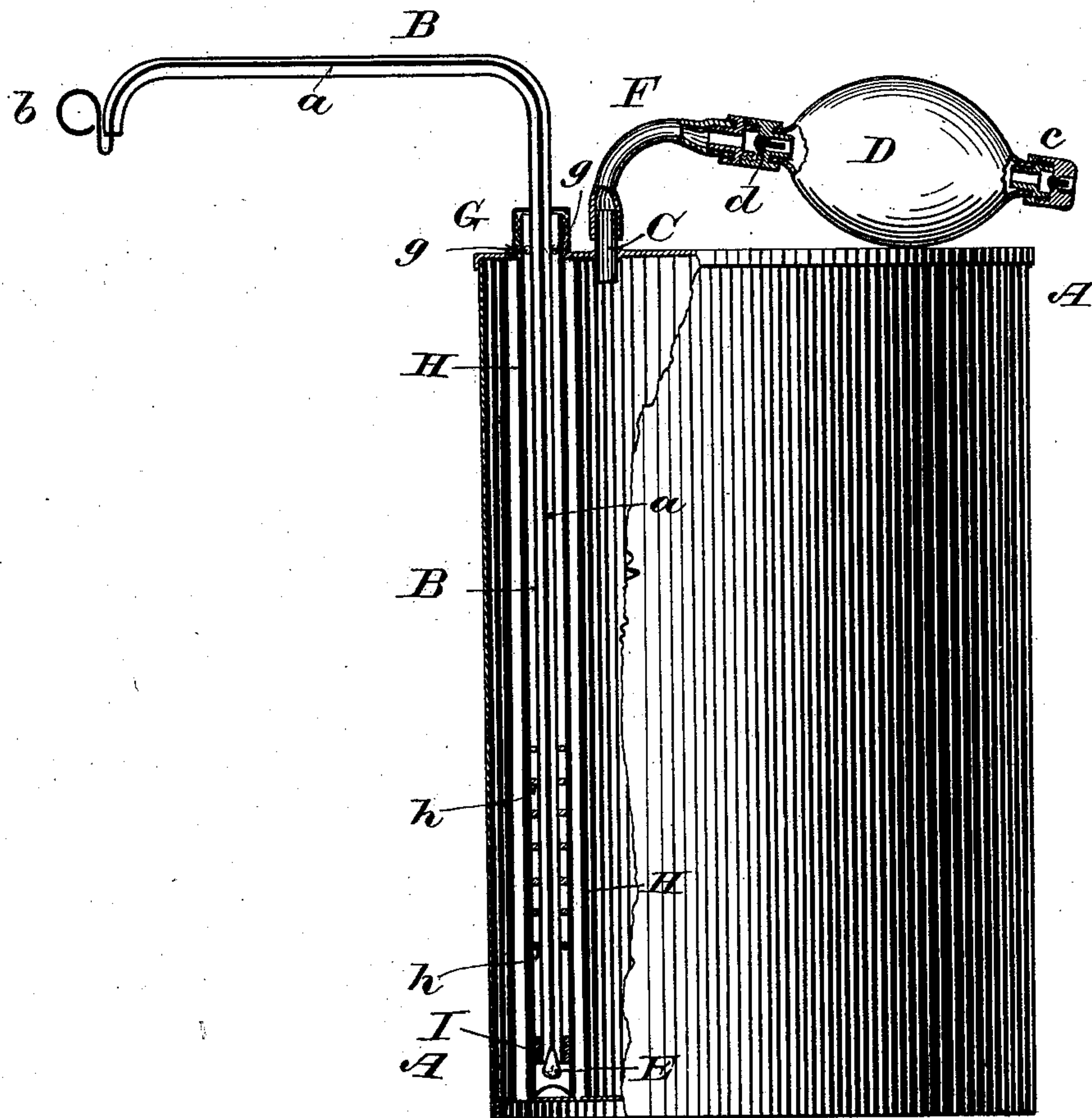


(No Model.)

H. L. HAUSER.
PUMP FOR EMPTYING CANS.

No. 364,819.

Patented June 14, 1887.



Witnesses:

Chas. R. Goss.
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UNITED STATES PATENT OFFICE.

HORACE L. HAUSER, OF MINNEAPOLIS, MINNESOTA.

PUMP FOR EMPTYING CANS.

SPECIFICATION forming part of Letters Patent No. 364,819, dated June 14, 1887.

Application filed July 13, 1886. Serial No. 207,947. (No model.)

To all whom it may concern:

Be it known that I, HORACE L. HAUSER, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Pumps for Emptying Cans, &c.; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

The objects of my invention are, first, an easy method of emptying bulky and heavy cans, casks, &c.; second, to accomplish the same without wasting or spilling the contents; third, to readily withdraw any portion of the liquid from the can, bottle, cask, or the like without soiling the hands, and, fourth, when applied to receptacles containing highly volatile and inflammable liquids to obviate the danger of explosion arising from the ignition of the fluid within such receptacle as they are ordinarily closed and emptied.

It consists, essentially, of an air-pump applied to the upper part of the receptacle, in connection with a discharge tube or pipe extending from near the bottom of the receptacle upwardly, and formed at its upper end into an overhanging spout, together with a tube or jacket inclosing said discharge-tube, and a stopper for closing the upper end of said jacket, and of a valve or stopper arranged to be operated from the outer end of said discharge-tube.

The accompanying drawing illustrates, partly in side elevation and partly in section, my improvements as applied to a can of ordinary form.

A represents the can. D is a flexible bulb, made of rubber or any suitable material, and provided at one end with an inwardly-opening valve, *c*, and at the other end, where it is connected with the tube F, with the outwardly-opening valve *d*.

C is a short metallic tube secured in the top of the can, communicating with the interior thereof and projecting above the same sufficiently to form an attachment for the flexible tube F, by which it is connected with the bulb D.

B is a metallic tube or pipe extending from near the bottom of the can when in place up through the larger tube, H, and the screw-cap G, above which it is formed into an overhanging arm, bent downwardly at the end, so as to give the proper direction to the liquid at the point of discharge. To prevent the escape of air around the screw-cap G, and to cause the can to be entirely drained by the pump, I inclose the tube B inside of the can, with the larger tube, H, attached at its upper end by an air-tight joint to the top of the can, and provided at its lower end, where it rests upon the bottom of the can, with an opening or openings for the admission of the liquid thereto from the bottom of said can. The tube B is retained at the center of the tube H, and the liquid and air is prevented from rising between them by a ring or coupling, I, secured inside of the tube H and internally threaded to receive and engage the end of said tube B, which is externally threaded and forms an air-tight joint with said ring I. The coupling-ring I may be formed in various ways of any suitable material, and it may be replaced or supplemented by closely-fitting leather washers *h h*, placed about said tube B, between it and the surrounding tube H. Without either said ring or washers the tube H may be employed to advantage, since it insures an air-tight joint in the upper part of the can about the cap, and even if air or a small amount of oil or liquid should escape from the interior of the tube about the cap the discharge through tube B would not be materially affected thereby.

a is a wire passing through the entire length of tube B, terminating at the end within the can in the bulb or valve E, which, when closed, forms a tight joint with the lower end of tube B and formed at the outer exposed end into the thumb-piece *b*. The elasticity of the wire *a* causes it to bear against the outer walls of tube B and thereby retain the valve E in whatever position it may be placed. To prevent any drip from the discharge end of spout B, when the valve E is closed, the overhanging arm of said spout may be slightly inclined toward the can, so as to be drained back into the same.

It is essential to the proper working of my device that the entire upper part of the can about the tube H should be air-tight. It is

not essential, however, that the cap G should be air-tight, and a small opening or openings, *g g*, may be formed therein and through the tube H to receive and return to the receptacle any oil collecting upon the top, which should be slightly depressed toward said cap. By screwing the cap up from the top of the can the openings *g g* are exposed, and any oil which has oozed out around said cap is allowed to drain back into the can; but when the cap is screwed down the openings are closed. It is obvious that any other suitable kind of stopper may be employed in place of the screw-cap G without changing the operation of the device.

My improved device operates as follows: After the receptacle or reservoir has been filled with liquid and the cap or stopper has been properly replaced, whenever it is desired to withdraw or expel a portion of the liquid the bulb is compressed, thereby opening the valve *d*, forcing air through the tubes F and C into the upper part of the can, and compressing the air in the can above the liquid. As the bulb D is released the valve *d* closes, preventing the air within the can from escaping back into the bulb, the valve *c* is opened, and the bulb D is, by its own expansive force, refilled with air, which is in like manner forced into the can by the repeated compression of said bulb. When the bulb E is lowered, by raising the thumb-piece *b*, which is connected therewith by wire *a*, the receiving end of the tube B is thereby opened, and the pressure of the compressed air upon the surface of the liquid forces the same up through the tube B and out at its overhanging orifice. By depressing the thumb-piece B the valve E is closed and the flow of liquid from tube B is instantly stopped. The tube H and coupling-ring I or washers *h h* prevent escape of air about cap G, which can with difficulty be made air-tight, and assists to completely expel the contents of the receptacle.

For use with acids the tubes B and C may be made of glass. It is obvious that my improvements may be applied to cans or recep-

tacles of various styles and shapes without departure from the spirit of my invention. They may be employed to advantage in gasoline and oil stoves for raising the oil from the reservoir to the burners.

I claim—

1. The combination, with an oil-receptacle, A, of an air-pump, D, applied thereto, tube H, attached by an air-tight joint to the top of said receptacle and extending within the same to the lower part thereof, tube B, extending from near the bottom of said receptacle up through said tube H and formed at its protruding end with a discharge-spout, and a stopper arranged to close the upper end of said tube H, substantially as and for the purposes set forth.

2. The combination, with an oil-receptacle, A, of the flexible bulb D, connected therewith and provided with inwardly and outwardly opening valves *c* and *d*, tube H, attached by an air-tight joint to the top of said receptacle and extending within the same to the lower part thereof, tube B, extending from near the bottom of said receptacle up through said tube H and formed at its protruding end with a discharge-spout, and a stopper arranged to close the upper end of said tube H, substantially as and for the purposes set forth.

3. The combination of the valvular bulb E, discharge-tube B, and wire *a*, attached to said bulb, passing through said tube and provided at its protruding end with a thumb-piece, *b*, substantially as and for the purposes set forth.

4. The combination, with the receptacle A, of the discharge-tube B, tube H, surrounding said tube B within said receptacle, and ring I, substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

HORACE L. HAUSER.

Witnesses:

E. H. BOTTOM,
GEORGE GOLL.