RECENTLY PATENTED INVENTIONS.

Agricultural Implements.

CHECK-ROW CORN-PLANTER. — CHARLES M. DAYTON, Bowling Green, Ky. The purpose of the invention is to provide a planter which will drive stakes to mark the end of a row. The stake-setting mechanism is automatically actuated; the machine plants without the use of a wire. The invention consists essentially of a planter provided with stake-holders, mechanism for planting corn and fertilizer together in hills at regular intervals, and means whereby the mechanism for planting will automatically actuate the stake-holders to release and drive the stakes in order to mark the end of a row.

PLOW. — MICHAEL BYSTROM, Centerville, S. D. The plow has a mold-board provided with fingers which can be quickly adjusted, so that any undesirable material upon the field (weeds, long stubble, straw), can be covered up, whether the ground be loose, dry or wet. The plowshare is so constructed that it will produce a straight, well-defined cut. The point remains sharp for a long time, so that the land-side is subjected to but little pressure.

Mechanical Inventions.

EXHIBITING-MACHINE — JOHN HEISSENBERGER, Bronx, New York city. This machine is designed to exhibit illuminated pictures and to provide music during the exhibition, and to distribute photographs or other articles before or after the exhibition of the pictures, all the parts being controlled by a common motor, set in motion by a coin. The picture-carrier and cylinder of the music-box are automatically stopped and the light employed for illumination extinguished as soon as the first picture exhibited is again brought before the lenses. Comparatively few parts are necessary to perform these various functions. The machine is simply and durably constructed, and is so arranged that but little space is occupied.

PULVERIZING AND SEPARATING MACHINE. —CHARLES W. DAY, Santa Cruz, Cal. This mill is designed to extract precious metals from their ores, particularly from talc, talcose, slate, and clay. The inventor employs crushing-rolls which travel in a circular trough containing the ore and a suitable quantity of mercury for amalgamating purposes.

CLOTH-CUTTER. — ROBERT PHILLIPS, 330 North Charles Street, Baltimore, Md. The cutter is an improvement in machines which are manually guided upon a table or other flat support for the cloth, and are driven by a steam, air, or electric motor. Heretofore a single knife has been employed, arranged to reciprocate vertically. The inventor, however, uses two cutters working parallel, but out of contact, and making a circular movement by which they make a draw cut in the cloth and thus do rapid and effective work. The two cutters are separated by a thin, flat plate, with whose opposite sides they work in contact. Being beveled exteriorly, the cutters are, to some extent, sharpened by friction with the plate and cloth.

FLUID-PRESSURE PRESS.—RUDOLPH RUETECHI, Argentine, Kans. The object of the invention is to provide a machine for pressing dry and wet materials into bricks, the machine being completely automatic in its operation and arranged to form articles of a uniform and predetermined strength, the controlling power being air or steam under pressure. The motive agent actuates a piston in order bodily to move a mold, so as to compress the material against a fixed platen and form the brick. The air or steam is then allowed to actuate secondary devices under reduced expansion to remove the finished article, fill a second batch of material into the mold, cut off the initial pressure, release the actuating devices at the proper time to bring them back to a normal position, and again turn on the initial pressure in order automatically to repeat the cycle.

TRUCK-HAULING DEVICE. FRANCIS H. WEEKS, Bronx, New York city. In unloading vessels, it is necessary for a truckman to draw the loaded truck from the deck up an inclined gangway to the pier. It frequently happens that the gang-planks are considerably inclined, so that it is extremely difficult to haul a load up the plank. A number of men are, therefore, located along the plank, so as to help the truckman. By using a mechanical conveyor, Mr. Weeks dispenses with the extra longshoremen, and the truckman has merely to guide the truck while on the gang-plank.

TRAP-GUN.—ADOLPHUS H. FORSTNER, Salem, Ore. The purpose of this invention is to furnish an improved trap-gun which can be handled and set with perfect safety, and which is designed to kill gophers and like animals. The firing-pin is manually placed in operative and inoperative position. When in inoperative position it is held against movement by the hammer to prevent accidental firing of the gun, even if the hammer strikes the pin.

BRICK-MACHINE.—RUSSELL ANTHONY, Wortham, Tex. The inventor has devised a simple, automatic machine designed to receive bricks from a stiff-mud mill and to repress them. The machine is so constructed that the bricks to be treated will be fed to the machine by a suitable conveyer and conducted one after another to the press-box, released from the pressure of the box and its follower, and removed from the box to a second conveyor, which will conduct the finished bricks to any desired point.

PNEUMATIC PUMPING-DEVICE. - LEVI M. BROCK and GEORGE W. PHILLIPS, Mackinaw, Ill. The invention is an improvement in devices for pumping water, using compressed air as a motive force, and is composed of two alternately-operated cylinders, which are placed to receive a gravity-supply of water to which separate air-supply pipes lead. A double-cylinder air-pump is also used, each cylinder being connected with one of the pipes supplying the water-pumping cylinders. Valves, provided with a tubular central portion, have their ends inserted in casings and have ports adapted alternately to connect both pipes from the compressing cylinders with one pump-supply pipe and to discharge the air from the other pump-supply pipe. A valve-operating mechanism is actuated by the compressor-actuating means.

Railway-Appliances.

CAR-DOOR.—GEORGE M. CARTER and ALEXANDER W. DAVIDSON, Poplar Bluff, Mo. The invention relates to box freight-cars; and its object is to provide a new car-door arranged to be flush with the side of the car when closed and to render the car rain and dustproof at the door-opening. The door has one side and one end formed of movable members, a lever, and links connecting the lever with the members to move them simultaneously in the plane of the door in an inward and outward direction. The door can hence be opened and closed with very little physical effort.

Miscellaneous Inventions.

VEHICLE-BRAKE.—CHARLES W. LOOMIS, Otisville, N. Y. The purpose of the present invention is to provide a vehicle-brake of that class in which the brake may be hung from the body of the vehicle or otherwise supported. The invention embodies certain special combinations by which, when the brake is hung on springs, it is possible to apply it with a force increasing with the load on the vehicle, so that when the load is great the brake will be applied with much force, and so that when the load is light the force of the brake will not be so great.

FILTERING-STOPPER. — ISIDOR LAMBERT, Rue des Pyramides 14, Paris, France. This perforated, hollow stopper contains filtering material, so that it can be used on milk-bottles, jars, and flasks for purifying water, milk, and the like. The filtering stopper enables the soldier, for example, rapidly to fill his can with water, regardless of its quality; and this water is purified as he drinks it. The suction necessary to draw the water into the mouth causes the water to pass through the filtering substances contained in the stopper.

UNDERCHECK DEVICE FOR HORSES.—GEORGE A. KELLY, Dayton, Wash. The inventor has devised an attachment for a bridle which will render it unnecessary for the horse to be unduly checked up and which will likewise prevent the horse's pulling too strongly upon the reins or choking. One bit only is required; and the chin-straps and nose-band may be dispensed with.

HEATING APPARATUS.—DAVID M. HORTON, Fishkill, N. Y. The purpose of the present invention is to provide a heating apparatus by which hot air can be supplied to the higher rooms of a house by heat derived from the chimney-flue. The invention is principally characterized by novel constructions of the hot-air flue, which cause it to be more effectually acted on by the heated gases in the chimney-flue, thus to increase the efficiency of the apparatus.

OIL-FILTER.—GEORGE W. GALLAWAY, Rye, N. Y. This oil-filter for bearing-drippings and the like, comprises a body portion divided into a water-chamber and a precipitating-chamber. A funnel is removably arranged in the water-chamber and has its stem portion extended nearly to the bottom. Filtering material is arranged in the funnel. A precipitating-pan is removably arranged in the precipitating-chamber; and to this pan the oil is directed through the water-chamber. An outlet-tube is extended from the top of the pan and through its bottom. A filtering-device is located below the pan; and above a chamber for receiving the filtered material.

MEANS FOR CONTROLLING HORSES. — GÉZA EGYESY, Buda-Pesth, Austria-Hungary. The inventor has devised a means for arresting horses, should they become violent when in harness. He employs straps connected with the bridle and reeved through guide devices on the thills, the straps passing to the vehicle, where they may be reached by the driver when necessary.

EJECTOR-PUMP. — CHARLES A. DRYER, Champaign, Ill. This pump is especially adapted to deep-driven wells and comprises special features of construction by which a fluid-jet can be effectively employed as the motive-agent. The pump has a valve-casing in which is a passage commanded by a valve. A head is attached to the casing and is composed of a chamber having communication with a source of fluid-supply, and of a passage conducting a jet of fluid from the head. As a partial vacuum is created in the well-tube above the valve-chamber, the water is drawn through the valve-chamber and forced up the well-tube.

ENVELOP.—MILLARD J. DENNIS and WILLIAM C. DAVIS, Nevada, Tex. The envelop is particularly adapted as a cover or wrapper for valuable papers, money, and the like, and is so constructed that its contents are thoroughly protected, and that it can be traced from one forwarder to another and identification be established at the point of destination.

CONCENTRATOR. — EDSON F. DAVIS, Wetmore, Colo. The ore-concentrator comprises a frame in which an inclined table is hung and pivoted. The table can be given a bumping reciprocating motion. A feed-hopper discharges the material upon the upper end of the table and at one side. Riffles on the table extend partly straight in a longitudinal direction below the feed-hopper and partly curved in an upward and transverse direction. A trough on the lower front end of the table receives the tailings; and a trough on the upper rear end of the table at the discharge end of the curved parts of the riffles receives the gold.

MEAT-COOKING DEVICE.—ADAM REUBOLD, Manhattan, New York city. This device has a barrel-shaped body with open ends, arranged to contain the article to be cooked. A closure for the body presses and incloses the article at the sides. The contrivance is designed for cooking hams. The ham is inclosed in wood, so that the meat is not injured by coming into contact with the metal parts.

PAPER-BOX.—JOSEPH T. CRAW, Jersey City, N. J. The invention provides a means whereby a paper-box can be rendered siftless at its end or flap section, thus providing a package in which granulated sugar or like material can be packed and shipped without danger of the contents' spilling, even when the package is subjected to severe usage.

ICE-CREEPER.—ROBERT C. SNOWDEN, Duquesne, Penn. The ice-creeper is composed of a length of suitable wire which is bent to form a spring-clamp adapted to clamp or embrace the ball of the heel. Spurs are provided for biting into the ice or sleet. The device is light and can be readily carried in the pocket and conveniently applied for use whenever desired.

BOLT-LOCK.—PAUL O. E. BOUDREAUX, Theriot, La. The invention comprises a bolt having a tapering screw-threaded bore in one end and equidistant tapering slots dividing the bore into sections. Each of the sections thus formed is provided with a shoulder. A tapering screw is arranged to work in the bore and is formed with a head and a transverse opening therethrough below the head. The opening is adapted to receive a key which projects beyond the screw to engagement with the side walls of two opposite slots when the screw is in place in the bore.

SAILING CRAFT.—DOUGLAS BEARDSLEY, Auburn, N. Y. The invention is an improvement upon sailing craft provided with swinging ballast. In a former arrangement patented by the inventor a mast was employed stepped in a pivoted socket and connected with the ballast so that when the mast inclined, resistance was offered by the ballast and not by the hull of the craft, which remained in normal vertical position. The present invention embodies improvements found necessary in actual practice, these improvements being designed to obtain a quick lateral movement of the ballast to prevent the wind's "spilling."

ACETYLENE-GAS GENERATOR. — WILLIAM F. COOPER, Meriden, Conn. The apparatus is designed to feed the carbid intermittently to a subjacent body of water and automatically to renew that body of water, and discharge the slush into a sewer or other convenient receptacle. The device precipitates into the generator a large flushing volume of water, whose flow, when started, continues from an elevated reservoir independently of any subsequent motion of the gasometer; and the discharge-pipe opens directly from the bottom of the generator and rises to a point outside in a relatively small cross-section. This causes a forceful flow of water to issue from the bottom of the generator, so as to carry out the slush.

HEAD-GATE LOCK.—JOSIAH L. RHEAD, Corinne, Utah. This invention relates to locking devices for the head-gates of irrigating ditches, canals, flumes, and waterways, constructed in such a manner as properly to protect the interests of both the supply company and the consumer. It is desirable in the interests of the company that the head-gate should not be opened more than a limited distance to admit the amount of water which the consumer contracts for; and yet the consumer frequently desires to be able to cut off the water or reduce the flow. The present invention provides a single gate which can be locked by the supply company at its limited opened position and yet be perfectly under the control of the consumer in every range of adjustment less than the maximum and down to the point of closure.

GRAIN-CONVEYER.—CHARLES A. SCOTT, Broughton, Ill. The apparatus is especially designed for conveying grain from an elevator to cribs or bins. It comprises a bed constructed of end and intermediate sections separately connected. On the bed are driving-shafts, one of which is detachable. An endless conveyer is propelled by the shafts; and the lower lap of the conveyer has a guide-box. Vertically-movable bearing-brackets are attached to the front end section of the bed. The conveyer-bed can be shortened when necessary, by taking out one or more intermediate sections.

SIPHON WATER-ELEVATOR.—WALTER S. JEWELL, 534 Albion Street, Oakland, Cal. The invention is in the nature of a water-elevator, operating on the principle of the siphon and arranged to take water from a given level and to raise a portion of it to a higher level with no other aid than the useful fall or difference in level between the entrance and exit points of the siphon. It consists in the construction and arrangement of a siphon designed to operate as described. The invention is distinctive in so far as it does not employ pressure and momentum, but rather the principles of suction and gravity.

BINNACLE AND STEERING STAND.—WALTER T. STANWORTH, Norfolk, Va. The invention consists, broadly, in a combined steering-stand provided with a wheel and with an extension above the wheel, upon which extension the compass is placed. The steering-wheel and compass are carried by the same stand; and the steering-stand is provided with the steering-wheel and with the compass above and concentric with the wheel.

PROCESS OF MAKING GAS.—EMIL PILOUS, Vienna, Austria-Hungary. The process is intended to produce a white illuminating-gas by a new carbonizing method, from sweepings of houses, markets, and streets, residue of petroleum, of wood, and of coal, and other waste products. The gas is produced by the distillation of waste material and is conducted in a crude impure state through a carbureter containing calcium-carbid salts. The illuminating power is obtained, not simply by the admixture of acetylene gas, but principally by the removal of the carbon dioxid and pyro-pneumatic substances from the gas to be enriched. The intrinsic merit of the invention consists in placing the carbureter between the retorts and the gas-reservoir, so that the crude, impure gas must pass through the carbureter.

STROPPING MACHINE.—WILLIAM H. DOUGLAS, Belleville, N. J. This machine, for sharpening razors and other knives, consists of a frame in which a shaft is journaled. A blade-holder, secured on the shaft, extends alongside the roller. Gearing connects the roller and blade-holder shaft, so that upon rotating the driving-roller in one direction, a swinging motion is given to the blade-holder in an opposite direction. A spring is connected with the gearing and adapted to be compressed thereby. By the resiliency of the spring, the edge of the blade is caused to be moved out of engagement with the strop surface at the end of the stroke.

Designs.

FISHING-ROD TIP.—ARTHUR L. CLEAVER, Manhattan, New York city. The tip has a shank fitting on the end of the rod and a grooved head having flanges between which a wheel is held, over which the line runs.

CURTAIN-POLE RING.—JOHN KRODER, Manhattan, New York city. The leading feature of the design consists of depending eyes at the ends of a split ring.

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NEW BOOKS, ETC.

INDIA RUBBER, GUTTA PERCHA AND BALATA. By William T. Brannt. Philadelphia, Pa.: Henry Carey Baird. 1900. 12mo. Pp. 328. Price $3.50.

The present volume deals with the occurrence, geographic distribution and cultivation of rubber plants the manner of obtaining and preparing the raw materials, modes of working and utilizing them including washing, loss in washing, maceration, mixing and vulcanizing rubber and gutta percha compounds. The literature upon the rubber industry is so extremely limited that any work devoted to it is doubly welcome, even if it were not of the valuable nature of the present book. A careful examination of the book shows that the information contained in it is of great value and deals with the subject of experimenting upon rubber on a considerable scale. The publishers will send the book postpaid to any address in the world.

ETHNOLOGY. By Dr. Michael Haberlandt. London: J. M. Dent & Company. New York: The Macmillan Company. 1900. 16mo. Pp. 169. Price 40 cents.

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INORGANIC EVOLUTION AS STUDIED BY SPECTRUM ANALYSIS. By Sir Norman Lockyer, K.C.B., F.R.S. London and New York: The Macmillan Company. 1900. 8vo. Pp. 198. Price $1.75.

The author occupies an unique position in the scientific world and anything from his pen is sure to be excellent. The present volume contains an account of the author's most recent inquiries into the chemistry of the stars, and of some questions which have grown out of these inquiries. It is an important treatise concerning the evolution of the chemical elements; and points out especially that the first steps in this evolution may possibly be best studied by and most clearly represented in the long chain of facts now at our disposal touching the spectral changes observed in the hottest stars.