

## ENGINEERING INVENTIONS.

A car bell has been patented by Mr. William H. Hudson, of New York City. It is adapted to be operated from the axle of the car when the latter is in motion, the car bell and striker being arranged in connection with a pulley having an arm operating on the striker, an endless belt passing over the pulley and operated by the axle of the car.

A steam heater for railway cars has been patented by Mr. Henry R. Robbins, of Baltimore, Md. This invention covers certain novel features of construction in steam heaters in which pipes or tubes are supported underneath a train of cars, with means for communicating with registers or other devices for diffusing the heat within the cars.

A car coupling has been patented by Mr. Lavvega Self, of Piedmont, Mo. Combined with the chambered head of the drawbar is a spring-pressed follower adapted to hold the pin in an elevated position, and to hold the link in suitable position for engagement with the drawhead of the adjacent car, the device being simple and designed to work entirely automatically.

An automatic railroad gate has been patented by Mr. John T. Phillips, of New Castle, Pa. It is designed to be closed automatically by the approaching train and opened as soon as the last car has passed the gate, which is pivoted, in connection with springs arranged at the side of one of the rails of the track, wheels mounted in bearings, levers engaging the springs and wheels, and other novel features.

A tube expander has been patented by Mr. Thomas Beverly, of Ellis, Kansas. It is especially designed for expanding the ends of boiler tubes close up to the flange of the flue sheet, a single tool being provided for flues of different diameters, the stock being adapted to receive rollers or swages of different sizes, in connection with which is employed a tapering plug varied in size and form for different requirements.

A car coupling has been patented by Mr. Henry Gallager, of Savannah, Ga. It is intended especially for use on freight cars, having a drawhead of the ordinary form, with pin openings, with a main lever and a pin suspended at its forward end, the rear end being pivoted to the drawhead, the device being intended as a simple construction, whereby the coupling and uncoupling can be effected without trainmen going between cars.

A railway gate has been patented by Mr. Oliver H. P. Cornell, of Albany, N. Y. It is for closing highways at the intersection of railways and for giving an alarm just before and during the closing of the gates, and has a spring-actuated mechanism, a scape wheel and a pendulum pivoted on a fixed support, with other novel features governing the time of opening and closing and adapting the gate for use in a variety of situations.

## AGRICULTURAL INVENTIONS.

A combined hay rake and tedder has been patented by Mr. Cassius M. Maxson, of Portville, N. Y. This invention covers various novel details in the construction and combination of parts of a machine which can be readily adjusted for use as rakes or as tedders, and which is calculated to be reliable in operation in either capacity.

A dust conveyer for thrashers has been patented by Mr. Lyman A. Miller, of Carbondale, Ill. Combined with the thrashing cylinder and feed board are a fan and fan case, with a tube having its vertical portion provided with inwardly or rearwardly projecting tubes, extended to conform to the lower side of the feed board and then carried upward and rearward to cause it to overhang the feed board.

A combined seeder and fertilizer distributor has been patented by Mr. Isaac N. Franklin, of Lake View, Chicago, Ill. The construction is such that the seed and fertilizer are simultaneously dropped in one spot on one side of the machine into a furrow made by the opening cutter or plow, the furrow afterward being closed by the driving wheel, the invention covering various novel details and combinations of parts.

## MISCELLANEOUS INVENTIONS.

An improvement in calipers forms the subject of a patent issued to Mr. Oliver D. Warfield, of Chicopee Falls, Mass. The invention consists in a joint formed of two rolling surfaces held together by a spring, the legs having convex surfaces and mortises, and the spring having tenons to fit the mortises.

A hat has been patented by Mr. Robert Plats, of New York City. It is designed as a cheap and practical folding hat, the brim wire being formed in curved sections, with inwardly projecting radial arms at the ends of each section, the arms being held by radial seams in the brim.

A fireplace blower has been patented by Mr. Ralph Ely, of Delaware, Ohio. A hood is secured to the lower edge of the blower proper, and so arranged as to permit free access for the purpose of stirring the fire, while the dust resulting from such stirring will be carried up the chimney by the draught.

A necktie fastening has been patented by Mr. James H. Carter, of Philadelphia, Pa. A back plate is connected at its upper edge to the upper edge of the front or main portion of the necktie, with openings through the front portion and back plate, the button head holding the tie also serving as a substitute for the ordinary scarf pin.

A scribing attachment has been patented by Mr. William F. Seargeant, of Marshall, Mo. It consists of two parallel legs united by a head block, one leg being somewhat longer than the other, with other features, the attachment being more particularly designed for marking off weather boards where they abut against window casings and corner strips.

A swing has been patented by Mr. John O. Lyon, of Quincy, Ill. Its construction is such that no rope or other connection with a fixed point is

required to operate the swing. The seat may be adjusted to an upright or a reclining position. The swing is easily portable, and has an awning to adapt it for comfortable use in sun or shade.

A hat hook has been patented by Messrs. Gustav and Frederick Pape, of New York City. This invention covers a pivoted arm arranged to be closed upon a hat or other garment placed upon the hook, and to be locked to prevent the removal of the garment except by the person holding the key to unlock the pivoted arm.

A cattle stanchion has been patented by Mr. Dwight Manwaring, of Algona, Iowa. The frame has a horizontal rod on its top crosspiece, the neck bars having separate independent flexible connections at their upper ends sliding laterally on the horizontal rod, the neck bars being thus yieldingly mounted and increasing the comfort of the animal.

A necktie has been patented by Mr. John H. Irwin, of Philadelphia, Pa. Combined with a binding strip formed with button holes are studs fitted within the button holes, the binding strip being composed of several layers of the material forming the outer face of the scarf, thus making a scarf which can be worn much longer than the ordinary form.

A bustle has been patented by Messrs. Edward D. and John Fraser, of Brooklyn, N. Y. It consists of main and auxiliary loops so arranged that when the extending loops are subjected to any pressure directed toward the person of the wearer the loops will fold upward and inward to positions within the line of the main supporting hoop.

A cuff fastener has been patented by Mr. David Stone, of New York City. It is a stud formed with a hollow shank adapted to receive a headed pin, the head of the stud being preferably concave and the hollow shank being preferably provided with a spring, making a fastener whereby the cuff may be readily secured in such position as may be desired.

A carpet stretcher has been patented by Mr. Oscar L. Sprague, of Andover, Ohio. Combined with a slotted main frame is a rack bar carrying teeth and having vertical and longitudinal movement, a pivoted lever carrying a pawl, an independently pivoted retaining pawl, and other novel features, calculated to make a simple and effective device for the work of putting down carpets.

A cigar bunching machine has been patented by Messrs. William M. Steidle and Anton Senn, of Toledo, Ohio. It has an endless traveling apron and adjustable guide roller, whereby either or both edges of the belt may be slackened or tightened to roll bunches of different sizes and shapes, the compressor cutting off surplus tobacco as it depends on the cigar bunch placed in the shaper and forcing the bunch into the mould cavity without too much pressure.

An improvement in pants has been patented by Messrs. Frank Kahn, Hirsch Morris, and Louis Morris, of Memphis, Tenn. It consists in having a strip stitched at opposite sides of the crotch seam, through the laps or folds, with a second separate strip crossing the first strip and stitched to the legs at opposite sides of the seams, the invention relating especially to working pants or overalls, and being intended to make ripping practically impossible.

A fruit picker has been patented by Mr. George C. Thompson, of Darien, Ga. It consists of two pivoted hemispherical cups, arranged to nest together or pass one into the other, combined with a pull cord for closing them to a spherical form, and a forked handle, permitting fruit to be picked from clusters, from the picker not expanding to occupy a great space when opened.

A washing machine has been patented by Mr. John W. Neff, of Buckhannon, West Va. Combined with a suds box in which revolves a drum, having circular plates with circularly arranged bowed springs, the plates carrying concave rubbing sections connected by bolts to the ends of the springs, are other novel features, to bring more or less pressure on the clothes in their passage between the drum and rubbing sections.

A shuttle operating mechanism has been patented by Mr. Lynn W. Buck, of Springfield, Vt. The sweep stick is formed with a slot through which the picker stick passes, the slot being larger than the picker stick, to permit independent movement of the latter, the sweep stick being supported and connected with the picker stick by an all wood or all metal connection, and yet retaining freedom of action or rebound.

An implement for buckling bale ties has been patented by Mr. Frederic S. Williams, of De Roche, Ark. Combined with a bar having a device at one end for clamping one end of the tie is a lever fulcrumed to the bar, and formed with a forked forward end adapted to retain the cross bar of a buckle held to the other end of the tie, and allow the first named end of the tightened tie to be passed around the buckle cross bar, with other novel features.

A plastic compound for walls has been patented by Mr. Henry W. Merritt, of Somerville, Mass. This invention is an improvement on a former patented invention of the same inventor, and provides for a compound consisting of silica and a solid silicate and carbonate of lime, each in pulverized condition, dissolved in water, and a soluble alkaline silicate, the whole intermixed and incorporated after a special manner, and including variations for different uses.

An automatic perforator for printing presses has been patented by Messrs. George and Robert Kennedy, of New Westminster, British Columbia, Canada. The invention provides a hollow rule containing a serrated cutter mounted on links to give it a parallel motion, in combination with an angled lever pivoted in the hollow rule and arranged to be engaged by the yielding contact carried by the platen of the press, for perforating paper in the operation of printing.

A washing machine has been patented by Mr. Townson Hand, of Shelbyville, Ind. This invention provides an improvement in machines where

conical shaped dashers are made to reciprocate vertically in a tub on a revolving table, the machine being adjustable by a single tension screw to operate on a large or small number of clothes, and provides means whereby the dashers may be readily changed from a vertical to a horizontal position, with other novel features.

A stringed musical instrument has been patented by Mr. George W. Van Dusen, of Brooklyn, N. Y. This invention relates more particularly to pianos, providing a simple arrangement of the strings and their supports, the spring wire being flattened where it is doubled over or around a head or pin, and the string head having a knife edge bearing upon a compensating lever, the construction being designed to assure the maintenance of the strings in practically perfect harmony and pitch of tone.

A carding engine has been patented by Messrs. Benjamin A. Dobson and William I. Bromley, of Bolton, Lancaster County, Eng. The invention relates to an improved arrangement for casing in the space between the cover of the doffer cylinder and the adjacent portion of the main cylinder of the carding engine, dispensing with the ordinary wooden or tin mould or any other loose filling up or making up pieces, the use of which necessitates separate adjustments of the parts.

A carding engine has likewise been patented by Mr. William Dobson, of Bolton, Lancaster County, Eng. In connection with the engine bend, flexible bend moving lengthwise, and cams and pins for adjusting the flexible bend, are a slotted bracket piece on the engine bend and a pin or projection on the end of the flexible bend riding in the slot, making an easily arranged positive adjusting action.

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