RECENTLY PATENTED INVENTIONS.

Agricultural Implements.

CHURN.—JAMES M. GOSS, Pekin, Ind. The inventor has devised a simple and cleanly construction of upright churn and driving mechanism readily attachable to and detachable from the churn. The mechanism in question consists of a bevel-gear, the periphery of which is engaged by two bevel-pinions. One bevel pinion is loosely mounted on the dasher-shaft, and the other is rigidly secured to the shaft. By means of this construction, the body of the churn is turned in one direction and the dasher in the opposite direction.

CHURN.—WICKLIFF B. MITCHELL, Owensburg, Ind. To secure a quick forward and backward turning motion of the dasher Mr. Mitchell employs a novel means of adjusting the height of the dash. Arms extend outward from a standard and have forked ends forming bearings for the dasher-rod. A series of annular channels are formed in the rod; and flanges on the forked members of one of the arms engage in any of the channels to support the rod in adjusted vertical position.

PLOW.—JOHN N. HANNA, Del Norte, Colo. The invention relates to a class of plows provided with two shares and moldboards located at opposite beams, and with means for bringing either share and its moldboard in operative connection with a common landside. The invention simplifies the construction of such plows and provides an adjustable beam so arranged that but little strain will be sustained by the handles. The beam is so shaped that large or small sized moldboards can be employed. A turning and locking device for the shares and their moldboards is located within convenient reach from the handle.

Engineering Improvements.

BOILER.—PERCY W. HANFORD, Oakesdale, Wash. This boiler includes in its construction a vessel having a burner and a regulating-valve controlled by the pressure in the vessel. A water-chamber connected with a water-supply is located over the burner and is provided with an opening at the top for the water to pass into the chamber. The opening also serves for the escape of the vapors. The bottom of the chamber is concaved to form a combustion-chamber for the burner. The boiler, it is claimed, is a good steam-producer and burns little fuel.

Railway Appliances.

TRAIN AIR-SIGNALING APPARATUS. — JAMES H. TURBUSH, Bronx, New York city. This invention relates to air-pressure brakes of the Westinghouse type, and its object is to provide a train air-signaling apparatus, whereby the separate signal-pipe now used is dispensed with and the train-pipe and its pressure, as well as the engineer's valve, are made use of to actuate the whistle and give the desired signals to the engineer by the conductor of the train, no matter what position the engineer's valve is in.

CAR-FENDER. — JOSEPH W. MCKEAN, Charleroi, Penn. The fender is mounted to swing by means of a simple and ingenious mechanism. On the car-axle is a gear-wheel engaged by a movable tooth. The movement of the tooth imparts a positive swinging motion to the fender. The object of the construction is to prevent an object on the track from passing under the car-wheels. The arrangement operates automatically.

Mechanical Devices.

COFFEE MILL. — GEORGE H. DROEGE, Brooklyn, New York city. The coffee-mill is self-measuring, the construction being such that the hopper can be filled in the usual way and that cut-offs can be adjusted to pass through the slots and separate a certain quantity from the bulk of beans, which quantity alone will be ground. The slots mentioned can be so gaged that each division in the hopper will represent enough beans when ground to make a certain number of cups of coffee of average strength.

ROCK-DRILL FORGING AND SHARPENING MACHINE. — WILLIAM J. EVANS, Butte, Mont. A number of dies are adapted to upset and sharpen the cutting edges of a four-winged drill. A drill-supporting device is provided comprising a horizontal guideway on which a carriage is movable. The carriage can be held at different points on the guideway. A cam-head is held to rock on a pivot-shaft between uprights on the carriage. Handle-arms on the pivot-shaft of the cam-head are adapted by manipulation to rock the cam toward an end of a drill-shank, to feed it up against the impact of the edge-sharpening die.

GRAIN-DRIER. — GEORGE WERNER, Brooklyn, and JOHN H. HILLIKER, Richmond Hill, Queens, New York city. The machine is especially designed for rapidly and thoroughly drying wet grain, such as spent brewer's malt. In the heating-chamber of a furnace drums are mounted to rotate. The drums are alternately inclined in opposite directions and geared together at their converging ends. Boxes are arranged at the ends of the furnace over the projecting ends of the drums. Stirrers are arranged in the drums with their shafts projecting through the boxes and geared together. Mechanism is provided for operating the drums and beaters. A hopper discharges into one of the boxes and is provided with a rotary feed device driven from the stirrer-operating mechanism.

WASHING-MACHINE. — PENTON A. HARDWICK, Colorado City, Colo. The purpose of the invention is to improve that class of washing-machines provided with means for introducing steam into the washing-chamber, and so to construct the machine that it can be used for drying feathers or clothes or for dampening clothes for ironing. A tub is employed, provided with a double bottom and an outlet and a grating adjacent to the outlet. The outer section of the bottom is eccentric to the inner section. A nozzle leads into the upper portion of the chamber formed by the double bottom of the tub. A double nozzle communicates with this chamber and with the exterior and interior of the tub.

DEVICE FOR FIXING SHANKS OR SCREW-STEMS IN HANDLE-KNOBS OR PICTURE HANGING NAILS.—SERAPHIN KRIBS, Brooklyn, New York city. This device holds in proper position the shanks or screws of handle-knobs and picture-hanging nails while in process of manufacture, the handle-bodies being formed of molten glass, clay, or any suitable plastic material. The employment of the machine facilitates the manufacture of door or drawer-knobs and insures perfect attachment of shanks or screw-stems thereto. The attached parts project axially from the knob-bodies, which is very important and is not the case when ordinary means for attaching the shanks or screw-stems to knobs are employed.

Miscellaneous Inventions.

CAMP COOKING-STOVE. — WILLIAM C. LANDY, Manhattan, New York city. The invention provides a combined range, cooker, and field-kitchen which simplifies out-door cooking, obviates wastefulness of food and fuel, and tends to minimize danger of scorching. The stove folds up and occupies but a small space and can be readily disconnected. Even the largest size of stove will fit any of the army wagons.

TRUCK.—JOHN MEANEY and JOHN STOEVER, Ridgefield Park, N. J. It is a common objection that it is necessary in the use of hand-trucks first to move the truck up to the object to be carried and then to tilt the object back upon the truck, whereupon the truck itself is thrown downward so as to bear the load. Before the truck can be thus thrown down, it will invariably jump or move backward. The present invention provides a simple attachment for the truck which will prevent this action.

TENT.—THADDEUS D. MCCALL, Wichita, Kans. Mr. McCall has devised a convenient and easily-portable tent for campers, which requires no poles, has a canvas floor, and can be suspended and used as a hammock.

ANTISEPTIC BROOM.—OSCAR S. KULMAN, Savannah, Ga. We have frequently had occasion to notice the various inventions in antiseptic brooms which Mr. Kulman has patented. In this new improvement an antiseptic retainer is inclosed within the wisps of the broom, so that the antiseptic can be fed in sweeping. The end of the broom-handle which enters the antiseptic-retainer is longitudinally bored slightly above the wrappings of wire. At the upper end of the channel thus formed a transverse opening is bored, through which fresh antiseptic can be fed to the retainer whenever it may be desired.

HEATING-STOVE.—ATEN B. HOWER, Baker City, Ore. By means of a transverse partition the stove is divided into cold-air and hot-air compartments, the partition being formed with an opening near its lower end. In the cold-air compartment is a fuel magazine having its lower end connected with the partition at the opening therein. Below the opening is a fire-pot in the hot-air compartment; and above the fire-pot is a heating-drum partially surrounded by a deflector-plate. The separation of the fuel-magazine from the heating part of the stove and other features effectively avoid the collection of gas.

CARD-GAME.—EDWARD CHRISTIE, Corning, N. Y. The inventor has devised a new card-game which consists of five suits and two extra cards, all designed after an entirely new plan. Various games can be played with these cards, the preferred rules being described in detail in the patent specification.

FIRE-PLACE. — NATHANIEL BATES, Dubbs, Miss. This invention is an improvement in fire-places which are formed in flat plates, sections, or pieces secured together. The fire-place can be quickly and economically constructed, and, if desired, may be incased or inclosed at its back, sides, and upper portion by masonry, brickwork, or the like.

CANVAS-STRETCHER.—ARTHUR F. TAIT, Yonkers, N. Y. The stretcher is extended and positively held in adjusted position through the medium of properly-applied keys. The corners of the stretcher are strengthened and maintained in proper shape. The central portion is braced; and the outer members can be expanded at such point in about the same ratio as the corners. A cardboard or strawboard is placed upon the front face of the stretcher, which affords an extended bearing for the canvas and a firm working surface for the artist.

FOUNTAIN-PENHOLDER.—SENECA M. and ELMER E. SALISBURY, Aberdeen, S. D. Almost any pen can be inserted in this holder and can be used as if an ordinary holder were employed, without the annoyance of stopping to dip the pen into an ink-well or frequently to fill the reservoir as in the case of an ordinary fountain-pen. The fountain-pen is provided not only with a large reservoir for ink, but also with a convenient means whereby the reservoir may be filled in a cleanly manner and the ink supplied to the nib of the pen.

INKSTAND.—CHARLES W. HAMSHAW, Lamar, Mo. The inkstand comprises a base and an ink-receiver provided with a dip-cup whereby the pen will receive only a proper amount of ink. Hence all the ink in the reservoir can be directed to and used up in the well forming a portion of the receiver. By a special pivotal mounting the receiver can be tilted toward the writer, so that the pen can be handily inked.

BREECH-LOADING FIREARM. — FREDERICK HOCHBRUNN, Manhattan, New York city. A controlling-ring or cut-off for magazine-rifles is provided, the ring being of such construction that it can be turned by the fingers to such a position that the cartridges in the magazine will not be affected when the extractor is brought into action. By means of this arrangement the arm, while the magazine is filled, can be used as a single loader. When the ring is brought to such a position that it will act upon both the extractor and the cartridges in the magazine, the gun can be used as a simple repeater. The ring is so arranged relatively to the bolt and the extractor, that it is carried out of engagement with the extractor and the cartridges, enabling the bolt to be withdrawn and the magazine replenished without withdrawing a cartridge.

Designs.

BREAD-BOARD.—ISRAEL S. THOMPSON, Ashland, Wis. The board has a rim extending above its top and below its bottom, so that it can be used for making bread on both sides.

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References to former articles or answers should give date of paper and page or number of question.

Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and, though we endeavor to reply to all either by letter or in this department, each must take his turn.

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(7987) F. W. Q. writes: A few months ago, I read an account in the SCIENTIFIC AMERICAN SUPPLEMENT about renewing dry batteries by putting holes in the cell and immersing it in acidulated water. Would you please inform me the name of the acid and how proportion it with water? A. To renew a dry cell by the method referred to, pour one part of sulphuric acid into ten parts of water. Punch many holes in the outer coating of the dry cell as directed in the note referred to. When the liquid becomes cold, put it into any convenient glass or earthen jar, and place the prepared dry cell in the jar, so that the top stands out of the liquid about one inch. You now have a wet cell in place of the worn-out dry one, which will run till the acid has dissolved the zinc of the dry cell. This is the renewing of a dry cell. It changes the dry into a wet cell.

(7988) E. M. S. asks: Will you please send me the recipe for making the glue used on the backs of postage stamps. A. Gum dextrine, 2 parts; water, 5 parts; acetic acid, 1 part. Dissolve by aid of heat and add 1 part of 90 per cent alcohol.

(7989) W. G. asks: Will you please tell me if there is anything flexible that electricity will not burn? A. Asbestos.

NEW BOOKS, ETC.

MEMOIRS OF HAYWARD AUGUSTUS HARVEY. By His Sons. New York. Printed for Thomas W. Harvey, M.D., Orange, N. J. 1900. 12mo. Pp. 98.

The late Mr. Harvey was a typical inventor, and on the occasion of his death we published an elaborate biographical notice. The present memoirs compiled by his son give a thoroughly adequate idea of Mr. Harvey's epoch-making inventions. In addition to his process of treating armor plate, he also made many highly important inventions for making screws, spikes, wire nails, washers, etc. In all, Mr. Harvey had issued to him since 1859 seventy-eight patents, which is a most excellent record. The book is admirably written.

METHODS IN THE ART OF TAXIDERMY. By Oliver Davie. Philadelphia: David McKay. Pp. 359, 90 full page engravings. Price $2.50.

The work is very fully illustrated by engravings which vary a good deal in quality. There is hardly a branch of natural history which is more interesting than taxidermy and the excellent works on the subject have done much to aid taxidermists. Mr. Davie's book is a good one and shows an extensive practical acquaintance with the subject. The methods are modern and American.

STEAM ENGINE INDICATOR By Cecil H. Peabody. New York: John Wiley & Sons. 1900. 12mo. Pp. 153. Price $1 50.

The number of books upon the indicator is already very large, but there always seems to be room for a new treatise on this subject. The author is admirably fitted for his task, as he has the professorship of marine engineering and naval architecture at the Massachusetts Institute of Technology. The book is an excellent one.

MOULDERS' TEXT BOOK. Being Part II. of American Foundry Practice. By Thomas D. West. Eighth Edition. New York: John Wiley & Sons. 1900. 12mo. Pp. 461. Price $2 50.

The true test of the value of a technical book is to see whether it can run through a number of editions. The volume before us is certainly a most valuable contribution to technical literature. It is well illustrated by comprehensive engravings. The entire subject is well treated.

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