

(No Model.)

W. A. WALLINGFORD.
OIL CAN.

No. 552,158.

Patented Dec. 31, 1895.

Fig. 1.

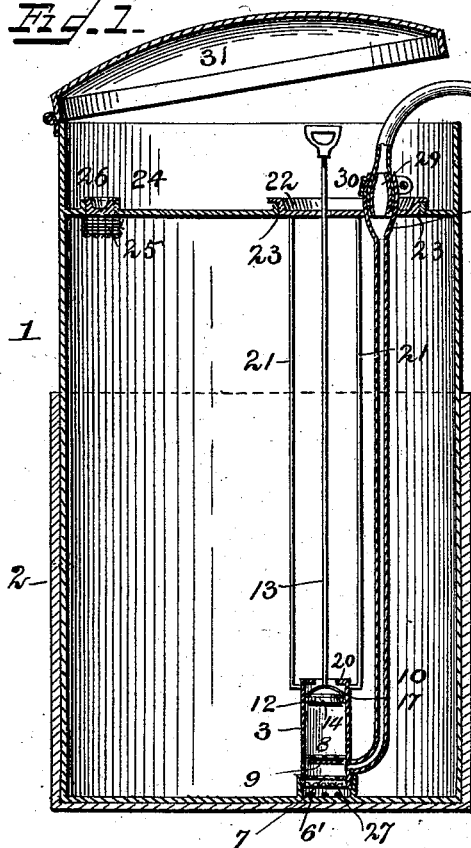


Fig. 2.

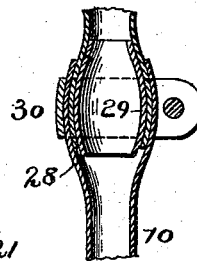


Fig. 3.

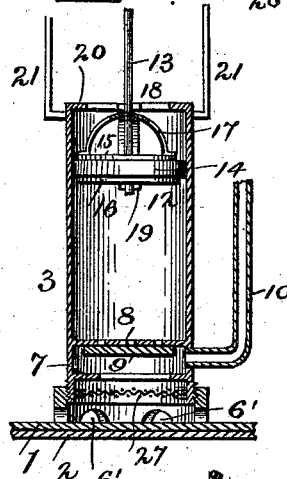


Fig. 4.



Fig. 5.

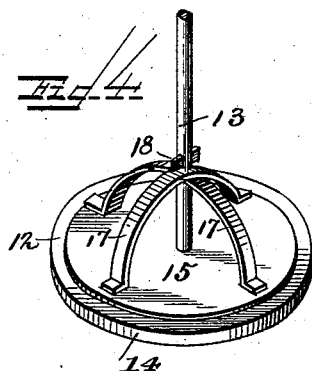
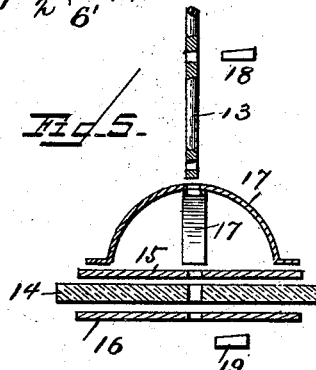


Fig. 6.



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OIL-CAN.

SPECIFICATION forming part of Letters Patent No. 552,158, dated December 31, 1895.

Application filed May 20, 1895. Serial No. 549,947. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. WALLINGFORD, a citizen of the United States, residing at Newberry, in the county of Newberry and State of South Carolina, have invented certain new and useful Improvements in Oil-Cans; and I do 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 oil-cans.

The object of the invention is to provide a can of that type by which lamps or the like may be easily and quickly filled and will also allow oil from the lamp to be siphoned back to the can without the liability of its spilling.

With these objects in view the invention consists of certain features of construction and combination of parts, which will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a longitudinal section of my improved oil-can, showing the hinged top swung up and the flexible tube hanging down along the side of the can. Fig. 2 is an enlarged vertical sectional view of the pump. Fig. 3 is a longitudinal sectional view through the meeting ends of the flexible and metal tubes and the clamp for connecting them together. Fig. 4 is a perspective view of the plunger. Fig. 5 is a longitudinal section of the plunger, showing the parts separated. Fig. 6 is a view of the clamp.

In the drawings, 1 denotes the oil-can, which may be of any suitable material and be of any desired form. As shown in the accompanying drawings, the can is of cylindrical form and is provided with a wood covering 2 at its bottom to prevent the puncturing of the can at that point.

A pump-chamber 3 is secured to the bottom of the can preferably in a removable manner, so that it may be removed for the purpose of repairing or cleaning. The chamber communicates with the can. This communication may be established in any suitable manner, a very desirable expedient being to notch the lower end of the chamber, as shown at 6'. In the interior of the chamber, a short distance above its lower end, is formed a valve-seat 7, and a slight distance above the

valve-seat is provided a reticulated portion 8, which I will hereinafter designate as a "valve-cage" or "cage." A valve 9, of some buoyant material, as cork, is placed in the chamber and in its normal position, when the can contains a liquid, is floated up against the lower side of the cage. A pipe 10, preferably of metal, is connected to the lower end of the chamber between the valve-seat and the cage and extends upward through the top of the can and is connected in a novel manner, which will be hereinafter described, to a flexible tube 11. A plunger 12 works in the chamber above the cage and is provided with a rod 13, which projects upward through the top of the can. The plunger consists of a flexible disk 14 interposed between two metallic disks 15 and 16, of less diameter than the flexible disk, which snugly fits the interior wall of the chamber. The upper disk 15 is provided with arched brace-rods 17. The lower end of the rod 13 passes through these arched braces and each of the disks, and is provided with removable keys 18 and 19, by means of which the parts are detachably connected to the rod. The metal disks will prevent the flexible disk from buckling or otherwise getting out of shape, and will hold it in proper relation with respect to the interior wall of the chamber. The extreme upper end of the chamber may be bent inward to form a flange 20, which when bent upward will permit of the removal of the plunger. The chamber is held firmly in the bottom of the can by the pipe 10 and bars 21, which are secured to the sides of the chamber with their lower ends, and with their upper ends are secured to a screw-cap 22 covering an aperture 23 in the top of the chamber. This aperture is of sufficient size to allow of the removal of the chamber and entire pump when desired.

A filling-aperture 24 is formed in the top of the can and is provided with a strainer 25 and is adapted to be closed by a screw-plug 26. A strainer 26' is also secured at the free end of the flexible tube, and a similar strainer 27 is secured to the extreme lower end of the chamber.

The novel means heretofore referred to for connecting the flexible tube to the metal pipe consists in forming the upper end of the metal pipe with a bulge portion 28 and inserting into

the inner end of the flexible tube a short section of pipe 29 similarly bulged. This short section is placed in the upper end of the metal pipe and a band 30 is clamped around the parts, thus securely fastening them together and providing an air-tight joint. This clamp allows of the flexible pipe to be removed when it has become damaged or worn and another one substituted therefor.

31 denotes a cover hinged to the top of the can.

In operation, when it is desired to fill a lamp or other vessel, the free end of the flexible tube is placed within the same and the plunger thrust suddenly downward. This movement of the plunger will cause the float-valve to be pressed downward upon its seat, thus preventing the column of liquid contained within the chamber escaping from the same into the can and causing it to be forced upward through the metal pipe, from whence it will flow into and out of the flexible pipe into the vessel to be filled without further movement of the plunger. This continual flow is due to the fact that the two pipes form a siphon. When the plunger is thrust downward, the float-valve is held only temporarily on its seat, for as soon as the liquid reaches the upper bend of the siphon and begins to descend the liquid pressure in the cylinder will diminish and finally cease to exist, allowing the float-valve to be raised against the bottom of its cage by the liquid flowing in at the bottom of the chamber and by its own buoyancy, and the liquid will then continue its flow through the siphon.

If it is desired to fill several lamps or vessels by one operation of the plunger, the tube is removed from the filled vessel and its lower end inserted into another vessel. If the other vessel is not within convenient reach, I may provide any suitably-constructed clamp for closing the tube until the vessel may be brought to the can.

Should it be desired to remove the contents or a part thereof of a vessel and return it to the can, the vessel is raised and the long leg of the siphon becomes the short leg and the liquid will then flow back into the can. This is due to the flexibility of the tube 11.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of my invention will be readily understood. The strainer in the top of the can will collect any foreign matter while the can is being filled through the aperture in its top, while the strainer at

the lower end of the flexible tube will do likewise when the contents of a vessel is returned to the can, while the strainer at the bottom of the chamber will prevent any sediment which may accumulate in the can being delivered into the lamp or vessel.

After the vessels have been filled, the flexible tube may be placed upon the top of the can and with its nozzle end into the filling-opening. This will allow the liquid contained within the flexible tube to flow back into the can. When the cover is swung down and secured to the side of the can, the parts are all concealed and protected.

Although I have shown my preferred construction, I do not wish my invention to be limited thereto, as several changes may be made without departing from the spirit of my invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The combination with a can having two openings in its top, one opening being provided with a strainer and a screw-plug, and the other opening provided with a screw-cap, the top being arranged across the can below the upper end, and a cover for the upper end, of a chamber removably secured to the lower end of the can and communicating therewith, rods connecting the chamber with the screw cap, said chamber provided with a strainer, a valve-seat secured to the open bottom of said chamber, a cage secured above the valve seat, a float valve which normally rests against the bottom of the cage, a plunger within said chamber provided with an operating rod which projects upward through the screw cap, the metal tube connected with the chamber at a point between the upper limit of the valve and its seat, the end of the said tube extending through the screw cap and formed with a bulge, the flexible tube inserted in said bulged end of the metal tube, the short bulged pipe in the inner end of the flexible tube and corresponding with the bulged end of the metal pipe and the clamping band encircling the upper end of the metal tube, substantially as described.

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

WILLIAM A. WALLINGFORD.

Witnesses:

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S. S. CUNNINGHAM.