

ENGINEERING INVENTIONS.

A car brake and starter has been patented by Messrs. Amos M. Vereker and Stephen M. Yeates, of Dublin, Ireland. This invention covers devices which act automatically to store up force while acting as a brake to stop the car, so that it will be available for starting the car again when required.

A railway clamp plate has been patented by Mr. Thomas J. Bush, of Lexington, Ky. This invention covers a special construction of plate in combination with interlocking bolts inserted into diagonal intersecting holes made in the cross tie, being an improvement on a former patented invention of the same inventor.

A car coupling has been patented by Mr. Gustav J. Selk, of Monico, Wis. This invention provides a coupler which can be readily attached to any car, and which can be used in connection with the old pin coupler without alteration, automatically coupling with an opposing coupler, while the cars may be coupled either from the sides or the top.

A safety attachment for railway car heaters has been patented by Mr. Edwin C. Rowe, of Bellefonte, Pa. This invention relates to that form of car stoves in which the jar of the collision or tilting of a car automatically dumps the grate and also the bottom of the stove, dropping the hot coals entirely through the bottom of the car and out upon the ground.

A car coupling has been patented by Mr. Samuel A. Young, of Washington, D. C. This invention covers a novel construction to effect the automatic dropping of the pin on the entrance of the link, and also simple means for adjusting the outer end of the secured link, in order that it may properly enter drawheads of different heights.

A motor for street cars has been patented by Mr. William H. Patton, of Pueblo, Col. Its construction is such that the drive power may be operated at full speed at all times, and its motion transmitted to the axles in any desired degree, or so as to revolve the same in either direction, the power being afforded by either gas or steam engine or other motor, and the invention covering various novel features and combinations of parts.

AGRICULTURAL INVENTIONS.

A coupling for cultivators has been patented by Mr. Peter Rader, of Kirklind, Ind. This invention relates especially to corn cultivators, and covers a device for coupling the shovel beams to the arch of two-horse cultivators, being light, strong, and inexpensive, and adapted to be adjusted horizontally on the arch.

A manure scraper for plows has been patented by Mr. Adolph Zerrenner, of New York City. It consists of a straight vertical runner with its rear end widened and concaved outwardly to form a deflector, and adapted to be secured to a plow beam with the vertical runner directly below and approximately parallel with the beam, the device being easily attached and detached and adjusted to the beams of different plows.

MISCELLANEOUS INVENTIONS.

A tobacco box has been patented by Mr. Austin L. Gresham, of Kingsland, Ark. It is so made that the tobacco will be in sight and yet be protected from the atmosphere and from dust, flies, etc., while the tobacco will be as readily accessible as in the old style of boxes.

A hand loom has been patented by Mr. Charles N. Newcomb, of Omaha, Neb. It is intended especially for weaving rag carpets, and in its general construction, is much as usual, but the invention covers various novel features of combination and the arrangement of parts.

A folding stacker has been patented by Mr. Charles Saunders, of Cape Vincent, N. Y. It is made in sections which may be folded upon themselves for removal from place to place, but the construction is such as to admit of a proper adjustment and support of the stacker sections by a single operating rope or cord.

A broom holder has been patented by Mr. Charles W. Love, of Fairpoint, Ohio. It is made of one piece of wire, so formed and bent as to have a trefoil base and a right-angled projecting pair of curved gripping jaws or fingers with coils therein, to be secured to the wall and conveniently hold a broom or brush, etc.

A bung has been patented by Mr. Michael R. Mayer, of Zanesville, Ohio. A bung provided with a lug is hinged to the bung hole, a plate being hinged to the vessel provided with a lug and arranged to lie over and upon the hinged bung, a locking bolt engaging the lugs of the bung and plate.

A mail bag has been patented by Mr. Carey F. Kizer, of Westville, Ohio. This invention covers a special formation and construction of the mouth of the pouch, whereby it may be readily and easily closed and opened, requiring no straps and but one staple, the fastening being secure and durable.

A cash box has been patented by Mr. Benjamin C. Foster, of Baltimore, Md. It is made of sheet metal, in two sections, hinged at their edges, the parts being arranged in a novel way, with reference to convenience, safety, compactness, and easy portability, in the keeping of bills and fractional currency.

A fence has been patented by Mr. Jacob M. Bosart, of Sumner, Ill. This invention provides a fence wherein wire may be conveniently used in addition to rails, wherein but few posts are buried in the ground, and whereby the fence may be set up and taken down again with celerity and ease.

A lounge has been patented by Mr. George Hoffman, of Mount Vernon, N. Y. It has a reversible back, so that when desired the lounge may be easily and quickly changed from a right to a left hand lounge, and *vice versa*, and there are various novel features of construction and the combination of parts.

A harness buckle has been patented by Mr. John H. Neill, of Sinclairville, N. Y. It is adapted more particularly for use on the crupper and hip straps of harness, being so made as not to catch the horse's tail, and so the line will not be caught under it, and at the same time to prevent the line from being caught under the end of the hip strap.

A miner's lamp has been patented by Mr. John L. Morris, of Middleport, Pa. Combined with the lamp is a double hook formed of a doubled or looped wire having its ends bent over into outwardly projecting beaks or points, one of which is longer than the other, whereby the lamp is more readily inserted in the hat and more steadily held in place.

A wagon jack has been patented by Mr. Anthony O. Stiveson, of Pomeroy, Ohio. This invention covers a novel construction and combination of parts in a jack having a stationary standard firmly mounted in a base block, making a wagon jack which is convenient and effective and has an extensive range of use.

An apparatus for purifying and separating fatty substances by electricity has been patented by Mr. Heinrich F. D. Schwahn, of Kansas City, Mo. Combined with a closed cylinder provided with steam inlet pipes in connection with a boiler is an electric separator suspended therein, in connection with a battery, with other novel features.

A spring roller has been patented by Mr. Eucher Gres, of Tombstone, Arizona Ter. It is of that class wherein a casing secured to the curtain roller incloses a drum and spiral spring, one end of the spring being attached to the pivot on which the casing turns, the invention covering a novel construction and combination of parts.

A water back for gas heaters has been patented by Messrs. John T. and Errett E. Phillips, of New Castle, Pa. It is applicable for use in connection with the ordinary form of gas heater, and provides for a proper moistening of the atmosphere of the apartment, and also for a decrease in the amount of gas required for heating.

A fire escape and water tower has been patented by Mr. Maurice J. Hart, of New Orleans, La. It is to be located at street corners, and has floors or platforms with movable bridges for establishing connection with the buildings, and is furnished with a stand pipe with lateral branches for conveying water to different heights for fire extinguishing purposes.

A baling press has been patented by Mr. Abijah Simpson, of Lapeer, Mich. It is a simple and inexpensive device for compressing hay, straw, cotton, and similar material, there being combined with the baling box and plunger a shaft in the forward part of the case, with a loosely mounted drive wheel and a sweep pivoted on the shaft, with other novel features.

A tent pin extractor has been patented by Mr. Henry M. Hyde, of Princeton, Ill. It consists in a rectangular box-like frame adapted to engage a tent peg, having its forward end beveled, and a detachable connection between the frame and the handle of a mallet, whereby a tent pin may be readily drawn from the ground.

A buckle has been patented by Mr. William J. Walters, of Prospect, N. Y. It is a suspender buckle in which the frame has a cross bar and a clamp sliding on the side bars and pressing the web of the suspender upon the fixed cross bar, the clamp being connected with the suspender straps, holding the web of the suspender firmly as the pull is increased.

A buckle has been patented by Mr. Charles R. Harris, of Williamsport, Pa. The frame of the buckle has applied to it a sliding roughened or toothed cross bar for holding on a suspender web or band passing through the buckle, there being also a face bar applied to the buckle below the toothed or back cross bar, for use in connection with the latter.

A box loop has been patented by Mr. Martin L. Hickle, of Dyson's, Ohio. It is for retaining the free ends of straps secured by a buckle, the loop being formed with its top plate made to open to enable the strap to be conveniently placed in and removed from it, and provided with a catch or fastening by which it may be secured closed.

A galvanic battery has been patented by Mr. Horatio J. Brewer, of New York City. Combined with the cell is a division plate, dividing the cell into two compartments, one larger at its upper end to form sufficient space for the head of the negative electrode and for conveniently packing the negative material around the negative electrode, with other novel features.

A thill coupling has been patented by Mr. Samuel Forter, of Marysville, Kansas. It consists of a bolt passing through the apertured ears of the clip and through the shaft end, the bolt having on one end an extension on which is formed a bar extending parallel with the bolt, and having on its outer end a curved angular arm adapted to engage the outer face of one of the ears of the clip.

An invertible microscope has been patented by Mr. Edward Rausch, of Rochester, N. Y. The stand has an arm adapted to receive a doubly reflecting prism, the arm being arranged to hold the main tube in two positions, and to receive and hold the prism, making a microscope which may be employed either as invertible or vertical instrument without any material change in the adjustment.

A magic lantern has been patented by Mr. William H. Ridding, of Brooklyn, N. Y. It consists of an extensible frame with a condenser holder and slide holder, and having an objective holder connected with the slide holder by a bellows, there being a centrally apertured cap adapted to fit over the condenser holder and receive the casing inclosing the source of light, with other novel features.

A portable elevator has been patented by Mr. Samuel C. Derby, of Ashley, Mich. Combined with a guide frame having parallel side beams and a car mounted to slide thereon is a stop on the

lower part of the guide frame, a part on the car projecting between the side beams and adapted to strike the stop, the device being readily folded up and adapted for use in lieu of the ordinary ladder.

An air ship has been patented by Mr. Charles H. Morgan, of Gunnison, Col. It is constructed with a series of longitudinal tubes adapted to hold concentrated gas, bent to a spherical or birdlike shape, secured at their extremities to end ribs, together with a series of transverse oval ribs, between which and the longitudinal tubes is fitted an inner inclosing silk or metallic wall, with various other novel features.

A hand grip tester has been patented by Mr. John M. Reiners, of New York City. It has opposing dials supported by standards, a pinion pivoted between the dials carrying indicating fingers, a rack sliding in the standards, a spring adapted to bear against the standard and arm, making a simple and accurate device for registering the grip of the human hand.

A logometer has been patented by Mr. Charles Sperry, of New York City. It provides a registering mechanism to be operated and regulated by mechanism indicating uniform time, on vessels, in combination with a speed-indicating mechanism, the register showing the distance the vessel has covered since starting, thereby making a complete logometer to constantly indicate uniform time, the speed of and the distance run by the vessel.

A brake for children's carriages has been patented by Mr. James H. Peterson, of Brooklyn, N. Y. Combined with the axle and hub of one wheel is a bracket adapted for attachment to the axle, apertured to receive one end of a brake strap, a brake strap being adapted to encircle the hub, so the brake can be quickly applied from the handle, and the carriage may be left upon an inclined surface without danger of changing position.

SCIENTIFIC AMERICAN
BUILDING EDITION.

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