

RECENTLY PATENTED INVENTIONS.

Agricultural Implements.

HAY-RACK.—H. P. VOGLER, Waterville, Kans. The hay-rack is so constructed that the front wheels of the wagon on which it is placed may be turned short without danger of cutting the rack. The rack is further constructed so that it will not upset as readily as the ordinary rack, for it has a firm bearing upon the running gear of the vehicle.

Engineering Improvements.

HYDROCARBON-OIL ENGINE.—D. A. BRIGGS, Ewart, Mich. The object of this invention is to provide an engine of simple construction in which the heat of the cylinder is utilized to vaporize the fuel and to heat the mixing air. The hydrocarbon oil is conducted around the cylinder in a spiral tube. Before it reaches the air-mixing chamber it becomes highly heated. After being mixed with air it is exploded by a suitable igniter placed in the cylinder near the top.

SPRAY-PUMP FOR EXPLOSIVE-ENGINES.—J. T. METCALFE, Quincy, Pa. The invention relates to explosive engines in which successive charges of liquid hydrocarbon are first vaporized and mixed with air and then caused to explode. The particular objects of this invention are to make a suitable pump and appropriate connections for use in mechanism of this kind and also to cushion the rebound of the valve used to prevent the retrogression of gases upon the cylinder after each explosion.

FEEDER.—G. M. HILGER, Chicago, Ill. This feeder is adapted for use on boilers, open feed water heaters and the like, and is arranged to feed the liquid compound drop by drop into the feed water to prevent the formation of scales in the boiler.

PUMP.—O. J. BRACKNEY, Butler, Pa. This pump is of simple construction, having no projections such as collars and the like on its outer side, so that it may be readily inserted in a well, or withdrawn therefrom. The invention provides a simple means for fastening the inlet valve in place, whereby it may be easily removed or inserted without the use of a pipe wrench or similar tool.

EXHAUST MECHANISM.—T. D. KLINE, Savannah, Ga. The invention is an improvement in exhaust mechanism for use on locomotives. It consists of the main exhaust flue and an auxiliary exhaust flue opening in its lower end at one side of the main flue and gradually enlarging circumferentially around this main flue above its lower inlet end. Means are provided for controlling the auxiliary flue so that by opening the flue the exhaust is relieved of considerable back pressure.

TIRE-HEATER.—H. J. HENGEVELD, Savannah, Ga., and A. E. ADAMS, High Springs, Fla. The tire-heater is adapted for use in heating tires of locomotives, to permit their removal when worn without requiring the removal of the wheel. In construction the tire heater forms a burner ring which encircles the tire and secures a rapid heating thereof.

Machines and Mechanical Devices.

VOTING-MACHINE.—G. W. LAPRADA, Sago, Va. By this invention, Mr. Laprade provides means whereby the voter may print the names of the different candidates he wishes to vote for on the ballot sheet, which is arranged in the form of a strip wide enough to contain in one line the names of all the candidates to be voted for in the election. Means under the control of the judges of the election are provided for advancing the ballot sheet, which means are also arranged to operate the inking brush and further to operate a register, so that the number of voters that cast their ballots can be determined at any time.

MARKING-MACHINE.—R. N. MOODY, Aberdeen, Wash. This machine is especially useful as a device for marking linen and laundry goods. It comprises one or more type wheels, which may be set at any combination desired, and certain devices for inking the type and impressing the characters on the articles to be marked.

DRIVING DEVICE FOR SHAFTS.—J. HOLTSHAUS, Hüllen, Germany. The driving device is more especially designed for revoluble shafts having lengthwise vertical movement. The invention is arranged to prevent or reduce undesirable friction to a minimum and to allow any desired pressure to be exerted lengthwise of the shaft without interfering with the action of the driving device.

Miscellaneous Inventions.

GRATE.—T. H. LUCAS, Minneapolis, Minn. Difficulty has been experienced in burning fine and crumbling fuel, such as peat, sawdust, pea coal and the like, from the fact that the fine particles fall unconsumed through the grate whenever an attempt is made to remove the ashes, thus wasting a large quantity of fuel. The purpose of this invention is to provide a grate capable of retaining all fuel until consumed to ashes and then to remove the ashes without interfering with the unconsumed fuel.

BOTTLE-STOPPER.—JOHN HEARD, Strathroy, Canada. The body portion of the stopper is recessed at its lower end and receives a conical plug which is drawn upward by suitable attachments, thereby expanding the lower

end of the body so that it will fit tightly in the bottle-neck.

PROTECTIVE TUMBLING-HOOD FOR SHIPS' HATCHES.—J. BERGEBSEN, New York, N. Y. The hood is conical in shape and mounted at its apex by a ball and socket joint. Because of this fastening the hood under pressure of the wind will tumble in the direction of the wind, so that that portion of the hatch facing the direction of the wind is closed by the hood, while the rest of the hatch is open to permit ventilation. Means are provided for lowering the hood and effectually sealing the hatch whenever desired.

FISHING DEVICE.—J. SEILER, South Norwalk, Conn. The invention relates to a peculiar gang-hook fishing device adapted either for bottom or surface fishing. The hooks project radially from a body portion, and the line is connected to a shank pivoted on the central part of the body portion. When a fish takes the bait the line is drawn up sharply and the hook which engages the fish is allowed to stand still relatively to the other part of the apparatus, the body portion then tilting relatively to the shank of the device. This enables the hook effectively to engage and impale the fish.

CALENDAR.—M. LICHTER, New York, N. Y. The calendar consists of a plate having pairs of slots through which strips of flexible material with the proper letters and numbers thereon are passed. These strips are treated to curl or roll up, so that when unrolled the ends are passed through the slots and immediately curl or roll up on the back of the plate, drawing the front portion of the sheets taut. The curled-up ends not only form means for drawing the displayed portion of the sheets in taut condition, but also form handles for the operator to conveniently take hold of when adjusting the strips.

PAPER-FASTENER.—H. TRENCHARD, JR., Brooklyn, N. Y. The fastener comprises an eyelet adapted to be engaged through the back of an envelope and fingers extending from opposite sides of the eyelet adapted to be passed through the flap of the envelope and turned outward and downward thereon. The material between the openings in the flap forms a cover for the eyelet.

FLAT BRUSH.—W. H. HUMPHREY, New York, N. Y. The invention relates to brushes used by painters, varnishers, and other mechanics, and provides an improvement in flat brushes whereby the bristles are resiliently supported at the front and rear faces of the brush to insure proper flexing of the bristles when the brush is in use and at the same time allowing free flow of the paint, varnish or other material.

ROLL.—J. P. LANGE, Passaic, N. J. The device comprises a number of semi-circular sections placed together, edge to edge, so as to form wheel members. Endless bands of resilient material encircle these wheel members in such manner as to hold them together and also to hold together the oppositely disposed semi-circular sections in each wheel member. Longitudinal rods run entirely through the roll and short bolts secure together the semi-circular sections of each of the wheel members.

NOTE-BOOK.—A. L. HOLTEN, Norfolk, Va. The invention is an improvement in tablets in the form of note-books, and especially in books of such character designed for use by stenographers in taking notes. The base-plate of the note-book can be conveniently removed from the baseboard and turned end for end, this being especially desirable when the stenographer has written through the book on one side of the sheets and desires to readjust the book to the baseboard so as to write upon the other side of the sheets.

AIR-HEATER.—A. H. LOVEJOY, Gallia, N. J. This improved air-heater is arranged to utilize the fuel to the fullest advantage and to heat the air and conduct the same in a perfectly pure state into the rooms to be heated. The arrangement is such that each conduit extends from the air-inlet duct through the heater to an individual room without danger of the air being fouled with obnoxious gases and dust.

SAIL FOR MARINE VESSELS.—R. LUNDQUIST, Laguna, de Terminos, Mexico. The inventor has found by practical experience that when a boom and gaff sail is hauled on the wind, the part of the sail nearest the mast and the head of the sail along the gaff are the only parts which actually exercise a propelling effect on the vessel. The other parts merely lie across the course of the wind and tend to heel or tilt the vessel. In this invention provision is made for slacking away a portion of the sail thus avoiding this tilting effect.

GRANULATING ATTACHMENT FOR SALT-SHAKERS.—J. A. MOLLER, JR., New York, N. Y. This invention provides an agitator made of spring wire adapted to be attached to the inside surface of a cap for a salt-shaker. The agitator is so constructed as to extend within the body of the shaker and serves to hold the cap in place without resorting to a thread. Furthermore, its construction is such that upon the slightest turn of the cap forward or backward it will break up or granulate the salt which may have become clogged.

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AUTOS.—Duryea Power Co., Reading, Pa.

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WATER WHEELS. Alcott & Co., Mt. Holly, N. J.

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Handle & Spoke Mch. Ober Mfg. Co., 10 Bell St., Chagrin Falls, O.

Inquiry No. 2758.—For makers of copper, brass or steel lightning rods.

Sawmill machinery and outfits manufactured by the Lane Mfg. Co., Box 13 Montpelier, Vt.

Inquiry No. 2759.—For makers of the Little Giant wood planer, or a combination planer and jointer.

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Inquiry No. 2760.—For manufacturers of spring motors.

We design and build special and automatic machinery for all purposes. The Amstutz-Osborn Company, Cleveland, Ohio.

Inquiry No. 2761.—For dealers in automatic machinery for cutting small brass wheels, such as are used in clocks.

Special and Automatic Machines built to drawings on contract. The Garvin Machine Co., 149 Varick, cor. Spring Streets, N. Y.

Inquiry No. 2762.—For manufacturers of combination engine and boiler 4 or 5 h. p., the "Porcupine" preferred.

Manufacturers of patent articles, dies, stamping tools, light machinery. Quadriga Manufacturing Company, 18 South Canal Street, Chicago.

Inquiry No. 2763.—For dealers in essential oils, etc.

Vegetable and fruit-canning machinery wanted. Manufacturers please address with full particulars F. S. Wertz, 319 Franklin St., Reading, Pa.

Inquiry No. 2764.—For makers of match-making machinery.

The celebrated "Hornsey-Akroyd" Patent Safety Oil Engine is built by the De La Vergne Refrigerating Machine Company. Foot of East 138th Street, New York.

Inquiry No. 2765.—For dealers in the "Finger Cork Screw," which folds up into a shell-shaped wood handle, or something similar.

IDEAS DEVELOPED.—Designing, draughting machine work for inventors and others. Charles E. Hadley, 584 Hudson Street, New York.

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Inquiry No. 2767.—For makers of machines for rolling and gluing tubes for fire works, such as cannon crackers, Roman candles, etc.

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Inquiry No. 2783.—For makers of brass finger rings.

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Inquiry No. 2785.—For dealers in materials for covering shingles to prevent leaking.

Inquiry No. 2786.—For manufacturers of turbine water wheels.

Inquiry No. 2787.—For machinery for packing preserved provisions.

Inquiry No. 2788.—For dealers in armature toothed punchings.

Inquiry No. 2789.—For complete commutators or segments for small machines.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Issued for the Week Ending

June 10, 1902, AND EACH BEARING THAT DATE.

[See note at end of list about copies of these patents.]

Table listing various inventions and their corresponding patent numbers, including items like acids, adding machines, air brakes, automobiles, water wheels, diving suits, lightning rods, sawmills, wood planers, spring motors, automatic machinery, combination engines, patent articles, essential oils, fruit-canning machinery, match-making machinery, safety oil engines, cork screws, machine work, bobbin turning machinery, rotary bath brushes, horizontal boring mills, stationary steam boilers, brass bushings, portable ice machines, telegraph supplies, cast-iron specialties, ship-building companies, flying machines, celluloid novelties, automobiles, horizontal wind mills, brass finger rings, hygrometers, shingle covering materials, turbine water wheels, packing machinery, armature punchings, and commutators.

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CIVIL ENGINEERING AS APPLIED IN CONSTRUCTION. By Leveson Francis Vernon-Harcourt, M.A., M. Inst. C.E. London, New York and Bombay: Longmans, Green & Co. 1902. 8vo. Pp. xv-624.

The name of Vernon-Harcourt is in itself a sufficient guarantee for the trustworthiness and scholarliness of the present book. The range covered is wide. After an introductory part on materials, preliminary works, foundations and roads, Vernon-Harcourt begins a description of railway, bridge and tunnel engineering.

(Continued on page 441)

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