(No Model.)

C. L. BURBECK.

OIL CUP.

No. 433,849. Patented Aug. 5, 1890.

Fig: 2.

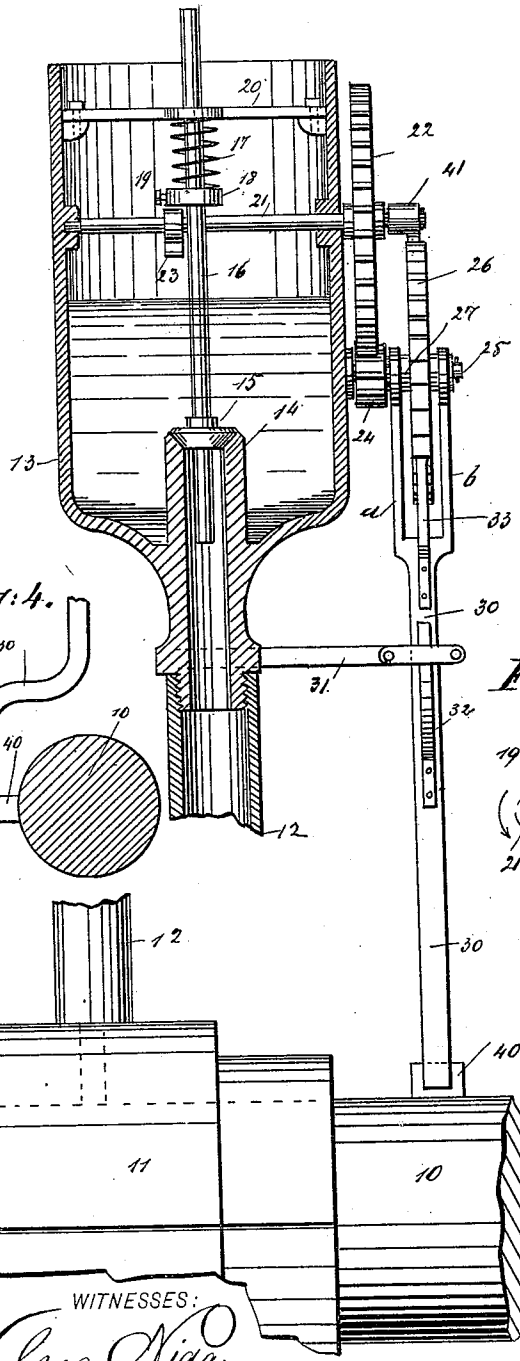


Fig: 1.

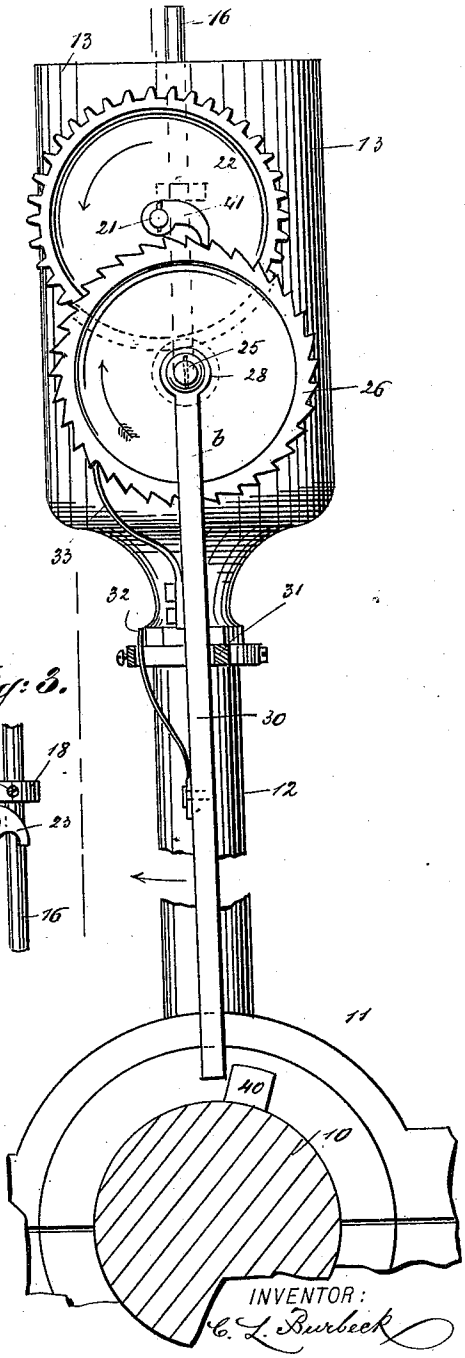


Fig: 4.

Fig: 3.

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CHARLES L. BURBECK, OF FORT BRAGG, CALIFORNIA.

OIL-CUP.

SPECIFICATION forming part of Letters Patent No. 433,849, dated August 5, 1890.

Application filed December 12, 1889. Serial No. 333,422. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. BURBECK, of Fort Bragg city, in the county of Mendocino and State of California, have invented a new and Improved Oil-Cup, of which the following is a full, clear, and exact description.

This invention relates to oil-cups, the object of the invention being to provide for the intermittent delivery of oil to a journal-bearing, and also to provide for the regulation of the amount of oil so delivered to the bearing; and to the ends above named the invention consists of certain novel constructions, arrangements, and combination of elements, all as will be hereinafter fully explained, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a side view, in partial section, of an oil-cup embodying my invention, the shaft being shown in section and portions of the bearing being broken away. Fig. 2 is a partial sectional elevation of the cup, the view being taken from a direction at right angles to the line of the shaft. Fig. 3 is a detail view of a portion of a valve-stem and its operating-cam, and Fig. 4 is a detail view of a modified construction.

In the drawings, 10 represents a shaft, and 11 its journal box or bearing, to which bearing, through the medium of a pipe 12, there is connected an oil-cup 13.

Within the oil-cup 13 is formed a valve-seat 14, upon which there normally rests a valve 15, that is carried by a stem 16, the valve being held to its seat by a spring 17, the lower end of which spring bears against a collar 18, that is adjustably connected to the stem and held to place by a set or binding screw 19, while the upper end of the spring bears against a cross-piece 20, that is apertured to receive the stem 16.

Within the oil-cup there is mounted a shaft 21, which carries a gear 22 and a cam 23, the gear 22 being engaged by a pinion 24, that is studded to the side of the oil-cup.

Upon the stud 25, which carries the pinion 24, there is mounted a ratchet-wheel 26, which said wheel is connected to the pinion by a sleeve 27. The sleeve 27 passes loosely through eyes 28, that are formed at the upper end of the members *a* and *b* of a bifurcated lever 30, the main body of the lever passing through a bracket 31, that is carried by the oil-cup body, the lever being normally held in the position in which it is shown in Fig. 1 by a spring 32. This lever 30 carries a spring-pawl 33, that engages the ratchet 26, so that if the lever be swung, as indicated by the arrow shown in connection therewith, the ratchet-wheel will be advanced in the direction of its arrow, and the sleeve 27 will be turned, so as to carry the pinion 24 forward, and as the pinion 24 so moves forward the gear 22, and with it the cam 23, will move in the direction of the arrow shown in connection with said gear in Fig. 1.

To bring about the movement of lever 30 just described, I provide the shaft 10 with a lug or projection 40, and I carry the end of the lever 30 downward, so that such end extends into the path of the lug or projection, and consequently at every revolution of the shaft 10 the lever is thrown forward and the shaft 21 is advanced, all retrograde motion of the parts being prevented by a gravity-pawl 41, that is loosely mounted on the extending end of the shaft 21. In this way an intermittent forward motion is imparted to the shaft 21, and consequently to the cam 23, and at each revolution of the cam the valve-stem will be moved and a supply of oil will feed downward to the journal-bearing. By changing the shape of the cam 23 or by raising or lowering the collar 18 the supply of oil delivered at each upward throw of the valve-stem may be regulated, or the supply could be regulated by changing the relative proportions of the gear 22 and pinion 24.

Although I have represented the gear 22 and pinion 24 as being arranged upon the outside of the cup, it will of course be understood that the apparatus could be so constructed that the gears could be upon the inside of the cup.

Instead of carrying the lever 30 to a point directly over the shaft 10, it might be bent, as shown in Fig. 4, and carried down at one side of the shaft. This arrangement is preferred when it is desired at times to impart a reverse motion to the shaft 10.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. The combination, with an oil-cup formed with a valve-seat, of a valve seated thereon, a stem extending upward from the valve, a collar carried by the stem, a spring arranged in connection with the stem, a cam mounted beneath the collar, and a means for turning the cam, substantially as described.

2. The combination, with an oil-cup formed with a valve-seat, of a valve, a stem arranged in connection therewith, a collar carried by the stem, a spring arranged in connection with the stem, a transverse shaft, a cam carried thereby, said cam being arranged to bear upon the stem-collar, a ratchet-wheel, a pawl-carrying lever arranged in connection therewith, connections between the ratchet-wheel and the cam-carrying shaft, and a means for rocking the lever.

3. The combination, with a shaft provided with a projection and a bearing in which said shaft is mounted, of an oil-cup, connections between the cup and the bearing, a valve arranged in connection with the cup, a stem by which the valve is carried, a collar mounted upon the stem, a spring arranged in connection with the stem, a transverse shaft, a cam carried thereby, a gear 22, mounted upon the shaft, a pinion 24, which engages the gear, a ratchet mounted to turn with the pinion, and a swinging lever provided with a pawl which engages the ratchet, the lower end of the lever extending into the path of the shaft projection, substantially as described.

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Witnesses:
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