

RECENTLY PATENTED INVENTIONS.

Mechanical Devices.

DRILL-CHUCK.—WILLARD H. MERREL, Oneida, N. Y. To provide means whereby a drill or like tool may be firmly held in place to prevent it from turning in the jaws, this inventor provides a chuck whose body-portion has a transverse seat. Two jaws slide toward and from each other in this seat and meet at the center of the chuck. Interlocking fingers on the jaws hold the drill. The jaws have respectively right and left hand threads at one side, and at opposite sides are provided with shoulders. The enlarged end portions of a screw-rod bear against shoulders on the body, are oppositely threaded and are engaged respectively with the threads on the jaws. By this means the jaws are advanced and retracted. Two screws working in opposite sides of the body and having heads engaged with the shoulders on the jaws, lock the jaws in place.

MAGAZINE BOLT-GUN.—JOHN H. BLAKE, New York city. The fire-arm patented by this inventor is capable of being used either for single or for magazine firing, a simple and easily operated cut-off being provided, by means of which the magazine may be brought into or thrown out of action as desired, the magazine when not in action remaining in the gun. A cartridge-pocket is also provided in which a number of cartridges may be quickly placed. Only a single packet is placed in the magazine-chamber. This magazine-chamber is so constructed that the packet, while normally concealed, may be rendered visible at any moment. The packets are made so as to be carried loaded in a belt as is customary in carrying single cartridges, thus enabling a marksman to substitute quickly, a loaded for an empty packet in the magazine, a cartridge being at the time within the barrel ready to be fired. The bolt is so made that its parts may be easily separated and assembled again. In addition to its usual function, the sear in this gun is employed to prevent a rocking movement of the bolt when the latter is in firing position.

WEIGHING AND FILLING APPARATUS.—JOSEPH E. J. GOODLETT, Memphis, Tenn. In this invention we find means for filling receptacles with liquids, for delivering a predetermined quantity of the fluid, and for cutting off the delivery automatically. The apparatus includes, as its chief features, a weighing scale upon which the liquid receptacles are placed to be filled, a filler proper, which is provided with automatic valve and tripping mechanism for controlling the flow and delivery of liquid, and an electrical switch and circuit and co-operating devices for actuating the trip mechanism when the weight of the liquid delivered into a receptacle reaches the predetermined limit.

Railroad Appliances.

COMBINED DUST-GUARD, CAR-AXLE LUBRICATOR, AND HOT-BOX INDICATOR.—JAMES S. PATTEN, Baltimore, Md. The dust-guard provided for in this invention has, connected with the axle-box, a curved supporting spring whose convex portion bears upon the bottom and outer end of the axle-box and whose extended outer end rests upon the bearing of the journal, whereby the dust guard is elastically held in place. The lubricator consists of a roller running in a stratum of oil and so pivoted to the upward and recurved rear ends of the spring that it will take up and transfer oil to the journal. The "hot-box" indicator operates in a box or holder having open perforations and means for supporting the latter in the axle-box above the oil-space, and holding it in contact with the bearing. In the box a substance is placed capable of emitting a strong, easily-perceived odor when the oil runs out and the friction heats the substance, thus indicating the presence of a "hot box."

CAR-COUPLING.—HERMÉNILDE and AIME LOISELLE, Winnipeg, Canada. The purpose of this invention is the provision of a simple and effective car-coupling, which shall couple cars automatically when they come together, which shall not come apart accidentally nor cramp and bind in turning curves and which shall be adapted to couple cars having the ordinary construction of draw-bar and the ordinary link and pin coupling. The coupling has a pair of jaws pivoted on horizontal axes and having tapered noses and grappling surfaces, each face having a central recess with a lip at top and bottom. A lug partly closes one end of the recess and has a notch at the top and bottom of the lug for the purpose of locking the jaws against vertical as well as horizontal motion.

CAR COUPLING.—VALENTINE ERBACH, Scranton, Pa. This coupler is of the knuckle-type and is so constructed that it will be of less dimensions than ordinary knuckle-couplers, will not present any unnecessary side projections and will be simple and durable. In this coupling a draw-head is provided having a long and a short horn at opposite sides, the long horn being chambered and having a shoulder formed between its ends. A knuckle mounted to swing in the chamber of the long horn has a vertical shoulder in line with the shoulder in the long horn, and at its pivot point has its lower surface inclined and engaging a correspondingly-inclined surface on the draw-head. A release-lever is pivoted to the knuckle and is adapted to engage with its head an opposing knuckle when two draw-heads are brought together and are in coupling position.

BICYCLE SADDLE.—LOUIS P. WELLMANN, Union, Hudson County, N. J. This saddle is made to form a flexible seat which may yield with the motions of the rider and which may be adjusted in width. The saddle has two independent seat-portions each with a depression of irregular shape in its upper face, which depression is adapted to fit the body. A stem is formed integral with each seat-portion, the stem and seat-portion being composed entirely of rubber, whereby the seat-portion will yield to the weight of the rider and bend as a whole with respect to the stem so as to conform with the position of the thigh.

SASH-FASTENER.—LEWIS H. BOWMAN, Walla Walla, Wash. The purpose of this invention is the provision of a fastener which shall lock a sash in any desired position without rattling and which shall make a tight joint between the sash and casing. The sash-holding device comprises a vertically moving sash-locking member, a horizontal lever pivoted beneath the window-sill, connections from one end of the lever to the sash-locking member, a bent hand-lever pivoted by

one end beneath the sill and having an arm lying flush with the sill when the window is locked, and a link connecting the lever near its bend with the other end of the first-named lever. The pivots on the hand-lever and its connected link are nearly in line when in locked position, the center pivot being sufficiently at one side of the center line to hold the parts locked.

SNAP-HOOK.—CHARLES F. FRANCISCO, Lakeside, Cal., and EUGENE E. SHAFER, San Diego, Cal. This invention has for its purpose the provision of a simple, cheap, and efficient snap-hook which remains firmly in locked engagement with the ring or buckle to which it is coupled. The snap-hook comprises a frame portion having a hooked portion and three cross-pieces, of which the first two are at the lower side, with an open space between them, the third cross piece being arranged at the upper side and between the first two cross-pieces. A U-shaped spring has its lower bent end hooked over the second cross-piece, its middle bend surrounding the first cross-piece and its free end pressing upwardly. A latch is arranged within the frame above the free end of the spring.

HARNES ATTACHMENT.—WILLIAM R. PHILLIPS, Pomona, Cal. The attachment provided for by this inventor may be applied to any harness, and is arranged to hold the lines in proper position so as to prevent entanglement with other parts or with the horse's tail. The attachment comprises a loop having at one end means for securing it to a strap and having its rear member split or separated to form an opening for the entrance and removal of a line and provided with lugs for engaging apertures in the strap to which the loop is attached.

PIPE-COLLAR.—EDWARD J. MALLEN, New York city. This pipe-collar is made with a body plate constructed in removable sections. Clamping plates are adjustably and removably held in the body plate and are made of spring-material. End clamping plates are mounted to slide in engagement with a central clamping-plate, each clamping-plate having a pipe-receiving opening and divided at a portion in its surface. This division extends from the pipe-receiving openings to the outer edges of the plates. The device is applicable to all kinds of pipes and will not mar the appearance of a ceiling or wall. Fire-proof material may be filled in around the pipes, thus deadening all noise and preventing dirt from dropping down.

Designs.

HOSE REEL SPOOL.—HARRY E. DONNELL, New York city. This design consists of a hub from each end of which extend spokes arranged in pairs, the inner end of the spokes of a pair being separated and the outer ends being joined and terminating in a circular rim. The inner end of one spoke in a pair, joins the inner end of the adjacent spoke of the next pair.

GAME-BOARD.—WILLIAM B. GILES, New York city. In this design, the surface of a game-board is divided into two parts or fields, with a groundwork of contrasting colors and with a series of disk-like figures, the color of one series of figures differing from that of another.

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NEW BOOKS, ETC.

LOGIC, DEDUCTIVE AND INDUCTIVE. By Carveth Read, M.A. London: Grant Richards. 1898. Cloth, 12mo. Pp. 323. Price £0.6.

This work more definitely separates logic, pure and simple, from all other studies, and especially from psychology and metaphysics. It is, in fact, a concise and comprehensive textbook of logic, the mastering of which is made more easy by the aid of questions that are introduced as an appendix.

ELECTRO-DYNAMICS—THE DIRECT CURRENT MOTOR. By Charles Ashley Carus-Wilson, M.A. London and New York: Longmans, Green & Company. 1898. Cloth, 16mo. Pp. 298. Price \$1.75.

The aim of this volume is to apply the principles of electro-dynamics to the direct current motor. As it is a work intended for the enlightenment of electrical engineers, the author takes it for granted the reader is familiar with the use and design of motors; but he in the main avoids all technicalities, hoping thereby to render the volume useful to engineers generally.

THE CURE OF WRITER'S CRAMP AND THE ARM TROUBLES OF TELE-GRAPHERS AND BALL PLAYERS. By S. H. Monell, M.D. New York: J. B. Taltalart. 1898. Pp. 49. Paper 8vo. Price 50 cents.

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(7472) W. H. M. writes: In the May 15, 1897, issue of your paper, you have an interesting article on a toy calorific engine. You state that they are simple and reliable; that they have been known for years. This being the case, allow me to ask you why small and light ones of from 1 to 4 horse power have not come into general use for running fans, launches, etc.? There must be some drawback, and for the benefit of several of your readers here, please state it in the Notes and Queries. A. The calorific engine is rather heavy for the power produced, and has never seemed successful in very small powers—although largely in use for domestic pumping. For power purposes, the explosive motor, which is of much less weight in proportion to power, has almost displaced the calorific engine.

(7473) J. H. W. L. says: Will you advise me what is a good tonic to prevent hair from falling out of the head?

- A. Quinine sulphate..... 20 grs.
Tincture of cantharides..... 2 fl. drms.
Fluid extract of jaborandi..... 2 "
Alcohol..... 2 fl. oz.
Glycerine..... 2 "
Bay rum..... 6 "
Rose water—enough to make..... 15 "

The quinine is dissolved in the alcoholic liquids by warming slightly, then the other ingredients are added.

TO INVENTORS.

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