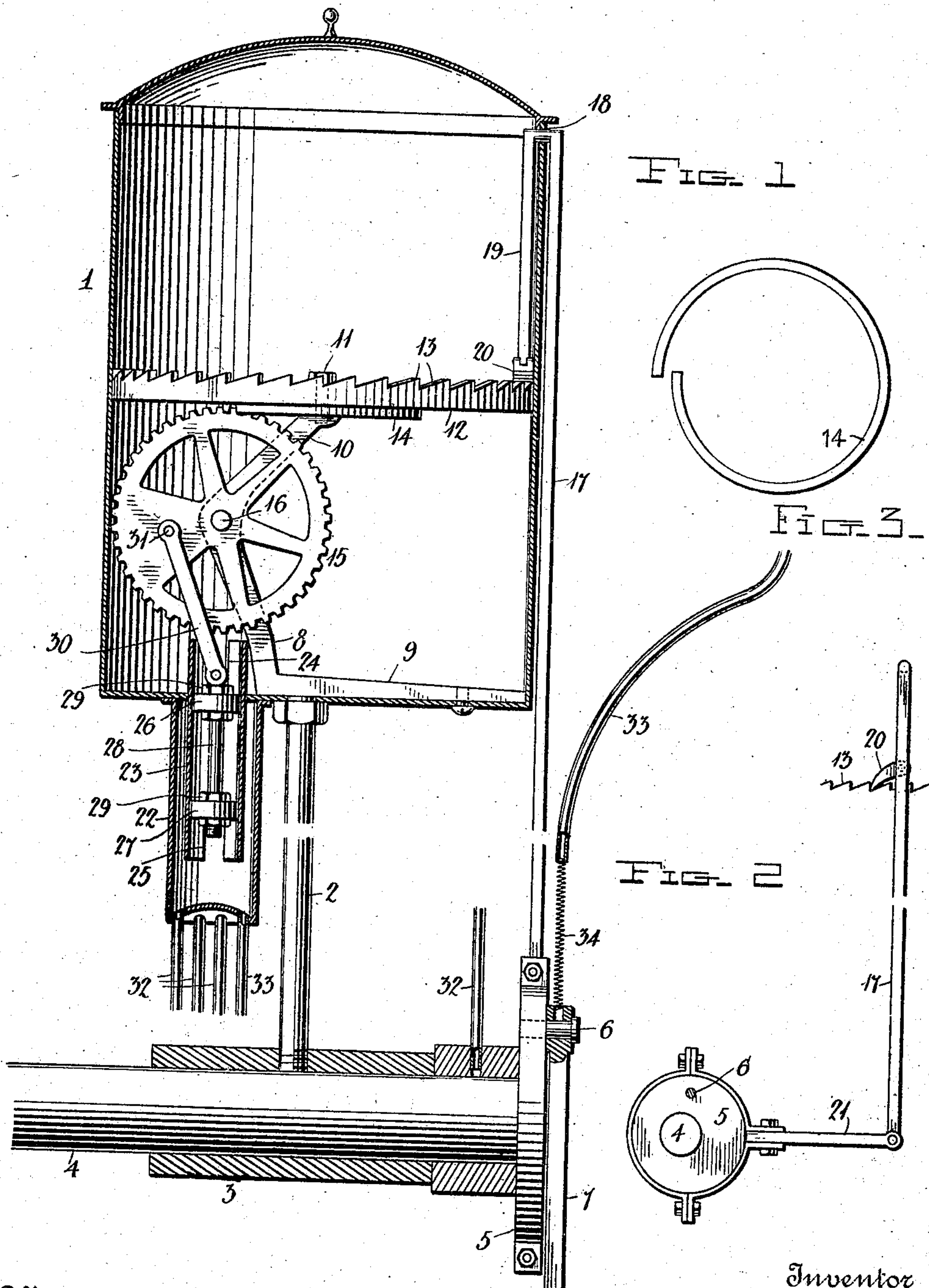


No. 847,898.

PATENTED MAR. 19, 1907.

T. E. BROOKS.  
LUBRICATOR.

APPLICATION FILED APR. 9, 1906.



Witnesses  
*J. L. Perkins*  
*C. H. Griebauer*

Inventor  
*T. E. Brooks*  
by *A. B. Wilson & Co.*  
Attorneys



# UNITED STATES PATENT OFFICE.

THOMAS E. BROOKS, OF CHICAGO, ILLINOIS.

## LUBRICATOR.

No. 847,898.

Specification of Letters Patent.

Patented March 19, 1907.

Application filed April 9, 1906. Serial No. 310,875.

*To all whom it may concern:*

Be it known that I, THOMAS E. BROOKS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Lubricators; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention is an improved lubricator, especially adapted for lubricating the bearings of windmills, but also adapted for use in lubricating the bearings of other kinds of machinery; and it consists in the construction, combination, and arrangement of devices hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a vertical sectional view of a lubricator embodying my invention, and Fig. 2 is a detail elevation. Fig. 3 is a detail plan view of the worm or spiral gear.

In accordance with my invention I provide a can or reservoir 1 to hold a quantity of oil or other suitable lubricant. Said can or reservoir is here shown as supported by a standard rod 2, which extends upwardly from the bearing 3 for the shaft 4 of a windmill. The said shaft is here shown as provided at one end with a crank-wheel 5, to the crank-pin 6 of which is attached the usual pitman-rod 7. In the lower portion of the reservoir is a bracket 8, having a lower horizontal arm 9, which bears on and is secured to the bottom of the reservoir, and an upper arm 10, having a stud or other bearing 11, on which rotates a disk 12. The said disk is provided on its upper side with ratchet-teeth 13 and is provided on its lower side with a worm 14. A worm wheel or gear 15, which has its bearing 16 on one side of the bracket 8, is engaged by the said worm 14, so that the said gear 15 is partly rotated to the extent equal to the space between two of its teeth or spurs at each rotation of the disk 12. The latter is rotated by a step-by-step movement by means of an oscillating rod 17, which is here shown as having its bearings at 18 in one side of the reservoir, near the upper end thereof, and as provided with a depending inner arm 19, having a dog 20, which successively engages the teeth 13 of the disk 12 and turns said disk to a slight extent equal to the space between two of the said teeth 13 at each movement of said oscillating rod 17.

Any suitable means may be employed to operate the said oscillating rod. For the purposes of this specification it is shown as operated by a rod 21, which has an eccentric-strap engaging the periphery of the crank-wheel 5, the latter being eccentrically mounted on said shaft 4.

A cylinder 22 depends from the reservoir 1. A tube 23 extends downwardly in the said cylinder 22 for a suitable distance and also extends for a suitable distance up from the bottom of the reservoir. The upper and lower ends of the said tube are open and are respectively provided with slots 24 25 of suitable length, which form channels for the escape of lubricant from the reservoir 1 and the tube 23, as hereinafter described. The channels 24 extend from the upper end of the tube 23 down to the level of the bottom of the reservoir. The channels 25 in the lower end of said tube are of the same length as said upper channels 24.

A pair of valves 26 27 operate simultaneously in the tube 23 and are connected together by a rod 28. Nuts 29 are here shown screwed on said rod and clamped against the upper and lower sides of the said valves to hold the latter in place on the rod. A pitman 30 connects the upper end of the valve-rod to a wrist-pin 31, with which the gear-wheel 15 is provided. The said valves are so spaced apart that when they are at the upper limit of their movement the channels 25 will be closed by the lower valve 27, while the extreme lower ends of the channels 24 will be opened to a very slight extent by the upper valves 26. When the said valves are at the lower limit of their movement, the upper ends of the channels 25 will be slightly opened by the lower valve 27 to permit the escape of oil from the tube 23 into the cylinder 22, the upper valve 26 controlling the escape of oil from the reservoir into the said tube 23. It will be understood that the said valves will be moved by the action of the gear 15 and the pitman 30.

The oil from the cylinder 22 is led through suitable tubes 32 to the various bearings of the windmill or other machine. Where the bearing is a movable one—as, for instance, in the case of the pin 6—the tube 33, which leads from the cylinder 22, terminates short of the bearing 6, and a spring-coil 34, made of wire or other suitable material, connects the lower end of said tube 23 to the said movable



bearing. This spring-coil, while serving to conduct the oil from the tube 33 to the movable-bearing, yields and accommodates itself to the movement of the said bearing. It  
 5 will be understood that the mechanism in the can or reservoir 1 is covered by the oil or other lubricant in the said reservoir.

From the foregoing description, taken in connection with the accompanying drawings,  
 10 the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be  
 15 resorted to without departing from the principle or sacrificing any of the advantages of this invention as defined in the appended claims.

Having thus described my invention, what  
 20 I claim as new, and desire to secure by Letters Patent, is—

1. In a lubricator, the combination of a reservoir, simultaneously-movable valves to control the discharge of lubricant therefrom,  
 25 a gear-wheel in said reservoir, a connection between said gear-wheel and said valves to operate the latter, a disk in said reservoir having a worm engaging said gear-wheel and also provided with ratchet-teeth, a rocking

element, and a dog carried thereby to engage  
 said ratchet-teeth for the purpose set forth. 30

2. In combination with means to discharge a lubricant, a movable bearing, a tube leading from said lubricant-discharging means, and a spring-coil connecting the  
 35 lower end of said tube to said bearing, for the purpose set forth.

3. In a lubricator, the combination of a reservoir, a cylinder extending downwardly therefrom, a tube with its upper end in the  
 40 lower portion of the reservoir, its lower end in the cylinder, and having vertical slots in its upper and lower ends, a pair of valves in said tube, coacting with the slots thereof to permit oil to pass from the reservoir into the  
 45 tube and from the latter into the cylinder, means to simultaneously reciprocate the said valves, and means to adjust the valves toward and from each other to vary the quantity of oil discharged by the lubricator. 50

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

THOMAS E. BROOKS.

Witnesses:

JOHN S. LERPA,  
 JOHN J. DOLAN.