

(No Model.)

A. A. GREGORY.  
AXLE LUBRICATOR.

No. 409,962.

Patented Aug. 27, 1889.

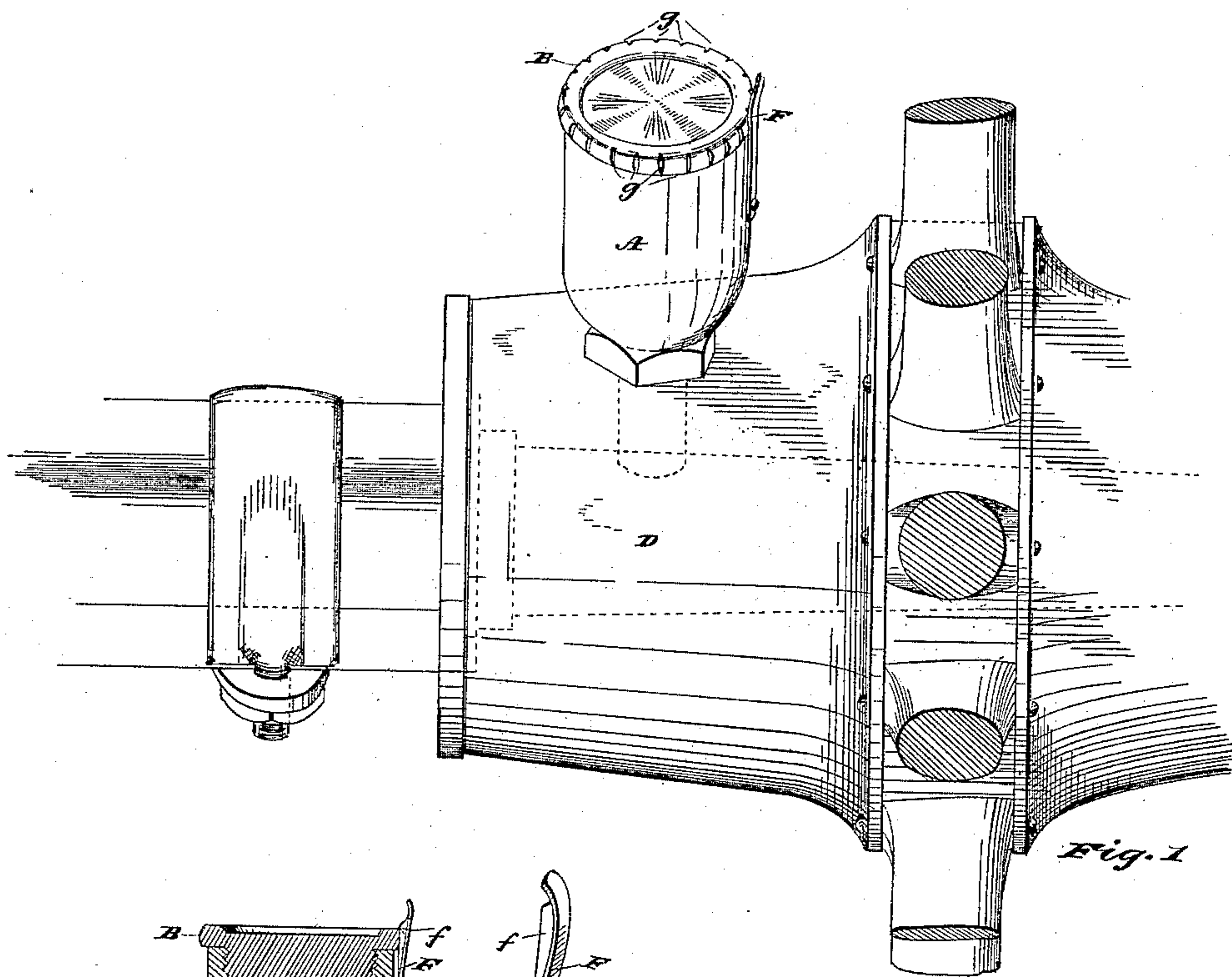


Fig. 1

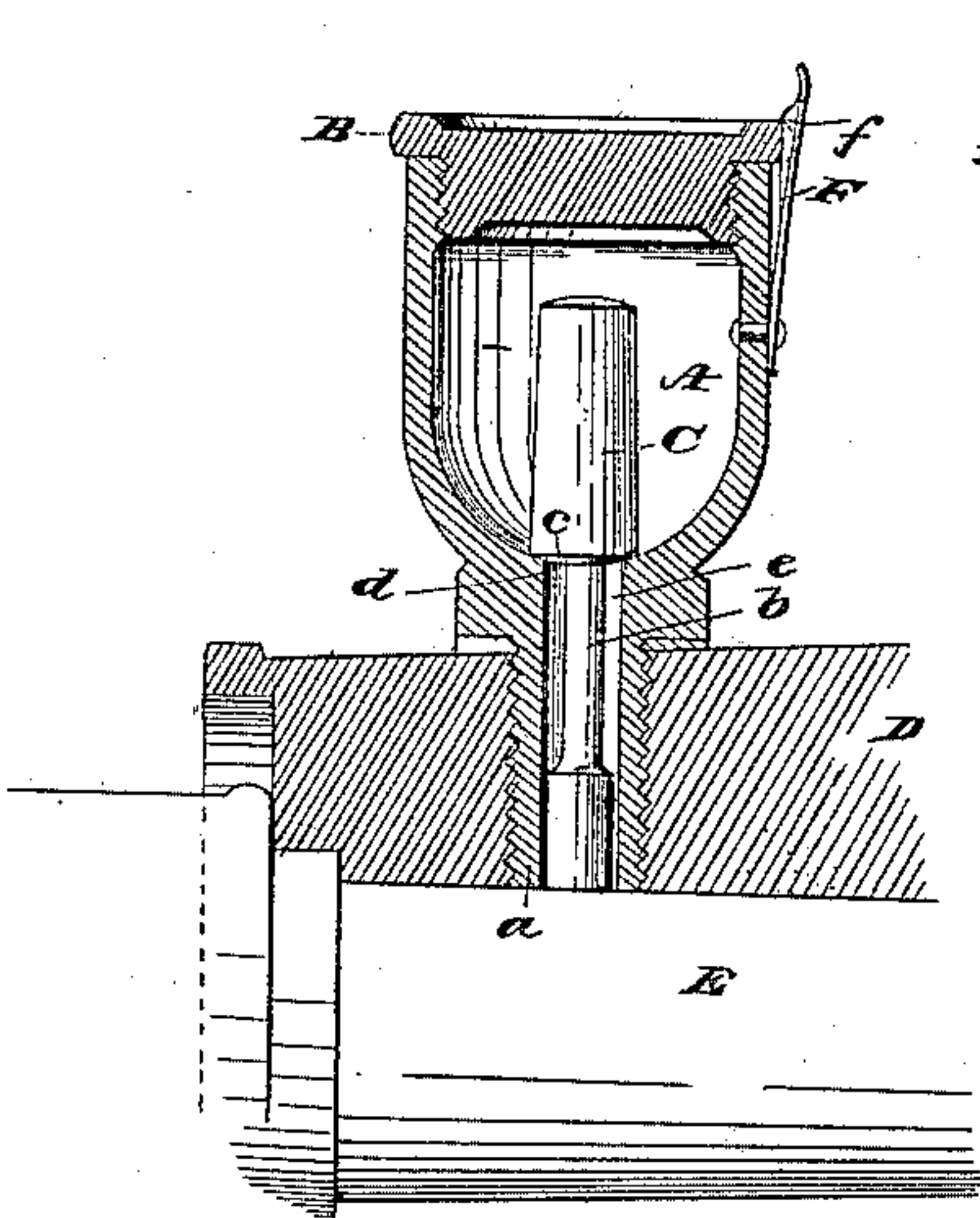


Fig. 2.



Fig. 3.

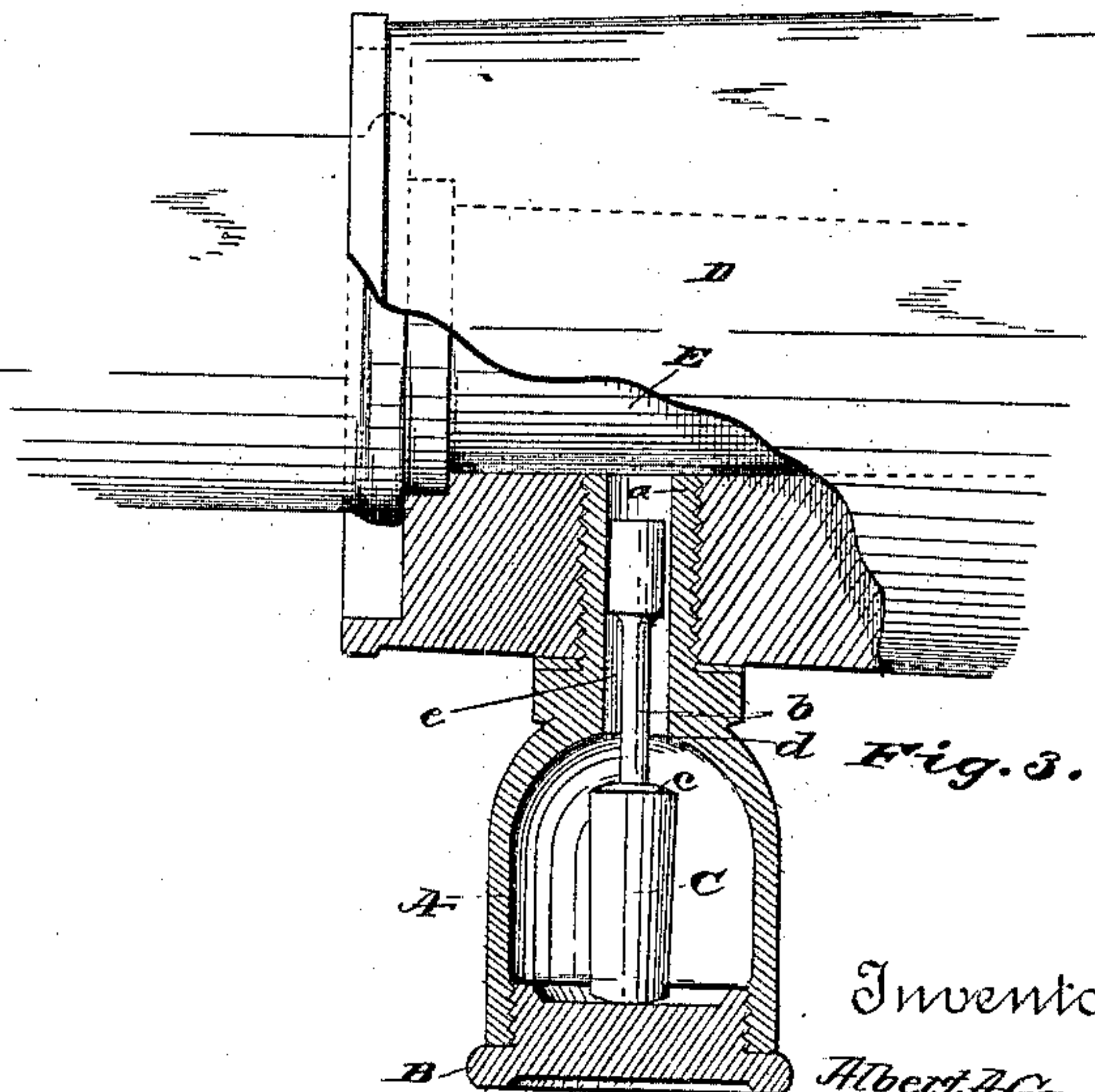


Fig. 4.

Witnesses  
F. B. Lane  
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# UNITED STATES PATENT OFFICE.

ALBERT A. GREGORY, OF CANTON, OHIO, ASSIGNOR OF ONE-HALF TO ALLEN COOK, OF SAME PLACE.

## AXLE-LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 409,962, dated August 27, 1889.

Application filed May 10, 1889. Serial No. 310,235. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT A. GREGORY, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Oil-Cups; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon, in which—

Figure 1 is a side elevation showing a portion of a vehicle-hub with the oil-cup properly attached; Fig. 2, a longitudinal section of the cup, showing its position when on top of the hub. Fig. 3 is a longitudinal section of the cup, showing its position when on the under side of the hub. Fig. 4 is a detached view of the retaining-spring.

The present invention has relation to oil-cups; and it consists in the different parts and combination of parts, hereinafter described, and particularly pointed out in the claims.

Similar letters of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, A represents the cup, which is substantially of the form shown, and is provided at its open end with screw-threads, which are for the purpose of receiving and holding the screw-threads of the cap B, which cap is located as illustrated in the drawings. The opposite end of the oil-cup A is provided with the hollow screw-threaded shank *a*, which is for the purpose of entering a screw-threaded aperture in the hub of a vehicle.

The plunger C is located as illustrated in the drawings, and as shown is provided with the neck *b*. The portion of the plunger located within the oil-cup A is formed heavy, for the purpose of causing the plunger to reciprocate back and forth as the oil-cup proper revolves with the hub D. It will be seen that as the oil-cup proper comes upon the top or upper side of the hub D the plunger will fall, and when the oil-cup proper comes upon the under side of the hub the plunger will again

fall. The movements of the plunger are limited in one direction by the shoulder *c* striking against the shoulders *d*, and in the opposite direction by the end of the plunger striking the cap B. The portion of the plunger fitting in the tube *e* is somewhat smaller in diameter than the diameter of the tube, thereby permitting a small quantity of oil to pass the plunger and reach the axle E.

In use the oil is placed in the cup A and the cap B placed in proper position. It will be seen that as the plunger C moves toward the axle it will cause the oil to be forced toward the axle, and when the plunger assumes the position shown in Fig. 3 the oil will flow away from the axle, and, as the oil-cup proper is traveling toward the top of the hub, oil will pass into the tube *e* and around the neck of the plunger in advance of the fall of said plunger.

For the purpose of regulating the quantity of oil designed to reach the axle, the portion of the plunger within the tube *e* is adjusted to a greater or less diameter, thereby regulating the space between the plunger and the wall of the tube.

For the purpose of preventing the cap B from becoming accidentally displaced, the retaining-spring F is provided, which is attached to the cup A, substantially as illustrated in Figs. 1 and 2. The free end of the spring is provided with the flange *f*, which is for the purpose of engaging one of the notches *g* in the cap B.

In case it is desired, a metallic thimble may be placed in the hub to receive the screw-threaded shank *a*, in which event the inner side of the thimble is screw-threaded, and if desired the outer side of said thimble may be screw-threaded.

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

1. The combination of the cup A, provided with the screw-threaded cap B and the screw-threaded shank *a*, the weighted plunger C, provided with the neck *b* and the shoulder *c*, adapted to strike the shoulder *d*, substantially as and for the purpose specified.

2. The combination of the cup A, provided

with the screw-threaded cap B, the screw-threaded shank *a*, and the tube *e*, the weighted plunger C, provided with the neck *b* and the shoulder *c*, the spring F, adapted to engage  
5 one of the notches *g*, substantially as and for the purpose specified.

In testimony that I claim the above I have

hereunto subscribed my name in the presence of two witnesses.

ALBERT A. GREGORY.

Witnesses:

ALLEN COOK,  
F. W. BOND.