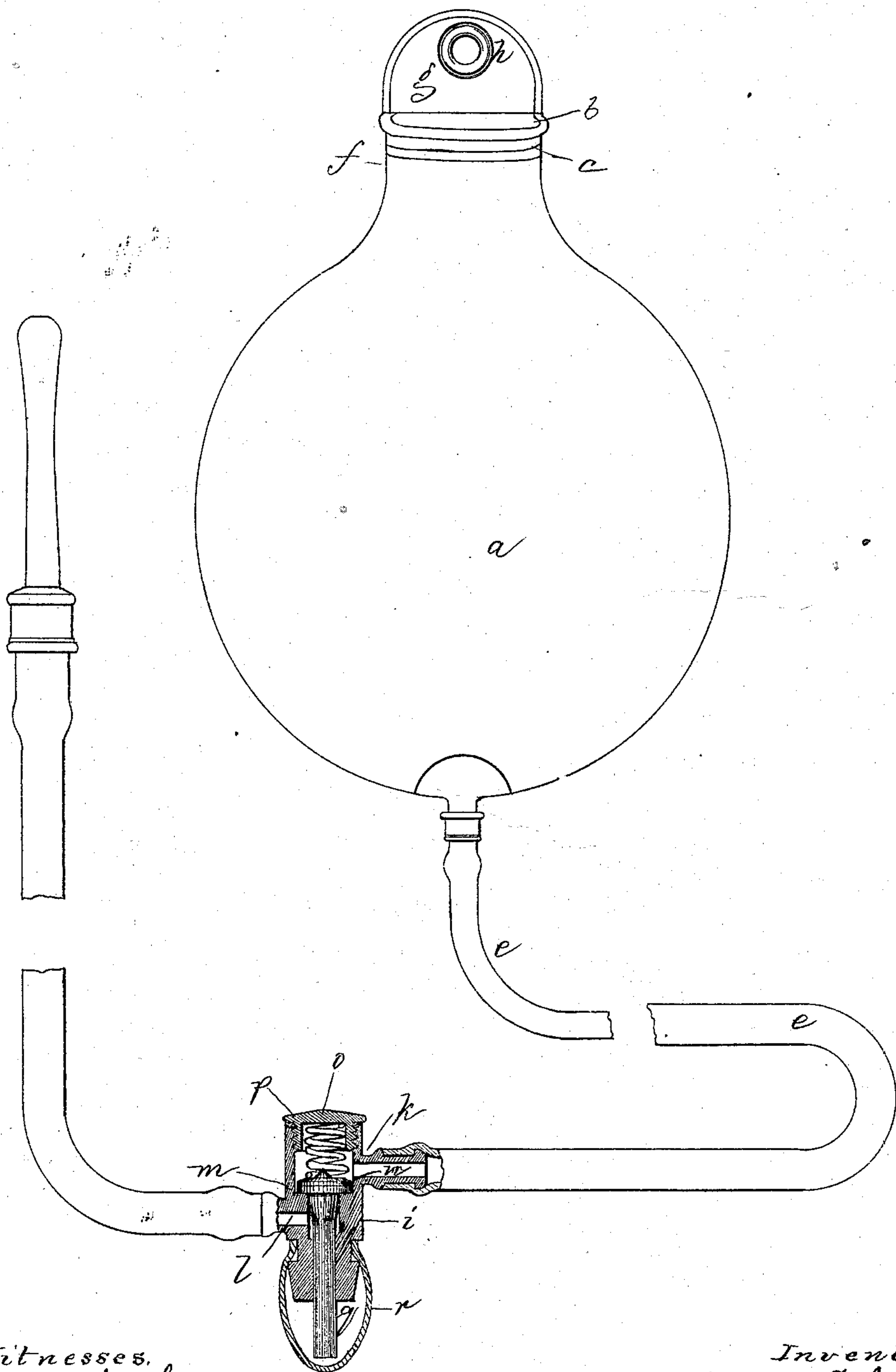


H. D. LOCKWOOD.
Fountain Syringes.

No. 138,417.

Patented April 29, 1873.



Witnesses.
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HAMILTON D. LOCKWOOD, OF CHARLESTOWN, MASSACHUSETTS.

IMPROVEMENT IN FOUNTAIN-SYRINGES.

Specification forming part of Letters Patent No. 138,417, dated April 29, 1873; application filed February 7, 1873.

To all whom it may concern:

Be it known that I, HAMILTON D. LOCKWOOD, of Charlestown, in the county of Middlesex and State of Massachusetts, have invented an Improved Fountain-Syringe; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification is a description of my invention sufficient to enable those skilled in the art to practice it.

In the manufacture of what are known as fountain-syringes an elastic bag is generally made for containing the water or other liquid to form the head, said bag being open at top, and having leading from its bottom a flexible tube for conducting the liquid, the bag having a mouth distended by a wire which is bent to form an eye above the mouth for the suspension of the bag from a hook or nail, and the pipe having a clamp by which the flow of the liquid may be arrested.

These fountain-syringes are used both for administering enemas and for nasal douches, but the strain upon the wire at the mouth soon tears the rubber, and the clamp or gripping device furnishes a very imperfect and clumsy means for closing the conducting-tube.

In my invention I have endeavored to make a more efficient construction, and to effect this I form the mouth of the bag with a band or rim, which, by its increase of thickness, holds the mouth sufficiently open, and to the neck, or preferably to a piece extending up therefrom, I apply a strong metal grommet or eye, the flanges of which bear upon so much of the surface of the bag material as to render it impossible for the grommet to break or tear the rubber, this grommet being used as the means of suspension of the bag. I also apply in the tube a valve, which is placed in a metal coupling or valve-box, the flexible tube being made in two parts or lengths, connected by this valve-box, one end of this box being tight or closed by a metal cap, and having in it the valve and a spring, the spring forcing the valve against its seat, in which position it is normally held by the spring to cut off communication between the inlet and outlet passages of the valve-box. The valve-stem extends centrally through the valve-seat and through the opposite and open end of the

valve-box, but over this end of the box, and encompassing the end of the stem, is a hollow flexible tip, which leaves the stem perfectly free to be operated by pressure upon the tip without possibility of leakage, simple pressure of the tip toward the valve-box serving to open the valve, which remains open as long, and only so long, as the pressure continues.

My invention consists in the bag having the grommeted neck or mouth, and in the tube having the valve-box containing the valve, which, being held normally upon its seat by a spring, has a stem extending into the hollow tip.

The drawing represents a douche or enema fountain-syringe embodying my construction.

a denotes the flexible bag for containing the enema or douche liquid. *b* denotes its open mouth; *c*, the rim or band that keeps the mouth open. From the bottom *d* of the bag extends the tube *e* that conducts the liquid from the bag. To form a head the bag is hung up at a higher point than that at which the injection is to be administered, and for the means of suspension from a nail or hook I apply to the neck *f*, or to a special extension or tongue, *g*, made for its reception, a metal grommet, *h*, the flanges of which clasp the rubber tightly, so that neither the weight of the liquid in the bag nor any accidental strain upon it will cause the rubber to be torn or injured. In the tube *e*, or connecting its two parts, is the metal valve-box *i*, (which is shown in section in the drawing,) this box having opening into it the inlet-passage *k*, and from it the outlet-passage *l*, there being between these two passages the seat *m*, against which the valve *n* is forced by the spring *o*. This spring is in one end of the box, closed by a screw-cap, *p*, and the stem *q* of the valve extends in the opposite direction through the other end of the box, which is covered by a projecting hollow, flexible, and elastic tip-piece, *r*, whose inner end tightly encompasses the otherwise open end of the box. End pressure against the tip (by acting upon the stem) forces the valve away from its seat, and opens the passages for flow of the liquid through the tube, the flow continuing so long as the pressure is kept up, but ceasing as soon as such pressure is withdrawn, the

spring *o* then returning the valve *n* to its seat *m*. The stem being thus enclosed requires no packing, and no stricture has to be made upon the tube to arrest the flow of the liquid.

I claim—

The valve-box *i*, having combined with the valve *n*, valve-seat *m*, spring *o*, stem *q*, the

flexible and elastic hollow tip *r*, substantially as shown and described.

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Witnesses:

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