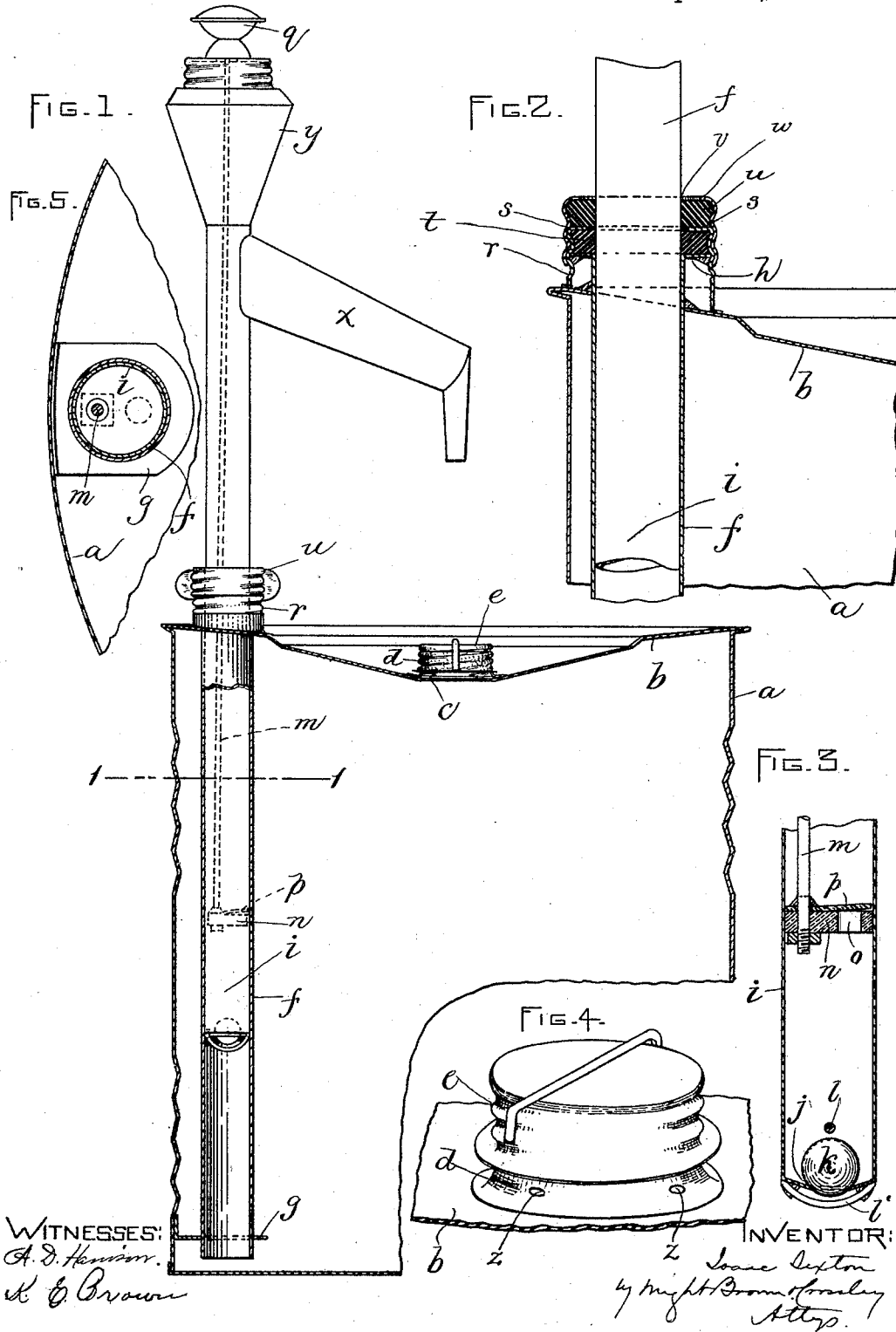


(No Model.)

I. SEXTON.
LIQUID HOLDING CAN.

No. 460,327.

Patented Sept. 29, 1891.



UNITED STATES PATENT OFFICE.

ISAAC SEXTON, OF SOMERVILLE, MASSACHUSETTS.

LIQUID-HOLDING CAN.

SPECIFICATION forming part of Letters Patent No. 460,327, dated September 29, 1891.

Application filed April 30, 1891. Serial No. 391,038. (No model.)

To all whom it may concern:

Be it known that I, ISAAC SEXTON, of Somerville, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Liquid-Holding Cans, of which the following is a specification.

The invention has relation to cans generally which are designed to hold liquids and from which it is necessary to draw the liquid from time to time, the improvements being more particularly adapted for use in connection with kerosene and similar cans contrived to hold burning-fluids.

It is the object of the improvements to equip cans of the kind mentioned with simple, inexpensive, and efficient means, whereby the entire contents of the can may be pumped therefrom into another vessel or vessels, as into lamps, for the purpose of filling the same, so as to avoid liability of spilling the fluid or other sources of waste.

It is also the object of the invention to provide a pump for liquid-holding cans, which may be adjusted to different heights and other positions, so as that lamps or other vessels may be filled with the utmost readiness and with the least trouble.

It is also the object of the invention to make the pump of a can equipped as hereinbefore noted removable, so that the can may be made conveniently portable.

It is also the object of the invention to provide other improvements incident to the foregoing, all as is hereinafter more fully set forth.

Reference is to be had to the annexed drawings, and the letters marked thereon, forming a part of this specification, the same letters designating the same parts or features, as the case may be, wherever they occur.

Of the drawings, Figure 1 is a side and partially sectional elevation of a liquid-holding can equipped with my improvements. Fig. 2 is a vertical sectional view of parts shown in Fig. 1, illustrating the manner in which the pipe of the pump is packed where it passes through the top of the can, and showing also the construction of the pump-pipes receiving-tube and its relationship to other parts of the invention. Fig. 3 is a vertical sectional view of the lower portion of the pump-pipe and its valves. Fig. 4 is a perspective view of the filling-aperture of the can and its cover. Fig.

5 is a sectional detail view taken on the line 1 1 of Fig. 1.

In the drawings, *a* designates the body of the can, which may be made of sheet metal or other suitable material and be provided with a top *b*, soldered or otherwise secured thereon, so as to be liquid-tight. The upper surface of the top *b* may be of concave form, as shown, and provided at its center with an aperture *c*, having a surrounding screw-threaded neck *d*, in order that a screw-threaded cap *e* may be secured thereon.

f designates a pump-pipe-receiving tube secured at its upper end in an aperture formed in the top of the can, and stayed, it may be, at its lower end by a bracing-bracket *g*, secured to the side of the can, as shown in Fig. 1. The tube *f* extends from or near the bottom of the can to a short distance above the top *b*, where the said tube is provided with an outwardly-projecting flange *h*.

i designates the pump-pipe, which is adapted to fit quite closely in the tube *f*, and provided at its lower end with a suitable valve *j*, in the present instance shown as a ball-valve—that is, a ball *k* is constructed and arranged so as by its gravity to rest upon the bottom of the pipe *i* and close the aperture at that point, and when the force of liquid is applied below the same to be lifted so as to admit the liquid to the pipe, a cross-wire *l* being arranged above the ball to limit its upward movement.

l represents a guard (here shown as a curved wire) soldered to the lower end of tube *i* and extending across the lower end or bottom thereof in position to protect said bottom and prevent it from being indented, it being important to preserve the shape of said bottom, since an indentation thereof would prevent the ball *k* from closely fitting the margin of the orifice in said bottom when the ball is seated.

m designates a rod or wire arranged in the pipe *i*, and provided on its lower end with a clapper-valve consisting, as herein shown, of a disk *n*, of leather or other yielding material, having an aperture *o*, above and upon which is a flexible disk *p*, so held and arranged as that the force of liquid up through the aperture *o* may raise the portion of the disk *p* over the said aperture, and the pressure of liquid

upon the flexible disk may effect the closing of the aperture. The rod *m* at its upper end is provided with a knob or head *q*, as a means whereby the pump-rod *m* may be raised and
 5 lowered for the purpose of pumping the liquid out of the can, as will be understood without special description.

A screw-threaded neck *r* surrounds the flange *h* of the extended portion of the tube
 10 *f*, and is provided at its upper end with an inwardly-extended flange *s*, between which and the flange *h* there is arranged a flexible packing-ring *t*, and in the upper part of the screw-threaded cap *u*, provided centrally with an
 15 aperture *v*, through which the pipe *f* passes, there is a packing-ring *w*, so that when the cap *u* is screwed down on the neck *r* the pipe *f* may be securely packed against the admission of air or liquid around its sides.

The pipe *f* is provided at or toward its upper end with a discharge-spout *x* and at its top with a liquid-returning funnel *y*. Apertures *z* are also provided in the base of the neck *d* for the admission of air to the can and
 25 to permit of the return or inflow into the can of spilled or overflowing liquid.

In the use of my invention, when the can is filled and it is desired to draw liquid therefrom, the pump will be arranged in place, as
 30 shown, and the receiving-vessel will be placed in the most advantageous position. If a lamp, it may be placed on the top *b* of the can over the cap *e*, and as the pipe *i* may be moved axially it may be so arranged that the spout
 35 *x* will be over the mouth of the lamp, when by raising and lowering the rod *m* the liquid will be pumped out of the can and run into the lamp through the spout *x*. Should the liquid be drawn up by the pump faster than
 40 it will freely flow through the spout *x*, it will collect in the funnel *y* and flow out through the spout as the rod *m* and its valve are being lowered. Again, should the lamp or other receiving-vessel overflow the spilled liquid
 45 will flow down upon the top and through the apertures *z*, which also afford means for admitting air to the can as the liquid is pumped therefrom. As the pipe *i* is adapted to be

raised and lowered in the tube *f*, the position of the spout can be adjusted vertically by the
 50 hand of the operator to suit the height of the mouth of the receiving-vessel. The tube *f*, extending as it does to or nearly to the bottom of the can, affords a means whereby the contents of the can may be drawn off by the
 55 pump, since the said tube affords a practical extension of the pump-pipe.

In use, should the can be nearly empty, the pipe *i* may be first depressed into the liquid and the rod *m* operated so as to fill the said
 60 pipe, when the latter may be drawn up again to proper height, sucking the liquid into the tube *f* and enabling the pump to be operated until the liquid in the can is nearly exhausted.

When it is desired to transport the can, the
 65 cap *u* may be unscrewed, the pump removed, and a covering-cap screwed on the neck *r*.

It is obvious that the upper surface of the top *b* may not be made concaved in form and that the packing in the cap *r* may be dispensed
 70 with, and that other changes may be made in the form and arrangements of parts constituting the invention without departing from the nature or spirit thereof.

Having thus explained the nature of my
 75 invention and described a way of making and using the same, though without attempting to set forth all of the forms in which it may be constructed or all of its modes of use, I declare that what I claim is—
 80

The combination, with the can and its fixed pump-receiving tube, of the pump-pipe adjustable in said tube and having a ball-valve at its lower end and a guard attached to the pump-pipe below the valve, whereby the valve
 85 or its seat will be prevented from injury by striking the bottom of the can, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 27th day of
 90 April, A. D. 1891.

ISAAC SEXTON.

Witnesses:

C. F. BROWN,
 A. D. HARRISON.