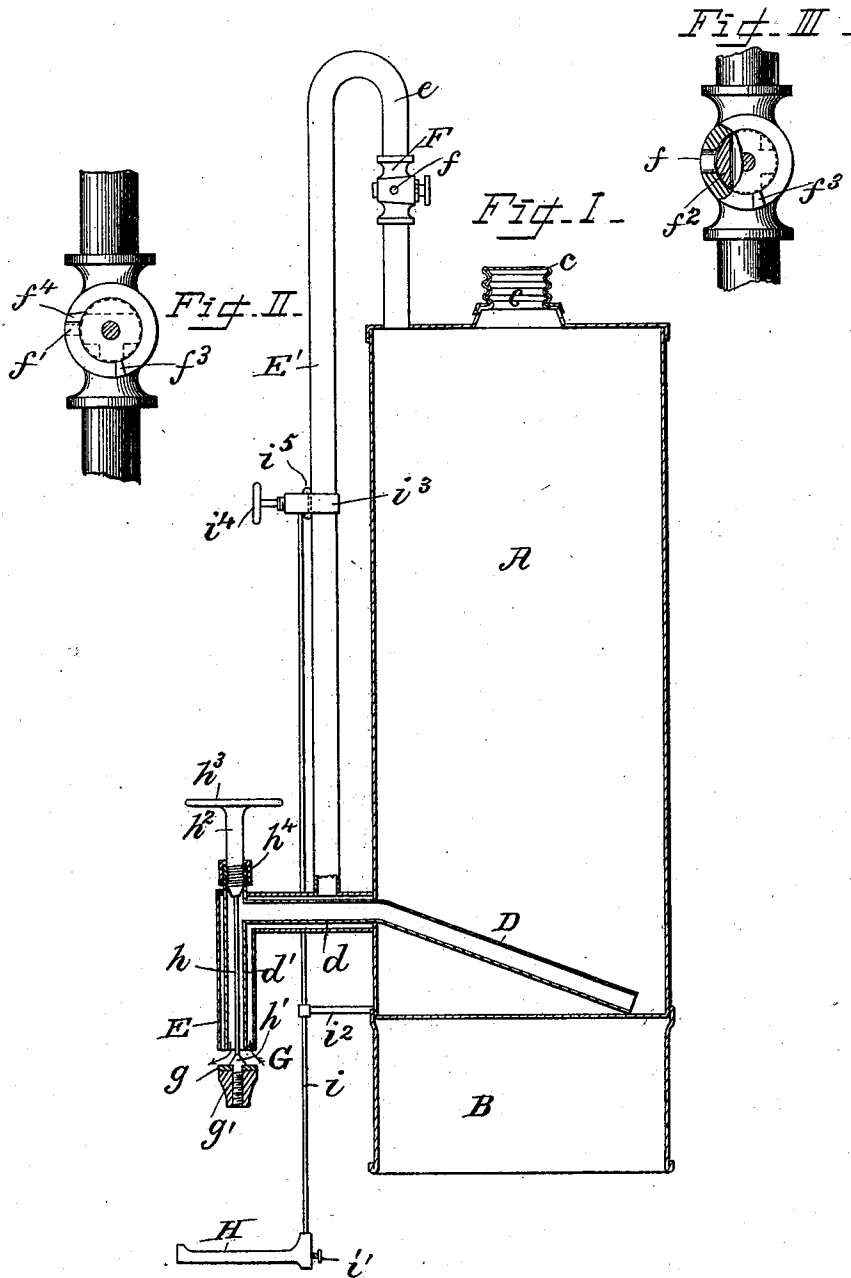


(No Model.)

B. L. BRINTON.
LAMP FILLING CAN.

No. 506,153.

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Attest:
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UNITED STATES PATENT OFFICE.

BURTWIN L. BRINTON, OF BRADFORD, PENNSYLVANIA.

LAMP-FILLING CAN.

SPECIFICATION forming part of Letters Patent No. 506,153, dated October 3, 1893.

Application filed March 11, 1893. Serial No. 485,549. (No model.)

To all whom it may concern:

Be it known that I, BURTWIN L. BRINTON, of Bradford, in the county of McKean and State of Pennsylvania, have invented a new and useful Improvement in Lamp-Filling Cans, which improvement is fully set forth in the following specification.

The present invention relates to oil-cans, particularly such as are used for dispensing oil in small quantities for purposes such as filling lamps, and similar receptacles. It may also be advantageously used for retailing oil and like purposes.

Although my improvement is especially designed for and is herein described as employed in dispensing oil, it is obvious that vessels constructed in accordance with the invention may be used for other liquids.

Prior to my invention oil-cans had been provided with lamp-filling devices, which comprised as an essential part of their structure, an air-supplying tube having its orifice in close proximity to the discharge orifice of the outlet tube for oil or other liquid, so that the rise of the liquid in the lamp reservoir, or other receptacle being filled, will automatically close the air inlet and stop the flow.

My invention embodies the same principle of an automatically closing air-supply pipe, and its object is to produce an apparatus less complex and costly than those of similar character heretofore devised, and one which avoids, in operation, certain difficulties or defects that have heretofore attended the use of devices of this class.

In carrying out my invention the discharge pipe for oil terminates in a downwardly projecting portion, adapted to project into the receptacle to be filled, and the end of the air-supply pipe is in close proximity therewith. Preferably the air and liquid pipes are concentric tubes (the air tube outside) with their ends in the same horizontal plane, so that they are simultaneously shut off by the same valve or closure. The arrangement of the air tube or passage surrounding the liquid outlet, in combination with means for closing both simultaneously, constitutes a special feature of the invention. The air-tube is extended upward, outside the can to or near the top thereof, and in this portion of the air pipe is placed a three-way cock, which in one

position puts the air-space in the upper part of the can into communication with the orifice of the air-tube, and in another position cuts off the air space, and puts the lower part of the air-tube into direct communication with the outside air.

The special objects and utilities of the new devices will be fully understood from the following description taken in connection with the accompanying drawings, in which—

Figure I, is a vertical section of my improved can, the upper portion of the air-tube being in elevation. Fig. II, is an elevation of a portion of the air-tube including the three-way cock, taken at right-angles to Fig. I, showing the positions of the passages in the cock in dotted lines, and omitting the thumb-piece or lever for turning the cock, and Fig. III, is a similar view partly in section, the cock being turned to a different position from that shown in Fig. II.

Referring to the drawings A represents an air-tight oil-can or tank, having a supporting base or stand B and a filling opening C, provided with a cap c. An oil-tube D inclined upwardly from the bottom of the can passes through the side thereof (a tight joint being formed around the tube) at a point a short distance from the bottom of the can. The oil-tube outside of the can comprises a horizontal section *d* and a vertical section *d'* open at its lower end. The upper end of the vertical section, above the horizontal section is interiorly screw-threaded, for purposes which will be hereinafter pointed out. It will be noted that the oil-tube thus arranged forms a siphon when the oil in the can has reached a level below the horizontal section *d*, but it is evident that such an arrangement (though in some cases preferable) is not necessary as the oil-tube may communicate with the interior of the can through an opening adjacent to the bottom thereof.

Around that portion of the oil-tube D outside of the can, with the exception of the upper end of the vertical section *d'*, is a concentrically arranged air-tube E, the lower end of which terminates in the same horizontal plane with the end of the oil-tube, for purposes hereinafter described.

E' is a branch of the air-tube E, extending upwardly from the latter at a point near the

can. The upper portion of this branch E' projects beyond the top of the can where it is bent over and extended downwardly, as at *e*, the lower end thereof communicating with the interior of the can through its top.

A three-way cock F is placed in the air-tube at any suitable point, by preference in the portion *e* thereof, said cock serving to alternately throw into communication with the exterior air, the interior of the can (through the nozzle of the air-tube when the valve at the lower end thereof is open) and that portion of the branch E', and air-tube E communicating therewith, which is between the cock F and the receiving end of the air-tube E, for purposes hereinafter described. A pin *f'* of the plug *f*² of the cock engages a stop *f*³ when the cock is in the position first mentioned, and when in the latter position said pin engages a stop *f*⁴, said stops allowing only a quarter of a revolution of the plug. The lower ends of both the air and oil tubes are shut-off by a single valve or closure G. This valve consists of a flexible washer *g* clamped tightly against the under face of a cone-shaped enlargement *h'* at the lower end of a valve-rod *h*, by a nut *g'* engaging a screw-threaded extension of said rod *h* below the cone *h'*. The valve-rod passes upwardly through and emerges from the vertical section *d'* of the oil-tube, its enlarged upper end *h*² being provided with a screw-thread which engages the interiorly screw-threaded upper end of the said section, hereinbefore referred to, whereby upon the rotation of the valve-stem by a handle *h*³ the valve G is closed; the flexible washer *g* being brought to its seat against the ends of the tubes, the cone *h'* engaging inside of the oil-tube, serving to guide said washer *g* squarely and firmly to its seat. A stuffing box *h*⁴ surrounds the upper end *h*² of the valve stem. By this arrangement of the shut-off valve both tubes are tightly closed by the single valve, and when the valve is closed no oil can drip out of the pipes.

The arrangement of the oil and air passages, the latter being annular and surrounding the former, is particularly useful, not only in that it enables both passages to be opened and closed simultaneously by a single valve, but also because both fluids are allowed to flow freely; whereas when the air tube is within the oil tube, as heretofore arranged in some instances, the oil acts as a curtain, cutting off or impeding access of air to the air tube.

A support H for the lamp or other receptacle to be filled is adjustably secured to rod *i*, by a thumb-screw *i'*. The rod *i* passes upwardly through a guide *i*² secured to the can, and carries at its upper end a sleeve *i*³ surrounding the branch E' of the air-tube, along which it may be adjusted and secured at the desired height by a thumb-screw *i*⁴, engaging against a clamping block *i*⁵ (shown in dotted lines in Fig. I) said block having enlarged

ends to hold it in place. The branch E' is extended above the can for the purpose of giving greater adjustment to the support which is regulated according to the height to which the lamp or other receptacle is to be filled.

The operation is as follows:—Assuming that no oil has been drawn from the can, so that there is no oil in the lower end of the air-tube, the receptacle to be filled is placed on the support H which is adjusted so as to bring the lower end of the air-tube to the height to which the receptacle is to be filled. The three-way cock is then turned to the position shown in Fig. III (the pin *f'* engaging against stop *f*³) and the valve G opened, or vice versa. As soon as the valve G is opened the air passing into the air-tube E, its branch E' and into the top of the can, fills the space left by the outflow of oil, and the flow of both fluids continues until the oil rises in the receptacle and closes the end of the air-tube, in consequence of which in turn, the flow of oil is also arrested. Inasmuch as the air in the top of the can A and the air supply pipe E E' is slightly rarefied, a small quantity of oil will be drawn by suction into said pipe. The user then shuts the valve G, closing both tubes. If now it be desired to fill another lamp from the can, the presence of oil in the air supply tube would prevent the outflow of oil. Therefore the user must turn the cock F to the position shown in dotted lines in Fig. II, so as to open the tube E' to the outer air above the level of the oil therein. When this is done and the valve G again opened the oil in the lower part of the air pipe runs off, and the cock F is then turned again to the position shown in Fig. III. By this arrangement it will be seen that the usual difficulty in starting the flow of oil after one lamp has been filled is obviated, and the filling is done in a convenient and expeditious manner.

Having thus described my invention, what I claim is—

1. The combination with an oil-can or other vessel, of a nozzle or spout for automatically cutting off the flow of liquid therefrom, comprising an oil-tube and an air-tube communicating with the atmosphere through its lower end only during the flow of the liquid and with the interior of the oil-can or other vessel at its upper end, both tubes having their orifices in the same horizontal plane, and a shut-off valve for simultaneously closing the ends of both said tubes, substantially as described.

2. The combination with an oil-can, or other vessel of a nozzle for automatically cutting off the flow of liquid therefrom, composed of concentric tubes, the inner tube being the oil outlet, and the outer tube being connected with the interior of the oil-can or other vessel, and communicating with the atmosphere through its lower end during the flow of liquid, the lower ends of both tubes being in

substantially the same horizontal plane, and a flat faced valve adapted to close against the ends of said tubes, substantially as described.

3. The combination with an oil-can of a
5 nozzle composed of concentric tubes, the inner one being the oil outlet, and the outer one being connected with the interior of the upper part of the can, the lower ends of both
10 tubes being in substantially the same horizontal plane, and a flat faced valve adapted to be closed against the ends of said tubes, substantially as described.

4. The combination with an oil-can of a nozzle or spout comprising an oil tube consisting of horizontal and vertical sections, an
15 air-tube arranged concentrically around the vertical part of the oil-tube, a continuation of the air-tube communicating with the upper part of the oil-can, a valve-rod passing upwardly through the vertical section of the
20 oil-tube, a shut-off valve or closure for the ends of the tubes at the lower end of said valve-rod, a cone-shaped enlargement on the rod above said shut-off valve, adapted to guide
25 the said valve to its seat, and means for closing the valve, substantially as described.

5. The combination with an oil-can of a filling device comprising a discharge pipe or

tube, an inlet pipe having its orifice in close proximity to the discharge outlet, and leading 30
to the upper part of the can, a closure for the discharge pipe, and a cock or valve in the upper part of said air-pipe for closing said pipe to the can and opening it to the outer air, substantially as described. 35

6. The combination with an oil-can of a nozzle or spout comprising an oil tube, and an air-tube arranged concentrically around the same, an upwardly extending branch of said air-tube, leading into the air-space in 40
the upper part of the can, a shut-off valve for closing the lower ends of the air and oil tubes, and a three-way cock in the branch tube for alternately throwing the air space in the upper part of the can into communication with 45
the orifice of the air-tube, and the lower part of the said tube into direct communication with the outside air through a lateral opening therein, substantially as described.

In testimony whereof I have signed this 50
specification in the presence of two subscribing witnesses.

BURTWIN L. BRINTON.

Witnesses:

PHILIP MAURO,
REEVE LEWIS.