

ENGINEERING INVENTIONS.

A car brake has been patented by Mr. Charles M. Sturgis, of Birmingham, Ala. The mechanism consists of levers pivotally connected with the truck and brake heads, a movable guide block through which the long arms of the levers project, and a chain leading to the ordinary manipulating mechanism, with other novel features.

An elevated railway track and car has been patented by Mr. Alfred Speer, of Passaic, N. J. The car is suspended by rods from the outside of suspension wheels, the seats are placed on the side of the body next to the posts, with the aisle on the outside, the ends of the car bodies are pointed or cigar shaped, and there are guide rails, yielding steady wheels, and other novel features.

A car coupling has been patented by Mr. Alfred D. Babcock, of Leon, N. Y. The drawheads slide in suitable guides attached to the framework of the cars, each having buffer springs, a pocket and pin, with other novel features, whereby cars may be automatically coupled, or the coupling may be used as a common link and pin device, where only one car has the improved form.

A car coupling has been patented by Mr. Frederick Yeiser, of Danville, Ky. The invention consists in the special construction of the link supporter in combination with a common drawhead, to hold the link in the drawhead at any required angle of elevation or depression, to enter a higher or lower drawhead, and throw the holder out of position as soon as the service is accomplished.

A motor attachment for locomotives has been patented by Mr. Edwin J. Strong, of Laingsburg, Mich. The drive wheels have side pulleys which are connected with pulleys on one or more following sets of wheels by a sprocket belt, to prevent slipping of the drive wheels and increase the tractive power of the locomotive, there being yielding pulleys to facilitate the rounding of curves.

A steam engine has been patented by Mr. Benjamin T. Webb, of Beaufort, N. C. The main shaft has a friction wheel, and a yoke is carried by the piston rod, arranged to alternately engage opposite sides of the friction wheel, with means for bringing the yoke into engagement with one or the other sides of the friction wheel, to convert reciprocating into a rotary motion without crank, racks, and pinions.

AGRICULTURAL INVENTIONS.

A farm gate has been patented by Mr. Edwin H. Penfield, of Santa Barbara, Cal. This invention is an improvement of a former patented invention of the same inventor, and consists principally of a special construction of the lever or hinge rod and of means connected therewith for operating double gates.

A plow has been patented by Mr. Geo. W. Wright, of Cartersville, Mo. This invention consists in combining with the mouldboard and landside the means for maintaining them in a heated condition, to avoid the necessity of maintaining a high polish on the face of the plowshare, mouldboard, and landside, and facilitate the turning of adhesive soil, reducing the power required to draw the plow.

A corn planter has been patented by Mr. George S. Agee, of Louisville, Kan. Combined with a dropper shaft and laterally adjustable seed dropping cylinder having rows or cavities is a check wheel with peripheral groove and transverse notches corresponding with the rows of the cavities, with other novel features, to make a corn planter which is strong and simple to build, and in which the seed-dropping mechanism can be operated by hand if desired.

MISCELLANEOUS INVENTIONS.

An annealing oven for glass has been patented by Mr. Frank Schefold, of New Albany, Ind. Its walls, floor, and ceiling are composed of hollow bricks, arranged to form a series of flues on all sides of the furnace, whereby provision is made for heating and cooling the oven very rapidly.

A playing card has been patented by Mr. Edgar J. Levey, of New York city. The invention consists in combining with the symbol of a suit any mark which shall distinguish it from a suit of the same color, and particularly in the application of a distinguishing mark to the marginal symbols of the cards.

A fence has been patented by Mr. Jos. R. Standley, of Platteville, Iowa. It is constructed with a bar arranged horizontally a short distance above the ground, with spikes and staples in its upper side, to make a simple form of fence which will allow cattle to pass freely over it, but prevent the passage of swine.

An automatic weighing scale has been patented by Mr. Jacob Ball, of Waterloo, Ont., Canada. This invention covers a novel construction and combination of parts and details for making scales whose parts shall be simple, and which are adapted to be adjusted very easily for weighing bodies of different weights.

A sash fastener has been patented by Mr. John F. Porter, of Mount Washington, Ky. It consists of a novel device of spring and lever lock, which is simple and strong, readily applied, not liable to break, and which has no binding action on the window stop when raising or moving the sash.

A folding table has been patented by Mr. Daniel A. Fay, of West Brattleborough, Vt. This invention covers a novel construction and combination of parts for a folding table, simple to make, which can be folded very compactly, and can be quickly set up and taken down.

A water closet has been patented by Mr. William D. Schuyler, of New York city. This invention covers certain novel devices for more securely closing, when not required to be open, drain pipes at or near their connection with water closet pans, wash bowls, sinks, bath tubs, or other similar fixtures.

A holder for paper bags has been patented by Mr. Sylvester W. Sheldon, of Jersey City, N. J. It is simple in construction and inexpensive to manufacture, and is so made that it can be readily applied to hold toilet paper, paper bags, and other similar articles.

A fruit drier has been patented by Mr. Hugh S. Jory, of Salem, Oregon. It is a special arrangement of upright drum heater, with small furnace without grate in its base, being an improvement on a former patented invention of the same inventor, to make such apparatus more convenient and effective.

Hollow ware forms the subject of a patent issued to Mr. William H. Hoyt, of Stamford, Conn. There are made of the pith of cornstalks cut into small curved or angular blocks and connected together with glue or other adhesive material, the ware being suitable for vases, jars, boxes, and other ornamental purposes.

An ironing table has been patented by Mr. Emanuel Ruse, of Lovettsville, Va. It has hinged legs in connection with angle irons with apertures, one arranged to adapt it to lap on the other, with a pin for securing both irons to the floor, the invention being an improvement on tables supported by legs adapted to fold.

A plow has been patented by Mr. Adolph Westling, of Ortonville, Minn. It has novelties in construction to provide that the horses' shoulders will not be injured should the plows strike an obstruction, there being yielding springs to prevent sudden jar, and the plow can be readily arranged to enter the ground to any desired depth.

An electric horse unhitcher has been patented by Mr. Andrew J. Coffee, of Portland, Oregon. Combined with an electro-magnet is a lever with a stem loosely carrying an armature, a spring for pressing the armature upward, with other novel features, for automatically unhitching horses in engine and truck houses on a given signal.

A bush hammer has been patented by Mr. William Oppy, of Westerly, R. I. This invention consists of two gibs placed between the side plates, and provided with a tongue which fits into corresponding recesses in the cutting tools, whereby the latter are securely held, or can be easily taken out for sharpening or other purposes.

A gate has been patented by Mr. Jesse H. Barton, of Brownsville, Tenn. It has battens so arranged that its horizontal bars may be conveniently depressed, or it may be easily adapted to provide a passageway for chickens and small stock, in connection with various novel features of construction and the combination of parts.

An ice tong has been patented by Mr. Eli A. Collins, of Huntington, Ind. The tongs are so made that when closed the handles will be at a distance apart, to prevent injury to the hands, and the handles are formed separate from the prongs, with straps and slots, that they may be secured to the prongs in any convenient manner.

A cotton gin has been patented by Mr. Samuel D. Freeman, of Fort Thomas, Arizona Ter. This invention covers a novel construction for removing cotton fiber from the seed without breaking it or bending it sufficiently to injure it, leaving the fibers straight and parallel, and of nearly quite full length as grown on the seed.

A map and window shade case has been patented by Mr. John M. Sauder, of Harrisburg, Pa. The case is provided with a spring roller, and is so made that maps and shades can be readily displayed and closed up, and when closed the case will exclude dust and water, and can be readily transferred from one place to another.

A washing machine has been patented by Mr. John M. Headen, of Pleasant Hill, Mo. A rotatable clothes-holding rack is arranged in a covered tub in such a way that the clothes will be forced through the washing fluid by the rotation of the rack, and thus quickly cleansed without injuring them, the apparatus being simple and inexpensive.

A pencil sharpener has been patented by Mr. Frank Worn, of Philadelphia, Pa. It has an exterior case with a recess and a detachable holder fitted thereto, with a series of sharpening blades, so contrived that the pencil will be held firmly and centrally between the blades, so as to make a sharp point without danger of breaking it off.

A device for withdrawing the pipes from driven wells has been patented by Mr. James Mericle, of Patchogue, N. Y. It consists of two grappling jaws made concave on their adjacent faces and linked together, one of the jaws having a clevis or other device for attachment to a chain or other connection for applying power to the grapplers.

A window bead fastener has been patented by Mr. Charles R. Nelson, of New York city. Combined with a stop bead are washers and screws, the latter passing through apertures large enough to permit moving the bead slightly in all directions, for the more ready adjustment of stop beads in relation to window sashes, to prevent rattling.

A folding top for school desks has been patented by Mr. William P. Conner, of Bloomsburg, Pa. The desk has an opening in its front and a leaf for closing the same, cleats projecting beyond the edge of the leaf, and links pivoted to the inner sides of the desk, with other novel details, making a folding top which also closes the opening in the box of the desk.

A child's carriage has been patented by Mr. Patrick Gallagher, of New York city. It has a fan supported on the rear part of the carriage and set in motion by a belt and pulleys actuated by the rotating axle, to which one set of wheels is rigidly attached, so the occupant will be fanned when the vehicle is in motion.

An electric signal recorder has been patented by Mr. Andrew J. Coffee, of Portland, Oregon. Combined with clockwork and an electro-magnet is a

printing lever, an additional clockwork for feeding a strip of paper, and other novel features, making an improved device for giving fire alarm signals, and for recording the signals by ink impressions.

A screen for bird cages has been patented by Mr. Samuel A. Bishop, of Smethport, Pa. It is of glass or sheet material, to be conveniently held by a simple form of hook outside the cage, opposite the bath tub and seed cup, to prevent birds from scattering water and their feed about, to the damage of the wall or furniture.

A fastening for pocket book, purse, and hand bag frames has been patented by Mr. Louis B. Prahar, of Brooklyn, N. Y. Combined with a frame having a recess, a pivoting wire, and a torsion spring, is a latch with a rearwardly projecting flange to come in contact with the side of the frame, so the latch will not be turned so far back as to break or injure the spring.

A metal polishing composition has been patented by Messrs. Zebulon Jacobs and William Horne, of Salt Lake City, Utah Ter. It can be used on gold, silver, zinc, copper, brass, and tin, without scratching, and consists of tripoli, coal oil, camphor, spirits of ammonia, and spermaceti, combined in specified proportions and made into a paste.

An end gate fastener has been patented by Mr. Joseph M. Reams, of Curwensville, Pa. This invention relates to devices for fastening the end gates of wagons or other vehicles, and has for its object to provide simple, inexpensive, and effective fastenings, which may be quickly and easily operated, and readily applied to new or old vehicles.

A wire fence machine has been patented by Mr. William J. Raymond, of Cherry Vale, Kan. Combined with a truck is a series of twistlers mounted thereon, with mechanism for beating up pickets, devices for moving the truck operated by the beating up mechanism, and other novel features, for building fences of twisted wire, and pickets or rods held by the wires.

A cotton cleaner has been patented by Mr. John H. Poston, of Eufaula, Ala. It has a revolving screen and air-exhausting device, with specially arranged passages, to withdraw the dust and dirt from the gin room and the condenser, whereby the lint is straightened out into better fiber, and the room rendered healthier and more comfortable.

A stump extractor has been patented by Mr. Alexander Logan, of North Sydney, Nova Scotia, Canada. It consists of a simple frame carrying a shaft and gear wheels, in connection with hook arms and chains, the machine to be anchored to another tree or stump, when a powerful leverage is easily brought to bear on the stump to be removed.

A mosquito canopy has been patented by Mr. Robert Mitchell, of Atlanta, Ga. This invention comprises a top adapted to support the sides of the canopy fabric and connected to a hanger or arm support, having opposite hinged frames with side arms which engage each other, so that by drawing on one arm both frames will be opened for the escape of insects in the space inclosed by the canopy.

A hair tonic has been patented by Mr. Leon Pierre Federmeier, of Leadville, Col. It consists of tincture of Peruvian bark, tannin, sulphuret of potash, common salt, alcohol, water, and a perfume, compounded in proportions and after a manner specified, to prevent and remove dandruff and stimulate the growth of the hair, while being also a useful application for the skin.

An apparatus for emptying privy vaults has been patented by Mr. Louis R. Sassinet, of New Orleans, La. It is a combination and arrangement of a water tight tank or reservoir, either on a wagon or making part thereof, with various special parts and devices, and a disinfecting fluid and gas pipe and burner, whereby the obnoxious gases are destroyed, and vaults may be emptied by day as well as night.

A log pusher for saw mills has been patented by Mr. Robison W. Shelbourne, of Blandville, Ky. Pushers are fitted in slide ways arranged transversely to the carriage and outside of a truck or trough on which the logs are brought into the mill house, mechanism operating the pushers from the mill driving shaft, whereby the log is automatically pushed from the log truck on to the mill carriage.

An apparatus for dyeing has been patented by Mr. Joseph Hanson, of Philadelphia, Pa. Combined with a vat is a frame adapted to move horizontally, in connection with another vertically moving frame, whereby the hanks or bunches of yarn may be dipped into and withdrawn from the coloring solution automatically, in imitation of the motion of doing the work by hand.

A music satchel has been patented by Mr. Eugene Thayer, of New York city. It has a flexible cover, attached to the inside of which at each end is a pair of semi-ovoid end pieces, so arranged that when pieces of music are placed in the satchel their edges will nearly meet at the mouth, and the sheets will not receive a permanent curve to prevent their being again placed smoothly on a music rack.

A vehicle spring has been patented by Mr. James R. Wright, of Portland, Oregon. This invention relates to springs mainly adapted for use on side bar vehicles, and covers a novel construction and combination of parts and details, whereby the spring plates are not subjected to any lateral or torsional strain, and so the spring will at all times regulate itself to the weight imposed upon it.

A steam radiator has been patented by Messrs. John Barnett, of New York city, and Charles S. Bavier, of Brooklyn, N. Y. The valve shell or casing is formed in one end of the steam chest or base, and contains a double valve, the spindle of which turns in end pieces screwed in the sides of the chest or base, and forming the ends of the valve chamber, and there are also other novel features of construction.

A cigar rolling machine has been patented by Mr. James W. Cameron, of New York city. It is operated by treadles, a suitable bunch of tobacco

for the intended cigar being placed in a recess, where it is pressed and rolled into a shape, when a wrapper cut to proper shape is introduced at the butt end, and so held by the operator that it will be spirally wound around the cigar to quickly complete the manufacture.

An oil separator has been patented by Mr. Eugene Polte, of Magdeburg, Germany. It is an apparatus combining a steam nozzle with a cylindrical vessel held below it, the nozzle having a channel for conducting the water of condensation and oil into the vessel, with an outlet pipe especially arranged, and other novel features, to separate oils and fats from the water of condensation and exhaust steam.

A centrifugal speed indicator has been patented by Mr. Henry Herden, of Corning, N. Y. It consists in a slotted shaft and a two-armed lever pivoted therein, with weights on the ends, in combination with an index and a spring for opposing the centrifugal action of the weights of the lever, with means for preventing the vibration of the weighted lever when the indicator is running at low speed.

A lamp for magic lanterns has been patented by Mr. Thomas H. McAllister, of New York city. The wick tubes are arranged diagonally with reference to the axis of the lenses, so the two flames from which the light emanates overlap each other, thereby avoiding the dark space, and there is a metallic chimney with enlarged portion, a reflector, and a removable glass window.

A process of photo-engraving has been patented by Mr. Charles T. Iago, of 55 Riverside Road, Highbury, Middlesex Co., England. It consists in first engraving the subject on wood in intaglio, then producing the necessary contrast between the lines and surface of the block and photographing direct therefrom, producing the relief block from the negative by any known photo-chemical or other method.

Card clothing for carding engines forms the subject of a patent issued to Mr. John T. Fallows, of Denton, Lancaster Co., England. Combined with a carding band on which carding teeth are held is an additional or supplementary belt, made of metal, to prevent the teeth on the band being forced out of position or partly driven back through the foundation of the band.

A combination garment has been patented by Mr. Abe W. Mensor, of Jacksonville, Oregon. It is a lapel vest and overshirt with lapel bosoms, and a detachable series of cuffs and collars, whereby three garments are combined in one, a vest, overshirt, and white or colored shirt or shirt front with cuffs and collars to match, the invention being an improvement on a former patented invention of the same inventor.

A fence has been patented by Messrs. Robert Black and John Strachan, of New York city. It is made of tubular iron, and designed more especially for use on elevated railway and other structures where the foundations are subjected to motion and jar, the horizontal bars or rails being secured in the posts by screw caps applied to couplings through which the rails pass, clasp rings of soft metal being used in the caps to grasp and hold the rails.

A drill chuck has been patented by Mr. Charles E. Stone, of Amesbury, Mass. Combined with a hollow shaft having a countersunk outer end is a sleeve fitting over the shank, having a conically bored end, and a pair of blocks having beveled ends, which are received between the conically bored end of the sleeve and the countersunk end of the shank, with other details, for holding drills and other implements in position for use.

A beer pump has been patented by Mr. Patrick R. Greene, of Brooklyn, N. Y. The pump cylinder is of glass, and its ends have externally screw-threaded rings, combined with metal mountings provided with shells of non-corrosive metal, so that when the mountings are screwed to place liquid-tight joints will be formed between the cylinder and the non-corrosive shells, making a non-corrosive pump for drawing beer and other malt liquors.

The manufacture of tiles forms the subject of a patent issued to Messrs. Joseph Bayer and Emil Puchta, of Washington, Mo. The process consists in first washing the clay with water and passing it through a sieve, then drying, grinding, pressing into form, and finally baking, in order, with a purified clay, to make a tile of increased hardness and durability, which will not absorb water, and will afford protection against slipping.

A phaeton spring has been patented by Mr. William J. Wayne, of Decatur, Ill. On the head block supported by the fifth wheel is secured a half elliptic spring, the ends bent upward and connected by shackle joints with the front ends of quarter elliptic springs secured on the under side of the body, all so arranged as to simplify the construction of the vehicle, avoid disagreeable motion, and allow the use of high buggy wheels.

A compensator for wire ropes and cables has been patented by Mr. Richard B. Ireland, of Trenton, N. J. Combined with the operating ropes or cables of a semaphore are a shifting lever and two wheels independently journaled, over which the operating ropes pass in opposite directions, eccentrically pivoted levers engaging the rope-carrying wheels and connected with the operating lever, to allow for the expansion and contraction of wire rope and cables in operating signals at a distance.

A tube expander forms the subject of 3 patents issued to Mr. William I. B. McHale, of New York city. This invention relates to an improvement in tube expanders employing rollers having their axes journaled or movable in slots in the heads between which the rollers are disposed, the tubular stock having longitudinal slots extending from the rear end to within a short distance from the front, in which slots cylindrical swages or rollers are held by a flanged ring surrounding the rear end of the stock loosely, with other novel features and combinations of parts and details, in an implement for expanding the ends of tubes, and so the implement can be used in tubes of different diameters.