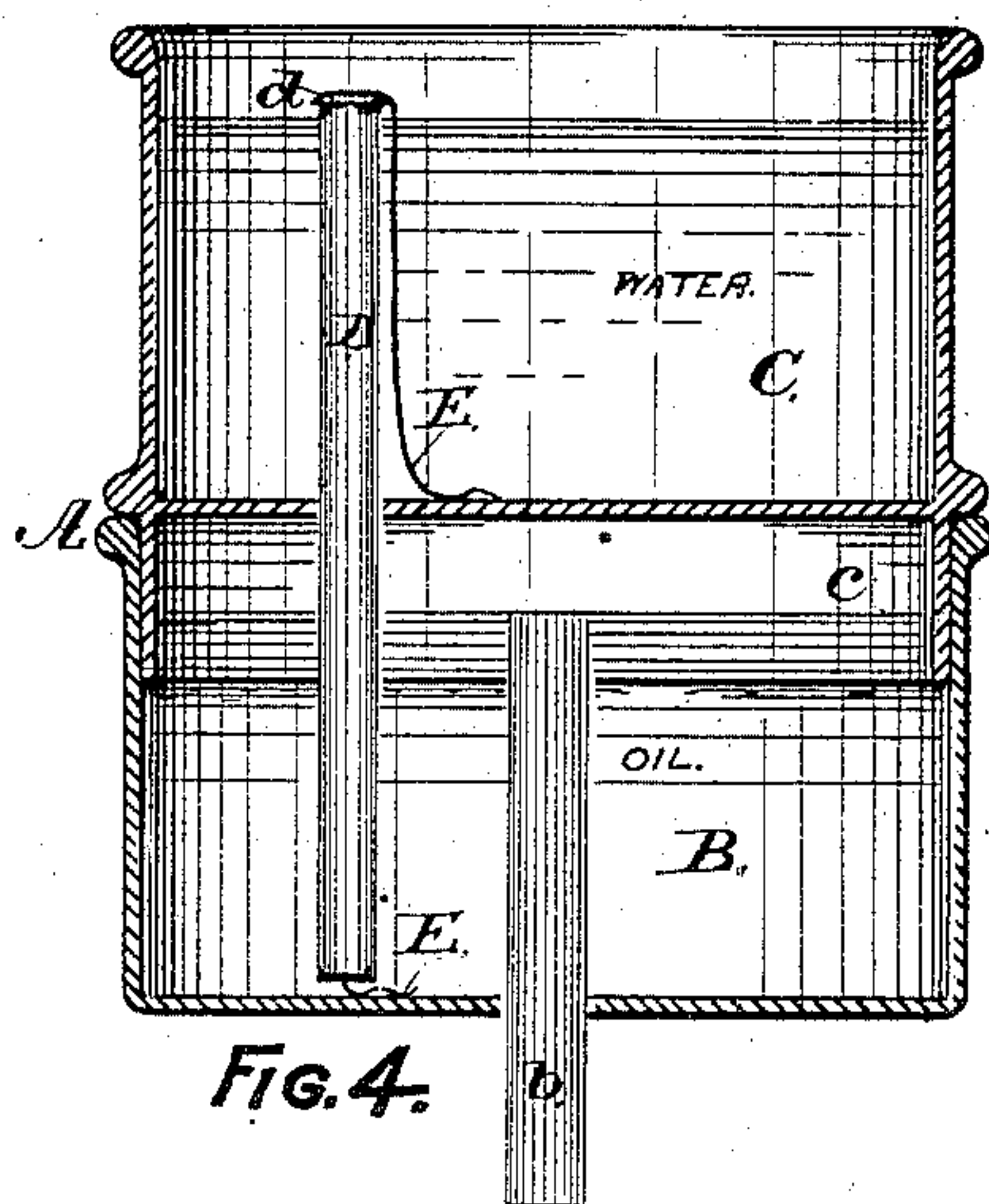
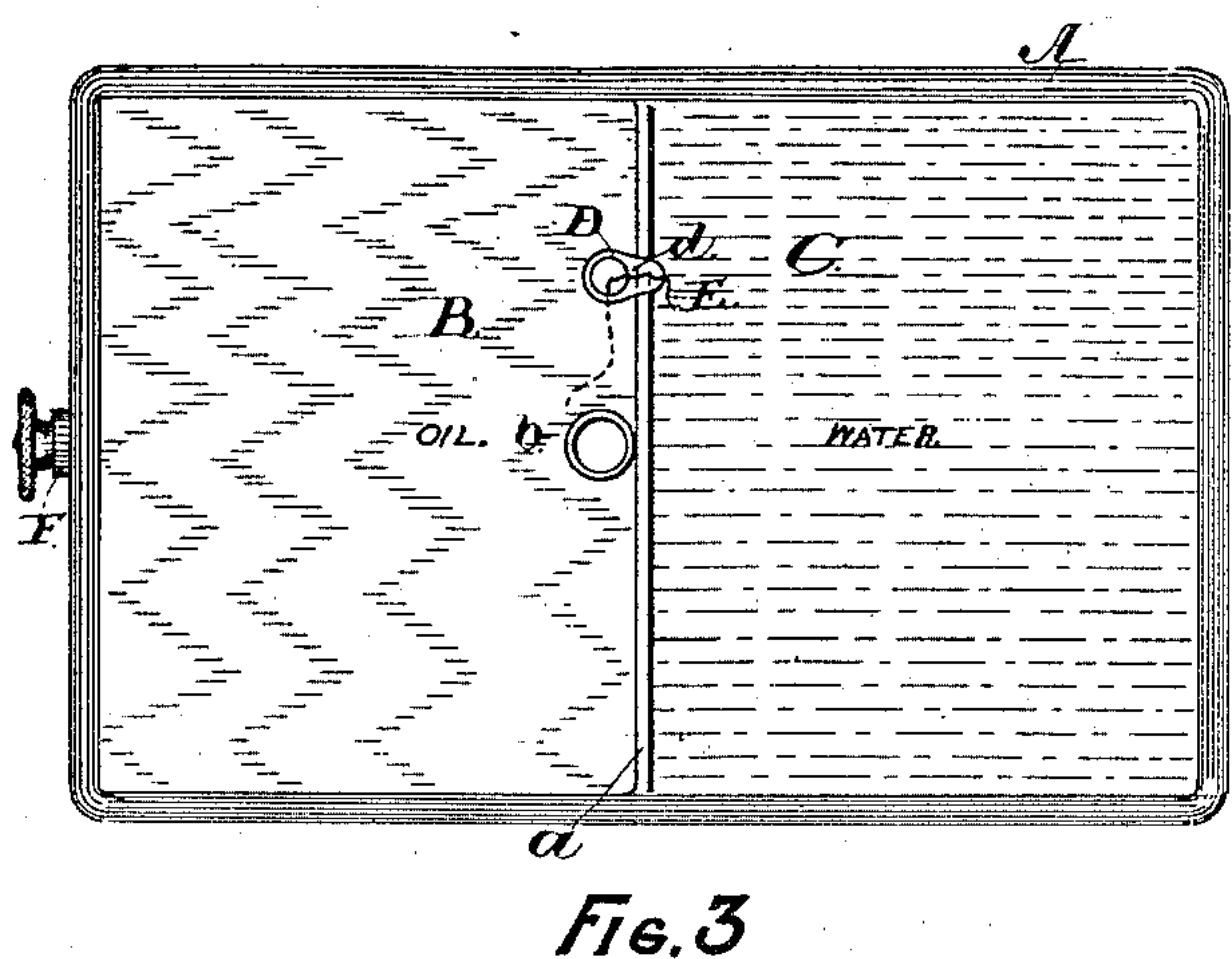
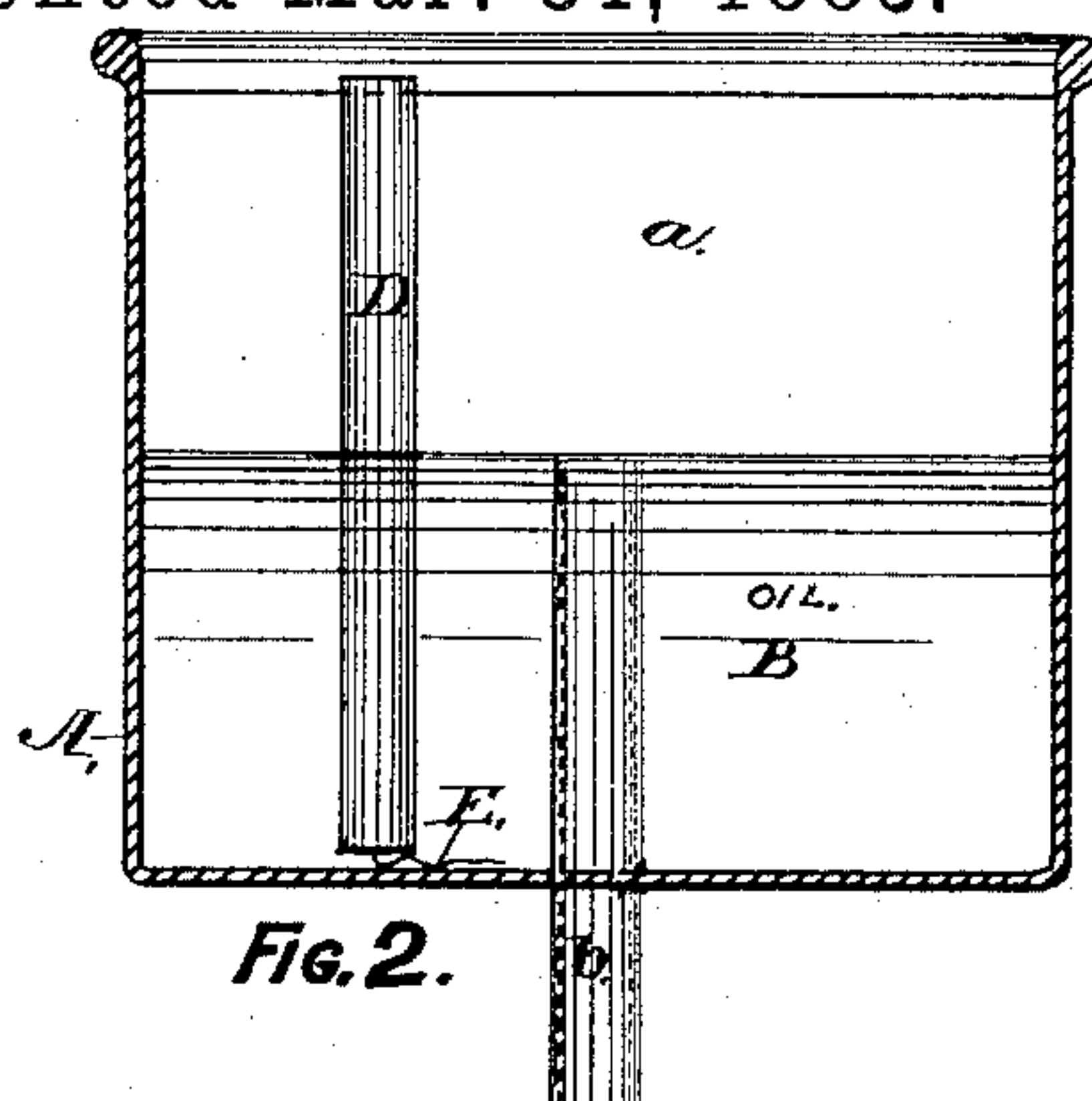
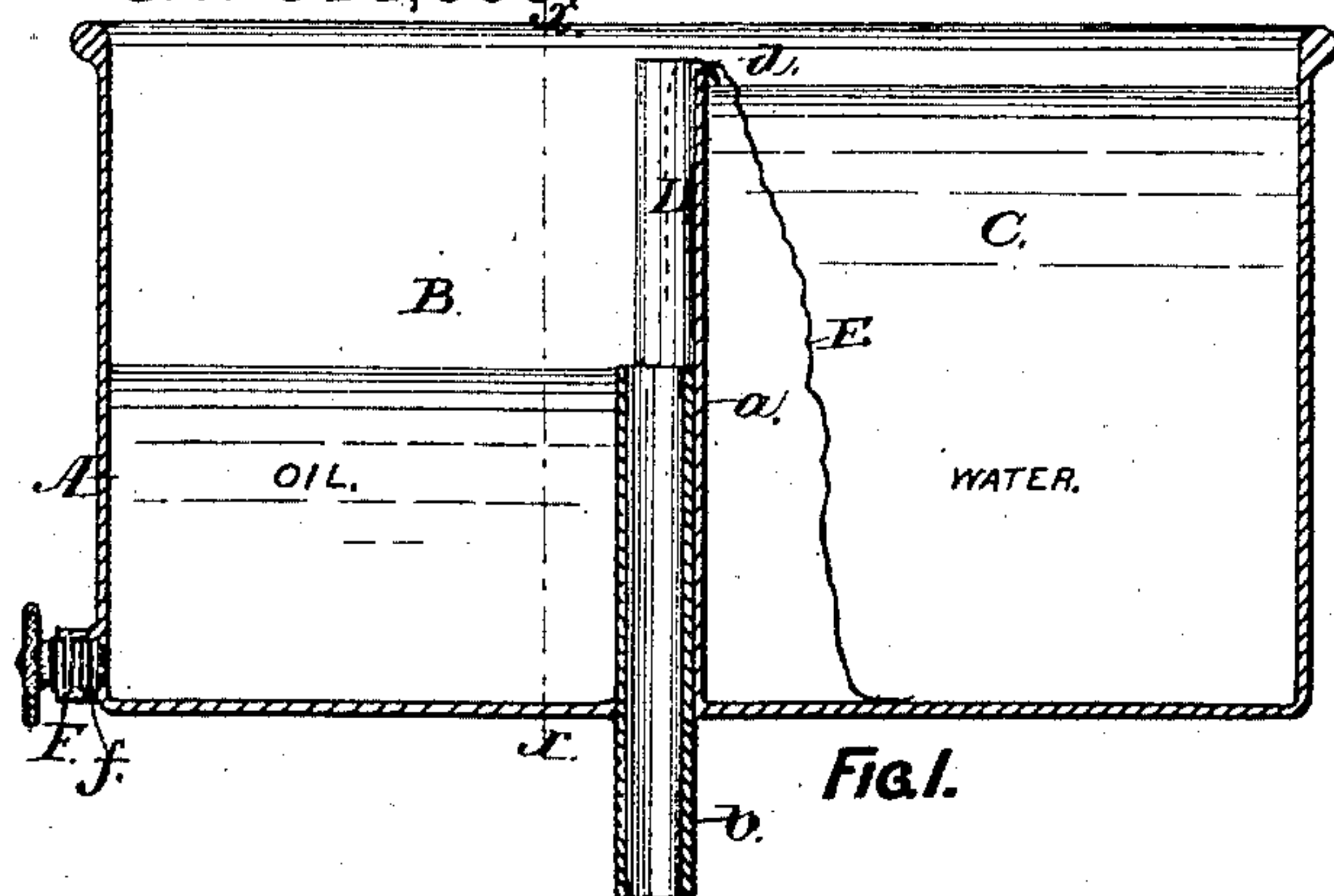


(No Model.)

J. H. MARS.
LUBRICATING CUP.

No. 314,593.

Patented Mar. 31, 1885.



Witnesses:

S. B. Brewster,
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UNITED STATES PATENT OFFICE.

JOHN H. MARS, OF ALBANY, NEW YORK.

LUBRICATING-CUP.

SPECIFICATION forming part of Letters Patent No. 314,593, dated March 31, 1885.

Application filed February 3, 1885. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. MARS, of the city and county of Albany, in the State of New York, have invented new and useful
5 Improvements in Lubricating-Cups, of which the following is a specification.

My invention relates to an improved device for feeding heavy mineral oils, or other thick or viscid substances, as a lubricant for shafts
10 and other bearings; and it consists of a vessel of two chambers—one for containing the lubricant, having a feeding-tube for conveying the lubricant to the bearing, and the other for containing water, or other liquid of greater
15 specific gravity than the lubricant—the said vessel being provided with means, as herein described, for transferring, by capillary action, the liquid from the water-chamber to the lower part of the lubricant-chamber for
20 the purpose of keeping the surface of the lubricant on a level with the upper end of the feeding-tube, so that the feeding will be constantly kept up in condition to effect the lubrication of the bearing in a very perfect and
25 uniform manner.

In the accompanying drawings, which are herein referred to and form part of this specification, Figure 1 is a longitudinal section of one form of my lubricating-cup with the oil
30 and water chambers on the same horizontal plane; Fig. 2, a transverse section at the line *xx* of Fig. 1; Fig. 3, a plan view of same; and Fig. 4 a vertical section of another form of my cup, with the water-chamber arranged
35 above the oil-chamber.

As represented in Figs. 1, 2, and 3 of the drawings, A is a lubricating-cup made in an oblong form and divided by a partition, *a*,
40 fixed at or near its middle into the oil-chamber B and water-chamber C. Through the bottom of the oil-chamber is inserted a tube, *b*, whose upper end should reach to about one-half of the height of said chamber, and the lower or projecting part of said tube may
45 be made of any convenient or required length.

Attached to or near the partition *a* is a water-feeding tube, D, whose upper end is brought up to, or slightly above or below, the
50 upper edge of said partition, and whose lower end is brought down nearly to the bottom of the chamber B, or so as to leave a slight opening from the lower end of the tube D into the

chamber B. The upper end of the tube D is provided with a lip, *d*, which projects over the partition *a* and is rounded over toward
55 the chamber C. A thread or small loose wick, E, is inserted through the tube D, and runs from the bottom of the chamber B up through the tube D down to the bottom of the chamber C; and said thread forms the capil-
60 lary for transferring water from the chamber C to the chamber B. A screw-tap, F, is inserted near the bottom of the chamber B, for the purpose of drawing the water out of said
65 chamber. Said tap is provided with an opening, *f*, through which the water escapes when the screw-plug is drawn back from its conical seat.

The cup A (shown in Fig. 4) is made in two separable parts, one above the other, of which
70 the oil-chamber B forms the lower part and the water-chamber C the upper part. The latter is provided with a pendent rim, *c*, which fits snugly into the upper end of the chamber B, so as to support the water-chamber in its
75 place over the oil-chamber. The oil-chamber B is provided with the tube *b*, as hereinbefore described, and the water-chamber C has a water-feeding tube, D, which passes through the
80 bottom plate of said chamber and reaches downward nearly to the bottom of the chamber B. A thread or small loose wick, E, passes downward through the tube D to the bottom
85 of the chamber B, and from the upper end of said tube to the bottom of the chamber C, so as to serve as a capillary for transferring the water from the water-chamber C into the oil-chamber B.

The operation of my lubricating-cup is as follows: The chamber B is filled with lubricant to the height of the tube *b*, and the chamber
90 C is filled to the height of the partition *a* with water or other liquid of greater specific gravity than the lubricant. By the thread E the water is transferred in a small but steady
95 stream (the quantity fed being dependent upon the capacity of the thread) from the water-chamber C into the lower part of the oil-chamber B, where it will collect in an independent
100 stratum beneath the stratum of lubricant in such manner that the lubricant will be constantly raised up, so as to maintain a level where it will feed the tube *b* with a regular and continuous supply of the lubricant,

which is conducted through the tube *b* down upon the bearing to be lubricated, and this action will be maintained until the water is drawn out of the chamber C to a sufficient
5 depth to establish an equilibrium between the two chambers, when the water must be removed from the chamber B, and the chambers B and C refilled, as above described.

The quantity of lubricant fed to the bearing
10 is dependent upon the quantity of water that is fed into the chamber B, and is therefore governed by the capacity of the thread E as a capillary, so that by varying said thread the quantity of lubricant can be increased or di-
15 minished at option.

I claim as my invention—

A lubricating-cup composed of the oil-chamber B and water-chamber C, the said oil-chamber being provided with an oil-feeding tube, *b*, and a water-feeding thread, E, by
20 which water is transferred from the water-chamber C to the oil-chamber B, as and for the purpose specified.

JOHN H. MARS.

Witnesses:

WM. H. LOW,
S. B. BREWER.