

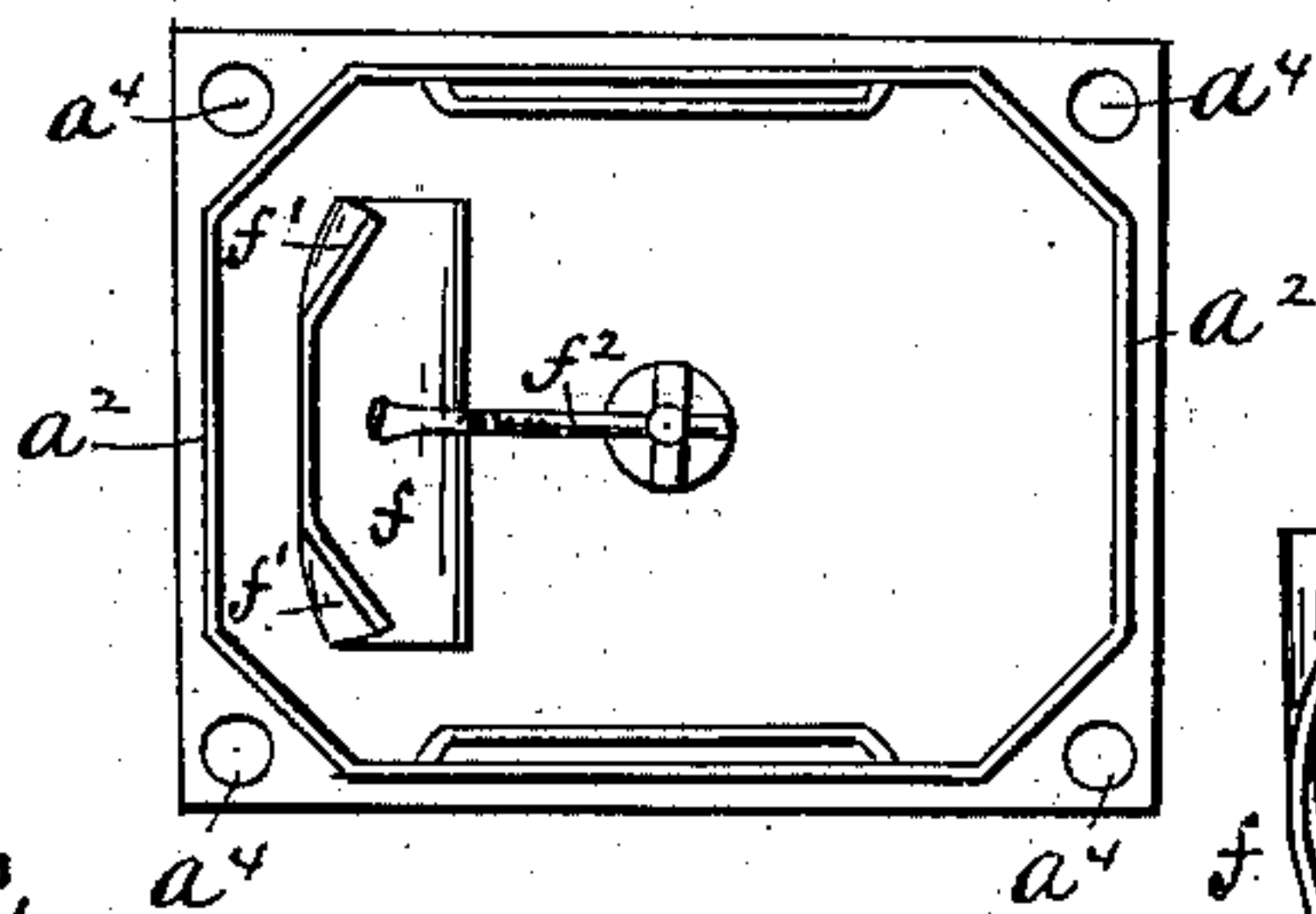
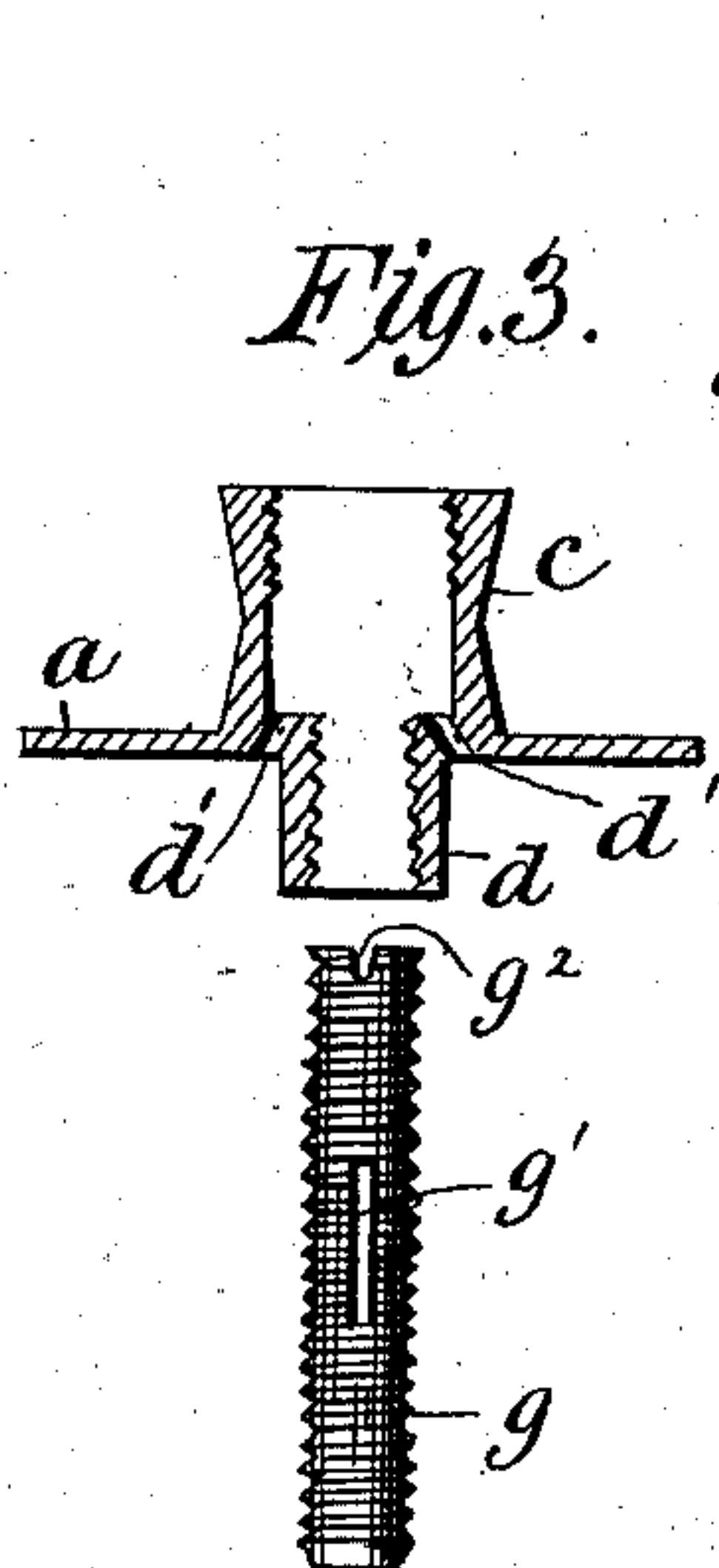
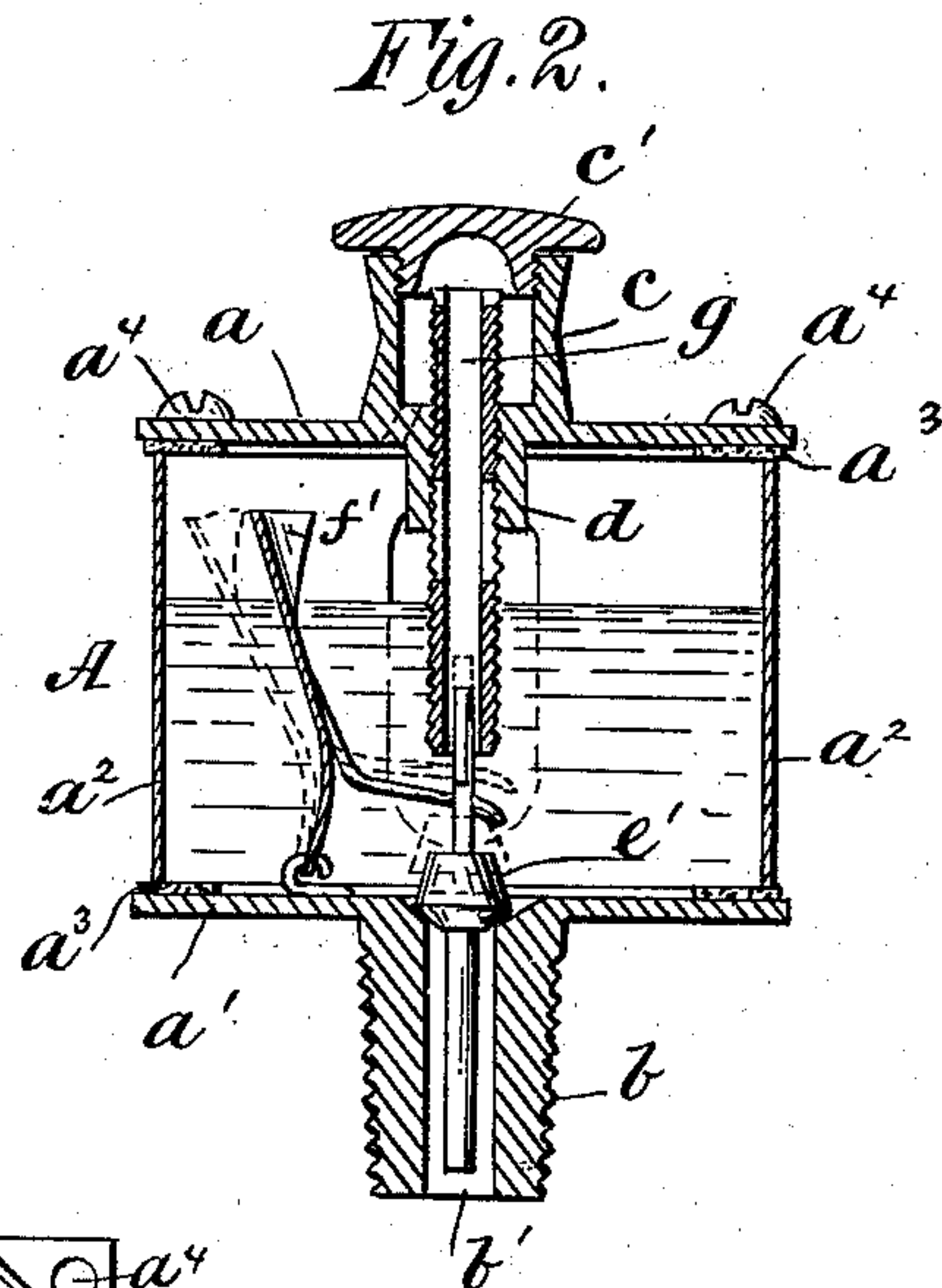
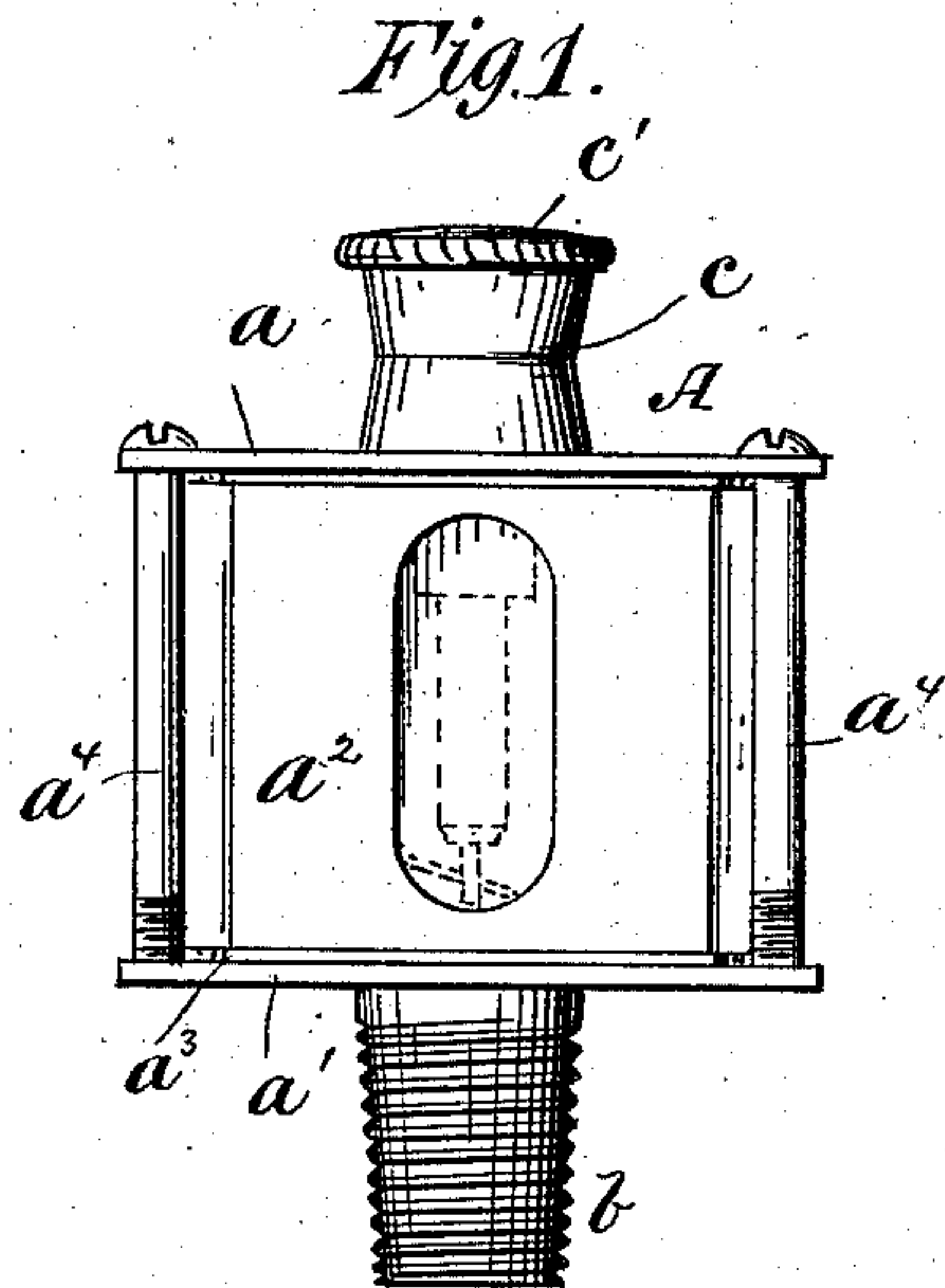
(No Model.)

J. E. GILLIGAN.

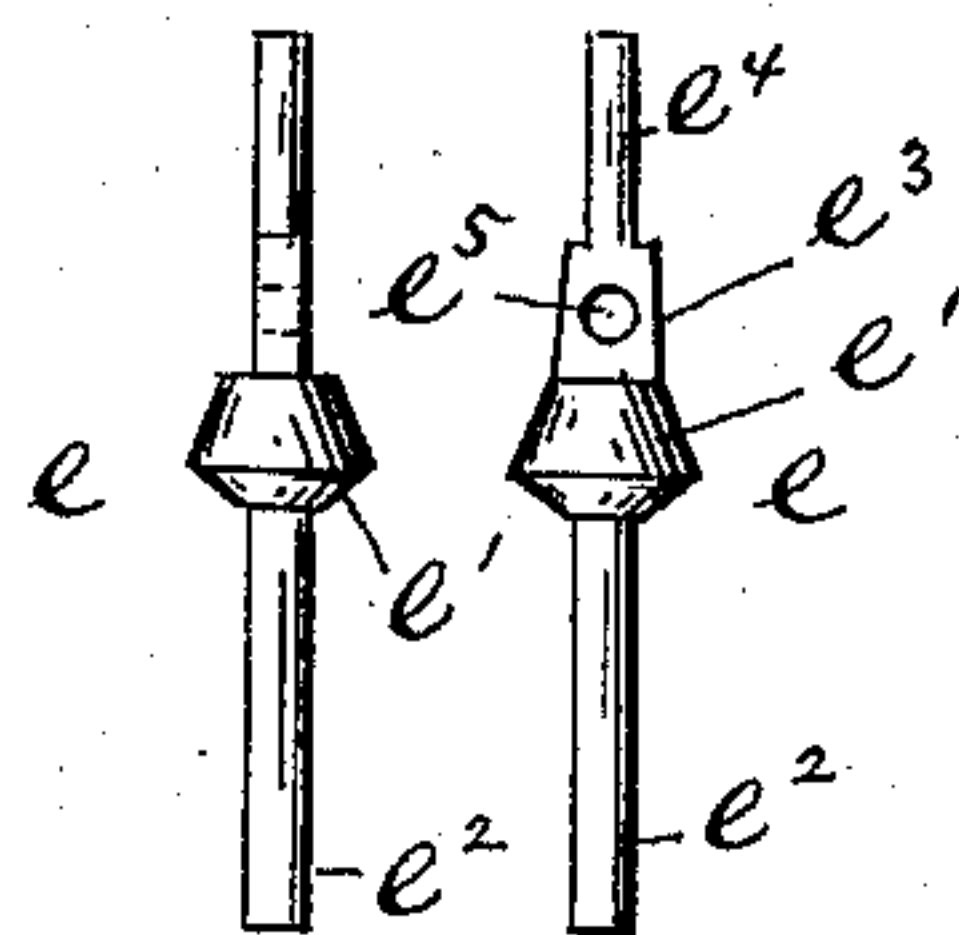
OIL CUP.

No. 258,049.

Patented May 16, 1882.



*Fig. 5.*



Witnesses:  
O. B. Surpin  
J. W. Wheat

John E. Gilligan  
By R. S. V. A. Lacey  
Atty's:



# UNITED STATES PATENT OFFICE.

JOHN E. GILLIGAN, OF ELKO, NEVADA.

## OIL-CUP.

SPECIFICATION forming part of Letters Patent No. 258,049, dated May 16, 1882.

Application filed March 31, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN E. GILLIGAN, a citizen of the United States, residing at Elko, in the county of Elko and State of Nevada, have invented certain new and useful Improvements in Oil-Cups; and I do hereby 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention has for its object to furnish an improved oil-cup; and it consists in the construction and arrangement of the several parts hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a front view, Fig. 2 a vertical section, and Figs. 3, 4, and 5 are detail views, of parts of an oil-cup constructed according to my invention; and Fig. 6 is a plan view of same with top removed.

A is the casing, which I preferably make oblong shape, as shown. It is composed of the top plate,  $a$ , bottom plate,  $a'$ , and side plate,  $a^2$ , the top and bottom and side plates having between them packing  $a^3$ , and clamped together by bolts  $a^4$ , as shown, to form a casing of a shape substantially as shown.

$b$  is a tube extended down from plate  $a'$ , and it is threaded on its outer side, so it may readily be connected to the journal or rod desired to be lubricated, as hereinafter set forth. The opening  $b'$  of this tube leading up into the casing A is countersunk at its upper end to form the valve-seat, in which rests the plunger-valve, as hereinafter set forth. From the upper side of the plate  $a$ , directly over the tube  $b$ , I project the tube  $c$ , the inner side of which, near its top, is threaded to receive the threaded cap  $c'$ . From the under side of the plate  $a$ , within the tube  $c$ , I extend the tube  $d$  down into the casing A. The inner side of the tube  $d$  is threaded, as shown. The tube  $d$  is smaller than the tube  $c$ , and through the plate  $a$ , within the tube  $c$ , I cut holes  $d'$ , leading along the outer side of the tube  $d$  into the reservoir formed within the casing A, as shown.

$e$  is the plunger. It is formed with the valve  $e'$ , fitted to the seat formed in upper portion of

opening  $b'$  through tube  $b$ , and the shank  $e^2$  extended below the valve within the said tube, and arranged to act as a guide for the valve. Above the valve I construct the plunger, with the angular portion  $e^3$  and the rounded portion  $e^4$ , the joint of the said portions forming a square shoulder, against which rests the regulating-pipe, hereinafter described. Through the angular portion  $e^3$ , I form the opening  $e^5$ , for the purpose to be hereinafter described.

$f$  is the hinged operating-lever. It is formed of a thin plate made about as wide as the inner side of my casing the narrow way, and it is hinged at its bottom to the lower plate,  $a'$ , so that it will tilt forward and back over its center. The upper corners,  $f'$ , of this lever-plate I bend forward and form the plate into a sort of cup, so that the splashing of the oil, as hereinafter described, will have greater effect on the said lever in operating the device, as will be described. From the forward part of this lever I extend the rod  $f^2$ , which is passed through the plunger  $e$ , thus connecting the lever and the plunger, so that the motion of one will affect the other, as shown.

$g$  is a tube threaded on its outer side and adapted to be screwed in the threaded opening through tube  $d$ , and rest with its lower end down over upper portion,  $e^4$ , of plunger  $e$ , and on the square shoulder formed at joint between rounded and angular portion of said plunger. About midway this tube I cut grooves  $g'$ , leading into the inside of same, so that air can escape from the cup when oil is being poured in through the openings made for that purpose, as will be described.  $g^2$  is a groove cut across top of groove  $g$  to give a hold for a screw-driver, so that the tube may be turned down into or up out of the cup.

In the operation of my invention it is properly screwed on a connecting-rod journal of crank-shaft or other part of a machine having a forward and back motion and requiring lubrication. The cap  $c'$  is then removed and oil is poured into the space around the tube  $g$  and through the openings  $g'$  into the cup, the air within the cup readily escaping through the tube  $g$ , and when the oil has risen above the lower end of said tube there is still exit therefor through slots  $g'$ . When the machine is at rest the operating-lever, valve, &c., will be in



the position shown in Fig. 2, and the oil will be secured from passing out of the cup. When the machine is in motion and the portion carrying the cup has finished its forward stroke 5 the momentum acquired, together with the throw of the oil against its broad surface, will throw the operating-lever back, raising with it the plunger, and the valve and oil escapes on the part where needed. Then, when quiet is 10 restored, the lever falls to its usual place, carrying with it the valve, and the oil is again shut within the cup.

The lever *f*, having its corners *f'* bent, as shown, provides a surface against which the 15 force of the oil acts with great power. The distance to which the lever may tilt and raise the valve, and consequently the amount of oil which may be deposited at each stroke of the machine, is regulated by the tube *g*, rested on 20 the square shoulder on plunger, and being screwed up or down, as the amount of oil to be deposited is much or little.

In the side of the casing I provide openings covered with glass, so the amount of oil with- 25 in the cup may be determined at a glance.

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

1. The combination, with the plunger *e*, having valve *e'* and opening *e''*, of the plate-lever *f*, 30 hinged to the lower side of casing and bent into a cup-shaped form on the side next the body of the oil, and connected to the plunger by rod *f''*, substantially as described.

2. The combination, substantially as herein- 35 before set forth, of the plunger *e*, having valve *e'*, the hinged lever *f*, connected to plunger *e*, and the regulating-tube *g*, threaded and arranged to bear against shoulder formed on plunger *e*, and provided with slots *g'*, substantially as de- 40 scribed.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN E. GILLIGAN.

Witnesses:

M. H. MILLER,  
FRANK GRINER.