

No. 646,126.

Patented Mar. 27, 1900.

E. McCOY.
LUBRICATOR.

(Application filed Nov. 18, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

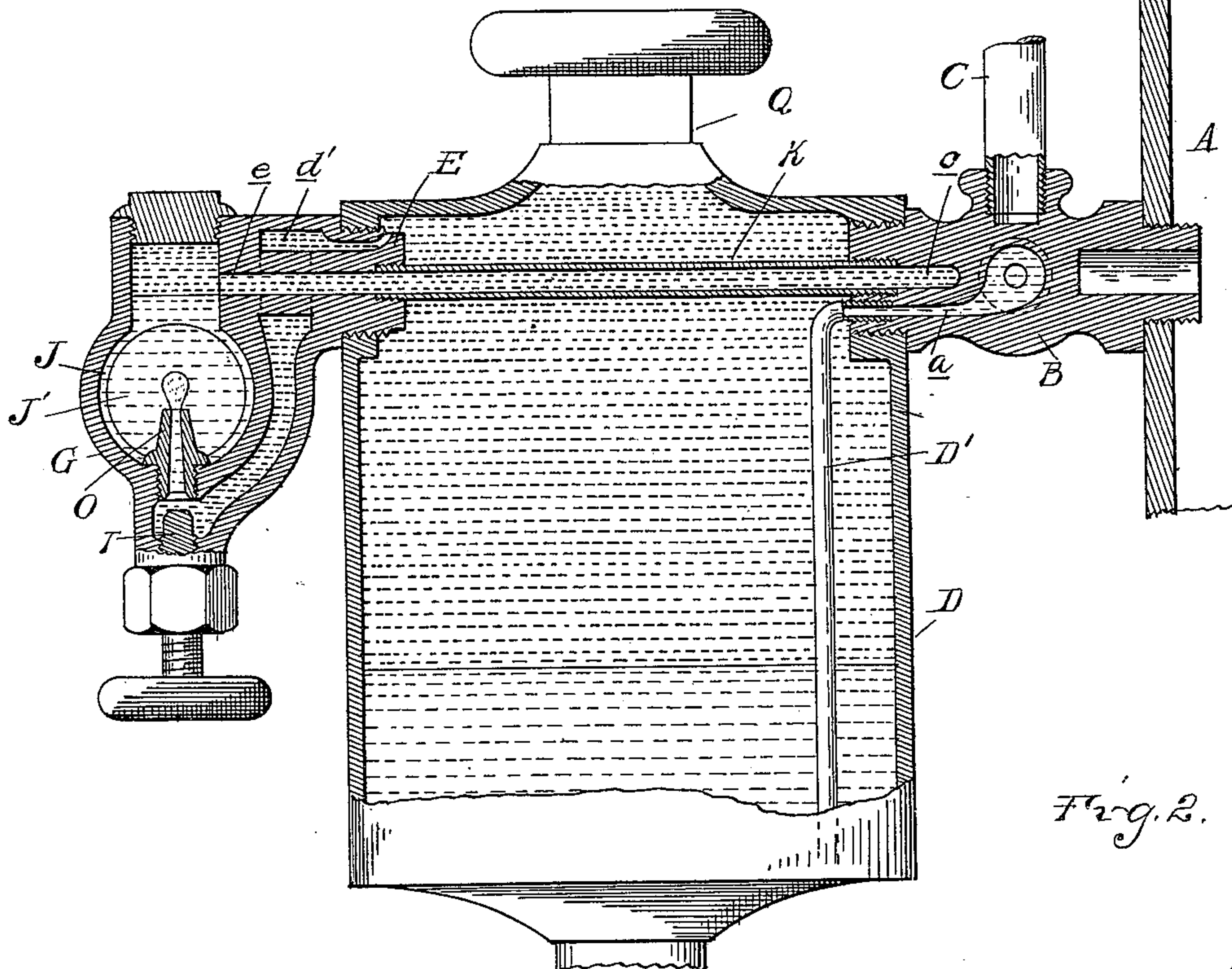


Fig. 2.

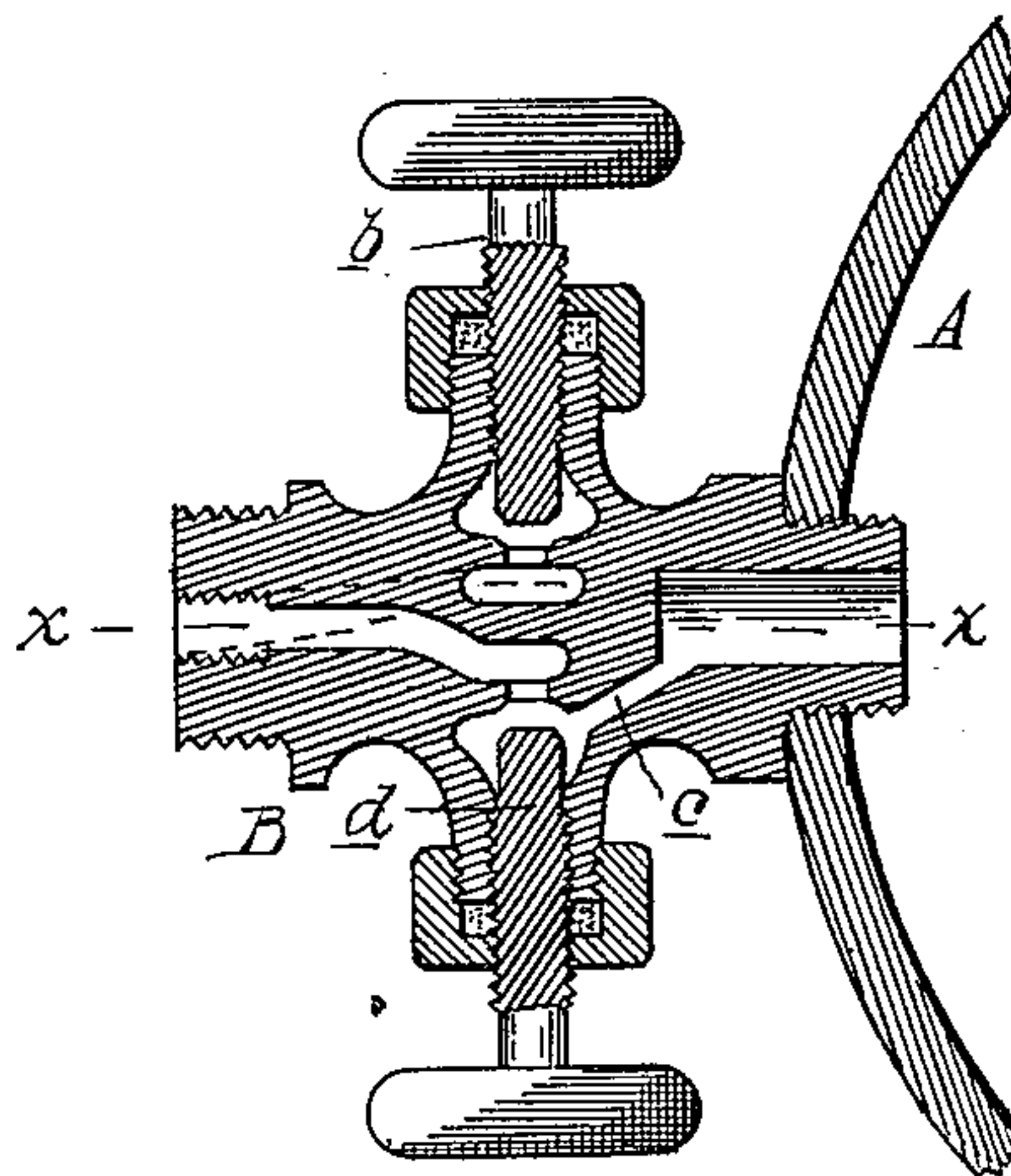
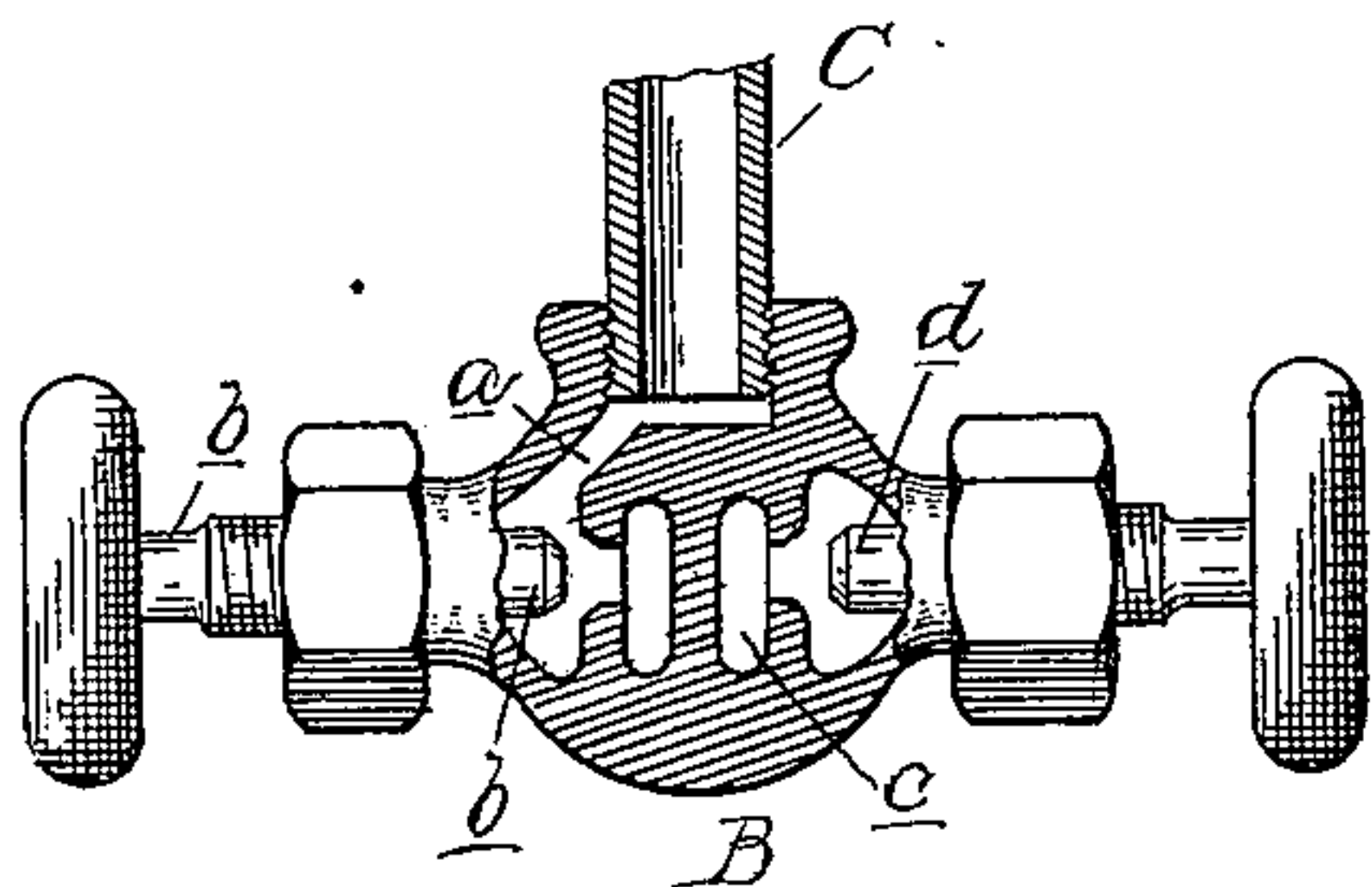


Fig. 3.



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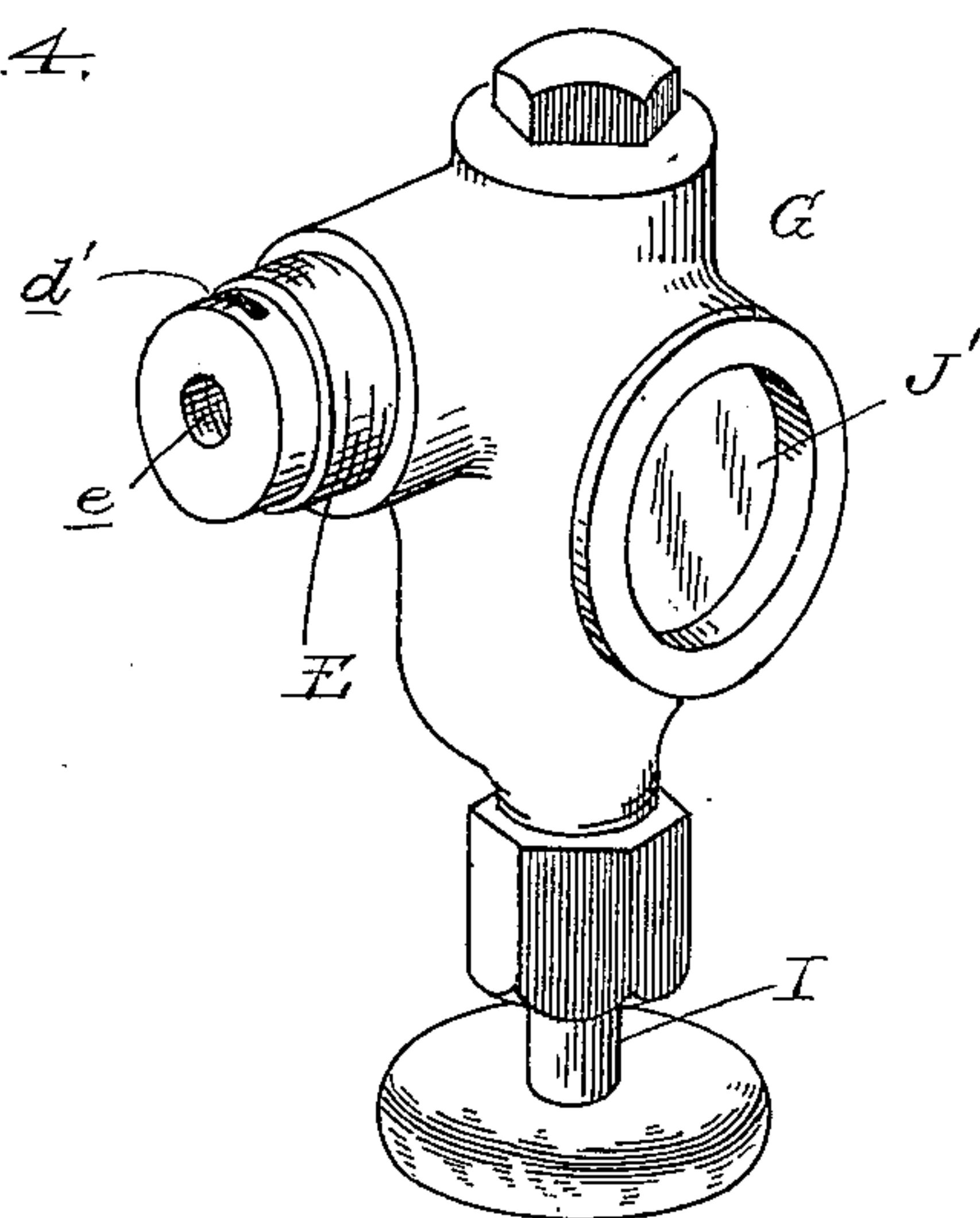
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2 Sheets—Sheet 2.

Fig. 4.



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UNITED STATES PATENT OFFICE.

ELIJAH MCCOY, OF DETROIT, MICHIGAN, ASSIGNOR TO THE PENBERTHY INJECTOR COMPANY, OF SAME PLACE.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 646,126, dated March 27, 1900.
Application filed November 18, 1899. Serial No. 737,460. (No model.)

To all whom it may concern:

Be it known that I, ELIJAH MCCOY, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Lubricators, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention consists in the construction of a sight-feed lubricator, and particularly in the construction of the cup, its support-arm, and the sight-feed arm, whereby the construction of the device is simplified, rendered more certain in action, and more easily repaired or cleaned than in previous constructions of this kind with which I am familiar.

The invention further consists in the peculiar construction, arrangement, and combination of the various parts, as more fully hereinafter described and claimed.

In the drawings, Figure 1 is a vertical central longitudinal section through a sight-feed lubricator embodying my invention, the section through the support-arm being on line $x-x$, Fig. 2. Fig. 2 is a horizontal section through the support-arm. Fig. 3 is a vertical cross-section therethrough. Fig. 4 is a perspective view of the sight-feed arm detached.

A represents the steam-pipe, which connects to the device to be oiled. B represents a support-arm connected thereto.

C represents a stand-pipe or condensation-pipe, connected at its lower end into the support-arm B and at its upper end connected to a source of steam, preferably the pipe A, so that steam may condense therein and form a hydrostatic column for feeding the oil in the cup in the well-known manner.

D is the oil-cup, having an opening at the top into which the other end of the support-arm B connects. Leading from the point where the stand-pipe connects to the stationary arm, (which is intermediate the steam-pipe and the cup,) extending through the support-arm, is a passage a . This passage at one point is provided with a controlling-valve b . (Shown in Fig. 3.)

D' is a tube connected to the support-arm within the cup and connected to one end of the passage a , so that the pipe D' forms in effect a continuation of the stand-pipe C with-

in the cup. Through the support-arm, longitudinally thereof, is a passage c , which at one point is controlled by a valve d . (Shown in Fig. 3.) This passage extends longitudinally through the support-arm, communicating with the cup and the steam-pipe A, respectively, as plainly shown in Fig. 2.

At the upper end of the cup and preferably diametrically opposite the opening for the support-arm is a second opening, in which is secured a nipple E. Cast integral with this nipple is the chamber-casing G, the whole being cast in a single piece and forming what I call the "sight-feed arm." Within the casing G is a chamber J, having upon opposite sides glass disks J', supported so as to form peep-holes or sight-openings into the chamber J.

d' is an oil-passage leading from the inner end of the nipple E, and preferably from the upper side thereof, Fig. 1, into the casing G and to the lower end thereof. This passage connects into the chamber J, preferably through an oil-nozzle O, detachably secured in the wall of that chamber, as shown in Fig. 1.

l is a valve controlling the flow of fluid from the passage d' through the nozzle O. From the upper end of the chamber J is an exit-passage which leads longitudinally through the nipple E and is connected with the passage c in the support-arm by means of a tube K, screwed, respectively, into the inner ends of the two nipples E and the nipple on the inner end of the support-arm.

The parts being thus constructed, their operation is as follows: To fill the cup, the plug Q in the top of the cup is removed and the oil poured into the cup. The plug is then replaced and the valve d is opened, and the steam from the pipe A will pass through the passage c and into the chamber J, filling the same with condensation. The steam from the pipe A will fill the stand-pipe C. The valve b is then opened and the water from the stand-pipe will pass through the passage a to the bottom of the cup, forcing the oil upwardly and out through the passage d' . The valve I being now opened, the oil will rise, proportionately to the amount said valve is opened, through that valve, through the sight-feed casing, and

by way of the passage *e*, pipe *K*, and the passage *c* into the steam-pipe, and thence to the parts to be lubricated in the usual manner. It will be seen that the sight-feed arm is connected detachably by a single connection to the cup and is made in a single piece, and that the oil-passage leads from the upper part thereof to the bottom of the sight-feed chamber and from the top of the sight-feed chamber through the connecting-nipple, and that this gives me a very short passage for the oil, which passage is in direct contact with the heated walls of the sight-feed chamber, and thereby prevents any coagulation or cooling of the oil and very greatly reduces the friction thereof in passing from the cup to the steam-pipe. Making the sight-feed arm in a single piece, with the passages through it, as shown, greatly reduces the cost thereof and enables the arm to be detachably connected, so that by simply unscrewing the single arm it may be blown out or cleaned and replaced in the shortest possible time.

The construction of the support-arm is also novel, simple, and advantageous for economical and operating reasons, and the arrangement of the two arms, constructed as described and arranged oppositely, permits the construction and assembling of the parts in the most advantageous manner and also permits the passing through the top of the cup-body of the pipe *K*, which will keep the oil warm at its feeding-point.

What I claim as my invention is—

1. In a sight-feed lubricator the combination of a cup having two openings at the top on diametrically-opposite points the support-arm connected into one opening, having a through oil-passage therein and a water-passage leading from an intermediate point there-

on into the cup, a stand-pipe connected to the outer end of said passage and a tube connected to the inner end of said passage and extending to near the bottom of the cup, a single-piece sight-feed arm connected into the other opening having a controlled oil-passage leading from the cup to the bottom of the arm, through a sight-feed chamber and back into the cup, and a pipe connecting this oil-passage extending across the oil-cup and connecting into the oil-passage in the support-arm.

2. In a sight-feed lubricator, a sight-feed arm made in a single piece chambered and comprising a sight-feed-chamber casing having sight-openings on opposite sides thereof, a nipple at one side entering the top of the casing of said lubricator, there being an oil-passage in the sight-feed arm extending from the upper part of said nipple to the bottom of said sight-feed chamber, and an oil-passage leading from the top of said chamber through said nipple, and a valve controlling the oil-passage to the sight-feed chamber.

3. In a sight-feed lubricator, the cup having an opening at the top, a sight-feed device connected thereto comprising a nipple and a body or casing having therein a sight-feed chamber, and an oil-passage leading in through the nipple and to the bottom of the sight-feed chamber, and an opening leading from the top of the sight-feed chamber through the same nipple, a connection therefrom to the steam-pipe and a condensation-supply connection into the cup.

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

ELIJAH MCCOY.

Witnesses:

JAMES WHITTEMORE,
H. C. SMITH.