

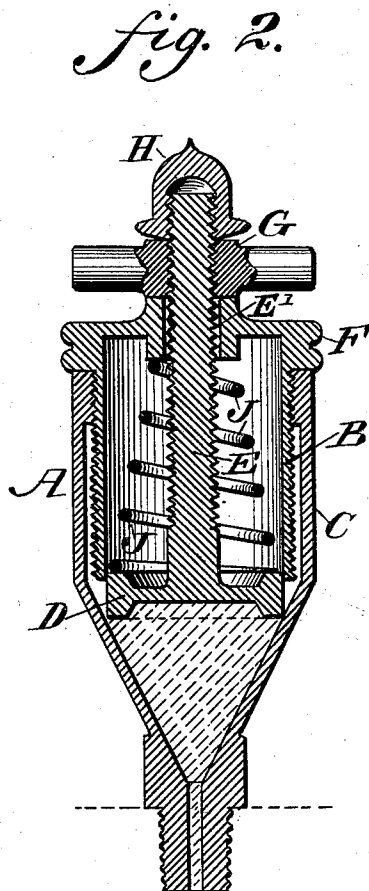
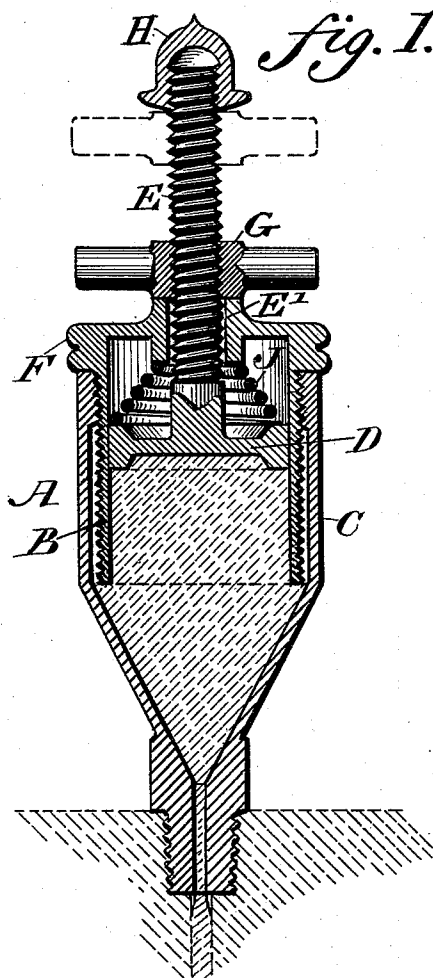
(No Model.)

2 Sheets—Sheet 1.

W. F. CRONIN.  
LUBRICATOR.

No. 535,196.

Patented Mar. 5, 1895.



WITNESSES:

*L. Douville,*  
*P. H. Tragle.*

INVENTOR  
*William F. Cronin*  
BY *John A. Wiedersheim*  
ATTORNEY.

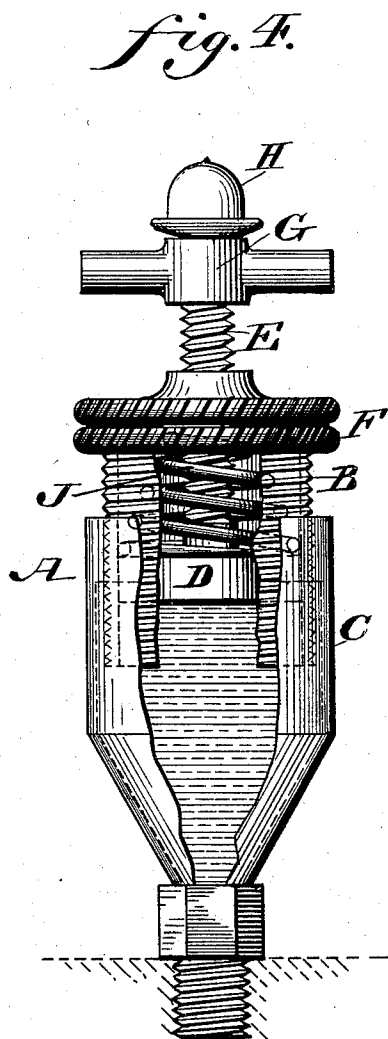
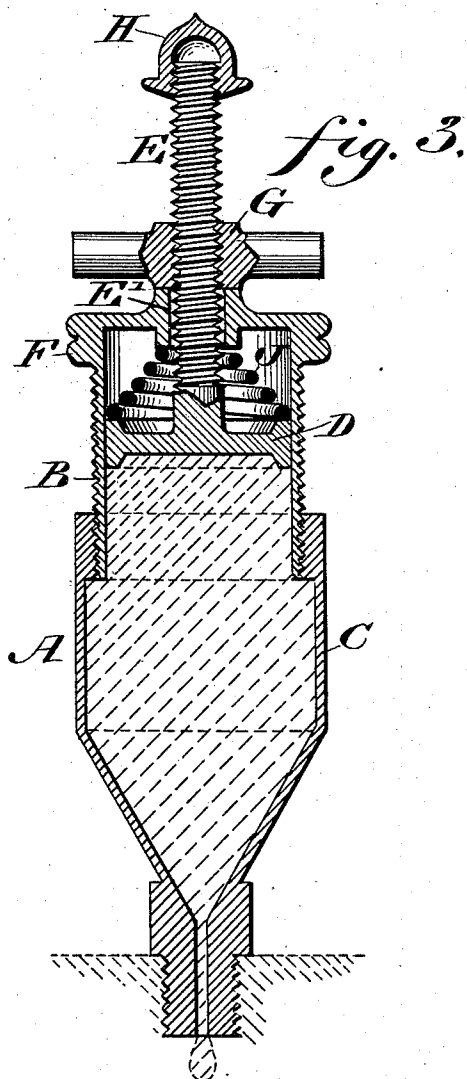
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W. F. CRONIN.  
LUBRICATOR.

2 Sheets—Sheet 2.

No. 535,196.

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Witnesses  
*L. Douville,*  
*Q. F. Eagle,*

Inventor  
*William F. Cronin*  
By *John A. Diederichsen*  
Attorney

# UNITED STATES PATENT OFFICE.

WILLIAM F. CRONIN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO  
ADAM WARREN FRANCE, OF SAME PLACE.

## LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 535,196, dated March 5, 1895.

Application filed March 10, 1894. Serial No. 503,081. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM F. CRONIN, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Grease-Cups or Lubricators, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a novel construction of grease cups or lubricators, provided with a movable follower and having a spring employed to actuate said follower, provision being made for readily adjusting the capacity of the cup body, and for regulating the tension of said spring, whereby a uniform and unvarying pressure can be applied to said follower at all times, from the beginning to the end of its stroke, thus positively insuring regularity of feed, and enabling hard or soft grease to be used without choking the feed outlet, since the pressure upon the follower can be increased according to requirements as the spring becomes weak or distended, all as will be hereinafter set forth.

Figure 1 represents a vertical section of a grease cup or lubricator embodying my invention, the same being shown adjusted to its partial capacity, and in operative position. Fig. 2 represents a similar view of the same nearly empty. Fig. 3 represents a view similar to Fig. 1, but showing the cup body adjusted to its maximum capacity. Fig. 4 represents a side elevation of the cup having a portion broken away, showing the manner of adjusting the tension of the actuating spring, as the cup empties.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings: A designates the body of a grease cup or lubricator, the same being formed of the sections B and C, the upper section being located within the lower section and screwed thereto.

D designates a follower which is freely fitted in the section B, the latter being extended so as to form a casing or cylinder in which said follower moves, the latter having connected with it the screw-stem E, which passes freely through the opening E' in the cap F of the section B, said cap serving as the top of

the device when the parts are assembled, the aforesaid stem having fitted to it the handled-nut G, which is adapted at times to turn on the wall of said opening E', said stem having also on its upper end the nut H, which acts as a stop for the upward movement of the nut G, as shown in dotted lines Fig. 1, whereby it will be seen that by adjusting the said nut H vertically on the stem E, and turning the nut G so as to contact therewith, the precise point at which it is desired to terminate the stroke of the follower can be readily determined.

Interposed between the cap F, and follower D, is a coiled spring J, which is compressed by the ascent of the follower, and whose tendency then is to depress said follower.

The operation is as follows: The nut is rotated so as to raise the follower, and the sections of the body A are separated so that the interior of each is accessible. The upper section is inverted and filled with tallow or grease, and the lower section is also filled with such material, after which the upper section is restored within the lower section, it being seen that the body A is now fully supplied with the tallow or grease, and the parts are in position shown in Fig. 3, in which position the spring J is compressed and the follower is controlled by the nut G. The nut G is now rotated so as to rise on the stem E, as shown by the dotted lines Fig. 1, whereby as said stem freely occupies the opening E' in the cap F, the follower is subjected to the downward pressure of the spring J, whereby it exerts its pressure on the tallow or grease, and consequently forces the latter from the body through the bottom bore thereof to the place of service. As the tallow or grease is removed, the follower descends, and when it is at its lowest point, the nut G contacts with the cap F, announcing the necessity of replenishing the body, which is accomplished by separating the sections, raising the follower by the operation of the nut G, then filling the sections and restoring the upper section within the lower one, when the parts are again in position shown in Fig. 1. When the upper section is empty, and the sections are disconnected, the nuts H, G, may be successively unscrewed from the stem E, and the follower removed at the lower end of the upper section, it being noticed that the

stem passes freely through the opening E', it being disconnected from the wall of said opening, as has been stated. It will also be seen that the inner section B of the body is connected with and depends from the cap F, so that said section may be readily rotated in opposite directions, and provision is made for adjusting the length of the body in order to increase or decrease the capacity thereof, the increase in the capacity of the cup being shown in Fig. 3. It will also be noticed that since the follower D has its bearing on the inner bore of the section B, in case the said section B should become damaged from any cause, it can be readily removed and replaced at a slight expense, without necessitating the removal and loss of the entire cup, and it will also be observed that when the parts are assembled, as seen in Figs. 1 and 2, the liability of leakage at the joint formed by the cap F with the section C will be reduced to a minimum; by reason of the extension of the section B within the section C, a feature which has been found to be of great importance in practice.

I am aware that it has been heretofore proposed to make a grease cup in two parts, and to extend the upper section into the lower section, and I do not therefore claim the above feature broadly, but only in combination with other elements which co-operate to make a commercially efficient cup in which hard or soft grease can be employed with equally good results, the tension of the actuating spring being kept uniform throughout the stroke of the follower by advancing the upper section into the lower section as the said follower descends, thus compressing the spring according to requirements, the cup being shown par-

tially empty in Fig. 4, and the upper section B advanced for a portion of its length into the lower section, as is evident.

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

1. A grease cup formed of the threaded hollow sections B and C, said section B being extended within the section C, and having the cap F provided with an opening E' therein, the follower D having its bearing on the inner bore of said section B, the threaded stem E attached to said follower, the nut G on said stem above said cup, and the spring J supported on said follower, and contacting with said cup, whereby the tension of said spring can be kept uniform as the cup empties, by advancing the said upper section into the lower section, the above parts being combined substantially as described.

2. A grease cup formed of the sections B and C, the upper section being extended within the lower section, and the follower D having its bearing on the inner bore of the said section B, the screw stem E connected with said follower and passing freely through an opening in said cup, a handled nut on said stem above said cup, a second nut engaging said stem above said handled nut, whereby the stroke of the follower can be positively limited, and a spring resting on said follower and contacting with the cup of the upper section, whereby the pressure upon said follower can be adjusted and kept uniform at all points of its stroke, substantially as described.

WILLIAM F. CRONIN.

Witnesses:

JOHN A. WIEDERSHEIM,  
R. H. GRAESER.