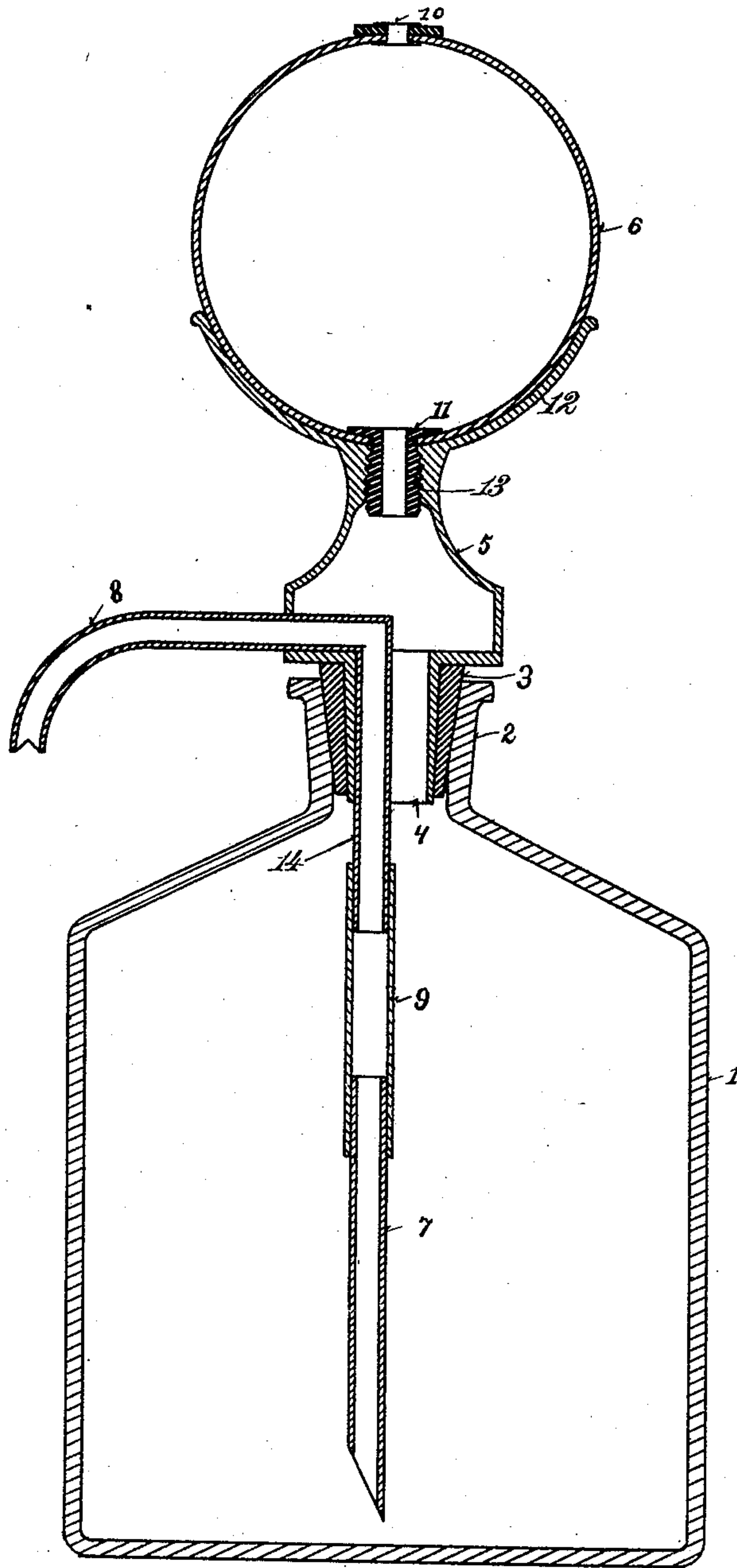


(No Model.)

L. HEITMANN.  
BOTTLE PUMP.

No. 452,643.

Patented May 19, 1891.



Witnesses

C. W. Miles  
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# UNITED STATES PATENT OFFICE.

LOUIS HEITMANN, OF MIAMISBURG, OHIO.

## BOTTLE-PUMP.

SPECIFICATION forming part of Letters Patent No. 452,643, dated May 19, 1891.

Application filed December 15, 1890. Serial No. 374,776. (No model.)

*To all whom it may concern:*

Be it known that I, LOUIS HEITMANN, a citizen of the United States, and a resident of Miamisburg, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Bottle-Pumps, of which the following is a specification.

This invention has for its object to provide a novel apparatus adapted to be attached to the neck of an ordinary bottle for the purpose of filling and emptying the latter, the construction being such that a collapsible bulb or sphere in connection with an angular spout fulfills the conditions required for filling the bottle and subsequently discharging the contents thereof. To accomplish this object my invention involves the features of construction, the combination or arrangement of devices, and the principles of operation hereinafter described and claimed, reference being made to the accompanying drawings, in which the figure is a vertical central sectional view of my improved apparatus applied to a bottle.

In order to enable those skilled in the art to make and use my invention I will now describe the same in detail, referring to the drawing, where—

The numeral 1 indicates a bottle having a neck 2, of ordinary construction.

The numeral 5 indicates a chambered pump-base, having a pendent tubular neck 4, surrounded on its exterior by a gasket 3, adapted to fit air-tight into the neck of the bottle.

The chambered pump-base may be composed of hard rubber or of metal and is provided at its upper end with a cup-shaped flange 12, receiving and conforming to the shape of an elastic bulb or sphere 6, having at its top portion an air-orifice 10, and at its bottom portion secured to the chambered pump-base by a flanged screw-threaded thimble 11, passing through the wall of the elastic bulb or sphere and engaging a central screw-threaded socket 13 in the pump-base.

The angular filling and emptying spout 8 of the apparatus is fitted air-tight in the side wall of the chambered pump-base and is provided with a pendent branch pipe 14, which extends downwardly through the tubular neck 4 of the pump-base. The angular spout, by being fitted air-tight into the side of the

chambered base, is attached thereto and carried thereby, and consequently is maintained at all times in proper position relatively to the pump-base for proper action in filling and emptying a bottle. The construction of the pump-base enables the elastic bulb or sphere to be secured thereto through the medium of the flanged screw-threaded thimble 11, while the cup-shaped flange 12 constitutes a seat for the bulb or sphere and supports it against undue strain.

The lower extremity of the branch pipe 14 is provided with a rubber tube 9, containing at its lower end a supplemental pipe 7, whereby the filling and emptying spout can be made longer or shorter for the purpose of applying the apparatus to bottles of different size.

In the practical use of the apparatus, if it is desired to fill the bottle, the bulb or sphere 6 is compressed and a finger or thumb is placed over the air-orifice 10 to close the latter. The spout 8 is inserted into the receptacle containing the liquid to be supplied to the bottle and then pressure is released from the bulb or sphere, so that the latter expands to its normal capacity, thereby causing a partial vacuum and producing a siphon action through the spout. After the siphon is started the liquid continues to flow from the receptacle into the bottle so long as the spout is immersed and the air-orifice is uncovered to permit the escape of air. It will be observed that the valveless air-orifice and valveless spout and pendent tube are important in this combination for the purpose of enabling the apparatus to be practically used for filling the bottle as well as emptying the same, in which respect my invention differs from prior apparatus of this kind. When it is desired to discharge the liquid from the bottle, a finger or thumb is placed over the orifice 10 to close the same and the bulb or sphere is compressed, which acts to force the liquid from the bottle out through the spout.

Having thus described my invention, what I claim is—

A bottle filling and emptying apparatus consisting of the chambered base having at its upper end the cup-shaped flange and screw-threaded socket and at its lower end a pendent tubular neck entering the bottle-mouth, an elastic bulb or sphere seating in the



cup-shaped flange and provided in its upper  
portion with a valveless air-orifice, the flanged  
screw-threaded nipple attaching the bulb or  
sphere to the screw-threaded socket of the  
5 pump-base, and the angular filling and empty-  
ing spout fitted air-tight in the side of the  
pump-base, attached to and carried thereby,  
and having a valveless pendent branch pipe  
extending through the pendent tubular neck,

whereby a bottle may be filled and emptied, 10  
substantially as described.

In testimony whereof I have hereunto set  
my hand.

LOUIS HEITMANN.

Witnesses:

W. A. REITER,  
FELIX KERSTING.