

D. H. CHAMBERLAIN.
Oilers.

No. 152,332.

Patented June 23, 1874.

FIG. 1.

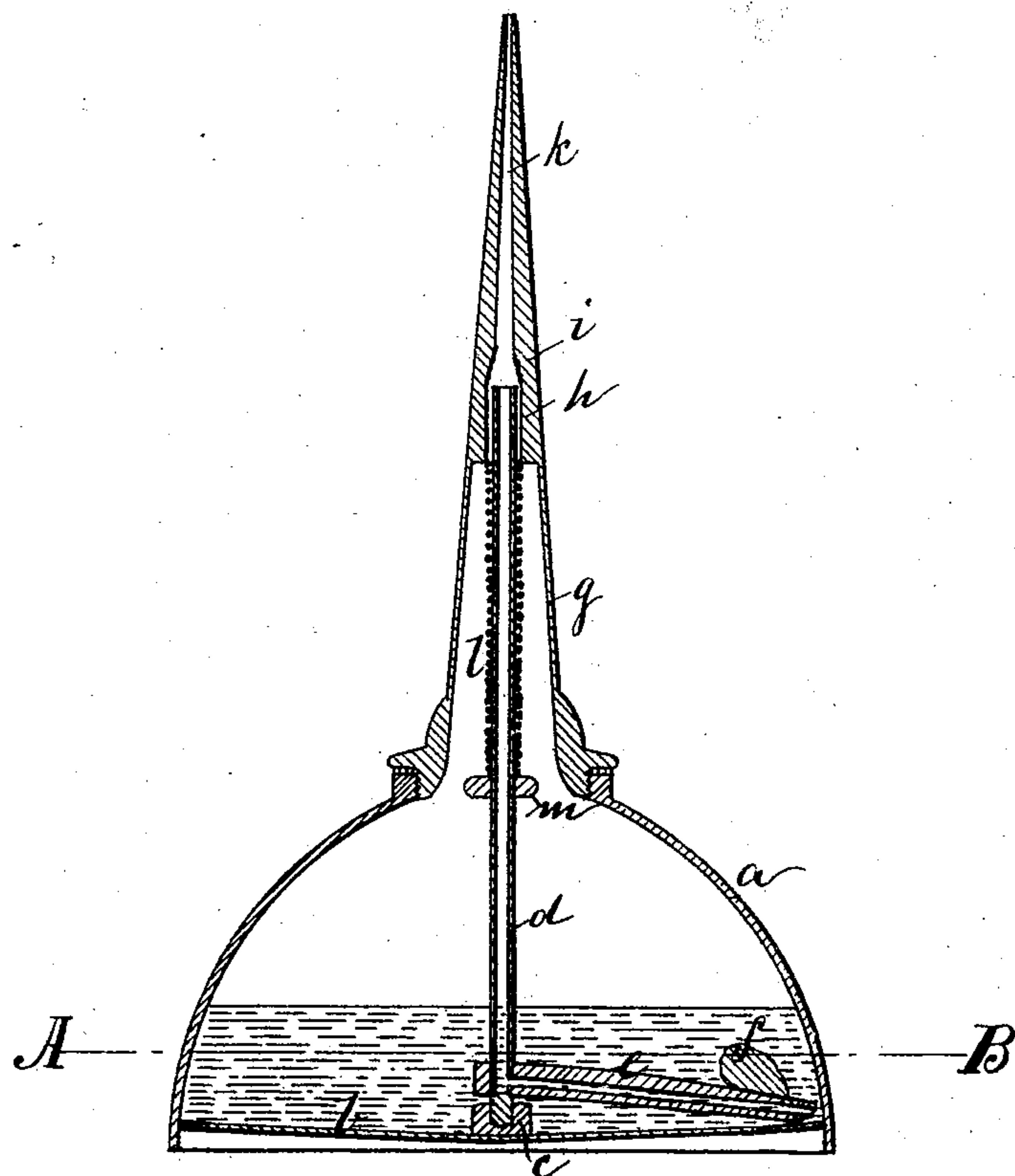
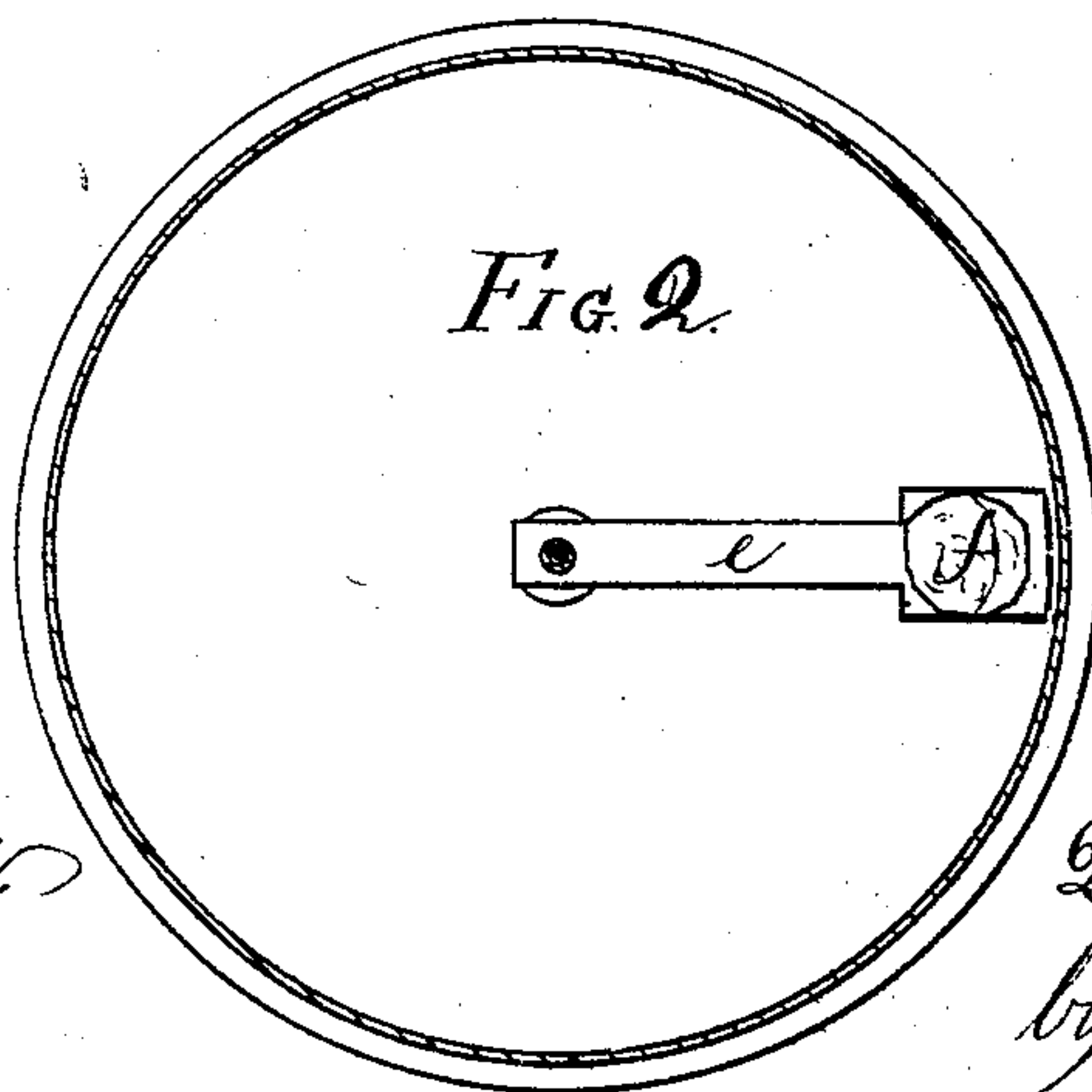


FIG. 2.



WITNESSES:

John H. Heard.
H. Osgood Edgely

INVENTOR:

Dexter H. Chamberlain
by Alban Andrieu
att.

UNITED STATES PATENT OFFICE.

DEXTER H. CHAMBERLAIN, OF WEST ROXBURY, MASSACHUSETTS.

IMPROVEMENT IN OILERS.

Specification forming part of Letters Patent No. 152,332, dated June 23, 1874; application filed May 25, 1874.

To all whom it may concern:

Be it known that I, DEXTER H. CHAMBERLAIN, of West Roxbury, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Oilers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in oilers; and consists in the combination, with an oiler, of a central hollow tube, provided, in its lower end, with a radial hollow arm, through which the oil is forced up through the central tube as soon as the bottom of the oiler is pressed in by the operator. The above-named hollow tube and its radial arm are allowed to turn freely in a step in the center of the bottom of the oiler, so that no matter in what inclination the oiler is used, the extreme end of the aforesaid radial arm will swing, by its own weight, into, and be covered by, the liquid in the oiler. The upper end of the aforesaid central tube fits loosely in a recess in the nozzle, so that the outer air will be allowed to enter the oiler through the annular space around the upper end of said tube. Said recess is made tapering above the end of the said central tube, so as to serve as a seat for the upper end of the said central tube when forced upward, by which arrangement the air is prevented from entering the aforesaid central tube, and by which all the liquid that is forced up through the said central tube is delivered to the nozzle without any possibility of flowing back to the oiler. The said central tube is automatically moved to its position for the admittance of the outer air to the oiler, by means of a coiled spring, as soon as the operator ceases to press on the bottom of the oiler.

On the drawing, Figure 1 represents a central longitudinal section of my invention; and Fig. 2 represents a cross-section on the line A B. (Shown in Fig. 1.)

Similar letters refer to similar parts wherever they occur on the drawings.

a represents an ordinary bowl, provided with a flexible bottom, *b*, in the usual manner. In the center of the bottom *b* is secured a step, *c*, that serves as a bearing for the lower end of a central hollow tube, *d*. The lower end of the said central tube *d* is extended as a radial hollow arm, *e*, the extreme end of which extends very near to the junction between the bottom *b* and the lower edge of the bowl *a*. A weight, *f*, is shown at the end of the hollow arm *e*, for the purpose of automatically moving the said arm *e*, by its own gravity, to such a position that the end of the hollow arm *e* shall be dipped into, and be covered by, the liquid in the oiler, whether the latter is kept in a vertical or horizontal position, or in any inclination between the said two positions. The arm *e* may, however, be made heavy enough, so as to dispense with the additional weight *f*. *g* represents the nozzle screwed to the upper part of the bowl *a* in the usual manner. A recess, *h*, somewhat larger in diameter than the outer diameter of the tube *d*, is made in the nozzle *g*, to serve for two purposes, namely: To allow the air to enter the bowl through the annular space around the upper end of the tube *d* when the whole is in the position as shown in Fig. 1; and, secondly, to serve as a guide for the upper end of the tube *d*. The recess *h* is contracted above the upper end of the tube *d*, as a tapering seat, *i*, against which the upper end of the hollow tube *d* is forced as soon as the flexible bottom *b* is pressed in by the operator, thereby making one continuous pipe of the tube *d* and orifice *k*. A coiled spring, *l*, surrounds the pipe *d*, and is confined between the lower part of the recess *h* and a collar, *m*, on the pipe *d*, as shown in Fig. 1, by means of which the pipe *d* is forced downward to the position shown in Fig. 1 as soon as the operator ceases to press on the bottom *b* of the bowl *a*.

It will be understood from the above that the arm *e* and the tube *d* are free to move in a complete circle for the purpose of immersing the extreme of the hollow arm *e* into the liquid, even if the oiler should be inclined to a horizontal position, and turned around its axis when in such a position.

The operation of my invention is as follows: If the oiler is used in a vertical, inclined, or

horizontal position, and the operator presses his finger on the flexible bottom *b*, the upper end of the tube *d* is thereby pressed onto its seat *i*, by which the air in the bowl *a* is prevented from escaping, and, by the increase of the pressure of the air in the bowl acting upon the liquid therein, the liquid is forced into the hollow arm *e* and central tube *d*, escaping through the nozzle *k*. As soon as the operator ceases to press on the flexible bottom *b*, the coiled spring *l* acts on the collar *m*, and withdraws the upper end of the tube *d* from its tapering seat *i*, thus allowing the outer air to enter the bowl through the annular space around the upper end of the tube *d*, instead of passing through said tube and its hollow arm *e*. When the oiler is turned upside down, the liquid is forced out through the annular space at *h* in the ordinary way.

It will thus be seen that, by the use of this,

my improved oiler, I am able to throw a jet of oil in a vertical, horizontal, or inclined position very quickly and powerfully.

What I wish to secure by Letters Patent, and claim, is—

1. An oiler provided with a movable central tube, *d*, and radial hollow arm *e*, as and for the purpose set forth.

2. The combination, with an oiler, *a*, and its flexible bottom *b*, of the tube *d* and hollow arm *e*, recess *h*, seat *i*, and coiled spring *l*, with its collar *m*, as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have affixed my signature in presence of two witnesses.

DEXTER H. CHAMBERLAIN.

Witnesses:

ALBAN ANDRÈN,
JOHN R. HEARD.