

RECENTLY PATENTED INVENTIONS.

Agricultural Implements.

ADJUSTABLE CULTIVATOR - ARCH.—CARL CHRISTENSEN, Chifton, Ill. The invention is an improvement on that part of a cultivator frame which is made in twin sections that straddle a row of plants and are connected by an elevated arch in the middle. The shovels have an independent up-and-down movement which will allow the cultivator to be tilted to one side and either foot of the arch raised without tilting the other foot.

PULVERIZER.—J. R. JONES, Jackson, Miss. The pulverizer provides a suitable roller for mashing and smoothing the soil, and is adapted to the greatest variety of purposes. The machine is so constructed that it may mash down plants that are to be destroyed by being covered up by the cultivating teeth which follow the roller, and such plants as are desired to remain and the soil will be left in the best cultivatable condition.

DRAFT-EQUALIZER.—T. F. and J. J. FOLK, Burton, Okla. Ty. This invention provides a novel construction of four-horse equalizer which is especially adapted for use on binders and aims to avoid as far as possible the side draft incident to the use of grain-binders, as is well understood by those skilled in the art.

Apparatus for Special Purposes.

APPARATUS FOR CHARGING AND DISPENSING LIQUIDS.—C. A. WILKINSON, Worcester, Mass. By means of this apparatus the water in a soda-water fountain is charged with the gas employed as fast as it is used, a mixing and charging device being comprised in the apparatus. After the water is charged it is led to a reservoir fitted with a gage so that the height of the water may be readily discerned. The reservoir is also fitted with a siphon for drawing off the charged liquid.

WATER SUPPLY AND FILTERING SYSTEM.—L. E. SMITH, Portsmouth, Ohio. The chief requisites for the water supply system for cities are due quantity, maximum purity, and moderate cost for installation and repairs. This apparatus is so constructed as to fulfill these requirements. A natural deposit of sand or fine gravel in a river or lake bottom is availed of as a filtering medium.

APPARATUS FOR THE HYDRAULIC PROPULSION OF SHIPS.—LEON VIDAL, St. Rome du Tarn, France. The apparatus consists essentially of a jacket surrounding the hull of a ship and perforated with a number of slots arranged at a slant to the longitudinal median plane of a ship which is fitted with a pump for supplying water continuously into the space between the hull and the jacket. The flow of water through the slots acts on the surrounding water to propel the ship.

Electrical Apparatus.

ELECTRIC-ARC LAMP.—P. H. F. SPIES, Mt. Vernon, N. Y. The feeding of the upper carbon is exceedingly sensitive to insure at all times a uniform steady light and to permit convenient adjustment according to the power of the current. The construction permits the attendant to conveniently open and close the arc-lamp for removal of the carbon or for making repairs.

TELEGRAPH-SOUNDER.—J. A. ALBERTSON, Lansford, Pa. The receiving stroke of the telegraph sounder is made more prominent than the sound produced by the return stroke, so that it may be more readily recognized. This avoids any confusion that may arise due to similar strokes or sounds produced by the forward and backward movement of the vibrating arm.

ELECTRIC CLOCK.—E. MEYER, Jersey City, N. J. The invention relates to clocks driven by electricity and provides a new electric clock which is simple and durable in construction and very accurate in its working. Movement is given to the pendulum by the successive blows of a weighted arm which is raised by an electrical device.

Engineering Improvements.

ROTARY ENGINE.—S. D. BOOK, Bagley, Minn. The rotary engine is provided with a piston divided into a plurality of chambers in each of which works a piston, the steam pressing on the piston heads to act expansively therein. The valves in the several valve chests work continuously to introduce and then cut off the steam, permitting the steam to expand, and thus deriving from it the full force of its power.

BOILER-FEEDER.—H. G. LARCOM, New York, N. Y. In this invention the apparatus for feeding boilers is so arranged as to transmit the steam pressure of the boiler to the feeder, allowing the water to fall by gravity into the boiler. The desired height of the water in the boiler may be regulated by the elevation of the feeder. Should the boiler be full the water will simply be forced by the pump through a pipe back to the source.

SPARK-ARRESTER.—E. J. SMITH, High Springs, Fla. It is well known that artificial or forced draft is what causes a locomotive to throw fire or sparks, and this draft is on only when the throttle is open and the steam is in the cylinder. Mr. Smith therefore provides means operated by the steam for adjusting the spark-arresting devices in posi-

tion to guard the stack, permitting the arresting devices to adjust clear of the stack when the throttle is closed, so an unobstructed natural draft is had when the engine is drifting or rolling or in firing up a cold engine.

HYDROCARBON-BURNER.—R. WITTY, San Bernardino, Cal. The burner is designed for use in steam boilers and the like to quickly and economically generate steam. In the burner, steam, oil and air are not only highly heated but are thoroughly mixed to form a very effective combustible mixture.

Hardware and Tools.

WRENCH.—L. W. JOHNSON, Jerome, Arizona Ty. In most wrenches the shank is weakened by the teeth extending across its upper face. In this wrench, however, the teeth are at the side and are engaged by teeth on the slidable jaw. This jaw is rockable on its center so as to be easily disengaged from the teeth when it is desired to adjust the tool to the size of the nut to be turned.

SAW-HANDLE CLAMP.—J. A. HALE, Rockville, Ind. The handle is attachable to the end of a hand-operated crosscut or ripping saw, and provides a novel device of the indicated character which is readily attachable or removable from a saw-blade, and which will reliably hold the same in connection with the handle.

LIFTING-JACK.—F. H. FORD, Jacksonville, Fla. This lifting jack is especially adapted for the repairing of the track of a railroad and is very compact, so that while affording a considerable range of elevation the projection above the rail of the track of any part of the lifting-jack is much less than a like projection of lifting-jacks in present use. Thus the operation of trains over track under process of repairs is much more safe from accident.

ADJUSTABLE WRENCH.—F. W. BROWN, Berlin, N. H. The tool embodies one or more sets of jaws that may easily be spread for a proper distance in order to receive nuts of different sizes. Suitable means are provided for securely clamping the movable jaw to its adjusted position, said clamping device being quickly tightened and easily released.

Machines and Mechanical Devices.

MULE.—F. REYNOLDS and W. J. UNDERWOOD, Fall River, Mass. The improvement relates to mules used in textile machinery, and more particularly to a buffer for cushioning the upward stroke or thrust of the part known as the jumper. The apparatus comprises a jumper, a revoluble roller connected therewith, and a spring-tension lever mounted in the path of the roller or cushioning the up-thrust of the jumper. Means are also provided for adjusting the position of the lever relative to the jumper.

BUTTON-SEWING MACHINE.—R. R. WANLESS, New York, N. Y. This machine is designed for sewing shank-buttons on garments, and provides a simple device which can be adjusted to hold buttons of varying sizes. A cam movement is employed for shifting the needle-bar in such manner as to form extra stitches at the outer side of the shank, somewhat in the manner of hand-sewing, to prevent the drawing out of the thread.

FIBER-CROSSER.—P. MICKLE, Troy, N. Y. This device has reference particularly to machines for making paper from all kinds of fiber, especially rope and wood, and its object is to provide a new and improved fiber-crosser for use in the cylinder vat. It is arranged to insure a perfect crossing of the fabric in the pulp to cross the fibers in all directions, thereby forming a very strong and durable paper.

MAIL-BAG DELIVERER AND CATCHER.—G. R. BERRIEN, Princeton Junction, N. J. This mail-bag catcher is so arranged that no matter how fast a car is traveling, the several devices readily act in the proper manner to afford the delivery of a mail pouch from the car to the station, and to insure the pouch from the station being picked up by the car without the slightest danger of its being dropped, or the parts of the device being injured as is so frequently the case with the apparatus now in use.

MERRY-GO-ROUND.—B. KIPPELS, Moorhead, Minn. The merry-go-round belongs to that class of carousels which are propelled by the exertions of the occupants. An improved arrangement of seats is provided and a propelling mechanism is employed which is adapted for utilization of both hands and feet.

COIN-FREED GYMNASTIC APPARATUS.—K. STRAUSS, Wiesbaden, Germany. The invention provides a locking device in connection with the swinging beam of a gymnastic apparatus for releasing the same on the insertion of a coin and for locking the swinging beam after use. It also provides a gearwork for determining the duration of the use in proportion to the number and length of strokes of the swinging beam. It further provides means for taking up the force of the loads on the swinging beam, while the apparatus is locked, whereby these loads are prevented from damaging the locking device and the gearwork.

MACHINE FOR APPLYING GATHERING-STRINGS TO BAGS.—J. W. TAYLOR, Goldsboro, N. C. Bags for holding various substances, especially smoking tobacco, are commonly provided with gathering or shirring

strings for closing their mouths. Such strings have usually been inserted by hand. The object of this invention is to entirely dispense with hand-labor for this purpose and to provide an improved automatic machine which will do the work in a quicker, cheaper and uniform manner.

CANE-FEEDING MECHANISM FOR CANE-MILLS.—F. ELIZONDO, Chucho de Pueblo Nuevo, Cuba. The principle underlying this invention consists in the use of two conveyors, one of which travels continuously and is driven in unison with the mill, feeding the material thereto directly. The other, which feeds the material to the first conveyors, is driven only intermittently to replenish the supply whenever necessary. To accomplish this automatically the first conveyor is movable vertically by the weight of the material resting thereon, and, according to the rise or fall of said conveyor, the driving mechanism of the second conveyor is thrown into or out of action.

MACHINE FOR CAPPING AND COMPRESSING CANS.—H. L. GUENTHER, Chinook, Wash. Mr. Guenther has invented a machine for capping and compressing cans in such a manner that the can heads are automatically placed in position on the can bodies. The flanges are then double-seamed and rendered completely air-tight without the use of solder, the finished can being automatically removed from the machine.

GARMENT-TURNING APPARATUS.—W. G. JARVIS, Defiance, Ohio. The machine is adapted to reverse gloves, mittens, thumbs and like articles after the same have been sewed wrong side out. It is arranged to efficiently and quickly do its work without danger of tearing or otherwise injuring the article.

CORN OR GRAIN DUMP AND ELEVATOR.—J. MABUS and F. L. HAY, Lilly, Ill. The object of this invention is to provide a machine in which a vehicle containing a load may be driven thereupon and the load dumped and distributed in suitable or desired quantities. The inventors have produced a compact, simple and cheap machine for this purpose.

GRINDING-MILL.—J. BROWN, Lorain, Ohio. This mill is provided with a simple means whereby two grinding surfaces shall be self-tramming or automatically maintained in their proper relations to each other, depending upon the material running through the mill.

CAN-FILLING MACHINE.—L. S. FLECKENSTEIN, Easton, Md. The food is intermittently delivered from a hopper into cans which are successively placed or carried beneath the discharge orifice of the hopper. The distinguishing feature of the machine is the arrangement of reciprocating pistons in a rotatable hopper, the pistons being reciprocated and the cylinder containing them rotated alternately by means of a suitable mechanism, and the food being received and discharged continuously.

TENSION MECHANISM FOR THE LOWER THREADS OF SEWING-MACHINES.—G. G. BEITZEL, 23 Nørrebrogade, Copenhagen, Denmark. The spool upon which the lower thread is wound is placed inside a spool-house consisting of two flat cups. The thread passes out between the rims and is held fast when the cups are pressed together. The spool-house is placed in the catcher of the machine so that the rims of the cups are forced together under an elastic pressure. Means are provided for releasing the pressure when the loop of the upper thread is to be slipped around the spool-house.

LOG-TURNER.—T. H. DILLON, Leesville, La. The invention relates to improvements in machines for turning logs on a sawmill carriage and provides a machine that will operate rapidly without jar to turn either round or square timber. The construction is such that the turner will bear evenly and yieldingly against the log.

COIN-CONTROLLED VENDING MACHINE.—F. LYNES, Johnstown, N. Y. The machine is adapted to contain articles of given values or grades and will deliver an article from any desired one of the several receptacles upon the insertion of a coin, directing the money by means of a novel device to the controlling mechanism for the desired receptacle.

Vehicles and Their Accessories.

CONTROLLER FOR ELECTRIC VEHICLES.—A. L. SIMPSON and H. B. PALMER, New York, N. Y. These inventors have produced a neat and compact controller capable of handling any sort of electrically-propelled vehicles, the action of the same being to avoid the injurious effects of heavy currents, to enable the vehicle to be reversed by merely pressing a button, and to speed the motor to four different rates of travel.

COMBINED POLE-STRAP AND COLLAR-BUCKLE.—A. C. BUTTMAN, Columbus City, Iowa. The buckle which is light and durable is especially adapted for use in connection with pole-straps and billets from collars of harness to effect a ready and convenient attachment between the pole and the collars of harness.

AUTOMOBILE.—A. L. SIMPSON and H. B. PALMER, New York, N. Y. The improvement relates to automobiles of the type employing storage batteries. The battery is carried upon the body of the vehicle and the motor is suspended below. By means of an adjustable brace the motor is prevented from swinging

and the gearing is maintained in its proper relation. When the storage battery is exhausted the motor may be connected to a gas engine and operated as a dynamo until the batteries are properly charged. In order to prevent the wheels of a vehicle from turning during this operation the adjustable brace is shortened, thus permitting the gearing to be quickly disconnected.

AXLE-SKEIN.—H. FOWLER, Crandall, Ind. Means are provided in this invention for taking up the space worn away from axles, so that an axle, although it may be partly worn away, may nevertheless be repaired so as to operate effectively.

Miscellaneous Inventions.

TOY.—H. A. VANDER COOK, Chicago, Ill. The toy is arranged to represent a series of animals or figures, passing into an ark, house, or other building, thus affording amusement as well as being instructive.

FOLDING BED.—C. P. BROWN, Springlake, Mich. This folding bedstead is formed principally of cylindrical rods of metal having novel details of construction which adapt it for convenient manipulation to open or close it. It is rendered safe in use by the provision of means to lock the folding section in open condition. A self-adjusting canopy is provided for the bed, which frame extends over the couch when the latter is in a horizontal position.

COMBINED AWNING FRAME AND HOOD.—W. G. BUSCHEMEYER, Louisville, Ky. The awning frame is designed to permit the convenient application of awning fabric thereto, and is so arranged that when raised the entire frame and covering are lifted above the window opening. On the upper portion of the awning frame is an overhanging hood for the protection of an opening at the top of the awning that affords means for escape of heat and provides ventilation.

COMBINED SCALE AND PENHOLDER.—P. F. M. BURROWS, Hunterville, New Zealand. Mr. Burrows has designed in this invention a very convenient attachment for pen and pencil holders, which attachment may be used in weighing letters or like packages.

TOOTH AND BASE FOR PHOSPHATE-LOGS.—E. E. CLINE, Ocala, Fla. The invention relates to a tooth of the kind used upon rotating logs for working phosphate and to a base for supporting this tooth upon the logs. The bases and teeth are arranged spirally so that when the log is rotated and phosphate and water are poured into one end of the trough the action of the teeth is to agitate the mixture, gradually working the phosphate to a particular end of the log.

BOEHM FLUTE.—E. P. ROGERS, Brooklyn, N. Y. This flute relates to the style known among musicians as "Boehm" flutes. The object of the improvement is to increase the number of notes which can be played upon the flute without injuring their purity and richness.

SHOW-CASE.—A. REINLE, Baltimore, Md. A novel construction is provided for uniting the adjoining plates of the so-called "all-glass" show-cases. The fastening device may be applied to secure two plates of glass regardless of the angle of such plates to each other.

COMPOSITION FOR PROTECTING GROWING PLANTS.—J. W. WHITE, Wisner, Neb. This composition is used for protecting young plants, etc., from the attacks of insects and the like, and also for strengthening them against storms and droughts. The preparation consists of the following ingredients: Ordinary clay, 128 ounces; common salt, 1 ounce; eucalyptus fluid, 1 pint; naphthalene moth balls, 24.

ROASTER.—W. F. COLLEY, Dublin, Ga. Mr. Colley has invented an improved device for roasting coffee beans, peanuts, and the like. The roaster may be placed upon an ordinary stove to receive the heat therefrom, and will uniformly roast and clean the coffee beans.

CAN.—E. A. NUGENT, Unionville, N. Y. A simple device is provided for holding the cover on a can or jar. A packing device that will serve to permit an easy removal of the cover is also employed.

EGG-CRATE.—H. J. HAGESTAD, Ettrick, Wis. The crate comprises a frame in which a number of drawers are mounted to slide. In each drawer a filler for the eggs is located. Suitable looking devices hold the drawers in place.

DUPLEX WAFER.—G. A. BARTH, Stapleton, N. Y. The wafer is more especially designed for conveniently and quickly fastening two sheets of paper together, and will permit of separating the sheets without danger of tearing or mutilating the same.

Designs.

MEDALLION.—C. W. PARK, New York, N. Y. The leading feature of the design consists in the opposing decorative figures appearing on the face of the medallion near the top and near the bottom, each of which figures comprises a curved base line terminating in oppositely-curved C-scrolls and the central V-scroll, at the fork of which a trefoil figure is seen.

NOTE.—Copies of any of these patents will 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.