

## RECENTLY PATENTED INVENTIONS.

## Agricultural Implements.

**BEAN-CLEANER.**—CHARLES W., JAMES J., and WION P. THOMAS, Sawyer, N. Y. The purpose of the invention is to provide a means for screening and cleaning beans. For this purpose a screening-mill combined with a brush is employed, by which brush the beans are polished and discharged from the machine. To the brush a feed-pipe is attached, projecting up through the top of the casing into proximity with a spout extending from the screening device. The feed-pipe is of greater diameter than the spout, to insure the feeding of the material from the shaking spout to the feed-pipe.

**CANE-FEEDING DEVICE.**—JOSÉ ELIGIO TALLET, Matanzas, Cuba. The device comprises an elevated track or frame on which a car is mounted, the bottom of which is composed of cross-bars upwardly-extending, dividing members carried by the cross-bars. Cane-receiving bars are fixedly supported by one end and extend transversely over the cross-bars when the car is at one end of its travel. The cane is dumped upon the car, while the car is beneath the cane-bars. The car being then slowly moved outward, the cane is gradually and regularly dumped upon an endless conveyer in regular quantities to the crushing machinery.

**CORN-PLANTER.**—MARCUS R. YATES, FRANK P. LIGHT, and ELLIOTT HEMERBAUGH, Pendleton, Ore. The invention is an attachment to a sulky corn-planter, for check-sowing or dropping the corn directly opposite each hill in the adjoining rows. The planter can be operated without the aid of a check wire or rope to drop the seed perfectly and at the same time mark so that the operator, without leaving his position on the seat of the planter, can readily determine if the machine is operating correctly.

## Mechanical Devices.

**DEEP-WELL PUMP.**—SIDNEY M. and JOHN POLSON, Laclede, Mo. The object of the inventors has been to construct a pump which could pass within a comparatively-small casing, though of large capacity. With this object in view, two pistons are used, placed in tandem and arranged so that one operates while the pump-rod is moving in one direction and the other while the pump-rod is moving in the other direction.

**JACK.**—CHARLES W. DOANE, West Lake, La. The jack is especially designed for handling timbers in bridge-work. It can be clamped to the side of the timber, whether round or square, and used for lifting another timber alongside; or it can be supported on any convenient base and clamped to a timber in order to lift that timber. The jack can be used in a vertical, horizontal or inclined position.

**DEFIBRATING-MACHINE.**—MANUEL A. TORRE, Merida, Yucatan, Mexico. The machine is designed to clean vegetable fibers and particularly to scutch leaves. It is exceedingly simple in construction, inasmuch as a single conveying-wheel is employed. The leaf is thoroughly scutched, for the reason that it is alternately seized at its opposite ends, the raising action of a central chain (constituting one of three endless, flexible connections engaging the conveying-wheel) insuring the engagement of a lowermost chain with the proper end portion of the leaf.

**HOIST.**—ERHÉGE B. ACHÉE, Labadieville, La. This invention provides a dumping-boist designed particularly for use on sugar plantations to carry the cane from the farm-wagons to the tramcar in which the cane is conveyed to the mills. The apparatus considerably facilitates the work by the employment of two dumping-carriers of special construction, which can be worked alternately, so that when one is dumping, the other is loading.

**WEIGHING-MACHINE.**—EDWARD W. COLLINS, Coalville, Iowa. The purpose of this invention is to provide means for controlling the feed of granular material to a weighing machine—a purpose which is attained by a novel valve mechanism, comprising a main and an auxiliary valve hung on and actuated by the scale-beam. The auxiliary valve serves to cut off the major portion of the material to be weighed; and the main valve serves subsequently to cut off completely the supply of the material. By this arrangement of main and auxiliary valves, a simple device is provided for regulating the supply to the scale-beam.

**FRUIT-PARING MACHINE.**—HAVEN M. HAFF, Ludington, Mich. On the framework of the machine a paring-disk is mounted and a fruit-holder is pivoted. A pulley and band connect the fruit-holder with a driving-shaft, whereby when the frame is moved backward and forward, the fruit being pared is respectively removed from or pressed against the paring-disk, thus enabling the operator to regulate the pressure against the paring-disk to correspond with the firmness or softness of the fruit.

**REVOLVER.**—CHRISTOPHER D. McDONALD, Vance, Colo. In a former patent the inventor described and claimed a revolver in which the handle portion is provided with rigidly-attached upper and lower extensions including the cylinder-space, and the barrel is vertically hinged between the forward ends of the rigid extensions and bears the revolving cylinder, which swings out when the barrel is deflected about the joint at the two forward extensions of the handle. The present invention is based on the same principle, but provides an improved means of articulation, so that the weapon can be readily broken, the shell ejected, and the chamber reloaded.

**MOLDING-MACHINE.**—MATTHEW F. ALLEN, Nashville, Tenn. The invention provides a device which can produce castings for "metal hollow ware" more rapidly than by present methods, and which can be moved about over the foundry floor, so that the sand can be shoveled directly from the floor into the machine and the finished molds deposited upon the floor back of the machine, thus obviating the necessity of transporting the sand to the machine and the molds from the machine to the floor. With this apparatus it is possible to mold and pour continuously.

**RAG-ENGINE.**—EDWARD A. JONES, Pittsfield, Mass. This engine is arranged to relieve the beating drums of unnecessary pressure of the entering pulp, thus saving power in driving the engine and insuring a thorough mixing and agitating of the pulp and a rapid circulation to

avoid streaks. The inventor employs a backfall having its face adjacent to the beating-drums provided with spaced-apart sets of ribs for mixing the pulp after leaving the drum.

**AUTOMATIC AIR-PUMP.**—CICERO M. HOBBY, San Diego, Cal. The construction devised can be used as well for exhausting as for compressing air. The novel features of the invention are to be found in a receptacle closed to the atmosphere and having a liquid-inlet, a valved air-inlet and a valved air-outlet, a siphon connected with the receptacle, and a valved connection between the arch of the siphon and the air-outlet. The use of a closed receptacle very radically affects the usual action of the siphon.

## Railway Appliances.

**AUTOMATIC CAR-AXLE LUBRICATOR.**—PIERPONT T. LANGDON, Audubon, Minn. The lubricator comprises a trough in the axle-box, having two flanges extending up at the sides of the axle-journal. On one end of each flange is a hook, and on the free end of the axle journal is a cap-plate, radially projected and provided with a circular edge. The hooks on the side flanges of the trough engage with the edge. A scraper blade is mounted on the end of each side flange below the hook. These blades come in contact with the cap-plate to scrape the lubricant therefrom into the trough.

**STOCK-CAR.**—HARRY C. CARSON, Virden, Ill. This invention is an improvement for changing stock-cars from single-deck to double-deck and vice versa. The car has vertical side studs or uprights and aligned blocks, both of like thickness and width. The blocks are separated from the studs by narrow spaces which receive cross-bars. Floor-sections which have parallel cross-crests on the under side, and side notches are adapted to receive the previously-mentioned studs and blocks, so that the section may slide up and down thereon. Supporting-posts are connected with the cross-bars and are adapted to enter sockets therein and in the floor of the car. The cleats are separated to accommodate the cross-bars between them as required when the floor is elevated, and are arranged in pairs separated to receive a bar and post between them as required when the floor is lowered.

**JOURNAL-BOX AND LID.**—JOHN D. MURRAY, Albany, N. Y. The journal-box has a recess in its top and a hinged lid. A plate-spring is fastened to the inner face of the lid, the upper free end of the spring being curved in to pass under the upper rim of the box opening into the recess. The spring constantly pulls the lid uniformly against the seat when the lid is closed, to render the box dust-proof.

## Miscellaneous Inventions.

**NOZZLE.**—VICTOR C. SWANSON, Salem, S. D. The nozzle is so constructed that it can be turned to different angular positions with respect to the head of the hose, and for that reason is particularly serviceable in cleaning boilers provided with small handholes not of sufficient size to enable a workman to insert both hands in the boiler.

**BUCKLE.**—EMANUEL REYHING, Manhattan, New York city. This buckle has two interlocking members, each comprising a metal shell containing a wooden block in which an eye is secured projecting beyond the shell to engage a keeper. The front faces of the two members are perfectly flat and can be readily ornamented to enhance the appearance of the buckle. If desired, a simple ornament can be applied to one of the members, so as to give the buckle the appearance of being one piece. The construction of the buckle is far stronger than that ordinarily employed.

**PROCESS OF MANUFACTURING LIME AND CARBONIC ACID.**—GUSTAF M. WESTMAN, Manhattan, New York city. By this process, both lime and carbon dioxide are produced for the market. In the apparatus a mixture of highly-heated carbon dioxide and steam passes into and up through a column of limestone, converting the latter into calcium oxide. The expelled carbon dioxide is then charged with water, which causes the heat of the gas to convert the water into steam, thereby reducing the temperature. A portion of the cooled gas charged with steam is then conducted into a regenerator and highly heated therein, and used in turn for expelling carbon dioxide from the lime. Finally, the calcium oxide is drawn from the base of the column.

**SMOKER'S PIPE.**—CHARLES E. ANGELL, Salt Lake City, Utah. A passage in the mouthpiece of this pipe is turned upward at its discharge end and opens at the side. A distributor-plate bound rigidly to the mouthpiece is located over the discharge end of the passage and deflects the smoke. By these means the fumes are evenly distributed in the smoker's mouth, not concentrating upon the point of the tongue as in the ordinary form. This construction prevents liquid charged with nicotine from entering the mouth.

**WRITING-TABLET.**—ELISHA D. HURLBUT, JR., Brooklyn, and DWIGHT TERRY, Manhattan, New York city. This device keeps double-sheet writing paper in convenient pad form for writing and for blotting the writing without danger of soiling the paper. It consists of a back of stiff material, a series of folded sheets of paper superimposed on the back, each half of each double sheet being free at its top, bottom, and outer edges from the other half of the same sheet, thus enabling the halves to be turned over successively. There are also provided a detachable connecting medium at the creases of the sheet, a blotter at the opposite edge of the back, and flexible connections between the near edges of the back on one hand and the cover and blotter on the other, the width of the connections being about equal to the thickness of the pad formed by the superimposed leaves.

**GLOVE.**—HENRY SINCLAIR DELAMERE, Ferndale, Cal. The slitted wrist portion of this glove has devices for fastening the sides of the slit together. A hand portion with short open-ended finger portions has a slit extending from the outer edge of the little finger portion along the outer edge of the hand portion to the beginning of the wrist portion. A lacing on the slitted edge connects the outer and the inner hand portions with each other along the slit, and holds a band-dressing in place on the hand of the wearer. The wrist-fastenings serve to hold the glove in position on the hand to prevent accidental displacement of the glove and the hand-dressing. The glove can be worn by oarsmen, golfers, and others.

**BUTTON-DISPLAYING DEVICE.**—MEYER HARBEBERG, St. Paul, Minn. Collar and cuff-buttons and similar articles which need attractive display can be quickly inserted and removed in this device, which consists of a plate, having rows of tongues, each tongue with an upper narrow neck attached to its upper end to the base, and a lower, wider body fixed at its lower end to the same. The plate is adapted to receive the base of a collar or similar button beneath the lower, wider portion of the two tongues of adjacent rows. The plate is preferably made of thin metal, although pasteboard, celluloid, or other material can be used.

**NIPPLE-HOLDER.**—CHRISTIAN W. MEINECKE, Jersey City, N. J. The nipple-holder is a decided improvement upon a similar device previously patented, in so far as the holder is rendered more effective than heretofore and is stronger and less liable to disarrangement. The construction is simple; the few parts required can be readily assembled.

**VEHICLE-TIRE.**—HENRY H. GERHARDT, Nashville, Tenn. Around the rim, a sectional tire is disposed, each section consisting of a series of disks secured to the rim, and one or more of the sections consisting of a smaller number of disks than the other and serving as a key or keys to fill the space between the ends of the longer sections. The short section or sections are independently secured to the rim. A very durable tire is produced by the use of leather strips held together by nails or a suitable binding substance.

**BLOTTING-PAD.**—ANTON D. GLUECK, Newark, N. J. This simple device is a small pad held on the small finger during writing, by means of an elastic band. The pad acts both as a support for the hand and as a blotter. Actual tests of the pad have proven that it is very useful in such work as posting books, when the amount of each entry is small and the writer desires to turn the page to post another entry.

**WATCH-WHEEL GAGE.**—ROBERT L. MARSHALL, Elizabethtown, Ky. The device accurately determines whether all points on the periphery of a balance-wheel are equidistant from the center and whether the wheel is exactly true or coincident with the plane in which it is adapted to move. The invention consists of a base on which are mounted means for holding the pivot of a balance-wheel or the like and a graduated plate with a sensitive pointer or indicator arranged to be held at different places on the base, so as to bring the bent end of the pointer in contact with the side and periphery of the wheel.

**PACK-SADDLE.**—EDGAR F. BLISS, Providence, Arizona Territory. This inventor has devised a simple and highly efficient pack-saddle, the parts of which can be variously arranged and assembled, so as to be adapted for carrying loose and sacked ore, cord-wood, baled hay, and other bulky material. The saddle is very durable, for the reason that no ropes are employed in its construction.

**STOVE.**—WELLESLEY R. HAMPDEN, Spokane, Wash. It is the purpose of the invention to provide a stove in which the combustion of the fuel will be rendered more complete than has heretofore been possible. The purpose has been attained by causing the draft from the firebox to pass circuitously through various portions of the stove, thus not only superheating the fuel, but facilitating the combustion of the inflammable gases which pass from the fire-box.

**PERPETUAL CALENDAR.**—EMIN G. TASSO, Rue Racine 23, Paris, France. The calendar is in the form of a cylinder or polygonal tube, which bears numbers and dates. By means of this calendar it is possible to ascertain on what day of the week any given date in past or future years fell or will fall. In form, the calendar is exceedingly compact; in operation, very effective.

**PHOTOGRAPHIC VIGNETTER.**—CHARLES W. CHRISTMAN, Waterville, Minn. The vignetter consists of a rigid, elongated frame, placed beneath the camera and carrying at its outer end a screen which can be adjusted in any manner to enable the operator to obtain almost any effect desired.

**STAMP.**—MARTIN R. DRISCOLL, Frisco, Utah. The invention provides a means for attaching the stamp, so that the hitherto troublesome necessity of dressing the end of the stem to fit a socket in the head or boss is avoided. The liability of the stem to breakage is greatly reduced. Should the stem break, the fracture will be comparatively small and may be quickly drifted out from the stamp head or boss.

**APPAREL-COAT.**—MARK L. KELLEY, Manhattan, New York city. The coat is of the raglan style and is effectively stiffened at the shoulders, so as to retain its shape, and yet, so as to enable it to be altered to form a coat of the ordinary pattern, should the wearer so desire.

**FIREPROOF STRUCTURE.**—JOHN STREIFLER, Manhattan, New York city. The purpose of the invention is to provide a fireproof construction for dumb-waiters, elevator-shafts, and partitions, utilizing metal tongues to hold the parts of the structure together, which tongues are completely concealed within the structure. The sections of the fireproof structure are so attached to one another and to the tie-plates or tongues, that an ample and slightly cement connection can be made. The abutting ends of slabs or blocks used in the construction of small dumb-waiter shafts can be quickly and perfectly tied together, especially when each face of the shaft is built up of single slabs or blocks.

**LUBRICATING APPARATUS.**—HANK DANGLER, Cleburne, Tex. The apparatus embodies means whereby locomotive-bearings can be lubricated, either when the locomotive is moving or when it is standing still. The apparatus acts automatically to supply the journal and spreads the lubricant over the entire surface engaged. The operation is automatic as long as oil is in the supply tank.

**FLY-BRUSH FOR DOORS.**—CHARLES H. and ARTHUR R. ANDERSON, Buda, Ill. This device for brushing away flies and preventing them from entering a doorway when opening or closing the door is composed of a brush-shaft mounted in the upper part of the casing between the jambs. The shaft has one end reduced and formed with a spiral groove, on which end a rope is wound. A coiled spring has one end secured to the rope and its other end to the jamb of the casing to which the door is hinged. A second rope winds in an opposite di-

rection to the first rope on the other end of the brush-shaft and is secured to the free edge of the door.

**METHOD OF CONDENSING FLUE-DUST.**—RUDOLF RUETSCHLI, Perth Amboy, N. J. The fumes escaping from metallurgical establishments are cooled in narrow channels under exclusion of air by an external cooling medium, to precipitate a portion of the solid matter in the fumes; then the more or less cooled fumes are mingled to equalize their temperatures. A second cooling of the fumes under the exclusion of air now follows; whereupon the fumes are compressed and mixed with air. The mixture, after having been divided and expanded, is given a whirling motion in closed receptacles at the same time cooling the mixture in order to precipitate the remaining solid matter.

**DESK ATTACHMENT.**—CHARLES F. NESSE, Elko, Nev. The attachment comprises a plate having a top and bottom member by which it is clamped to the desk. A retaining-surface on the top member of the plate is adapted to be engaged by the arm of the writer. The attachment is designed to prevent the arm of the writer from sliding along the smooth surface of the desk, and to indicate at a glance whether the arm is in proper position.

**LENS ATTACHMENT FOR LAMPS.**—JOHN C. MOLLOY, Cincinnati, Ohio. To increase the illuminating power of a lamp, a lens is securely held on the chimney. When the burner is lighted, the rays of light are refracted by the lens into the room.

**WRITING-TABLET.**—ETHELMEER E. MAGEE, Waynesville, N. C.—The ordinary school copy-books necessitate the use of the entire page for the reproduction of a single copy. The present writing-tablet enables the pupil to use the same sheet of paper for several copies and thus prevents the wasting of paper. The device also provides means for concealing the work already done by the pupil, so that only the perfect copy is reproduced and not the mistakes previously made.

**HEATING-DRUM.**—ROBERT L. HOLLINGSWORTH, Atlanta, Ga. The drum is applied to an ordinary heating-stove or kitchen-range and is designed for heating and baking and for warming dishes and the like. The drum comprises a shell having an inlet near the top of its front end and an outlet at the rear end. An oven extends from one side to the other of the shell. The top of the oven is below the inlet and the rear end is spaced from the rear end of the shell. A transverse partition below the bottom of the oven terminates short of the front end of the shell and has an opening in its rear portion. A damper above the outlet of the shell is adapted to close the opening in the partition. A cleaning-door gives access to the space below the partition.

## Designs.

**BELT.**—LOUIS SANDERS, Brooklyn, New York city. The belt has a diamond-shaped central portion, upper and lower continuous cords following the contour of the body of the belt, and a cord having a skeleton diamond formation at the central portion of the belt.

**NOTE.**—Copies of any of these patents can be furnished by MUNN & Co. for ten cents each. Please state the name of the patentee, title of the invention, and date of this paper.

## NEW BOOKS, ETC.

**A HAND BOOK OF TESTING MATERIALS FOR THE CONSTRUCTOR.** Text by Prof. Adolf Martens. Translated and edited by Gus C. Henning, M. E. New York: John Wiley & Sons, 1899. 8vo. 2 vols. Pp. 622. Price \$7.50.

There are two volumes, one of text and one of illustrations. The author is Director of the Royal Testing Laboratories at Berlin and at Charlottenburg. To the description of the customary methods of testing, the author has added a presentation and discussion of the most important types of testing machines and auxiliary apparatus. The editor has done well in selecting such an authoritative book for translation. It is certain to take a prominent place upon the book shelves of the engineer, for there cannot be too many books of this kind.

**ANNUAL ANALYTICAL CYCLOPEDIA OF PRACTICAL MEDICINE.** By Charles De M. Sajous, M. D., and one hundred Associate Editors. Vol. V. Philadelphia: F. A. Davis Company, 1900. 8vo. Pp. 662.

This volume which is the fifth of a series is up to the high standard which has been maintained through all the volumes of the series. It takes in subjects from M "Methyl Blue" to R "Rabies." The illustrations and plates are excellent and the typography, presswork and binding are of the best. Diseases are treated separately under the proper heading, and are divided in sections such as "Etiology," "Bacteriology," "Morbid Anatomy," "Treatment," etc.

**THE STUDY OF BREEDS IN AMERICAN CATTLE, SHEEP AND SWINE.** By Thomas Shaw. New York and Chicago: Orange Judd Company, 1900. Pp. 371. Price \$1.50.

The book has been written, so the author tells us in his preface, for the purpose of discussing all the pedigreed breeds of cattle, sheep and swine at present existing in America, as well as the more important sub-breeds. From its general style we should judge that Prof. Shaw's study will be of considerable service to students of agricultural colleges. Fairly good illustrations accompany the text.

**HELIOCENTRIC ASTROLOGY AND SOLAR MENTALITY.** By Yarmo Vedra. Philadelphia: David McKay, 1899. 8vo. Pp. 266. Price \$1.50.

**OUR NEW PROSPERITY.** By Ray Stannard Baker. New York: Doubleday & McClure Company, 1900. Pp. 272. Price \$1.25.

The profoundly important readjustments which have taken place in our relations to other countries and in the attitude of the various parts of our country to one another, have been indicated in this book by grouping the significant facts of the present era of prosperity in such a manner as to show the general tendency of American