

RECENTLY PATENTED INVENTIONS.

Agricultural Implements.

DEVICE FOR CUTTING WEEDS AND STIRRING SOIL.—H. D. CLAYTON, Edmond, Kans. Mr. Clayton's improvement relates to an agricultural implement used for cutting weeds and stirring soil, and more particularly employed in crops planted with a lister. The machine consists, mainly, of a pair of sleds connected by means of a long board, the sleds being preferably pulled by four horses, and is provided with cutting mechanism for severing weeds and for pulverizing the surface of the soil.

STUBBLE-SHAVER.—T. X. LANDRY, Labadieville, La. The stubble-shaver is devised to provide an apparatus in which the blades employed may be easily and quickly adjusted to and from the ground and reversed and wherein also the blades will have guided vertical movement. Another provision is a separator for the stubble, placed at the rear of the blades, which separator is provided with a roller to enable it to pass readily over the ground however uneven the surface. The shaver has a light and strong frame and is mounted to move upon runners.

Electrical Devices.

ACCUMULATOR-PLATE.—W. KRAUSHAAR, Neumühl, Rheinland, Germany. In this storage-battery-plate there is provided a leaden plate furnished with ribs of lead cut through at certain points. The cuts are so arranged that the ribs can be separated into small pieces without weakening any point of the plate. By this arrangement of cuts the plate can be cast more easily. The cuts in one strip are opposite the middle point of cuts in the adjoining strips which is an advantage over cuts which go right through the core, as here the lead, as soon as it comes to a part of the core, can flow through the opening in the neighboring rib.

Engineering Improvements.

DRY-VALVE.—J. K. S. RAY and W. D. McNEILL, Whitmire, S. C. This invention relates to pressure-controlled automatic valves. It provides a dry-valve for the pipe-line between the main water-supply pipe leading from the reservoir and the water pipes of the system, normally filled with air under pressure. The valve prevents leakage of air and water from the water-supply pipe to the air-filled distributing-pipe and consequent sealing of the valve, thus allowing the valve to open positively on the reduction of air-pressure in the distributing pipe in case of fire.

REVERSIBLE PROPELLER.—J. V. JOHANSSON, Skyrsta, Hammar, Sweden. This screw-propeller belongs to that class in which the blades are arranged to be reversed, so that a vessel may be propelled ahead or astern notwithstanding that the shaft may be turning continuously in one direction. The parts are so arranged that the propeller-hub will not be enlarged to an extent materially to detract from the efficiency of the propeller. At the same time the blades are held rigid and free from idle movement when the propeller is set, thus preventing needless wear of the parts.

BOILER.—A. JAEGER, Jersey City, N. J. The aim of the inventor is to provide a boiler in which will be combined the action of a water and a fire tube boiler with a jacket-chamber receiving products of combustion and heat usually wasted, in which jacket water-tubes are placed connecting with the steam-chamber below the water-line and with the water-leg of the boiler. The boiler sections are made so that perfect communication is established between them, the communications being both water and steam tight fittings.

BALANCED ROTARY ENGINE.—F. P. HUYCK, Swanton, Ohio. In this engine the moving parts are caused to balance each other, the packing is rendered more efficient, the working strain is distributed more equally, and a more operative cut-off is provided. These features are materially developed by a novel type of governor having peculiar relation to the cut-off valves, a cored-out webbed piston, and a valve-gear of unusual efficiency.

DRIVEN WELL DRILL.—M. ZIEGENFUS, Burns, Oregon. Mr. Ziegenfus's drill comprises a plunger mounted to slide in a perforated cylindrical jacket to which the well-piping is secured. The plunger is provided with a pointed head of larger diameter than the jacket. In operation the plunger is first driven down with a weight and the jacket is next forced down into the hole formed by the plunger head. As soon as water flows in through the perforated jacket the plunger is driven clear of the same and the well is completed.

PNEUMATIC WELL DRILLING APPARATUS.—H. W. RANK, McDonald, Pa. Means are provided in this invention for operating well-drills pneumatically or by the regulated pulsations of a body of air or other gas, whereby a piston connected with the drill is alternately raised and allowed to fall. A minor feature of the contrivance is the provision of an elastic cushion for causing rebound of the drill and arresting the rebound when required.

PNEUMATIC BALANCING ROPE-TENSION ATTACHMENT.—H. W. RANK, McDonald, Pa. It is the object of this invention to provide an elastic tension attachment for wire ropes of well-drilling apparatus that are subject to sud-

den and severe strains at each lift or rise of the part to which the rope is connected, so that the lift may be easy at the same time that the momentum of the tools in the downward movement permits a harder blow to be struck than if the attachment were a rigid one. To this end Mr. Rank employs a pneumatic apparatus applied to a walking-beam and other parts such as are usually used in well-drilling.

GOVERNOR AND THROTTLE-VALVE-CONTROLLING MECHANISM.—R. B. HAIN, Los Angeles, Cal. The aim of this invention is to furnish certain improvements in that type of engines used for auto-vehicles. The mechanism embodies a peculiar co-operative arrangement of centrifugal governor devices and manually-operatable means both connected with the throttle-valve, and each capable of independent movement for controlling the valve, and other arrangements of parts bearing on the control of speed.

Hardware.

LATCH.—A. WILLIAMS, United States Army, Manila, Philippine Islands. This is an improvement in door locks or latches especially adapted for heavy-hinged doors, although it may be used on sliding doors, or other kinds of doors. The object is to provide a latch-operating means by which the hand in gripping and opening the door also operates at the same time or movement to retract the latch and to hold it in an inactive position. The latch may be handled from either side of a door.

Mechanical Devices.

VENDING MACHINE.—F. E. HUXLEY, Rochester, N. Y. The improvement relates to a coin-controlled device for lead-pencils, slate-pencils, or like articles. In the machine, a casing is arranged with a storage-chamber and a discharging cylinder for articles to be sold; a coin-receiving lever having a slot for the passage of a coin is mounted to swing in the casing; a movable pin in the slot works outward when the lever springs downward; by an inward movement of a push-bar a receiving-lever is moved downward through connections between the bar and lever; gear connections between the push-bar and the delivery cylinder discharge the articles; and a spring moves the push-bar outward upon being released.

LINOTYPE MACHINE AND MATRIX THEREFOR.—S. SMITH, Brooklyn, N. Y. The inventor in this device seeks to overcome the defects common to linotype machines by attaining perfect alignment of the matrices notwithstanding that the lower lugs or other parts may be very much battered by the continual falling of the matrices into the assembler. He does this by providing on each matrix, an alining surface or surfaces, each independent of the surfaces which engage with the assembler as the matrix falls thereinto.

COPY-HOLDER FOR TYPE-WRITING MACHINES.—S. L. ENGEL, New York, N. Y. Type-writers will find this device a light, simple and effective copy-holder particularly designed to receive and retain a book of notes, so that the holder attached to the carriage and the book will not interfere with the operation and manipulation of the carriage and will hold the copy immediately before the operator, thus avoiding the tiresome side glances needed when the copy-holder is attached to one side of the frame of the machine. The copy-holder may be applied to any type of carriage, and is provided with means for holding the leaves as they are thrown back from the body of the book after the notes have been written.

WASHING-MACHINE.—G. V. CESINGER, Eaglelake, Texas. The novel construction and combination of parts involved in this design, relates to washing machines of the rocker type, and has for its object the provision of simple details of arrangement for a device of the type indicated which adapt the machine for easy operation and effect the cleansing of fibrous material in an expeditious and perfect manner.

TRANSMISSION-GEAR MECHANISM.—R. B. HAIN, Los Angeles, Cal. This in general is an invention relating to improvements in transmission-gearing, and seeks more specifically to furnish an improved type of sun-and-planet gear mechanism of a simple and stable construction in which the parts are co-operatively arranged, and to enable the power to be easily, quickly, and positively shifted for producing variable speed motion without jarring or straining the operating parts.

TRACK-LAYING AND SPIKE-DRIVING MACHINE.—F. B. HEWITT, Fort Myers, Fla. This invention relates to machines for laying ties and rails, and for driving spikes to fasten the rails in place, by which the operations may be carried out continuously by automatic mechanism. One part relates to mechanism by which ties may be transported and laid at proper intervals and successively. Another part relates to rail transporting and laying devices to carry lengths of rails and to place them in position on the ties, such devices being partly under manual control, so as to better position and align the rails. Another part refers to spike-driving mechanisms, one of which drives spikes into ties on opposite sides of each rail length immediately after placing the rail length in position. Each mechanism includes shoes to embrace a rail with means to clear and pass the fish-plates. Such mechanism also includes plungers and feed devices to place spikes in

position to be driven and for the heads of spikes to engage foot-flanges.

PROTECTOR FROM FIRES.—MICKEL MURRY, Morristown, N. J. By means of this mechanism the inventor has produced a protector which is capable of being operated with very little labor, and instantly upon discovering a fire and by means of which the fire will be hampered, if not completely extinguished at the outset, and an alarm will be sent to the fire department or other persons interested. The spray tank is directly connected with the water-main or other source of supply. It is intended for use particularly in suburban buildings, but is also applicable for service in cities.

Miscellaneous Inventions.

CONVERTIBLE SUSPENDERS AND BELT.—D. LAUFERTY and B. STEIN, New York, N. Y. This invention has for its object to provide novel details of construction for suspenders that adapt them to be quickly and conveniently arranged for use as a body-belt and again converted into suspenders, as occasion may require. A practical feature of the invention is the construction and arrangements of parts whereby improper friction and wear are prevented, and the suspenders are adapted to yield easily to change in the position of the person wearing them.

COTTON-TIE BUCKLE.—P. L. HOWLETT, Giddings, Texas. By the provision of a simple, strong and cheap buckle, in which the band or tie can easily be slipped or fitted and which will hold the tie so securely that it cannot become displaced and detached from the buckle, Mr. Howlett overcomes two objections to the common styles of bale-ties now in use, the most serious of which is that the looped and short end of the tie is liable to slip or work loose, while the other objection is that the tie must be threaded through the slot or eye of the buckle.

COMBINED TWEEZERS AND MAGNIFYING-GLASS.—F. J. BOEHM, Brooklyn, N. Y. This combination tool is made so as to be easily carried in the pocket. Its parts are so combined that when folded the lens will be housed and protected by the members forming the tweezers. The lens is detachably and foldably connected to an arm which is pivoted for adjustment relative to the tweezers, and means are provided by which these features of the lens may be separately obtained. The tool is especially useful in locating and extracting splinters, etc., and in the examination of work.

SWING.—C. B. MCKAY, New York, N. Y. In this form of teetering swing, the aim is to provide a device having a single swinging beam with cars or passenger-seats at opposite ends so connected as to always maintain a vertical position, to provide in connection with the beam a weight quickly and easily adjusted to cause a balance of the beam when the opposite ends are sustaining different weights; and still further to provide for checking the momentum upon the beam approaching or reaching the desired angles.

SELF-CLOSING VENT AND INDICATOR FOR STORAGE-CASKS.—J. G. F. HIEBER, Spokane, Wash. This improvement consists in a special indicator and self-closing vent, and is adapted for use on casks or vats employed in breweries for storing beer. To obviate the expensive loss of beer incident to overflow at cask-vents, the inventor has created a combined self-closing valve and peculiar drop tube which, in addition to automatically stopping all vent of air from the vat or cask, will indicate proper working of the vent.

STEAM-COOKER.—W. S. HUNT, Owosso, Mich. Mr. Hunt's improvement offers a simple device wherein food may be quickly and thoroughly cooked, and one which may be used in conjunction with an ordinary tea-kettle. Steam from the kettle passes up into the cooker by means of a tube. It is thence deflected downwardly and passes through the food placed in the receptacles, then out through side perforations and upwardly through outside vertical education tubes.

CUSPIDOR.—W. R. McCLANAHAN and C. E. BELL, Terra Alta, W. Va. The design of the inventors is to improve cuspidors, especially those intended for use in cars and similar vehicles and in such places as hotels, offices, etc. In operation the device is self-dumping or draining, and is always closed except when positively worked to the open position, from which position it automatically closes when the pressure of the foot is released from the rocker.

BOOT OR SHOE CLEANER.—D. McEACHERN, Rossland, Canada. This cleaner provides a novel construction both of brush and of framing, and the device includes a casing for inclosing the portions of the brush not in use. The invention provides opposite brushes that incline or converge toward each other so that the brushing-surfaces conform to the rounding surface of the shoe and will brush as the shoe is pushed between the bristles.

TRIGGER-TONGUE FOR TRAPS.—H. H. DREYER, Sentinel Butte, N. D. The purpose of this invention is to so construct a trigger-tongue that the trap when set may be covered by earth and leaves without interfering with the trip action of the tongue. The tongue is so shaped that it will sink in the ground under a very light weight and will offer a knife-edge to the surface of the ground, thus preventing stones, chips, etc., from hindering

its action, and insuring the springing of the trap when the animal is above the tongue at any point in its length or breadth.

PLACKET-CLOSER.—EMMA FALKENBERG, New York, N. Y. Means are provided in this improvement for closing the vent or placket of ladies' dress-skirts, and the object is to provide a very convenient device which may be readily secured to the inner surface of the dress at the side edges of the placket, and be adapted for an instant closure of the vent-opening by pressing the closing device at its side edges. The closing device is released by an upward pull on a flexible connection.

RESPIRATOR.—J. W. McNARY, Dayton, Ohio. This improvement is equipped to enable a user to breathe fresh outside air in rooms, railway cars, officers, etc., without exposing the person to drafts of cold air incident to the opening of a window or ventilator. The device is mainly intended for those afflicted with lung diseases, but is available for use in shops or laboratories holding impure air, gases, and the like. It may be used while reading or sleeping.

REFRIGERATOR.—H. INMAN, Keokuk, Iowa. This refrigerator secures a complete and continuous circulation of air between the storage and ice-chambers, thus keeping the refrigerating-air at a cool and even temperature. In the operation, the air warmed by the articles in the storage-chamber, will pass out through openings and air-passages. This warm air will cause the cold air from the ice to pass downward through the grates and into the storage-chamber, and when this new supply of cold air becomes heated it will pass out through an opening and force more air into the storage-chamber, and thus a circulation of air will be maintained.

APPARATUS FOR USE IN THE PRODUCTION OF STEEL.—E. C. WILLS, Rahway, N. J. The inventor provides his new apparatus with means for use in connection with a suitable receptacle, which may be an ordinary iron-foundry ladle, by which to convert the contents of such receptacle into steel by the introduction of air through the agency of a telescopic twyer whose discharge end is introduced into the receptacle. An outlet is so located that particles forced off by the twyer-blast strike against the roof of the cover, so that the lid causes the particles to drop back into the molten metal.

LOCKING-BAR.—J. P. MAGINNIS, London, England. To prevent articles from being stolen or handled without authority the inventor has patented a locking-bar for use in fastening baskets, mail-bags, and similar receptacles. The primary object of the device is to produce a locking-bar, neat, simple, strong, and efficient, one which may be inserted through a series of loops and rings and then locked in such a position as to frustrate its withdrawal therefrom.

EXHIBITOR.—G. W. FREESE, Clinton, Mich. One object of this contrivance is to display goods in stores, such as lace curtains, draperies, and the like, and to exhibit at one time a number of such articles. Another object is to provide means for covering goods after inspection. This is done by this exhibitor which has novel means for displaying goods in a hanging position and for covering them after inspection. It will also facilitate the displaying of goods when examination is desired and return them to position adapted to be rolled into compact form by a special arrangement and operations of the cover.

CONVEYER.—R. BLUM, Berlin, Germany. This improvement pertains to conveyers for moving coke and other lumpy material along in a trough or a channel from place to place. The object is to provide a new device, arranged to insure proper cooling of material while moving it bodily without bringing it into contact with the channel-walls, and without danger of crushing or pulverizing the material.

FOLDABLE CLOTHES-DRIER.—J. K. CHAMP, near Paris, Ky. The invention relates more particularly to that class of clothes-driers or drying-frames that are foldable when not in use; and the object is to construct a device having novel details that adapt it for convenient service, render it strong and durable, and facilitate an adjustment of the frame for its extension and contraction, as required.

SCAFFOLD.—W. L. CLANCY, New York, N. Y. This is a scaffold designed especially for the use of painters, masons, bricklayers, plasterers, and other mechanics, which is easily set up for use or knocked down for storage or transportation purposes, and arranged to provide separate running-boards for the mechanic and his helper and a platform for the material, and to allow of easy raising of the running-boards and platform as the work progresses, for the occupants to work with the best advantage.

CONTROL AND GUESTS PAY-CHECK FOR HOTELS, RESTAURANTS, ETC.—M. GELLER, New York, N. Y. Controlling and checking the service to guests in hotels and other similar institutions are advantageously secured in this device, which consists of a simple self-contained check so arranged that all errors in charges or receipts and peculations can be automatically, quickly, and infallibly detected and located.

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.