

RECENTLY PATENTED INVENTIONS.

Agricultural Implements.

DRAFT-EQUALIZER.—EDWARD E. MAXON, Abbott, Neb. The draft-equalizer comprises a main beam on which three wheel-tree-carrying levers are independently mounted, a connection extending from each end of the middle lever respectively to the ends of the remaining levers. By these means the horses are hitched to a plow or harvester in such a way that all may work on unplowed ground, when a plow is used, and on stubble ground when a harvester is used.

DIVIDER FOR MOWING OR REAPING MACHINES.—JOHN M. CLARK, Rathbone, Mo. The invention provides improvements in devices for dividing the grass or grain at the end of a cutter-bar; and by its means short, long-standing, or fallen grass or grain is effectually divided without manually adjusting the device for varying heights.

Engineering Improvements.

VALVE.—WILLIAM F. MULLANEY, Marshall, Minn. This invention relates to a valve which is so constructed that it can be operated either by pressure applied directly thereto by sliding its stem, or by pressure applied by the action of a screw formed on the stem. In the former case the valve may be operated quickly, and in the latter case great force may be brought to bear on the valve.

MEANS FOR GOVERNING SUPPLY OF STEAM UNDER PRESSURE.—CICERO M. HOBBS, Iowa City, Iowa. The object of the invention is to provide a simple device in which the supply of steam or other fluid is cut off automatically as soon as a predetermined pressure is reached. The invention is applicable to engines, pumps and other apparatus, but is particularly suitable for the automatic supply and cut-off of steam in pumping-engines, in engines without gearing to produce circular or reciprocating motion, and for use where the boiler-pressure or live pressure is variable and skilled or regular attendance impossible.

Jars and Bottles.

TESTING-BOTTLE.—CONSTANTINE WAGNER, Manhattan, New York city. The inventor has devised a bottle for testing milk and other liquids, which bottle is arranged to permit one conveniently to make a test, and readily and accurately to read off the amount of fat without the use of dividers or like measuring tools. The column of fat is brought down in the graduated tube until the bottom is at zero. The height of the column of fat can then be easily read off without calculation or the use of a measuring tool.

NON-REFILLABLE BOTTLES.—LESTER A. MCCORD and JOHN D. ADAMS, Laurens, S. C. The valve-seat in the bottle-neck is normally closed by a ball-valve held to the seat by a weighted pendulous portion. A guard is provided which serves to deflect a wire inserted through the neck for the purpose of unscrewing the valve. An attempt to refill the bottle by means of a vacuum-pump is frustrated, for the reason that the ball-valve floats on the rising liquid and closes the valve-opening.

JAR-CLOSURE.—JOHN SCHIES, Anderson, Ind. This improved jar-closure is of simple construction, can be easily applied to the jar, and easily removed. To remove the closure it is necessary merely to take an ordinary table-knife and press back small points or teeth which hold the closure to the jar top. This releasing of the points or teeth is facilitated by their form.

JAR-CLOSURE.—JOHN SCHIES, Anderson, Ind. The neck of the jar is provided on its outer side with a downwardly facing shoulder. On this neck a cap fits. To secure the cap, a continuous unbroken ring is employed, having at its upper edge an inwardly-projecting flange overlying the outer edge of the cap and extending inwardly beyond the inner line of the external downwardly-facing shoulder. The body of the ring is fitted snugly around the neck of the jar and has at its lower edge, portions bent beneath the shoulder of the jar-neck and arranged to be bent outwardly to release the closure.

Mechanical Devices.

METAL-BENDING MACHINE.—CHARLES DECRETTE, Manhattan, New York city. The machine is designed to bend metal bars at a sharp angle at one operation with only one heating of the metal. Thus, much time and consequently much expense is saved, as compared with the bending-machines in which several heatings of the metal are required.

SAFETY GAS-LOCK.—CHARLES H. LEWEY, Chicago, Ill. The inventor has devised an improved safety gas-lock for the shut-off cock in a gas or other supply pipe. The lock is controlled by the key of the main entrance door to the factory, store, or other building in which the lock is located, so that the shut-off cock cannot be reached and opened until the door is unlocked; and the door cannot be locked until the shut-off cock is closed, for only then the key for closing the door can be removed from the gas-lock.

DUMPING WAGON.—CHARLES CARROLL, General Delivery, Chicago, Ill. Mr. Carroll has provided a simple construction in which the body of the wagon is so hinged that it can be readily tilted into dumping position. A tilting rear-truck is secured to the body

and connected with the forward truck by a hinged joint and by bars which extend rearwardly from the forward truck, means being provided whereby the hinge connection of the body and the axle of the rear truck may be caused to depart in order to dump the wagon.

SAWMILL-CARRIAGE.—BENJAMIN E. SERGEANT, Greensboro, N. C. This invention is an improvement in sawmill-carriages designed to hold the projecting ends of the rack-bar in a positive and certain engagement with the subjacent pinion by which it is driven. A more convenient, stronger, and practical construction of sectional log beam is also provided for the carriage.

ORE-PULVERIZER.—ALBERT C. CALKINS, Los Angeles, Cal. The patent describes a convenient and effective device for further reducing or pulverizing crushed ore before separating the precious metals which it contains. The machine is designed for the use of assayers and chemists. The device comprises a concave bed and an oscillating shoe having in its middle an opening leading to the space between the shoe and bed. The middle of the upper surface of the shoe is lower than its outer edges, and its outer edges are sharp. This construction permits the coarse particles to tumble over the sharp angle in returning to the middle of the shoe.

GYRATORY MILLER.—ALBERT C. CALKINS, Los Angeles, Cal. The distinguishing features of novelty in this invention are a hinged bail-shaped frame in combination with open grappling hooks on a rotating shaft, by which the parts may be quickly opened and separated. By reason of this construction the machine can be rapidly cleaned after finishing one laboratory sample, and before grinding another. The only adjustment necessary is the turning-back of the bail, the bifurcated and hook-shaped crank-arm being thereby separated from the pins of the box.

TOY PISTOL.—EARL T. ADAMS and JOHN E. SIMPSON, Portsmouth, Ohio. The pistol has a moving tape or strip with spaced percussion caps thereon. The construction is simple and durable. A large number of caps can be exploded in rapid succession without the slightest danger.

WASHING-MACHINE.—HENRY F. and ROBERT H. STAGGS, McKinney, Texas. These inventors have devised an improved washing-machine arranged for use on any kind of tub and adapted to insure a perfect, uniform washing of all the clothes in the tub by the use of yieldingly-mounted pounders which intermittently change their positions relatively to the clothes under treatment.

CENTRIFUGAL CLARIFIER.—FRANK H. RICHARDSON, Pueblo, Colo. The object of the invention is to provide a machine which centrifugally separates impurities from water or other liquids. The clarifier comprises a rotary cylinder around the inner side of which sediment-chambers are arranged. Valves control communication between the sediment-chambers and the interior of the cylinder. A vertically movable part produces vertical movements in the valve. The movable part is moved by gear-wheels driven by the rotary motion of the clarifier.

REVOLVING TRUCK FOR FLAGPOLES.—SYLVESTER S. McGRATH and JOHN J. LAWLER, Manhattan, New York city. The invention provides a truck capable of revolving upon a flagpole, on which a lightning-rod is used. The revolving truck serves to prevent the halyards from becoming entangled, and also serves to protect the halyards where they pass over bearings in the truck.

TELLURIAN.—ADGAR A. HOYLEMAN, Organ Cave, W. Va. The chief object is to produce a simple apparatus to enable a teacher to explain the fundamental facts of astronomy, such as the inclination of the earth's axis to its orbit; the rotation of the earth upon its axis; the alternation of day and night for different longitudes and latitudes for different seasons of the year; the revolution of the earth around the sun; the change of the seasons; the revolution of the moon around the earth, and its relation in time to the revolution of the earth around the sun; the conditions under which eclipses of the sun and moon occur, and other phenomena resulting from the relative motion of the sun, earth, and moon.

ROLLER-MILL FOR GRINDING AND CRUSHING.—JOHANNES C. WIEGERIE, Leigh-on-Sea, Essex, England. With the ordinary hyperboloidal rolls, the obliquity of the roll-axes, necessitates the placing of one or both axes out of the horizontal plane, in consequence whereof an undue proportion of the pressure is borne by the bearing at the lower end of the roll, thereby very seriously affecting the efficiency of such rolls. The present invention obviates this evil, the axes of both rolls being perfectly horizontal.

SCREW-DRIVER.—GARY L. WOODRUFF, Albany, N. Y. The inventor has devised an improvement in screw-drivers in which the handle and shank are adapted for rotation when pressure is applied, so that a screw engaged by the bit is driven into the material. The novel features of the invention are to be found in a peculiar construction of bit which is so formed at its free end that it can be used for boring holes. Furthermore, a bit designed for drilling metal can be substituted for the wood-boring bit, thus increasing the range of utility of the instrument.

HALF-TONE NEGATIVE.—THOMAS S. FOX, Brooklyn, New York city. To avoid much of the hand or rule work which in photoengraving

is slow and expensive Mr. Fox has devised a novel method of making a negative. The portions not to be reinforced are stopped out with gum; and the portion to be reinforced is inked. Thereupon the stopped-out portion is washed. Finally an opaque substance is applied to the ink to render the ink of the impression opaque. Variegated but extremely strong effects are produced in the final prints.

CABLE-GRIP.—CHARLES NOBLE, Sisson, Cal. The invention is an improvement in cable-grips employed in hauling logs. The grip has but few parts and is not liable to get out of order. The construction is such that the simple act of hooking the device over a cable after the draw-dogs are fixed in a log causes it to grip the cable and remain fixed thereon until the draw-dogs are removed.

ACETYLENE-GAS APPARATUS.—OLIVER H. HAMPTON, Williamsburg, Ind. The gas-machine which has been devised by Mr. Hampton automatically generates gas in accordance with the amount consumed. The danger of the generator's bursting by overpressure is entirely obviated. Means are provided for automatically obtaining a uniform level in the generator. The carbide-holder is entirely submerged in an ample quantity of water, and therefore the gas is kept cool. Generation begins at the bottom and the gas is made to pass over the unused carbide which absorbs the moisture from the gas.

BORING-MACHINE.—SUMPTER L. HARWOOD, Fraunsdale, Ala. The machine is a well-boring machine in which water is forced to the revolving drilling tool to assist in loosening the ground and to cause the loose material to flow up in the drill-hole. The rate of cutting can be regulated according to the nature of the soil without subjecting the drill to the weight of the pipe-line. The pipe-line and drilling-tool are prevented from dropping into a bed of quicksand, if such be encountered.

TOOL.—DANTON O. BRUNNER, Somerset, Ohio. The tool, as constructed in accordance with the provisions of this patent, is compact and may be used for many purposes. It is specially serviceable in a stable, or as an implement to be carried in a vehicle. A nut-wrench, a pliers, and an eyelet-punch are included in the tool.

STAMP-FIXING MACHINE.—ALBERT S. HEINTZ, 213 Thirteenth Street, Portland, Ore. The inventor has devised an automatic and perfectly operating device through the agency of which a stamp may be cut from a sheet or strip, moistened and secured upon an envelop, document, or package, by the movement of a single rod or lever.

Railway Contrivances.

JOURNAL-BEARING.—ELWOOD E. BENNER, Sargent, Neb. Mr. Benner has devised an improvement in the brasses employed in car-journal bearings. The invention provides means for lubricating the journal by the use of water, thus economizing in the cost of lubricant and at the same time cooling the journal by means of the lubricating agent.

JOURNAL-OILER.—FRED E. PARSONS, Marshall, Minn. This invention relates to a simple device designed to be placed in a journal-box to hold the absorbent packing yieldingly against the journal, and by the use of which a less amount of packing is required than is ordinarily necessary.

Miscellaneous.

CLASP.—ARTHUR N. LENDBURG, Wayne, Neb. The clasp is adapted especially for application to suspenders to take the place of suspender-buttons and the usual loops which are employed to connect the suspenders with the buttons.

BED.—WILLIAM D. OLNEY, Stillwater, Minn. The bed is mounted on rollers so that it can be readily moved from place to place. The construction is such that the bed can be moved into engagement with a cabinet and folded out of operative position. By this construction all the merits of the folding-bed are retained without the danger of an accidental collapse.

DRINKING GLASS HOLDER.—RUDOLPH METZ, Atlantic City, N. J. The drinking-glass holder comprises two straps adapted removably to embrace the glass. Each strap comprises a retractile spring which serves to hold the straps around the glass. A handle extends between and is connected with the straps. The holder is merely slipped over the glass, the spring serving to prevent the straps from slipping.

KEYBOARDS FOR TYPEWRITERS.—JUAN B. VIDAL, Havana, Cuba. The invention provides an improved arrangement of keys by which the attainment of great speed in writing is facilitated, and which enables an operator to write as much by touch as by sight, thus rendering the work easier. The keys are arranged in two sections, one for the right hand and one for the left, and in each section the keys are disposed in groups, one group for each finger.

HAMMOCK.—LOUIS A. WRIGHT, Aspen, Wyo. The hammock is made of leather strips and a series of loops extending longitudinally. The loops in a series are linked together, each loop embracing a step between the link ends of the loop. Thus constructed a hammock forms a very durable supporting surface and can be very easily folded.

TIMBER-HOOK.—GEORGE H. HITCHINGS and PATRICK L. LACHAPPELLE, Hequiam, Wash.

The novel features of the invention are to be found in the arrangement of connecting-straps in pairs extending side by side; in lapping the joint plate and the hook bars on opposite sides; and in providing the drag device with side bars which extend on opposite sides of the hook-bars and of the joint-plate. The inventors are thus able to avoid all twisting of the joints and to brace the parts of the hook in the desired positions.

PUMP-CAP.—AUGUST GUSTAFSON, Cherokee, Iowa. The cap or cover for the pump-barrel is provided with an opening for the passage of the pump-rod. A yoke is located on the outer side of the cover and spaced therefrom. Between the cover and the yoke at opposite sides of the opening are separate blocks adjustable toward and from the opening. The yoke and cover can be pressed toward the pump-barrel. The pump-cap thus constructed can be conveniently applied to a new or old hand-pump or force-pump.

ELECTRIC-FIXTURE BASE.—JAMES W. SMITH, Brooklyn, New York city. The fixture-base is intended for use on flat surfaces and can be fastened closely to a wall without using a number of intermediate ungainly parts. In this respect the fixture differs from the ordinary insulating device which is designed for attachment to gas-pipes, and which when secured to flat surfaces requires the interposition of a separate base.

MEANS FOR SWAGING METAL DENTAL PLATES.—NORRIS C. LEONARD, McMinnville, Tenn. The purpose of the invention is to furnish devices which provide simple and effective means for swaging metal dental plates directly on a plaster model. Thus, a more accurately fitting plate is produced than is ordinarily possible, and thus the necessity of making counter-dies is obviated. The invention saves much time and labor and prevents the plate from being scarred.

FIRE-HOSE NOZZLE.—THOMAS F. BURKE, Engine Company 52, Van Cortland Avenue, Riverdale, New York city. The fire-nozzle is designed to supply both air and water. Air is first pumped by the fire-engine instead of water in order to drive away the heavy smoke and to enable a fireman to locate the blaze without danger of being suffocated. Then the water is turned on and the fire extinguished. One of the novel features of the invention is a distributor which discharges water in the shape of a circle 125 feet in diameter. The fine stream of water thus obtained is hurled to a distance equal to that of a large stream, in which respect the nozzle differs from ordinary hose nozzles. This device has been very successfully tried and will be adopted by the New York Fire Department.

SCABBARD.—GEORGE R. SIMMONS, French Gulch, Cal. The scabbard is a bowie or hunting knife scabbard. The sheath or scabbard commonly provided for the blade of a bowie knife is not adapted to receive the cross-guard plate of the handle. It thus often happens that the plate is caught by high grass or cane and the knife pulled out. The improved scabbard obviates this difficulty.

FRAME-LATCH FOR BAGS, PURSES, ETC.—LOUIS E. PRAHAR, Brooklyn, New York city. The invention is an improvement upon a similar device already patented by Mr. Prahar. The novel feature of construction is a locking device which is adaptable to a pocket-book frame. The members of a frame can be unfastened either by rocking the locking device in one or the other direction or by drawing the locking device outward. When relieved from tension the locking device is always in position to latch the members of the frame.

MUSICAL INSTRUMENT.—HENRY C. MARK, Linn, Kans. The instrument is of the zither type, and is provided with keys for striking certain of the strings to produce chords, while the melody is played on a certain number of open strings or on certain of the strings with which the keys are designed to engage.

CURTAIN-HANGER.—JOHN L. F. C. KOBER, Cincinnati, Ohio. Means are provided for hanging curtains securely and artistically without the use of cumbersome and unsightly devices such as the usual curtain poles and rings. The curtain is hung by means which are entirely obscured, thus making it possible to display ornamentation.

TRUSS.—HENRY H. GERHARDT, Nashville, Tenn. The truss is so constructed that the pads or supports can be adjusted vertically and laterally to and from each other, and also adjusted to and from the person in order to increase or decrease their pressure. Each pad is also independently adjustable. The body-belt by which the pads are supported coacts with an auxiliary belt adapted to hold the body-belt in position and prevent the adjustment of the pads from being disturbed.

Designs.

DISPLAY CARD.—HENRY HEININGER, Orange, N. J., and WILLIAM USGER, Manhattan, New York city. The display card is a bachelor's display card of an amusing character.

HOOK.—AUGUSTUS BROCKELBANK, Ossining, N. Y. The hook is to be used in connection with an eye for garments and is formed in a novel manner to enable the eye to be readily gripped and readily released.

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.