

ENGINEERING INVENTIONS.

A car wheel and axle has been patented by Mr. John H. Smith, of Paterson, N. J. This invention provides means whereby one wheel will run independent of the other, producing less friction on curves and preventing strain upon the axle, the axle and attached wheels being of simple, durable, and economical construction.

A car coupling has been patented by Mr. Abraham G. W. Foster, of Whitesburg, Ga. It is so constructed that the coupling pin may be set to be automatically thrown into coupled position with a coupling link and the latter guided into place in the drawhead, providing also for the uncoupling of the cars without the operator going between them.

A safety appliance for car trucks has been patented by Mr. Gavin Rainnie, of Portland, New Brunswick, Canada. It consists of a heavy or strong bar bolted to the truck frame and bent to cause it to pass over the main stationary bolsters, being applied in such way as to keep the cars on their tracks in case of derailment, and to operate as a safety means in case of a broken rail.

AGRICULTURAL INVENTION.

A cultivator has been patented by Mr. Henry H. Hooker, of Wilmot, Kansas. The cutter blade is of approximately U-shape, with two cutting edges, the vertical side portions having adjusting apertures for the attachment of a ball with which the handle is connected, the blade being adjusted at any required angle, and the device being especially designed for cultivating garden vegetables, young onions, etc.

MISCELLANEOUS INVENTIONS.

An ironing table has been patented by Mr. Frederic A. Clark, of Newark, N. J. It is a table that is simple and durable in construction, and can be easily folded up, the invention covering various novel details in the construction and arrangement of parts.

A load elevator has been patented by Messrs. Jacob Lane and Nelson McPherson, of Gainsborough, Ontario, Canada. It is made with a combined drum and ratchet wheel of peculiar construction, the ratchet wheel being formed of inwardly tapering sections.

A truss pad has been patented by Mr. Edward W. Holt, of Brooklyn, N. Y. It is flexible and hollow, and adapted to be inflated with air, water, or other fluid, and has partitions in the interior of the pad whereby the inflating medium is kept from shifting materially.

A tether has been patented by Mr. George S. Sergeant, of Greensborough, N. C. It is made with a standard or stake on which a bracket or carrier is supported, so that it may rotate on or be adjusted along the stake, in connection with a pole and a spring connection supporting the pole.

A sunshade for vehicles has been patented by Letitia V. Luce, of New Orleans, La. It is a simple and readily manipulated device whereby the eyes of the driver may be shielded from the sun, the device being such that it can be readily withdrawn and concealed when not in use.

A garment has been patented by Mr. Paul T. Forsyth, of Memphis, Tenn. This invention covers a garment provided at each side of the front opening of the skirt portion with pockets which may be slipped over the knees of the wearer in riding or driving, as a protection against cold, winds, or storms.

A new composition for dyeing aniline black has been patented by Mr. Benjamin F. Cresson, of Philadelphia, Pa. It consists of water, chloride of potash, sal ammoniac, sulphate of copper, nitrate of iron, aniline oil, muriatic acid, and tartaric acid, compounded in a manner and in proportions prescribed.

A double clamp has been patented by Messrs. William Carroll and Charles A. Hill, of Columbus, Ohio. It is for holding the doors of stoves in place on the stove casing while fitting on the hinges, pintles, etc., the clamp rods being held within casings in such way as to be acted upon by coiled springs.

An adding machine has been patented by Mr. Charles B. F. Lincoln, of San Francisco, Cal. This invention covers various novel features in the combination and arrangement of parts in an adding machine, whereby greater simplicity, convenience in use, and rapidity in operation are attainable than usual.

An automatic fan has been patented by Mr. Henry Goodspeed, of San Marcos, Texas. It is adapted to be connected to and suspended from the ceiling of a room in any desired position, the invention covering a peculiar construction and arrangement of parts, the fan to be operated by a suitable driving power.

A foot rest for chairs has been patented by Mr. Henry S. Parker, of Peterson, Iowa. It is especially adapted for use in connection with infants' high chairs, the invention covering a novel construction which may be conveniently attached to chairs of different widths, and also conveniently adjusted vertically.

A life preserver has been patented by Mr. Samuel Pemberton, of Alpena, Mich. It consists of two hollow belts connected together at one side by a tube and at the opposite side by a bellows, the bellows communicating with one of the belts and forcing air through both of them, the apparatus forming an inflatable harness.

An improvement in stereotyping has been patented by Mr. Lucius Goss, of New York City. This invention covers a method of casting and cutting plates of single column width, to be used to extend across two or more columns of a newspaper page, to

facilitate the arrangement of pictures in the cast matter used by "ready print" newspapers.

A sash balance has been patented by Mr. Charles Fowler, of East Springfield, N. Y. The invention consists of certain arrangements of wires or cords in the window or sash frame and friction pins in the sash, with means for taking up any slackness of the hanging wires or cords as it occurs, ordinary pulleys and weights not being necessary.

A bag holder and fastener has been patented by Mr. Aloysius, of Loretto, Kansas. Combined with the bag is a suspension and fastening wire detachably secured to the mouth of the bag at one side, and formed with eyes at its ends, making a support for the bag when not in use which may be employed to fasten the bag after it is filled.

A battery electrode has been patented by Mr. Horatio J. Brewer, of New York City. The conductor, of carbon or other suitable material, is made with projections on its surface, an envelope or bag being drawn over the projections to form pockets, in which a granulated or powdered electro-negative material is packed between the conductor and the envelope.

A fishing reel has been patented by Mr. Michael Cashin, of New York City. The reel is made with an operating mechanism designed to automatically wind up the line when a fish is hooked, the mechanism being so arranged that the control and winding and unwinding of the line may be readily effected.

An ironing machine has been patented by Mr. Frank Corbett, of New York City. This invention relates to ironing machines in which the revolvable ironing rollers are hollow, to receive the steam or other agent by which they are heated, the invention covering novel features of construction and the arrangement of parts.

A grapnel tong has been patented by Mr. Thomas J. S. Davis, of Davis Wharf, Va. It is specially designed for loosening and raising oysters in deep or shallow water, and consists of two rakes adapted to swing toward and from each other, racks being connected with the rakes, and a gear wheel, drum, and ropes, for operating the racks and rakes.

A folding bed has been patented by Mr. John S. Roe, of Chicago, Ill. Combined with a casing and racks secured to its sides are toothed wheels on the sides of the bed, rods pivotally connected to the casing and to the bed, with a spring for holding the toothed wheel in engagement with the rack and the bed in a vertical position, with other novel features.

A tin can has been patented by Mr. Francis J. Marmion, of New York City. It is made of but few parts, easily jointed together, forming a double seam on the sides of the can and on the joining edges of the flanges or sides of the steple-shaped top, whereby the can is made very strong, the double joints acting as braces to all the sides and the top of the can.

A gas pressure regulator has been patented by Messrs. John W. Carter and Joseph Miller, of Greenfield, Ind. This invention covers a novel construction of the supply valve and its seat, with means whereby the valve is automatically opened and closed, reducing to a minimum the pressure in the service pipe, the device being also adapted to serve as a steam or liquid pressure regulator.

An automatic advertising device has been patented by Mr. Edward C. Magnus, of Chicago, Ill. This invention covers a novel mechanism of springs and weights for utilizing the jolting, trembling and swinging motion of public vehicles, as cars, stages, etc., or frames of any kind to which a sign may be attached, to give motion to parts or the entire surface of advertising cards or devices.

A gas check for waste pipes has been patented by Mr. Henry B. Eareckson, of New York City. It is for use on the waste pipes of wash basins and other water fixtures, to permit the discharge of the waste water while automatically preventing the back-flow of sewer gas, a self-closing flap valve opening by the pressure of the waste water, and closing tightly by the pressure of gas from the drain.

A window shade attachment has been patented by Mr. Charles Niss, Jr., of Milwaukee, Wis. It is intended for window shades known as Venetian blinds, in which transverse slats are strung upon cords, the attachment furnishing a simple and convenient means for adjusting the slats, and to provide for the ready fastening of the blind to the window casing to prevent its being blown inward when the window is open.

A check hook has been patented by Mr. Clinton C. Lovejoy, of Bethel, Me. The hook proper is connected to a spring of sufficient strength to return the check rein, being retained by a suitable device connected to the frame of the hook, and also adapted by means of a rear hook to be thrown off from the retaining device for unchecking the horse, whereby a driver may check up and uncheck the horse without leaving the vehicle.

A pipe joint has been patented by Messrs. Francois Jos. Garnier and Nicolas Cure, of Brussels, Belgium. Combined with the plain flanged ends of two pipes connected by screw bolts is a thimble having an external under-cut flange, the thimble fitting loosely in the bore of the pipes, and the flange intervening between the abutting edges, a soft packing being placed between the under-cut faces of the flange and the pipe ends.

A stump puller has been patented by Mr. James M. Moore, of Union City, Tenn. It has silts with parallel runners, a derrick on one sill and a standard bearing on the other, to which is fulcrumed a draught-beam lever, there being a lever-hoisting tackle on the derrick and a brace jointed loosely at its ends to the top of the derrick and to the other sill, whereby a constant power may be employed, with the force the

greatest and the speed the slowest at the commencement of the pull.

An apparatus for teaching arithmetic has been patented by Messrs. Ignatius L. Unterbrink, of St. Rosa, and Albert G. Vandenberg, of Cassella, Ohio. It is made with a casing having two vertical series of horizontally aligned polygonal rollers having numerals on their faces, and an intermediate vertical polygonal roller separating the series and having algebraic signs on its faces, with other novel features, designed to save time and labor for both teacher and pupil.

An apparatus for automatically regulating the flow and temperature of fluids has been patented by Mr. George A. Gustin, of Washington, D. C. It consists of a valve operated by electro-magnets and a battery, in connection with a thermostat and a weight, so that the thermostat can be set at any desired temperature, the thermostat being operated by the temperature of the water it is intended to control, and connected electrically with one or more of the magnets which operate the valve.

A machine for wiring corks in bottles has been patented by Mr. Benjamin Adriance, of Brooklyn, N. Y. This invention covers an improvement on former patented inventions of the same inventor, and consists principally in means for giving to the intermittently rotated spindle a varying velocity of rotation, and in means for locking the spindle against axial movement while it is being moved longitudinally, together with means for operating the twisting pliers and clamping or tension jaws for holding and releasing the wires.

SCIENTIFIC AMERICAN BUILDING EDITION.

OCTOBER NUMBER.—(No. 36.)

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