

(No Model.)

E. W. LUCE.
OIL CAN AND FILLER.

No. 511,440.

Patented Dec. 26, 1893.

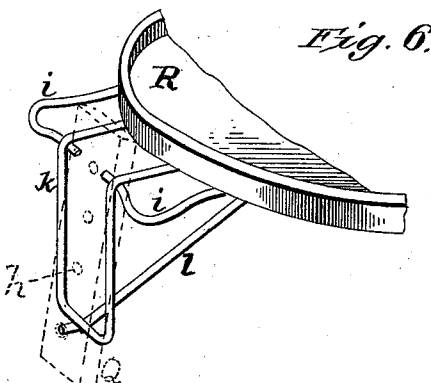
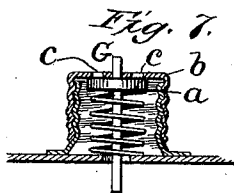
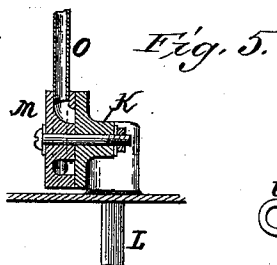
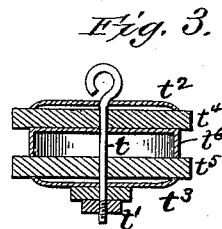
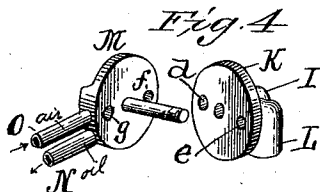
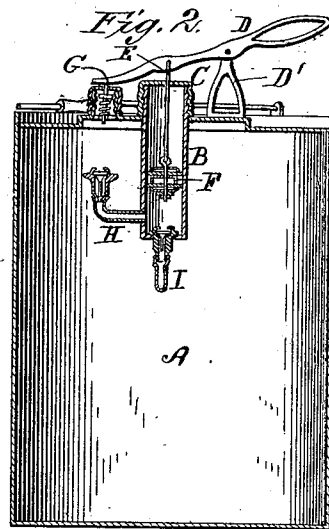
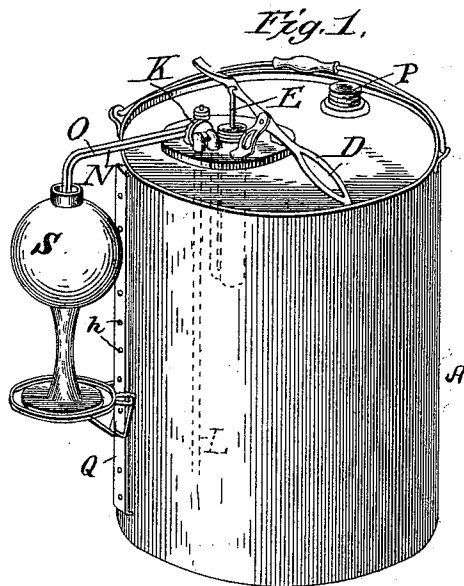
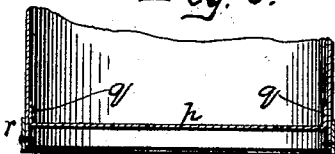


Fig. 8.



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UNITED STATES PATENT OFFICE.

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OIL-CAN AND FILLER.

SPECIFICATION forming part of Letters Patent No. 511,440, dated December 26, 1893.

Application filed March 18, 1892. Serial No. 425,463. (No model.)

To all whom it may concern:

Be it known that I, EDWIN WEBSTER LUCE, a citizen of the United States, residing at Meadville, in the county of Crawford and State of Pennsylvania, have invented certain new and useful Improvements in Oil-Cans and Fillers; 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to oil cans and fillers and has for its object to furnish an improved can and filler which shall be easy of operation, cheap in construction, and not liable to get out of order.

With these objects in view my invention consists in the improved construction, arrangement and combination of parts herein-after fully described and afterward specifically pointed out in the claims.

In the accompanying drawings:—Figure 1 is a perspective view of an oil can and filler made in accordance with my invention. Fig. 2 is a vertical section through the same showing the construction of the pump and the relief valve. Fig. 3 is a detail view, being an enlarged section through the piston head. Fig. 4 is a detail view showing the two parts of the casting with which the delivery and air spouts are connected to the body of the can, with the spouts in their delivery position. Fig. 5 is a vertical section through the same with the spouts raised to their inactive positions. Fig. 6 is an enlarged detail view of a portion of the lamp supporting bracket, the bar—attached to can—on which the bracket slides, being shown in dotted lines. Fig. 7 is an enlarged detail, sectional view through the relief valve. Fig. 8 is a sectional view showing the manner in which I attach the bottom of the can.

Like letters of reference mark the same parts wherever they occur in the various figures of the drawings.

Referring to the drawings by letter A is the main body of the can of the usual cylindrical, or any approved shape.

B is the pump barrel, let into the top of the

can and projecting above the same sufficiently far to accommodate a screw cap C by which its top can be covered. A pump handle D is pivoted in brackets D' erected on the top of the can and a piston rod E, removably pivoted to the handle, projects downward therefrom through the cap C, into the pump barrel, a valveless piston head F being attached at its lower end. The pump handle projects beyond the point where it connects with the piston rod and, when desired, can be brought down upon the pin G of a relief valve. This relief valve consists of the pin G, having a disk *a* secured thereon said pin passing up through a screw cap *b* and down through a hole in the top of the can. A spring normally presses the disk *a* upward against the screw cap *b*, thus keeping the relief vents closed until opened by pressing the pin downward.

The pump barrel B has a pipe H leading from it inside the can provided at its inner end with an outward opening valve, and a pipe I having an inward opening valve. The pipe H terminates within the can (see Fig. 2) but the pipe I leads outside the can and terminates in a block K, preferably of cast metal, secured to the top of the can. A pipe L, leading up from near the bottom of the can leads outside and also terminates in the block K, the pipe I terminating at *d* and the pipe L at *e* (Fig. 4).

Pivoted to the block K is another block M which has openings *f*, *g*, which, when desired, may be so placed as to register with openings *d* and *e* in block K, so as to communicate therewith, or not, as desired. From the openings *f* and *g*, in block M, passages lead to the side of said block and in such passages are secured an oil delivery tube N and an air supply tube O, as most plainly shown in Fig. 4. The can is filled with oil through an ordinary screw capped opening as at P.

Q is a vertical bar secured to the side of the can at a short distance from it, and is provided with a series of perforations *h*, one above the other as shown. This bar is the way upon which a bracket R is adjusted vertically, said bracket being provided as a support for a lamp S, or other vessel, while being filled. From the rear side of this bracket R is projected two bent wires *i*, a bent loop *k*

and a downward inclined wire *l*. To secure the bracket to the bar *Q* it is placed so that the bar passes through the lower part of the loop *k* and in front of the ends of the bent wires *i*, as shown in Fig. 6. The bracket may then be moved up and down upon the bar at will, and when the proper height is attained, it is held there, by placing the end of the inclined wire *l* in one of the perforations *h* in the bar *Q*.

The filling operation may be described as follows:—The ends of the spouts *N* and *O*, being placed in the lamp, as in Fig. 1, and the pump being operated, on the down stroke of the piston the air in the barrel below the piston head will be forced into the can through pipe *H* the valve in pipe *I* being closed. This air displaces a certain quantity of oil forcing it through pipe *L* and out through spout *N*. The motion of the pump being reversed, air is drawn into the pump barrel through air supply spout *O*, blocks *M* and *K*, and tube *I*. This operation is repeated, oil being forced into the lamp at each down stroke of the piston, and air being drawn out of the lamp and into the can at each up stroke, until the oil flowing into the lamp reaches the mouths of the two spouts *N* and *O*. Then, instead of taking air from the lamp at each up stroke, oil is taken therefrom, so that all the oil forced into the lamp at each down stroke of the piston, is drawn back into the can at the succeeding up stroke. As a consequence the oil in the lamp will not rise any higher no matter how long the pumping operation is continued, and the lamp will never run over. The peculiar noise made will notify the operator when the oil reaches the mouths of the spouts. The lamp being filled, the tubes *N* and *O* are turned up to a substantially vertical position (see Fig. 5) so that they will be out of the way. This action also closes the tubes by removing the openings in the two blocks *K* and *M* from their open position so that the blocks *K* and *M* form together a double valve for opening and closing both the air and oil tubes. Not only does the act of raising the tubes close their communication with the can, but any oil which may remain in the tubes is prevented from dripping out when the lamp is removed. The operation being concluded, the relief valve is opened by pressing the inner end of the pump handle down upon its pin, and the compressed air in the can allowed to escape, preventing any accidental overflow of oil should the delivery tube be accidentally turned down.

My can, of course, may be made in any usual way, but the way I prefer is illustrated in Fig. 8, in which *p* is the bottom, preferably of copper, cupped, or having an annular flange *q* turned up all around it. This bottom is placed inside the sides of the can, and outside them is placed a hoop *r* of iron, which may be secured by rivets, the bottom being soldered in. The hoop *r* also acts as a foot to

the can and prevents injury to either the sides or bottom, or the breaking at the joint between them.

The piston head consists of a central bolt *t* having nut *t'*, top and bottom cupped disks *t²*, *t³*, leather or felt washers *t⁴*, *t⁵*, inside said disks, and a cup *t⁶* between said washers. The upper end of bolt *t* is hooked to engage the lower end of the piston rod and the peculiar construction of the head holds it in a plumb position while allowing a loose connection with the piston rod.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In combination with an oil can, the pump barrel, the air tube leading from the pump barrel, the block *K* in which said tube terminates, the block *M* pivoted to the block *K*, and the air supply spout terminating in the pivoted block *M*, said blocks having passages communicating between the tube and spout which register and are open only when the spout is in its lower or operative position, as set forth.

2. In combination with an oil can, the pump barrel, the oil tube leading from inside the can, the air tube leading from the pump barrel, the block *K* in which said tubes terminate, the block *M* pivoted to the block *K*, and the oil delivery and air supply spouts secured to said block *M*, the blocks *K* and *M* having passages which afford communication between the spouts and the can only when the spouts are in operative position, as set forth.

3. The combination with an oil can, of an oil discharge pipe leading from the same, a pump, and an air supply pipe communicating with the pump, said pipes consisting each of an inner fixed portion and an outer swinging or rocking portion, and having ports or passages connecting the two portions, whereby communication through both pipes may be cut off or established at will; substantially as described.

4. In combination with an oil can, a block fixed exteriorly to the can and forming the termination of interior oil and air tubes, a second block forming the termination of the oil delivering spout and an external air-supply tube, and a pivot connecting the two blocks together, said blocks having ports or openings therein affording communication between the interior oil tube and its delivery spout, and between the interior and exterior air supply tubes, when the spout is in its discharging position, and shutting off said communications when the spout is not in discharging position.

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

EDWIN WEBSTER LUCE.

Witnesses:

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