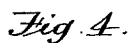


A. K. MURRAY.
LAMP FILLING TANK OR CAN.

Patented Oct. 4, 1892.



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LAMP-FILLING TANK OR CAN.

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To all whom it may concern:

Be it known that I, ALEXANDER K. MURRAY, a citizen of the United States, and a resident of Bradford, in the county of McKean and State of Pennsylvania, have invented certain new and useful Improvements in Lamp-Filling Tanks or Cans; 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.

This invention has relation to improvements in tanks or cans especially adapted for filling lamps without tilting or inclining the can in order to cause the liquid to flow through the spout or nozzle; and its object is to improve the device with a view to effectively discharging all of the liquid contained in the can without the necessity of tilting the same in any manner whatsoever, to automatically stop the flow of liquid when it has reached a certain predetermined level in the lamp, to enable the device to be adjusted, so that the lamp can be filled to any desired height, and to prevent the dripping of oil from the air-tube when the latter is removed from the lamp.

With these and other ends in view the invention consists in the peculiar construction and arrangement of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a tank or can embodying my invention, showing the same supported on a stand or table. Fig. 2 is a vertical sectional view through the tank or can. Fig. 3 is an enlarged sectional view through the valved discharge-spout. Fig. 4 is a detail sectional view through a part of the stand, showing the means for supporting the vertically-adjustable shelf.

Like letters of reference denote corresponding parts in all the figures of the drawings.

In the drawings, A designates the tank or can adapted to contain the liquid or oil, which can has the flat heads *a* *a'* at the top and bottom thereof. Said heads are arranged parallel with each other, and they are connected by means of a vertical stay-rod B, which extends centrally through the can and has its ends rigidly fixed to the opposite heads in any suitable manner, whereby the heads are stayed

and prevented from having any vibratory motion or play when the can is being emptied of the oil, which is one of the objections to the ordinary oil-can. The upper head *a* of the can has the usual filling-inlet *b*, which is screw-threaded to receive the cap *B'*, by which the inlet can be tightly closed.

On the outside of the tank or can, at the lower part thereof, is the globe-valve C, which in suitably secured in the wall of the can or tank, and the globe-valve has a nozzle *c*, which extends through the tank and depends therein, so that the lower end of said nozzle terminates very close to the bottom or lower head *a'* of the tank.

I attach importance to the globe-valve provided with the curved depending nozzle on the inside of the tank, as by such construction, in connection with an air-supply tube, hereinafter described, I am enabled to wholly withdraw or discharge all the liquid in the tank without the necessity of tilting the tank. At its outer end the globe-valve is provided with a reducing-plug D, which is externally threaded and is screwed into a threaded opening in the valve-shell, and this plug is provided with a curved depending spout *d*, which projects or extends below the plane of the bottom of the tank or can, so that the spout will readily enter into the mouth or filling-hole in a lamp.

E is the air-inlet tube, which is made of two sections *E'* *E''* of suitable length, said sections being connected together by means of an intermediate metallic tube *e*, which extends some distance into the adjacent ends of the two hose-sections, so that the sections of hose can be lengthened or shortened at will by slipping the connecting metallic tube *e* farther into or withdrawing the same farther from the ends of the hose-sections. The upper section *E'* of hose is rigidly fixed or secured in any suitable manner to the upper head *a* of the tank, so that the hose will communicate with the air-space of the tank above the liquid therein, and the lower section *E''* of hose is provided with a metallic tip *e'*, which is adapted to be thrust into the mouth or filling-opening of the lamp alongside of the curved depending spout *d* of the globe-valve. The reducing-plug D is about one-half of an inch in diameter at the point where

it is screwed into the valve-shell, and at the point where the spout *d* is screwed into said plug the latter is about one-half the diameter of the valve-shell, so that I am enabled to employ a curved spout *d* of about one-fourth of an inch in diameter. It is important to employ a discharge-spout of very small diameter, in order that it may be thrust with the tip *e'* of the air-tube into the mouth or filling-opening of a lamp. I do not wish, however, to confine myself strictly to the proportions of parts named herein as embodying my invention, as it is evident that the same can be varied without sacrificing the advantages of my invention.

When the device is not in use, the free end of the air-tube is turned up, as shown in Fig. 1, and the metallic tip *e'* of said air-tube is thrust or fitted into a retainer or loop *f*, which is secured to the outside of the can or tank near its upper end.

To properly hold the air-tube in position when the tank is to be used for filling a lamp, I provide a hook *g*, which is secured to the outside of the can or tank near its bottom and in close juxtaposition to the valve and depending spout. The tip *e'* is withdrawn from the loop or retainer *f*, and the lower part of the tube or hose is fitted into the hook *g*, which forces the metallic tip or nozzle into position alongside of the depending spout *d*, and said spout and tip are of such sizes and so arranged that it is possible to thrust both of them at one time into the mouth or filling-opening of the lamp.

To fill a lamp with my improved device, the tip *e'* is withdrawn from the retainer and the hose adjusted in the loop *g*, so that the spout and tip can enter the mouth of the lamp, the tip or nozzle *e'* depending into the lamp for a short distance below the end of the spout, after which the valve is opened. The oil immediately begins to flow through the valve and spout into the lamp and air is admitted into the air-tube and flows through the same into the air-space in the tank, thus maintaining the desired pressure of atmospheric air in the tank. The oil flows uninterruptedly into the lamp until the oil reaches the desired level around the tip or tube at the end of the air-tube, when the supply of air is cut off and the flow of oil stops. The valve is now shut off and the end of the air-tube withdrawn from the lamp, whereupon a few drops of oil will remain in the air-tube, the free end of which is thrust into the loop or retainer *f*, thus bringing the air-tube to the curved form shown in Fig. 1, which permits the pressure of air to force the drops of oil remaining in the air-tube back into the can or tank, thus preventing dripping of oil.

I have found by experiment that by having the valve provided with the depending nozzle on the inside of the tank and arranging the air-tube so as to supply the pressure of atmospheric air to the air-space of the tank above the oil therein all of the oil can be

withdrawn from the tank so long as the end of the air-tube in the lamp remains uncovered by the oil and the valve is allowed to remain open and this is effected without in any way tilting or inclining the tank or can, as is usual and customary with tanks in which the oil is siphoned out of the tank. I am also enabled to prevent the oil from dripping from the air-tube, as the small quantity remaining in the tube after its removal from the lamp is forced back into the tank, and another advantage consists in the simple means by which the lamp can be filled to any desired height, which is accomplished by making the air-tube shorter or longer and allowing the tip *e'* thereof to enter the lamp to a greater or less extent, so that the oil will surround the tip at the desired level in the lamp.

In connection with my tank or can I have provided an improved form of stand or table *H*, (shown in Figs. 1 and 4,) in which *h* is the top on which the tank can be placed. The top is supported by legs or standards *i i*, and a vertically-adjustable shelf *j* is provided below the top, at one side of the same, for holding the lamp to be filled below the depending spout *d* of the tank. This shelf is provided with clamps *k k*, which are fitted on vertical rods *l l*, suitably secured to the top and the standards of the table, and the clamps are adapted to bite or bind on the rods *l* and thus hold the shelf at the desired height below the tank, according to the size of the lamp. It will be seen that the shelf can be readily raised or lowered to bring the lamp into proper position beneath the spout *d*, and thus the stand can be adjusted to accommodate tall or short lamps, which can be readily filled without wasting the oil.

If it is desired to carry the tank or remove it from one plate to another, the plug *D* and the depending spout can be readily removed from the valve simply by unscrewing the plug and taking it off, which will prevent the lower end of the spout from resting on the table or other place should the tank be set down. To use the tank, the plug can be quickly screwed into the valve, so that the spout will depend below the bottom of the can.

The operation and advantages of my improvement will be readily understood and appreciated by those skilled in the art from the foregoing description.

What I claim as new is—

1. The tank or can, the exterior valve provided with the depending nozzle on the inside of the tank, the removable plug secured to the valve and provided with the depending spout, and the air-tube separate from the valve and its spout and having one end secured to the head of the tank and provided with the tip which is adapted to be inserted along with the spout into the mouth or filling-opening of a lamp, as and for the purpose described.

2. The tank or can, the exterior valve provided with the depending nozzle on the in-

side of the tank, the depending spout on the outer end of the valve and depending below the bottom of the tank, the air-tube having one end secured to the head of the tank and
5 provided with the tip at its free end, the upper loop or retainer on the outside of the tank to receive the tip of the air-tube, and the hook near the bottom of the tank close to the valve and spout and adapted to support the
10 lower part of the tube and hold the same in position for its tip to enter a lamp alongside of the spout on the valve, as and for the purpose set forth.

3. The combination of the tank or can, the
15 valve having the depending nozzle on the inside of the can, the plug carrying the depending spout on the outside of the can, and the extensible air-tube having its two sections connected by an intermediate tube-coupling
20 and one of the sections secured to the head of the tank and the other section provided with a tip or nozzle, for the purpose described, substantially as set forth.

4. The tank or can having its heads arranged parallel with each other and connected

by an intermediate stay-rod which is united rigidly to both heads, the exterior valve provided with the depending nozzle on the inside of the tank, the plug secured in the valve and having the depending spout, and the air-tube
30 secured to the upper head of the tank and provided with the tip at its free end, as and for the purpose described.

5. In a lamp-filling oil tank or can, the stand having the top adapted to support a
35 tank so that its spout will not contact with said stand, the vertical parallel rods rigidly secured to said top near one edge thereof and depending from the same, and the adjustable shelf having the friction-clamps fitted on said
40 rods and adapted to bite thereon to hold the shelf at the desired elevation, substantially as described.

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

ALEXANDER K. MURRAY.

Witnesses:

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WILLIAM O. BELT.