs free to be folded.

Messrs. Jeuleos Gamblee and John F. Haring, of Cresskill, N. J., have obtained a patent for an invention which is designed to increase the durability of vehicle axles and to facilitate their repair. It consists in an axle constructed with an adjustable bushing secured in place by a tubular nut, and provided with grooves and passages to receive oil, and an adjustable band provided with set screws and oil hole, whereby the bushing can be adjusted as each side becomes worn, and can be readily supplied with oil.

An improvement in coffee roasters has been patented by Mr. William W. Dunn, of Fort Worth, Tex. The object of this invention is to provide an improved apparatus by which green coffee may be evenly, quickly, and economically parched or roasted to the required degree without burning, thereby producing an article of superior flavor. The heating chamber or oven for roasting green coffee, etc., is formed of a casing, a series of vertical flues traversing the same, and horizontal wire screens for retarding the velocity of the falling coffee kernels.

An improved torpedo placer has been patented by Martin D. Williams, of Long Island City, N. Y. The object of this invention is to facilitate the work of placing torpedoes upon the rails of railroad tracks. It consists in a torpedo carrier fitted for operation from a distance to place the torpedo when required, and to remove the same when the necessity for its use has passed. In practical operation the train that explodes the torpedo will stop, and the train hands replace another, so that there will be no necessity of sending from the station for that purpose.

An improved music box which can be adjusted to play any desired piece of music by persons who are not acquainted with the art of performing on musical instruments, has been patented by Mr. Miguel Boom, of Port-au-Prince, Hayti. This music box is constructed with a rotary disk and a radial stationary musical comb, a disk having radial parallel-sided grooves in its face, and teeth arranged to fit anywhere in the grooves, so that revolving the disk will bring said teeth against the teeth of the musical comb, and the same teeth may be set to play different tunes.

Mr. Andrew Harbison, of New Castle, Pa., has patented an improvement in wire tubing. This tube is composed of an inner coil or tube formed of spirally arranged wires, in juxtaposition or in contact with each other, surrounding and in contact and concentric with which is arranged an outer coil or tube formed of wires coiled spirally in a direction opposite to that of the inner coil or tube, with intervening spaces between the wires of the outer coil, the outer and inner coils or tubes thus joined together, and the wires of the outer and inner coils being soldered together, thus forming a single strong and flexible wire tube.

An improved apparatus for desulphurizing gold and silver ores has been patented by Mr. William E. Harris, of New York city. The apparatus consists in the combination of an ore grinding apparatus having above it an inclosed air tight case, air inlet pipes adapted to be connected with an air forcing apparatus, and a fire chamber under said grinder with a pipe connecting said case with the upper part of a desulphurizing furnace, the furnace being constructed so that the blast carrying the pulverized ore enters above the grate and passes down through it, the whole operating to dry the ore as it is ground and then blow it through the desulphurizer.

Mr. Alexander Fraley, of Grayson, Ky., has patented an improved beehive, the object of which is to promote convenience in taking care of, wintering, and feeding bees. The hive is constructed in such a way as to form at will either one, two, or three compartments, and thus may be used for wintering as many as three distinct colonies of bees. A sliding feeding trough is likewise attached, which by means of perforations in the bottom supplies liquid food to the various compartments, or when filled with dry food is furnished with openings by means of which the bees from each section may gain access to the food supply.

An improved photographic shield has been patented by Mr. Erastus B. Barker, of New York city. The invention consists in a photographic shield constructed with a removable plate septum that is adapted to be inserted within the shield either side up, whereby either horizontal or vertical pictures can be taken by simply changing the position of the septum, also in a removable cover for excluding light and holding the septum in the shield. This is provided with locking devices and springs for holding the septum in the shield and throwing the cover open automatically when the same is unfastened, and also in a self-acting spring attached to the septum for the purpose of automatically locking and holding the sensitive plates in the septum.

Mr. Hughey Thompson Harris, of Phil, Ky., has patented an improvement in fences. This invention relates more especially to "flood fences," and is designed to effectively resist the action of currents of water, and thus prevent the washing away of the fence in the event of the inundation or flooding of the land or country. It consists in the employment of triangular braces and pickets or boards, both anchored by being planted in the ground and tamped, a rail or support for the upper end of the pickets or boards to rest against, said rail or support being fastened to the upper part of the braces, and the lower ends of the coincident pickets resting on the underground base pieces of the braces, while across the base pieces is placed a board embedded with them in the ground and brush.

Mr. Coulter C. Dederwick, of Howard City, Mich., has patented an expansible wedge for opening saw kerfs for preventing a log, while being sawed, from binding or pinching the saw passing through. It consists in two jaws, having each its lower end thicker than its upper end, which jaws are connected loosely together at the top, and are combined with a central stem or follower, which, by passing down between the jaws, spreads the latter and causes them to expand the saw kerf, the said semi-cylindrical jaws having their inner edges straight to the end, so as to form an outlet for the saw as it progresses in its cutting action, and being designed to be seated in a hole, which is first bored where the cut is to be made.