(Model.)

W. MILLARD.

LUBRICATOR.

No. 382,544. Patented May 8, 1888.

Fig. I.

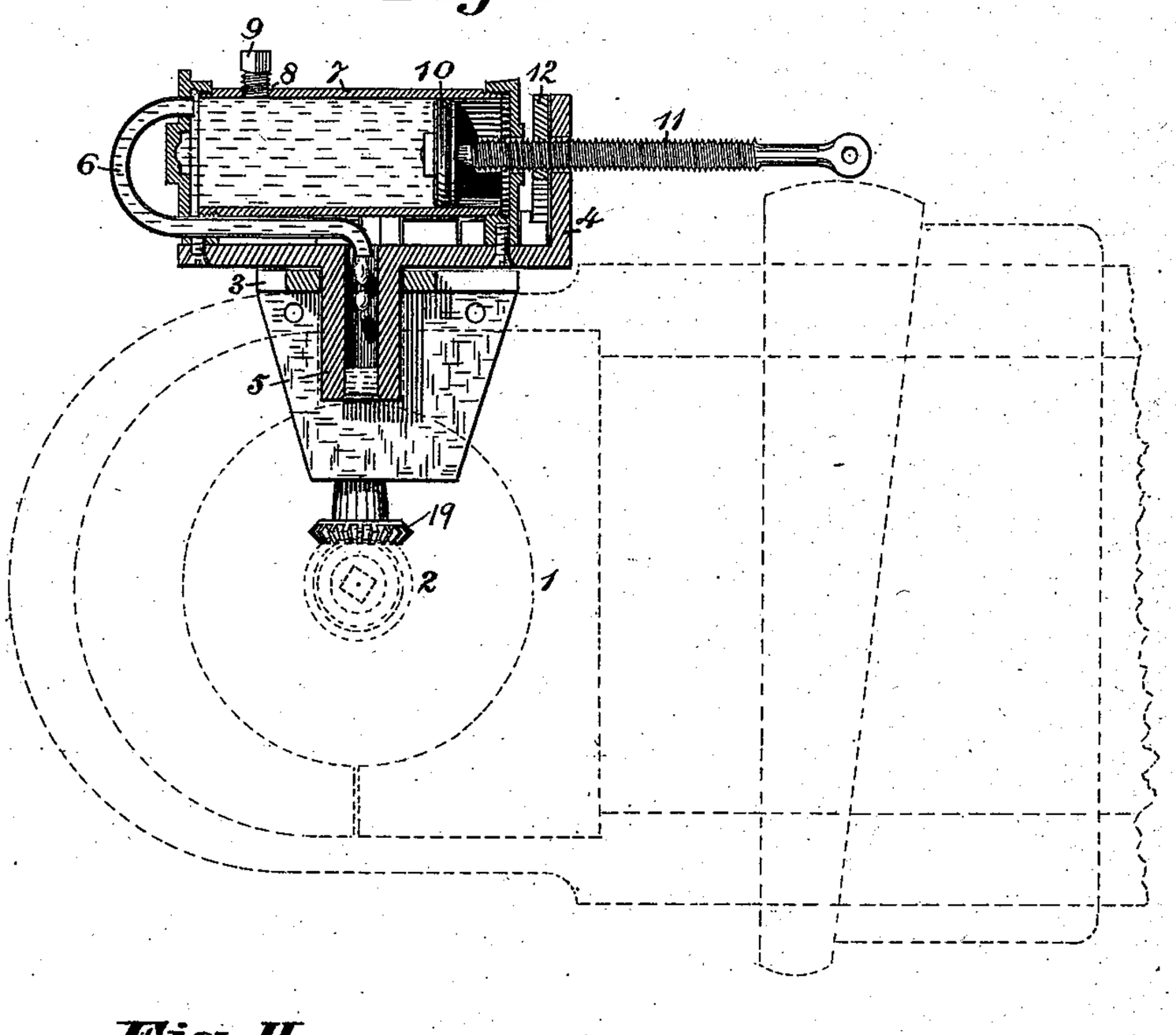


Fig. II.

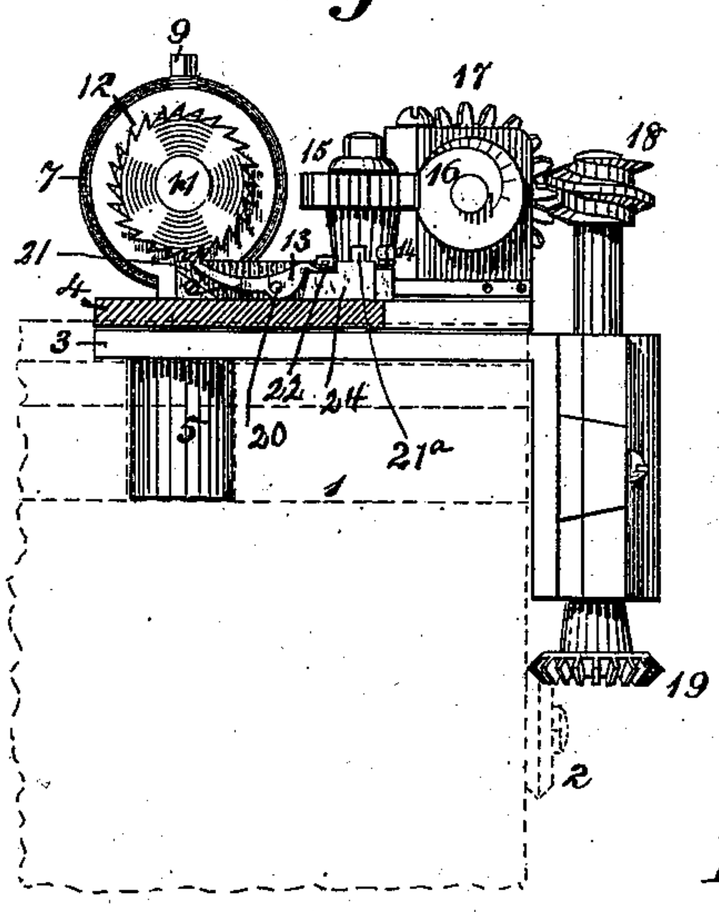


Fig. III.

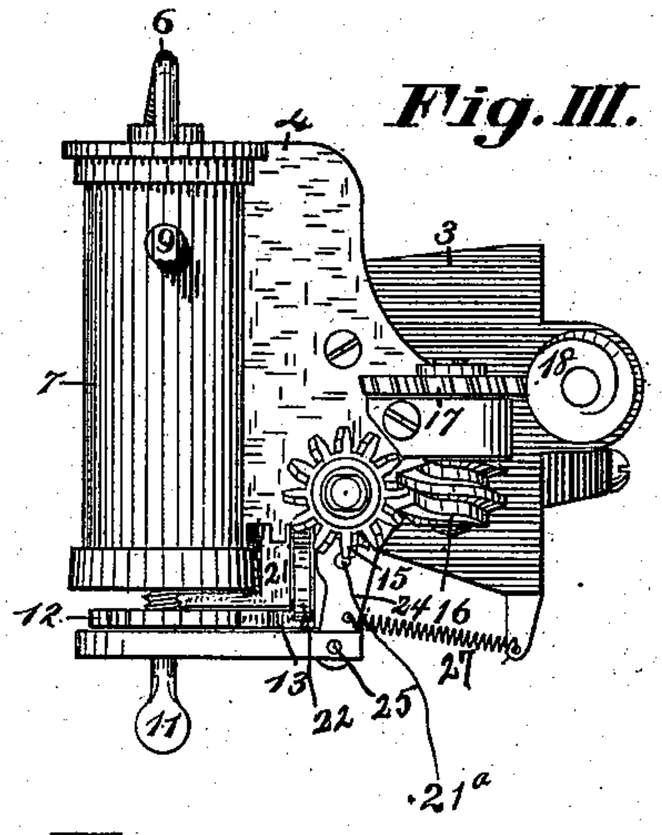
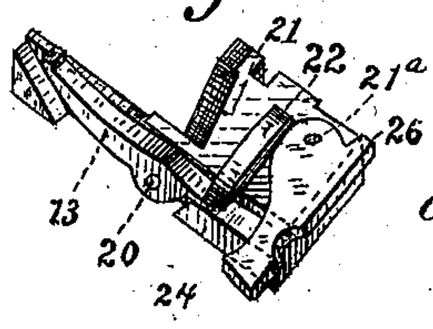


Fig. IV.



Attest:
Geo. H. Knight, Jr.
H. S. Knight

Inventor:
William Millard
By Knight Bros
Attys.

UNITED STATES PATENT OFFICE.

WILLIAM MILLARD, OF INDIANAPOLIS, INDIANA.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 382,544, dated May 8, 1888.

Application filed October 6, 1887. Serial No. 251,639. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM MILLARD, of Indianapolis, Marion county, Indiana, have invented a new and useful Improvement in Lubricators, of which the following is a specification.

The device relates to lubricating devices for rubbing-surfaces in general, but is more especially designed for, and is here shown applied to, the lubrication of crank-wrists.

When used for lubricating a crank-wrist, the rotary movement of the wrist is so transmitted through a wheel-and-worm movement to the piston of a grease-box or cylinder as to slowly but effectively express the lubricating-matter drop by drop through a suitable duct to the periphery of the wrist-pin.

The preferred form of my invention includes a pawl-and-ratchet movement, whereby the motion of the grease expressing piston is made to assume an intermittent character.

In the accompanying drawings, Figure I is a partly-sectioned side elevation of a lubricator embodying my improvements. Fig. II is a partly-sectioned end elevation of the same. Fig. III is a top view. Fig. IV represents in perspective the sliding block and its appendages.

In the above figures the crank-wrist, when shown, is represented by dotted lines. The dotted lines 1 and 2 respectively represent a crank-wrist and a bevel-wheel, which is made fast to the end of said wrist.

3 represents a bracket, which is fastened to the pitman-head, and 4 represents another bracket, which is fastened to said bracket 3. These two brackets support the various operative parts now to be described. Extending downward from the bracket 4 is a nozzle, 5, which, occupying a suitable hole in the pitman-head, communicates with the periphery of the crank-wrist. A discharge-duct, 6, conducts from the end of a cylindrical grease-box, 7, into said nozzle. The grease-box 7 has a charging-hole, 8, which is normally closed by a screw-plug, 9. The said grease-box 7 has a packed piston or plunger, 10, whose screw-threaded rod or stem 11 occupies a correspondingly-screw-threaded eye in a ratchet-wheel, 12, which is capable of being intermittingly rotated by a spring-pawl, 13, that is itself actuated periodically by a tappet, 14, which projects from a wheel, 15, into which gears a worm, 16, whose shaft carries a wheel, 17, into which there similarly meshes a like worm, 18, on whose shaft is a bevel-wheel, 19, propelled by the intermeshing-wheel 2 on the end of the crank-wrist.

The spring-pawl 13 is fulcrumed at 20 within a recess to a sliding block, 21, (see Fig. IV,) and its tooth is held normally in contact with the ratchet-wheel 12 by pressure of a spring, 22, upon the heel or rear end of the pawl. The slide 21 is pivotally connected at 21^a to a lever, 24, which is fulcrumed at 25 to bracket 4, and against whose projection 26 the tappet 14 impinges at each revolution of the wheel 15. This movement is made against a spring, 27, whose recoil after the tappet 14 has passed out of contact with the projection 26 restores the parts to their normal position in readiness for the ensuing tappet action.

I claim as new and of my invention—

The lubricator for crank-wrists consisting of the combination of grease-box 7, having duct 6 communicating with the periphery of the crank-wrist, piston 10, having a screw-threaded stem, 11, ratchet-wheel 12, having a screw-threaded eye, suitably-operated pawl 13 for intermittently rotating the latter, wheel 15, having tappet 14, lever 24, with which the latter is adapted to engage, and wheel and worm gear connection 16, 17, 18, 19, and 20 with the crank-wrist, substantially as set forth.

In testimony of which invention I hereunto set my hand.

WILLIAM MILLARD.

Attest:

K. G. REID,

HARRY STEMEN.