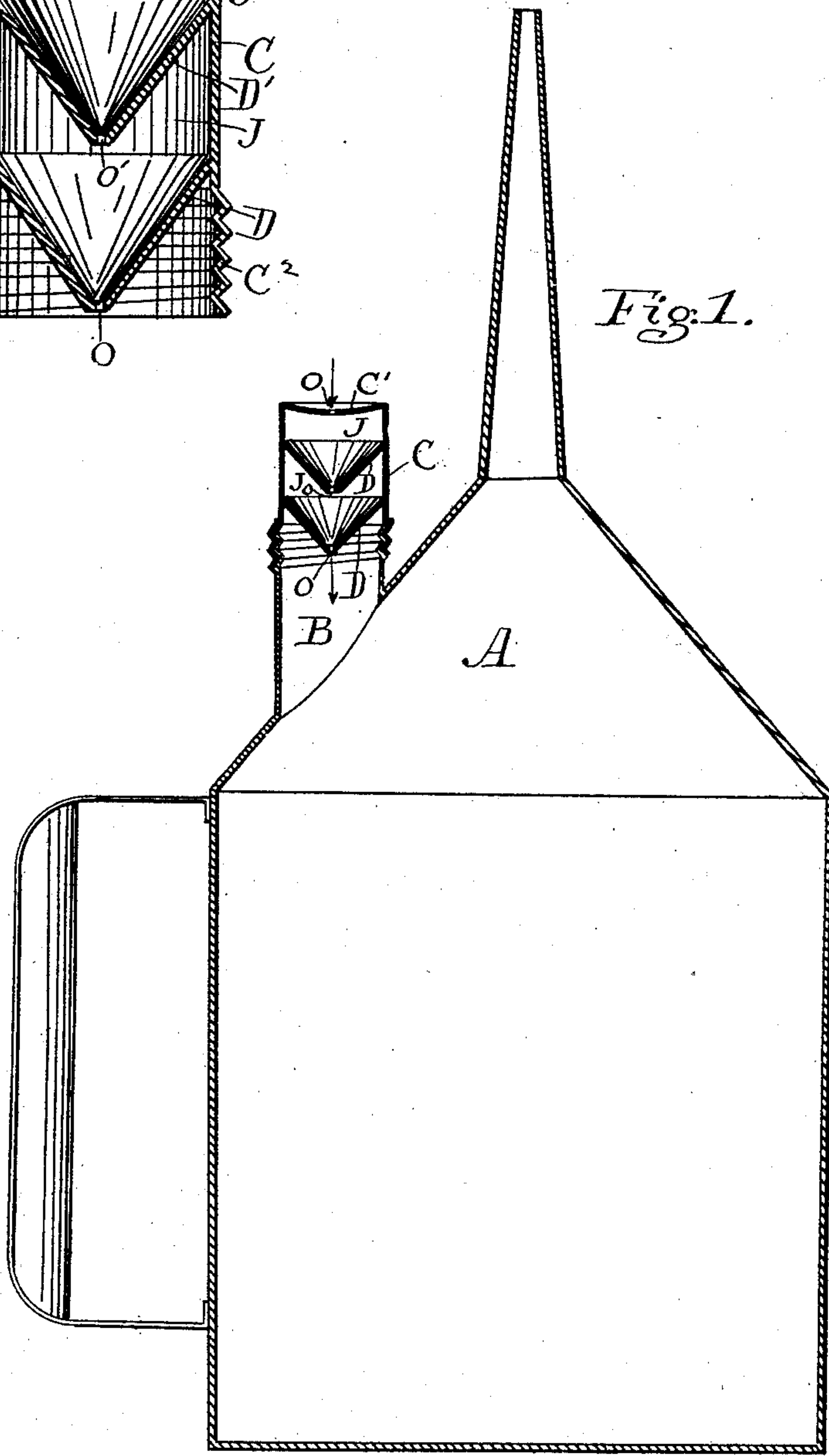
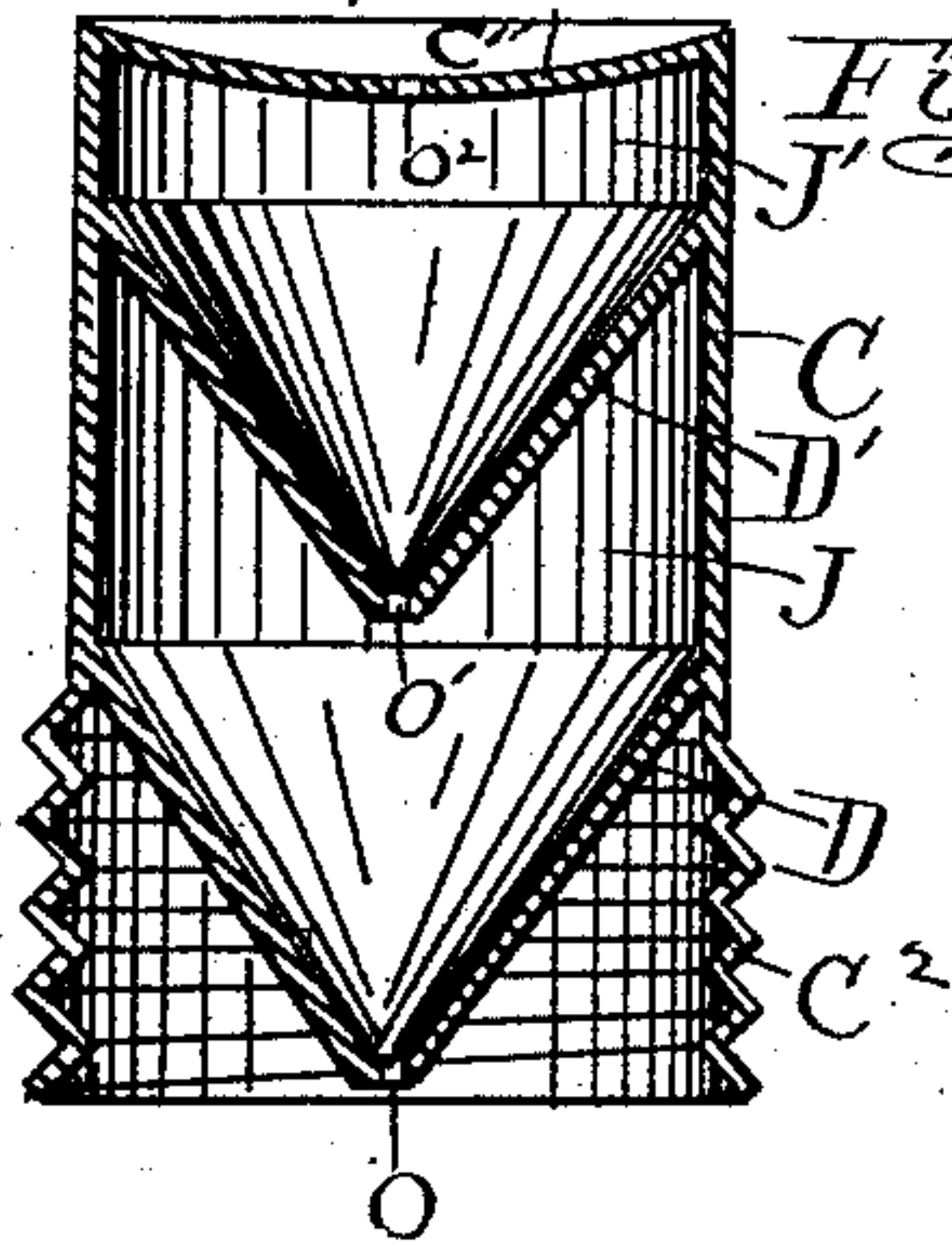


(No Model.)

L. H. FOSS.
AIR VALVE FOR OIL CANS.

No. 362,072.

Patented May 3, 1887.



Witnesses:

Wilbur F. Lunt,
Robert A. Davis.

Inventor:

Loretto H. Foss
by S. M. Bates
his atty.

UNITED STATES PATENT OFFICE.

LORETTO H. FOSS, OF PORTLAND, MAINE.

AIR-VALVE FOR OIL-CANS.

SPECIFICATION forming part of Letters Patent No. 362,072, dated May 3, 1887.

Application filed February 14, 1887. Serial No. 227,520. (No model.)

To all whom it may concern:

Be it known that I, LORETTO H. FOSS, a citizen of the United States, residing at Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Air-Valves for Oil-Cans and other Vessels 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.

My invention relates to air-valves, and it is designed to be applied to cans, barrels, and other vessels containing liquids, for the purpose of allowing the inlet of air and preventing the escape of the contained liquid.

My invention consists of a cylindrical air-vent for oil-cans, having on the lower end of the cylinder a standard screw-thread adapted to engage a like thread on the mouth of the can, and having two centrally-perforated conical diaphragms with their points extending downward, whereby air is admitted and the contents of the can prevented from escaping,

Hitherto oil-cans and the like have been principally made and used without any automatic air-valve or venting device. Most cans have been fitted with a screw cap or cover, which was loosened to allow of the inlet of air when the oil was to be removed. It has also been customary to use corks with a V-shaped slot cut in their sides, these corks being inserted in the mouth of the can. Among locomotive-engineers it is no uncommon thing for the engineer to cut a hole through the top of the can to admit the air and allow a free flow of oil from the can. In all these cases when the can was inverted more or less oil was sure to find its way out, resulting in a great waste of material.

It is well-known that as oil-cans are made and put on the market at the present time a very large class of them have a screw-cap covering their mouths, the screw-threads with which such caps are provided being of a standard size. My device being provided with screw-threads of standard size is adapted to being sold in the market for use on oil-cans having a screw-threaded mouth. Thus as a new article of manufacture it is an exceedingly useful and valuable device.

I am aware that downward-projecting conical diaphragms have been used in vents for cases for transmitting nitro-glycerine; but such vents have been permanently fixed to the case or can and were not constructed as a distinct and separate article of manufacture, as in my present invention. I am also aware that other vents have been made having flat or nearly flat diaphragms; but these do not prove so effectual as the conical diaphragms in preventing the escape of oil.

My invention is fully illustrated by the accompanying drawings, in which—

Figure 1 is a sectional view of an oil-can with my air-valve applied thereto. Fig. 2 is an enlarged sectional view of the valve unattached to the can.

A is the oil-can, and B its mouth, having the usual screw-thread to receive the cap.

C is a cylinder, preferably of tin, and having on its lower end a screw-thread, C', adapted to fit the thread on the mouth of the can. The cylinder has a partition, C', across the top, having in its center a small vent-hole, o'. Two conical partitions or diaphragms, D D, are inserted in the cylinder point downward, small vent-holes o o' passing through each point. These diaphragms D D are placed one over the other, so that there is formed between them the chamber J and above them the chamber J'. The cylinder is screwed tightly to the mouth of the can.

When the can is inverted, the oil will pass down through the outlet, and air will be drawn in through the several partitions of the air-valve, the peculiar form of the diaphragms preventing any oil from passing through the lower diaphragm. If any air should by chance pass through the lower diaphragm, it will be lodged in chamber J. It is evident that when my valve has once been tightly screwed on it works automatically and it has no working parts whatever. It is also very cheaply constructed.

The exact form of the partition is a matter of no consequence, provided the diaphragm is depressed and has a vent in the lower portion of such depression. The diaphragm may be conical, oval, spherical, or any other form. It may be applied to any vessel designed to contain liquids—such as oil-cans, barrels, &c.—and from which liquids are to be drawn

through a tap or otherwise. One diaphragm is sufficient in all ordinary cases to prevent the exit of the liquid contents of the vessel; but I prefer to use two to make the valve perfectly safe in all cases. If any liquid gets in the lower chamber, it drains back into the can when the latter is placed in an upright position.

I claim—

As a new article of manufacture, an air-vent for oil-cans, which consists of a cylinder having on its lower end a standard screw-thread

adapted to engage a like thread on the mouth of the can, and having contained therein two centrally-perforated conical diaphragms with their points projecting downward, substantially as described.

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

LORETTO H. FOSS.

Witnesses:

S. W. BATES,

WILBUR F. LUNT.