

No. 611,126.

Patented Sept. 20, 1898.

W. HUNT.
LUBRICATOR.

(Application filed Sept. 11, 1897.)

(No Model.)

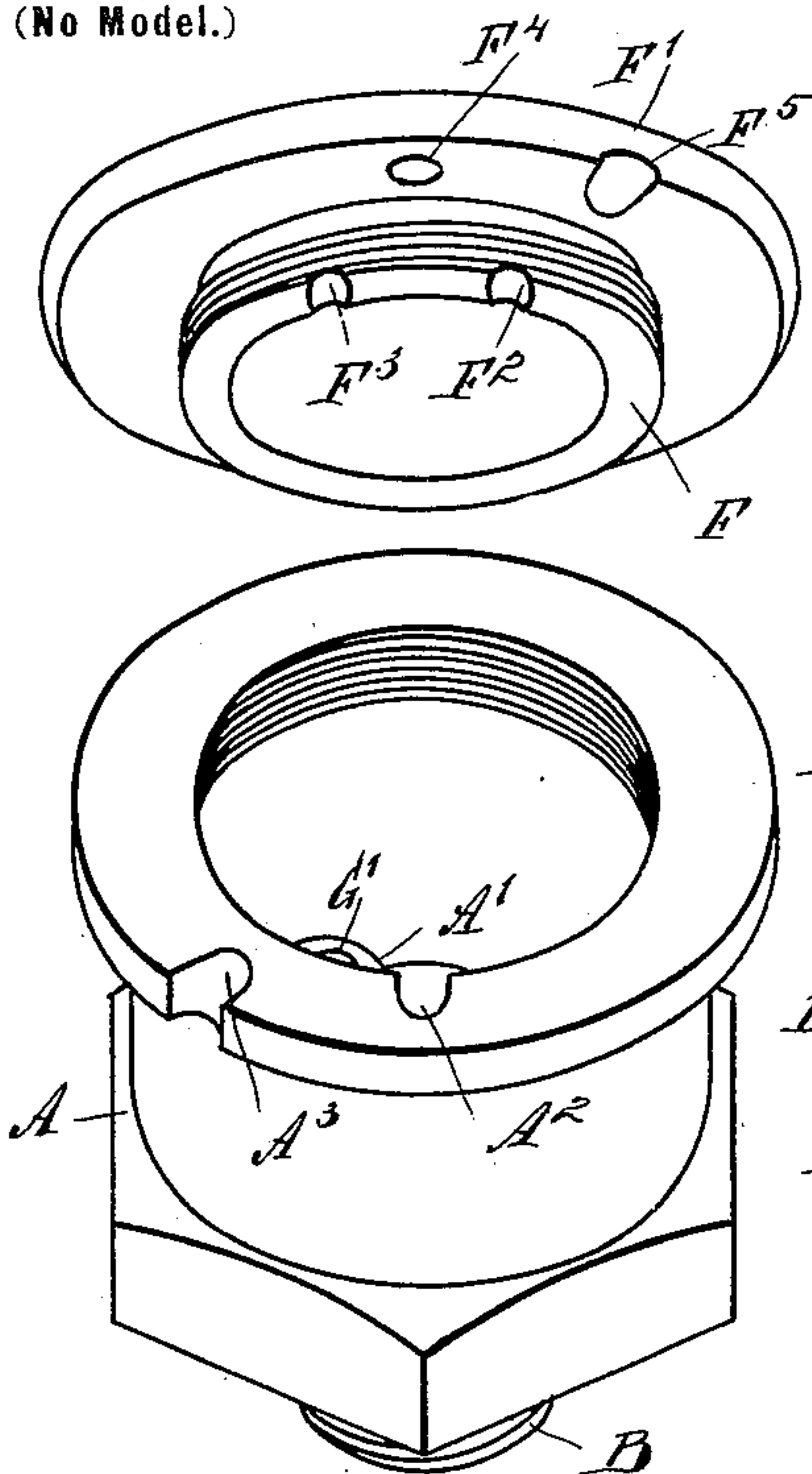


FIG. 1.

FIG. 2.

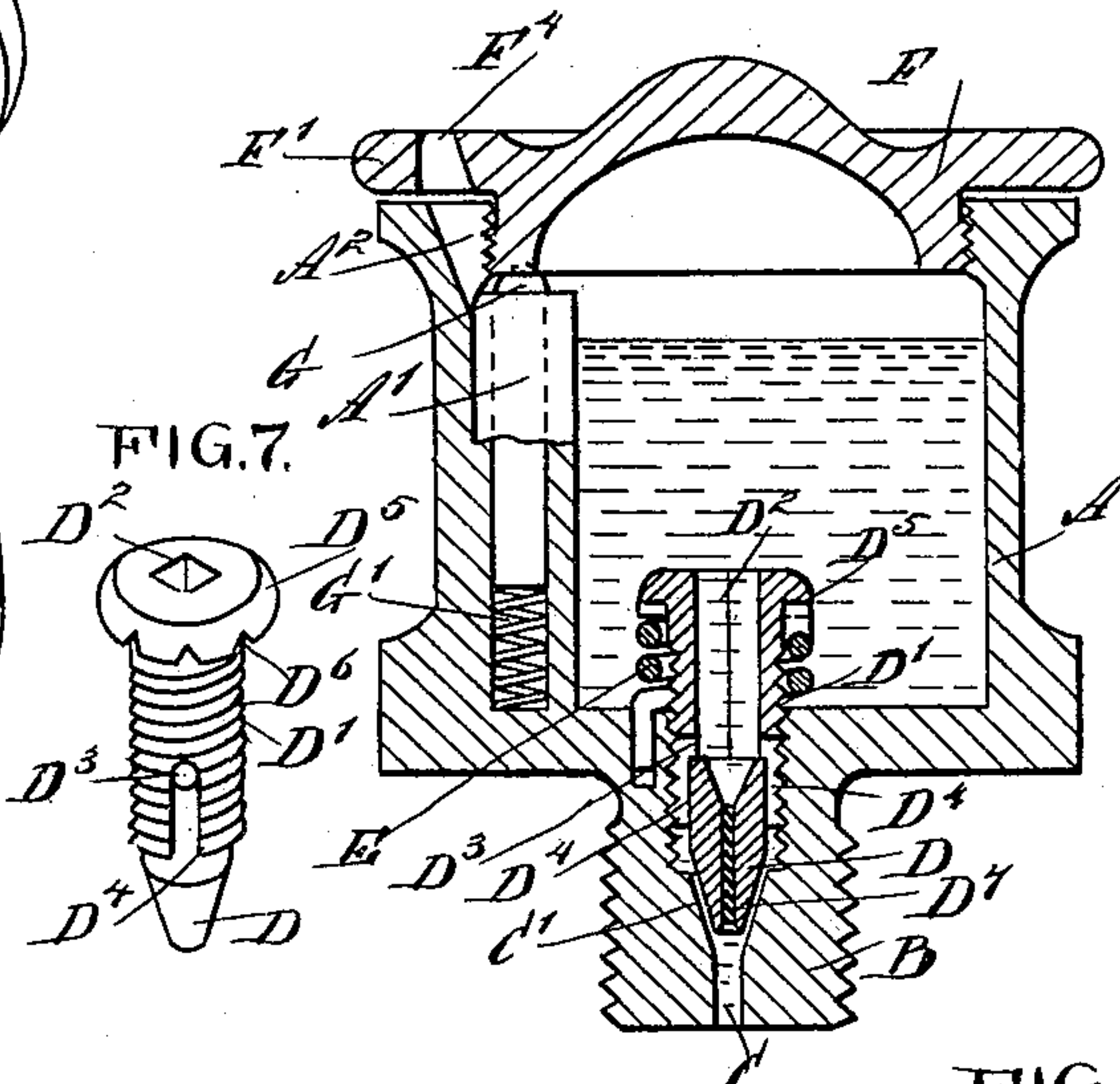


FIG. 7.

FIG. 3.

FIG. 5.

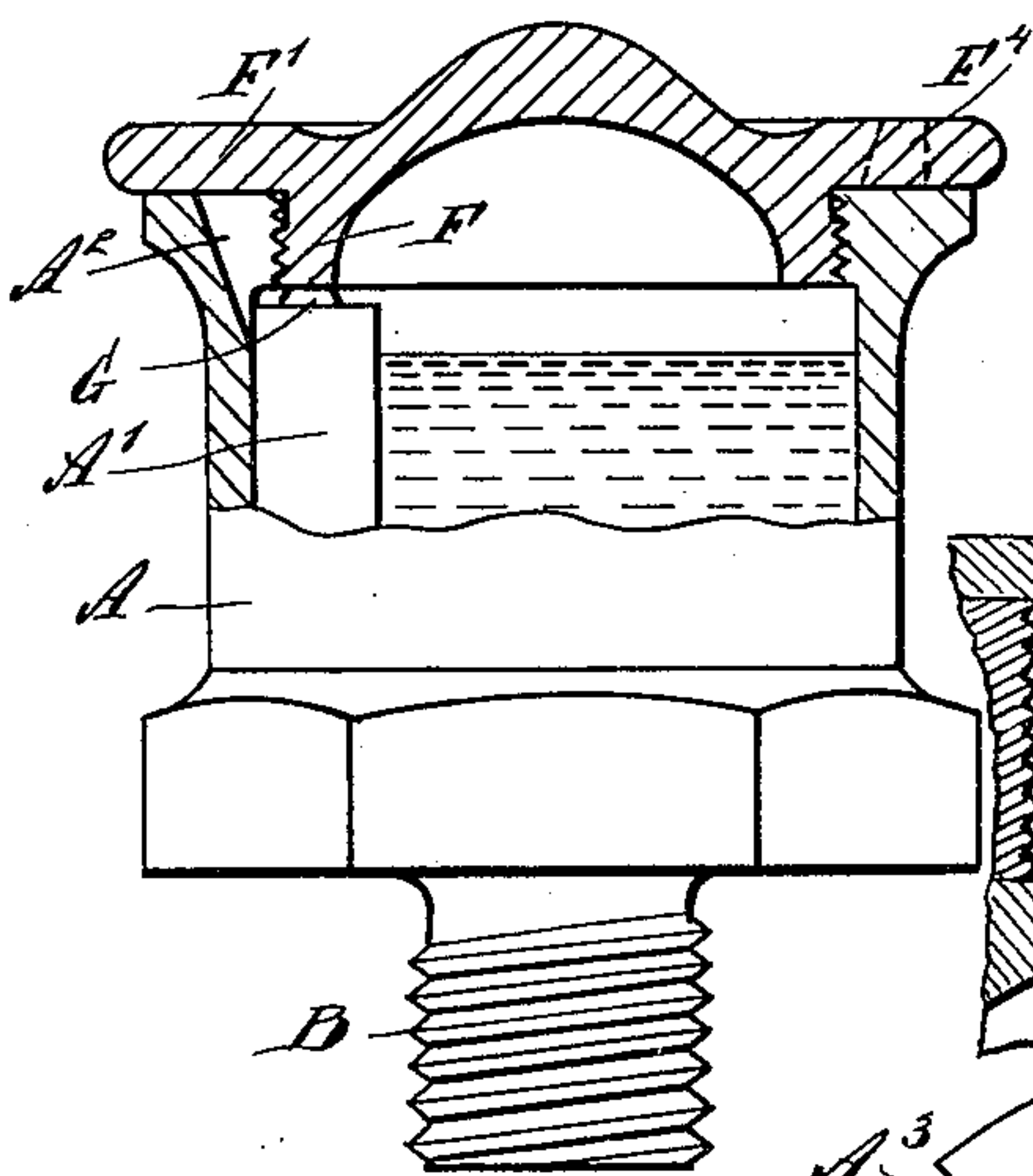
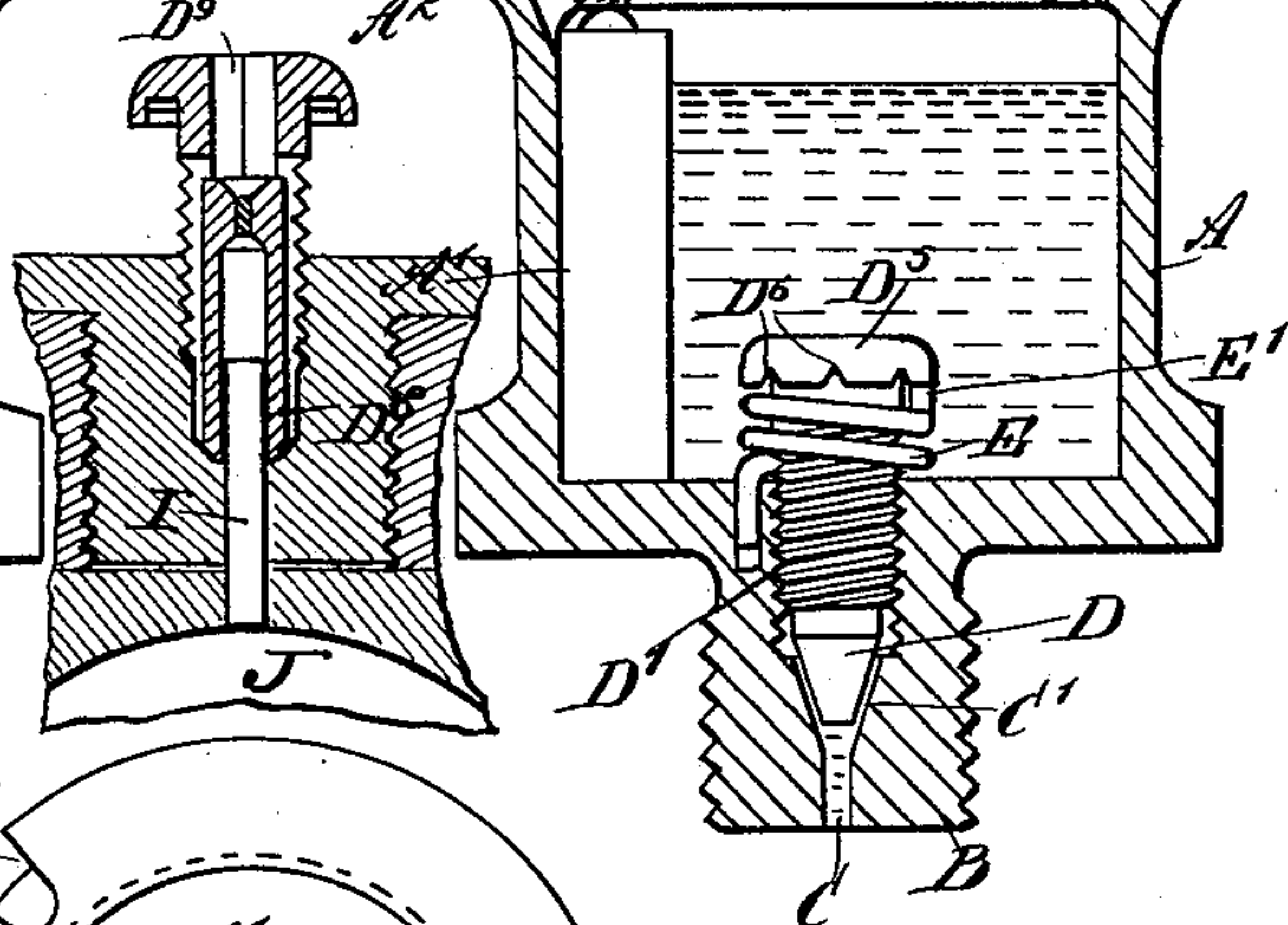


FIG. 4.

FIG. 6.

FIG. 8.



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LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 611,126, dated September 20, 1898.

Application filed September 11, 1897. Serial No. 651,330. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HUNT, of Winnipeg, in the Province of Manitoba and Dominion of Canada, have invented a new and Improved Lubricator, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved lubricator which is simple and durable in construction, completely dust-proof, arranged to regularly feed a desired quantity of lubricant, and to permit the operator to conveniently stop the feed whenever desired and to fill the cup with fresh lubricant without removal of the cap.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

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

Figure 1 is a perspective view of the improvement with the cover unscrewed from the cup. Fig. 2 is a sectional side elevation of the improvement with the cap in position for filling the cup. Fig. 3 is a side elevation of the same with the cap in position for stopping the feed, parts being in section. Fig. 4 is a sectional side elevation of the improvement with the cap in position for feeding. Fig. 5 is a sectional side elevation of part of the cap and cup. Fig. 6 is a plan view of the cup. Fig. 7 is a perspective view of the feed-plug, and Fig. 8 is a sectional side elevation of a modified form of the feed-plug.

The improved lubricator consists of a cup A, adapted to contain the oil or other lubricant, and on the bottom of the said cup is formed a threaded stem B, adapted to screw into the part to be lubricated. In the stem B is formed a discharge-passage C, made conical in its upper portion, as at C', as is plainly indicated in the drawings, and in this conical portion extends a similarly-shaped valve D, formed on the lower end of a screw-plug D', screwing in the stem B from the inside of the cup, as is plainly shown in Fig. 2.

The screw-plug D' is provided with a polygonal bore or opening D², terminating near its lower end in a transverse hole D³, leading at its outer ends to external vertical grooves

D⁴, to conduct the lubricant from the cup A through the said opening D², the hole D³, and the grooves D⁴ to the valve D and down the opening C to the part to be lubricated.

In order to regulate the amount of lubricant passing by way of the screw-plug D' and valve D through the passage C to the part to be lubricated, I screw the said plug D' up or down to increase or diminish the space between the valve D and the wall of the enlarged portion C' of the passage C. In order to do this conveniently, I make the upper end of the opening D² polygonal for engagement with a correspondingly-shaped key, which when turned screws the plug D' up or down for the purpose mentioned.

Now in order to lock the plug in place after the desired adjustment is made I provide the head D⁵ of the plug on its under side with notches D⁶, one of which is engaged at a time by the upper end E' of a coil-spring E, secured with its other end in the bottom of the cup A, as is plainly indicated in the drawings. Thus when the operator has turned the plug by the key to the desired position then the upper end E' of the spring E engages one of the said notches to prevent the plug from accidentally turning in the lug B. The lower end of the plug is formed with a central aperture D⁷ in register with the opening D² and leading to the point of the valve; but this opening is normally closed by a soft fusible material which melts in case the upper portion C' of the opening C is clogged up and the parts to be lubricated become heated, so that this generated heat melts the fusible material to establish communication through the openings D⁷ and D² with the oil-supply to again lubricate the parts.

The feed-plug shown in Fig. 8 is provided with an additional bore D⁸, extending from the lower or valve end upward to within a short distance of the lower end of the upper or entrance opening D⁹ to require but a small amount of low fusible material between the openings and to allow of putting a pin-feed in the bore to form a lubricator for side rods.

In the pin-feed shown in Fig. 8 the oil flows down the grooves in the sides of the plug to the lowest or valve end thereof to then pass directly onto the pin I and down the same onto the crank-pin J to be lubricated. By

screwing the plug up or down more or less oil is admitted to the pin I at the valve end of the plug.

The upper end of the cup A is provided with a screw-cap F, formed with a flange F', adapted to extend close upon the top edge of the cup A, so as to prevent admission of air to the cup and stop the feed of the lubricant by way of the plug-valve above described. (See Fig. 3.) Normally, however, this cap F is partly unscrewed, as shown in Fig. 4, and is held in this position by a pin G, engaging a recess F², formed in the under side of the cap F. The pin G is held to slide vertically in a chamber A', formed inside of the cup A, and the said pin is pressed upward in engagement with the recess F² by a spring G', set in the bottom of the chamber A'. A second recess F³ is arranged in the bottom of the cap F, next to the recess F², and is likewise adapted to be engaged by the pin G to lock the cap F for filling, as indicated in Fig. 2, a filling-aperture F⁴ in the flange F' of the cap F being then in register with a recess A², formed on the inside of the cup A and leading to the interior thereof. (See Fig. 2.) When the cap F is in the position for feeding, as above described, then the recess A², above mentioned, is in register at its upper end with an undercut F⁵, formed on the under side of the flange F', to readily admit air to the inside of the cup to allow the lubricant to readily feed through the plug-valve D and opening C to the part to be lubricated, as above described.

When the recess A² and the undercut F⁵ are in register, as shown in Fig. 4, then the filling-aperture F⁴ is in register with an external recess A³, formed in the upper end of the cup A, as is plainly shown in Fig. 5, to permit of readily cleansing the filling-aperture of any impurities should the said aperture be clogged up.

Now it will be seen that when the device is in use then the lubricant is readily fed to the working parts, so as to prevent the same from becoming hot. When the machine on which the device is used is stopped and it is desired to stop the feeding of the lubricant, then the operator simply turns the cap F to screw its flange F' tightly down upon the upper end of the cup A, as shown in Fig. 3, to cut off the air-supply from the cup, and consequently prevent the oil from feeding through the internal feeding device, consisting of the screw-plug D' and its valve D, as previously explained.

It will be seen that by the arrangement described adjustment can be made to set the feed to any desired rate. It is not necessary to change every time the engine or machine stops, as it is only necessary to close down the cap F to stop the feeding; nor is it necessary to take off the cap to fill the cup to start or stop it from feeding. Furthermore, it will

be seen that the device is very simple and durable in construction, is not liable to get out of order, and is practically dust-proof.

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

1. A lubricator provided with a cup formed with a discharge-passage, a screw-plug screwing in the said cup at the discharge-passage, and being formed at its lower end with a valve, the plug having a central bore a portion of which is filled with a fusible material and the upper non-filled portion of the bore being in communication with a transverse hole leading at its end to an external groove for conducting the lubricant to the said valve, substantially as shown and described.

2. A lubricator, provided with a screw-plug formed at its lower end with a valve and having a central bore, a portion of which is filled with a fusible material, the upper non-filled portion being in communication with a transverse hole leading at its ends to grooves, for conducting the lubricant to the said valve, substantially as shown and described.

3. A lubricator provided with a cup having an internal filling-opening, a cap screwing on the said cup having a filling-aperture adapted to register with the said opening for filling the cup with lubricant, the cap being also formed with an undercut adapted to register with the said opening to admit air to the cup, and a spring-pressed bolt held to slide on the said cup, and adapted to engage one of a plurality of notches on the cap to lock the latter in place, substantially as shown and described.

4. A lubricator provided with a cup having on its upper end an internal filling-opening, and an external recess, spaced from the said opening and a cap screwing on the said cup and having a filling-aperture adapted to register with the said opening for filling the cup with lubricant and adapted to register with the said recess for cleaning the filling-aperture, substantially as shown and described.

5. A lubricator provided with a cup having on its upper end an internal filling-opening, and an external recess spaced from the said opening and a cap screwing on the said cup and having a filling-aperture adapted to register with the said opening for filling the cup with lubricant and adapted to register with the said recess for cleaning the filling-aperture, the cap being also formed with an undercut adapted to register with the said opening to admit air to the cup, and a spring-pressed bolt held to slide on the said cup and adapted to engage one of a plurality of notches on the cap to hold the latter in position, substantially as shown and described.

WILLIAM HUNT.

Witnesses:

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