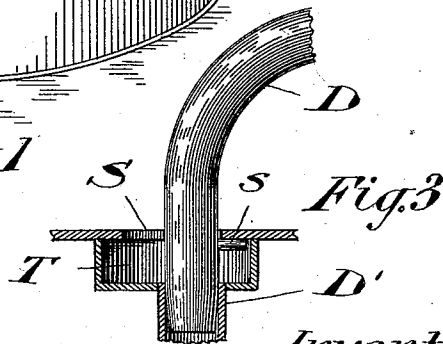
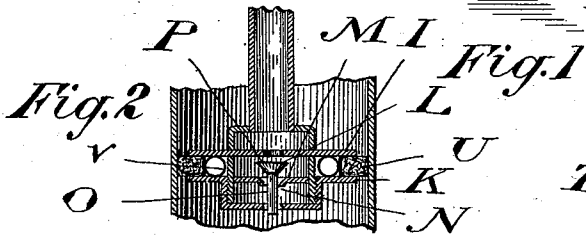
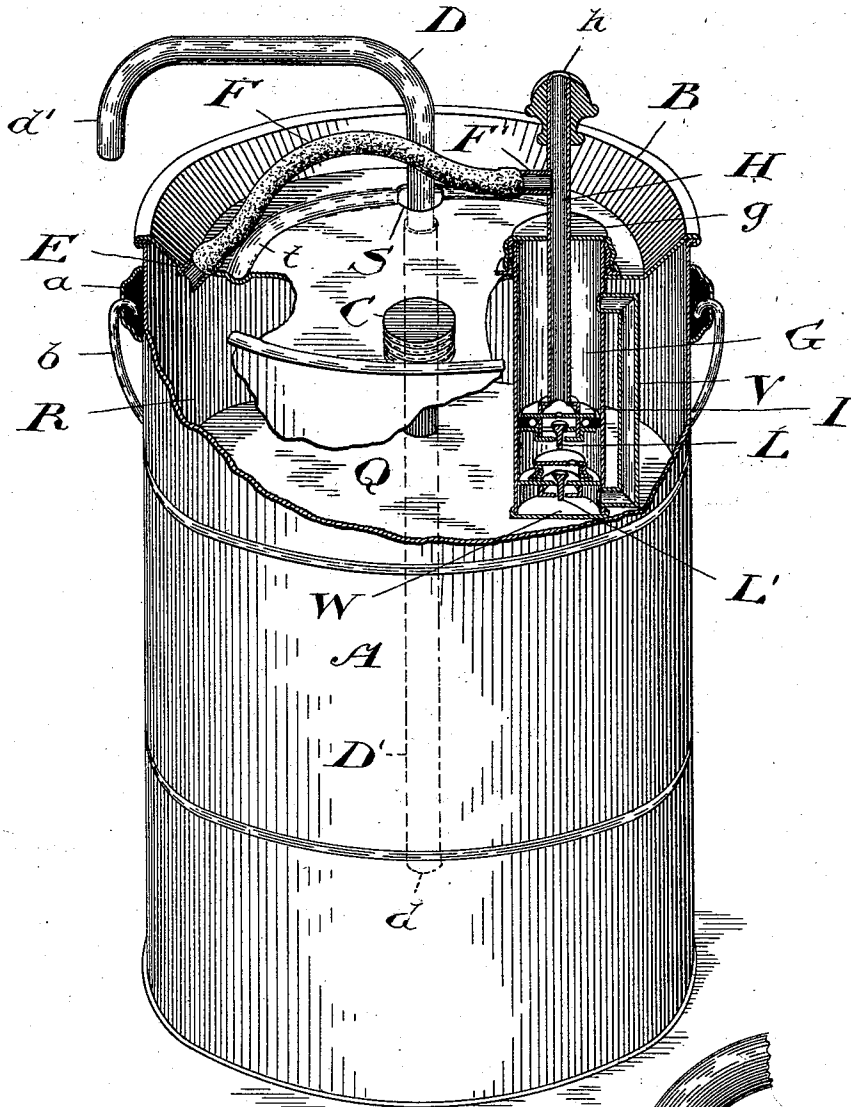


(No Model.)

J. P. ROGERS.
OIL CAN AND LAMP FILLER.

No. 543,054.

Patented July 23, 1895.



Witnesses.
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attys

UNITED STATES PATENT OFFICE.

JOSEPH PEARSON ROGERS, OF TORONTO, CANADA.

OIL-CAN AND LAMP-FILLER.

SPECIFICATION forming part of Letters Patent No. 543,054, dated July 23, 1895.

Application filed March 11, 1895. Serial No. 541,289. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH PEARSON ROGERS, of the city of Toronto, in the county of York and Province of Ontario, Canada, have
5 invented a certain new and useful Oil-Can and Lamp-Filler, of which the following is a specification.

The object of the invention is to provide a cheap, simple, clean, and effective device for
10 filling lamps and other receptacles with oil by means of air-pressure and insuring a steady flow of oil, which may be readily checked so as to prevent any overflow; and it consists, essentially, of an oil-can provided with an air-
15 pump cylinder, in which is fitted a piston-head with an air-valve, and means for admitting air to the lower part of the air-pump cylinder below the piston-head, and a hollow piston-rod
20 having an open upper end; also a flexible air-tube, forming a communication between the interior of the can above the oil and the interior of the hollow piston-rod above the upper
25 surface of the can, the open upper end of the piston-rod being closed by the finger when the pump is being operated and while the oil is
30 flowing through the ejecting-pipe, the finger being removed when it is desired to check the flow, as hereinafter more particularly described, and then definitely pointed out in the
35 claims.

Figure 1 is a perspective view partially in section and broken away to expose the interior of the can. Fig. 2 is a perspective detail
40 of the piston-head, the valve, and valve-seat shown in Fig. 1. Fig. 3 is a detail showing the top of the oil-ejecting pipe, its mode of connection, the eccentric opening, and the waste-oil chamber.

Like letters of reference indicate similar
45 parts in the different figures.

In Fig. 1, A is the body of the can. *a* are bosses formed thereon, and *b* is the bail or the handle.

B is a beveled rim whereby the top of the
45 can is preferably countersunk.

C is a screw-cap covering the hole through which the oil is poured into the can.

D is an oil-ejecting pipe which passes through an orifice S, which is larger than the diameter of the pipe D, which latter is fitted
50 into the upper end of the oil-ejecting tube D', the pipe D and ejecting-tube D' forming, when fitted together, an oil-ejecting pipe. (See Figs. 1 and 3.) The orifice S is eccentric with relation to the pipe D, and *s* is a pin for keep-
55 ing the pipe in place. T is a waste-oil chamber formed by enlarging the top of the ejecting-tube D, and which is secured to the bottom of the top of the can.

t is a groove or gutter formed in the top of
60 the can for conveying waste oil through the eccentric orifice S to the waste-oil chamber T.

By turning the bent end of the ejecting-pipe D the pin *s* may come under the wide end of the eccentric orifice S and the pipe D
65 may be withdrawn from the ejecting-tube D', so as to allow the oil in the waste-oil chamber T to flow down the ejecting-tube D'.

d is the inlet to the oil-ejecting tube D' and is located near the bottom of the can,
70 and through which the oil is forced when the lamp-filler is being operated.

d' is the bent spout on the oil-ejecting pipe D, under which the lamp-bowl or other recep-
75 tacle is placed for filling with oil.

E is an air-inlet pipe which passes through and projects above the top of the can.

F is a flexible tube, preferably made of rubber, one end of which fits over the projecting end of the air-inlet pipe E, while the
80 other end is fitted over the hollow stem F' fixed to and communicating with the interior of the hollow piston-rod H. This stem F' is made hollow so as to admit of instant relief
85 of air-pressure in the interior of the can, so as to check the flow of oil when the finger is removed from the hollow piston-rod, as hereinafter referred to. This flexible tube F
90 is made sufficiently long to permit of one end thereof rising and falling with the motion of the hollow piston-rod H.

G is an air-pump cylinder which passes through and is soldered to the top of the oil-can A. The upper portion above the surface

of the can is screw-threaded, and thereon is screwed the cap *g*, through which the hollow piston-rod passes and is loosely fitted, so as to permit of the passage of the air to the interior of the cylinder.

The hollow piston-rod *H* is provided with a piston-head *I* and an air-valve *L*. This hollow piston-rod is open at *h*. When the piston-rod is being forced up and down in order to pump air into the upper part of the can the hole *h* is closed by the finger, which may be removed when it is desired to allow the compressed air to escape from the interior of the can, as hereinafter described, and thus to stop the flow of oil.

O is the valve-stem which is fitted to the valve *L*, and which is adapted to move in the airway *N*.

Fig. 2 shows a detail of the valve and piston-head, in which *L* is the air-valve, which is adapted to fit down on the seat *M* when the valve is closed. *U* is piston-packing, and *v* is a spring for pressing the packing against the side of the cylinder in the usual manner, and *K* is a flange for holding the packing. In this view, Fig. 2, the valve is shown open, the face being raised from its seat, as on the downstroke of the piston, the air passing through to the interior of the hollow piston-rod from the bottom of the cylinder.

In Fig. 1 is seen the method by which the air is admitted to the bottom of the cylinder below the piston-head *I*, in which *V* is a pipe which communicates with the interior of the pump-cylinder *G* near its top and with an air-chamber *W*. The top of this chamber is provided with orifices and valve *L'* similar to those in the piston-head *I*, so that when the piston-head *I* is being raised the air is drawn through the pipe *V* to the air-chamber *W* and, raising the valve *L'* from its seat and passing through the orifices and the airway of the valve, enters the lower part of the air-chamber. When the piston-head *I* descends, the valve *L'* becomes closed, the valve *L* in the piston-head opens, and the air is forced into the interior of the hollow piston-rod, and thence, by means of the hollow stem *F'*, the flexible tube *F*, and air-inlet pipe *E* to the air-space over the oil *Q* within the can, the finger all this time remaining over the upper orifice *h* in the hollow piston-rod *H*, so as to prevent the escape of air. After several strokes of the hollow piston-rod *H* the air may be sufficiently compressed in the space lettered *R* to force the oil into the inlet *d* of the oil-ejecting tube *D'* and into the oil-ejecting pipe *D*, and which will continue to flow until the finger moves from the orifice *h*, when the air, escaping from the interior of the can, relieves the surface of the oil from pressure and thus stops the flow of the oil.

Instead of having an open orifice at *h* there may be, of course, a small valve supplied,

which can be depressed by the finger when it is desired to permit the escape of the confined air in the can, and thus to check the flow of the oil.

The air-pump cylinder *G* instead of being placed within the can may, of course, be attached to the can outside thereof, when the same effect will be produced, although it is more convenient to have it as indicated. The oil-ejecting pipe *D* is also rotatable, as mentioned, for the purpose of withdrawal, as well as to turn the bent spout over the top of the can when the can is not in use.

What I claim as my invention is--

1. In an oil can and lamp filler, the combination of the gutter *t*; eccentric opening *S*; oil ejecting pipe *D*; pin *s*; waste oil chamber *T*; and oil ejecting tube *D'*; substantially as described and for the purpose specified.

2. In an oil can and lamp filler, the combination with the can *A*, of the air pump cylinder *G*; cap *g*; hollow piston rod *H*; piston head *I*; air valve *L*; pipe *V*; air chamber *W*; valve *L'*; hollow stem *F'*; flexible tube *F*; and air inlet pipe *E*, substantially as described and for the purpose specified.

3. In an oil can and lamp filler, the combination of the can *A*; air inlet pipe *E*; flexible tube *F*; hollow stem *F'*; hollow piston rod *H*; gutter *t*; eccentric opening *S*; pin *s*; oil ejecting pipe *D*; waste oil chamber *T*; oil ejecting tube *D'*; screw cap *C*; air pump cylinder *G*; cap *g*; piston head *I*; air valve *L*; packing *U*; spring *v*; flange *K*; pipe *V*; air chamber *W*, and valve *L'*, substantially as described and for the purpose specified.

4. In an oil-can and lamp-filler, the combination of an oil-can, an air-pump cylinder, a hollow piston-rod *H* communicating with said oil-can and working in said pump-cylinder and having a piston-head *I* and air-valve *L*, air-chamber *W* and valve *L'*, and a pipe *V* affording communication between said chamber *W* and the upper part of the air-pump cylinder, whereby air is drawn through said pipe *V*, and by means of the piston-head *I* and valves *L* and *L'* is forced through the hollow piston-rod *H* into the oil-can, substantially as described.

5. In an oil-can and lamp-filler, the combination of an oil can, a pump cylinder and a hollow piston-rod, a flexible air-passage between the interior of the can and the interior of said hollow piston-rod, means for pumping air through the piston-rod and flexible air passage so as to compress the air above the oil, and an oil ejecting pipe, substantially as described and for the purpose specified.

6. In an oil-can and lamp filler, the combination of the can *A*, flexible tube *F*, air-pump cylinder *G*, hollow piston-rod *H*, and means for pumping air through the flexible tube from said air-pump cylinder *G* to the interior of the can above the oil; and the oil

ejecting pipe D fitted into ejecting tube D', substantially as described and for the purpose specified.

7. In an oil-can and lamp filler, the combination of an oil-can, an oil ejecting pipe, an air-pump cylinder, a piston-head provided with an upwardly opening valve, a hollow piston-rod communicating at one end with the interior of the piston-head above the valve and open at the other, means for admitting

air below the piston-head on the up stroke and a flexible tube communicating with the hollow piston-rod and with the interior of the can above the oil, substantially as described.
Toronto, February 28, 1895.

JOSEPH PEARSON ROGERS.

In presence of—

J. EDW. MAYBEE,
FRED CLARKE.