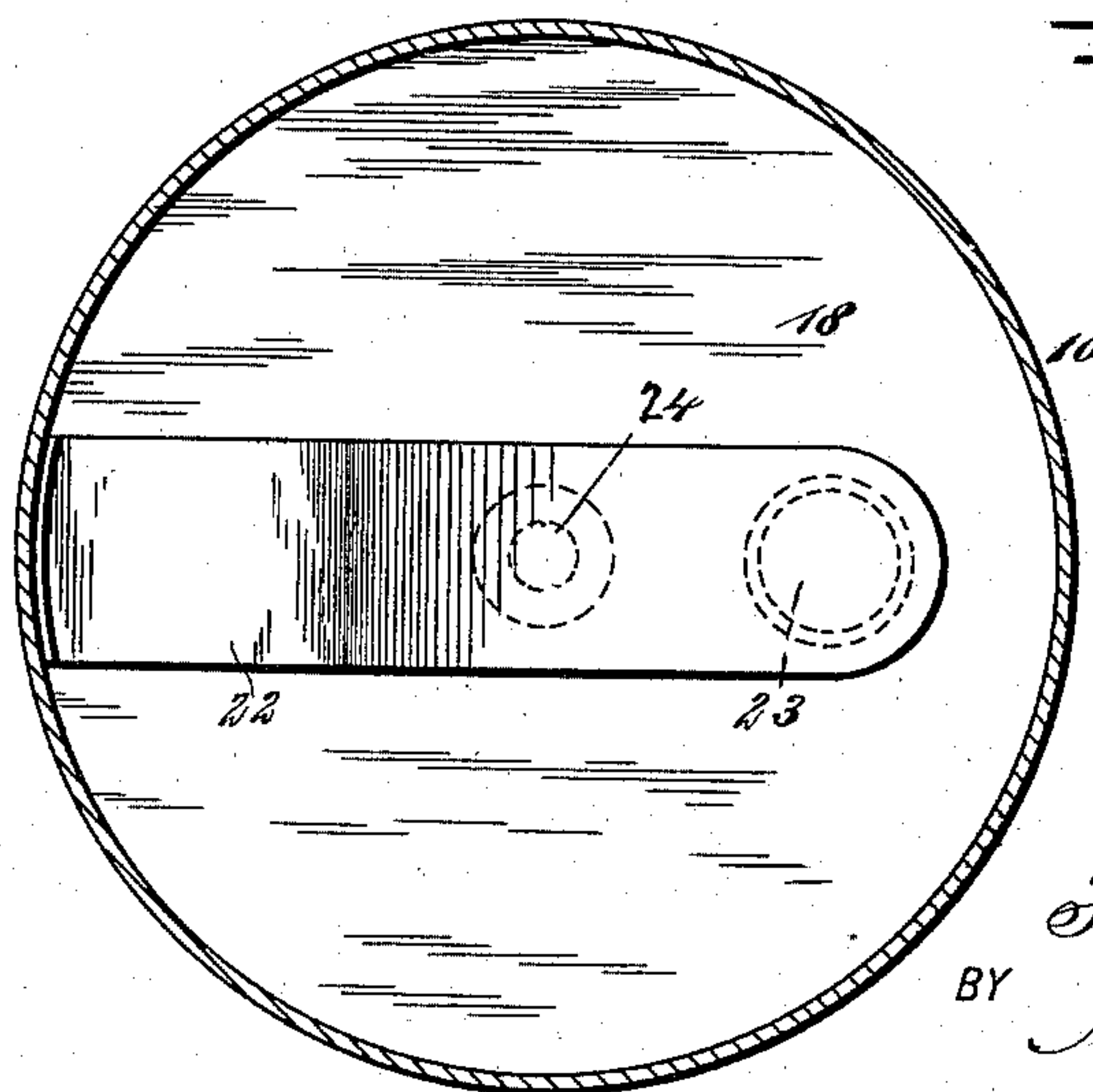
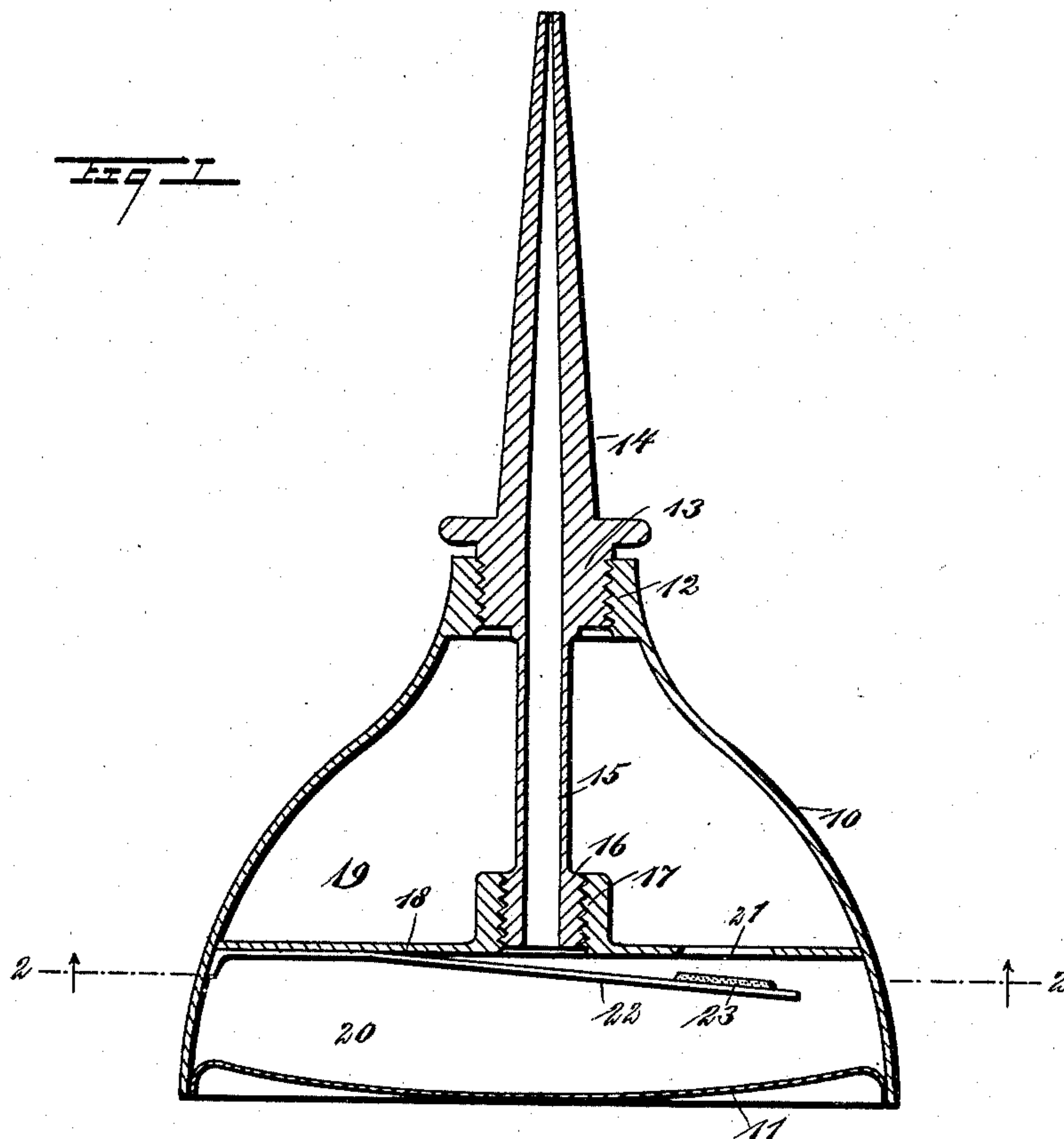


(No Model.)

F. E. SMALL.  
SQUIRT OIL CAN.

No. 477,581.

Patented June 21, 1892.



**WITNESSES:**

H. Walker  
C. Sedgwick

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# UNITED STATES PATENT OFFICE.

FRANK E. SMALL, OF SING SING, NEW YORK.

## SQUIRT OIL-CAN.

SPECIFICATION forming part of Letters Patent No. 477,581, dated June 21, 1892.

Application filed February 9, 1892. Serial No. 420,871. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK E. SMALL, of Sing Sing, in the county of Westchester and State of New York, have invented a new and Improved Squirt Oil-Can, of which the following is a full, clear, and exact description.

My invention relates to improvements in squirt oil-cans. In places where machinery is employed it is frequently necessary to oil overhead shafting or other machinery and this cannot easily be done to advantage without employing a ladder or other means of reaching the parts to be oiled.

The object of my invention is to produce a simple form of oil-can which is adapted for use in the ordinary ways and which may also be made to eject oil with a great deal of force, so as to throw it to any reasonable height and thus enable it to be advantageously applied to overhead mechanism.

To this end my invention consists in a squirt oil-can, the construction of which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in both the views.

Figure 1 is a vertical section of the oil-can embodying my invention, and Fig. 2 is an inverted sectional plan on the line 2 2 in Fig. 1.

The can has a body 10, of the usual shape, having the common flexible diaphragm 11 at the bottom, and the reduced neck 12, which is internally screw-threaded. A plug 13 is adapted to screw tightly into the neck 12, the plug being formed integrally with the spout 14, which spout has a downwardly-extending stem 15, which enters the body of the can and terminates at its lower end in a thickened and threaded portion 16, adapted to screw into the boss 17 on the division-plate 18 and effect an air-tight joint. The division-plate 18 extends transversely and horizontally across the can-body and it thus divides the can into an upper and lower chamber 19 and 20. These chambers communicate through an opening 21, and on the under side of the division-plate 18 is a light flat spring 22, having near its free end a valve 23, preferably of flexible material—such as felt—which is adapted to swing against the division-plate 18, which acts as a seat, and close the opening 21. The spring

22 has also a hole 24 through it immediately beneath the spout 14, so that the oil may flow freely upward through the spout.

The can is filled in the usual way by removing the spout 14, and it operates as follows: The operator grasps the can in his hand and presses upon the flexible diaphragm 11, which moves upward in the usual way and closes the valve 23, and forces the oil out through the spout 14. When the pressure is removed, the diaphragm returns to place, thus creating a partial vacuum, which causes the valve 23 to drop, and the oil flows from the upper chamber 19 into the lower chamber 20, thus charging the lower chamber and fitting it for another operation.

It is essential, in order that the can may work effectively and squirt the oil with great force, that the area of the interior of the spout 14 be considerably less than the displacement of the diaphragm 11, and it is also essential that there be a tight joint between the upper and lower chambers and that the valve 23 close tightly over the opening 21. In constructing the spout, it should also be tapered internally, so that a fine stream of oil may be thrown from it.

I am aware that it is not new to provide an oil-can with a division-plate extending horizontally across it and with a valve-controlled opening connecting the upper and lower chambers of the can thus formed, and I do not claim these features, broadly, as my invention; but I am not aware that a division-plate has been used in combination with a spout having an air-tight connection with the division-plate, or that a can has been constructed with a division-plate, a valve-controlled opening through the plate, a flexible-bottom diaphragm, and a spout whose internal area is less than the displacement of the diaphragm.

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

1. An oil-can having a flexible bottom and provided with an upper and lower chamber, a downwardly-opening valve for controlling the communication between the two chambers, a spring for holding the valve normally open, and a spout having an unobstructed communication with the lower chamber, substantially as described.

2. In an oil-can, the combination, with the can-body having a flexible bottom and provided with an apertured division-plate, of a spring secured to the division-plate and carrying a  
5 valve at its free end for closing the aperture of the division-plate, and a spout projecting down to and secured to the division-plate and having an unobstructed communication with the lower chamber of the can, substantially  
10 as described.

3. The herein-described oil-can, consisting of a can-body having a flexible bottom, a division-plate dividing the can-body into an upper and lower chamber and having a central

screw-threaded boss and an aperture at one 15 side of the boss, a spring secured to the division-plate and provided with a valve at its free end, and a spout screwed into the neck of the can and provided with a downwardly-extending stem screwed into the boss on the 20 division-plate and having an unobstructed communication with the lower chamber of the can, substantially as herein shown and described.

FRANK E. SMALL.

Witnesses:

STEPHEN M. SHERWOOD,  
WILLIAM MERRITT.