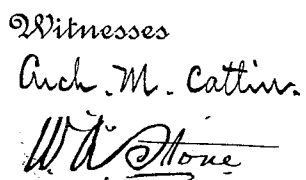


H. F. & R. H. ROBERTS.
OIL CAN PUMP.

Patented Jan. 2, 1894.



Benj. R. Carlin Attorney

UNITED STATES PATENT OFFICE.

HIRAM F. ROBERTS AND RAPHEL H. ROBERTS, OF ROCHESTER, NEW YORK.

OIL-CAN PUMP.

SPECIFICATION forming part of Letters Patent No. 512,220, dated January 2, 1894.

Application filed February 8, 1893. Serial No. 461,491. (No model.)

To all whom it may concern:

Be it known that we, HIRAM F. ROBERTS and RAPHEL H. ROBERTS, residents of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Oil-Can Pumps; and we 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 pertains to make and use the same.

The invention relates to devices for filling oil lamps and other vessels with liquids and it has for its object to provide a simple and efficient pump that can be attached to an oil can or other vessel and used to fill a second receptacle without danger of overflow and which is also adapted to return the contents of said second receptacle to the first named vessel without other change in the manipulation of the pump than the immersion of the mouth of the short arm of its delivery spout in the liquid within the lamp or other like receptacle.

The invention consists in the construction hereinafter described and particularly pointed out.

In the accompanying drawings Figure 1 is vertical section of an oil can, pump and lamp. Fig. 2 is a transverse section on line 2—2 of Fig. 1 the piston being raised out of the way. Figs. 3 and 4 are similar sections of modified forms.

Numeral 1 denotes an oil can or other vessel. 2 indicates a pump cylinder provided with an overflow or drip basin 3, air passages 4 and a foot or stand 5 adapted to support it a small distance above the bottom of the can and so as to permit the free passage of oil or other liquid thereunder. This stand can be conveniently formed of a sheet metal plate having down turned flanges 6 on two, three or more sides. If provided on all sides they may be cut away or bent in part to permit the passage of the oil.

7 indicates a passage through which the cylinder may communicate with the can and 8 is a valve consisting by preference of a single disk of leather or other suitable material.

9 denotes a cage or the like to hold and guide the valve.

A piston fitting the cylinder is denoted by 10, its rod by 11 and a handle by 12.

13 indicates a conduit formed by a strip of metal bent to have a V-shape in cross section and soldered to the exterior of the cylinder. The latter is cut away at 14 to provide communication between the cylinder and conduit which is always open. The upper end of the conduit communicates with a screw nozzle 15 adapted to receive a screw threaded siphon pipe 16. Instead of soldering the V-shaped strip, a conduit 13' can be formed in the wall of a cylinder 17 adapted to fit over cylinder 2. This cylinder 17 is made of suitable size to closely embrace cylinder 2 except where its wall is bent to form the conduit. In some cases the exterior cylinder need not be closed or soldered along the joint 17' but this may be left open and the outer cylinder held upon the inner one by friction being preferably soldered to the drip cup 3 and to the stand 5. This conduit may be entirely tubular if desired.

To operate the device and fill a lamp 18 for example the piston is raised by its handle and the pump cylinder filled or partially filled with oil, the valve being lifted by the upward pressure of the oil from below. Thereupon the piston is depressed and the contents of the cylinder forced through the conduit 13 and pipe 16 into the lamp. If one stroke of the piston is not sufficient to fill the lamp the operation can be repeated as often as necessary for that purpose. As soon as the oil covers the mouth of the short arm of the siphon pipe the raising of the piston will allow cylinder 2 to be filled or partially filled from the lamp by siphonage. This operation obviates overflow if the mouth of the tube 16 is held within the lamp, and it can be made to empty the lamp entirely and return its contents to the can by lowering the mouth of pipe 16 to the bottom of the lamp bowl and discontinuing the pumping operation. It will be understood that as soon as oil or other liquid being pumped covers the mouth of pipe 16 the action of the pump is reversed and the liquid is conveyed into the can and not out of it. But to insure such action and avoid the overflowing of the lamp or other receptacle the pump piston should not be in raised position

when the lamp is full. If one up-and-down stroke of the piston together with the amount ordinarily in the lamp bowl or reservoir is sufficient to fill said bowl, which is the preferable construction, then it will under such conditions be impracticable to cause the bowl to overflow. In pumping into a larger receptacle requiring several strokes of the pump or in any case, it is only necessary to immerse the exit end of the filling tube, said tube being full of oil or other liquid, below the liquid in the receptacle being filled, when the pump piston is at its lowest position, to prevent overflowing. And if under such conditions the exit be depressed to the bottom of the receptacle its whole contents can be transferred to the can by pumping.

The stand 5 is made with one of its diameters less than that of the cup seat to permit its insertion together with its connected tubes into the can. It is also placed close to the side of the can to permit a more complete removal of its contents when tilted and further the conduit 13 is situated close to the can wall and extends above the cup to which it is fixed to permit the convenient application of a removable discharge tube in manner not to interfere with the pump the arrangement being most suitable for filling a lamp at the side of the can.

The device is adapted to be applied to an ordinary can, the parts being made of suitable dimensions.

We are aware that discharging pumps with siphon tubes have been combined with oil cans and we do not broadly claim such devices. It is characteristic of our improvement that the pump cylinder and discharge conduit are connected to a drip cup and to a shallow stand in one integral removable structure and so

that the latter rests on the can bottom and the former on its top, and the conduit is also preferably formed by a lateral enlargement of a cylinder surrounding the pump cylinder whereby extensive soldering is avoided and whereby thinner and cheaper metal may be used.

Having thus described our invention, what we claim is—

The combination with a can or vessel having plain heads without depressions at the ends thereof, of the can emptying device situated near the side wall of the can adapted to be introduced or removed through an opening in its top, said device consisting of the pump cylinder and suitable valve, piston and discharge conduit, said cylinder and conduit being attached to a stand 5 having flanges 6 and to an overflow basin 3 the former being larger in horizontal section than the pump but less in one dimension than the opening in the can top and resting on the bottom of the vessel to enable said stand and flat bottom to receive the thrust of the piston and relieve the top therefrom and the latter filling the hole in the top of said vessel and resting thereon and the whole device adapted for application to cans of usual form, the conduit being next to the edge of the can and extended above its top and adapted to receive a siphon to fill a lamp at its side, substantially as set forth.

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

HIRAM F. ROBERTS.
RAPHEL H. ROBERTS.

Witnesses:

MARTIN DE MALLIE,
S. A. CROSTON.