

(No Model.)

S. T. HARRIS.
FOUNTAIN SYRINGE.

No. 596,158.

Patented Dec. 28, 1897.

Fig. 1.

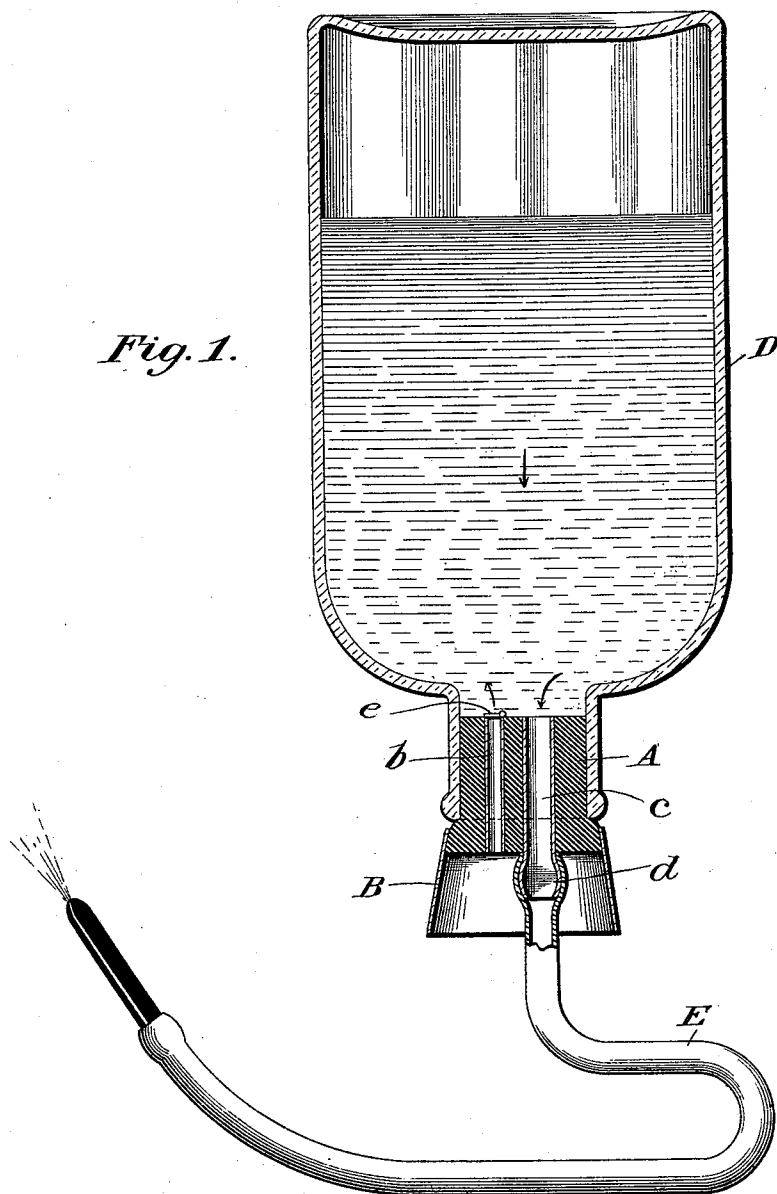
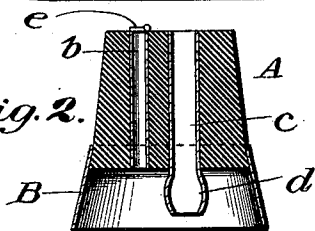


Fig. 2.



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FOUNTAIN-SYRINGE.

SPECIFICATION forming part of Letters Patent No. 596,158, dated December 28, 1897.

Application filed April 3, 1897. Serial No. 630,578. (No model.)

To all whom it may concern:

Be it known that I, STEVENS T. HARRIS, a citizen of the United States, residing at Carrollton, in the county of Carroll and State of Georgia, have invented a new and useful Attachment for Fountain-Syringes, of which the following is a specification.

My invention relates to an attachment for fountain-syringes by means of which any ordinary bottle may be substituted for the rubber bags or reservoirs now commonly in use in such syringes.

The object of my invention is to furnish a device which can be attached to any bottle of ordinary size and which when so attached to a bottle containing liquid for injection will enable it to be used as a fountain-syringe and which will also supply a means for conveniently filling the bottle when empty. I attain these objects in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a sectional view of the entire device, while Fig. 2 shows the cork with its tubular insertions.

Similar letters refer to similar parts throughout both views.

In the drawings, A represents a bottle-stopper, of rubber, cork, or other suitable material, being in form a truncated cone. Through this stopper from end to end pass two parallel tubes *b* and *c* of different dimensions, *c* being the larger of said tubes, and *b* the smaller. The tube *c* is the tube through which the liquid passes out of the bottle, and tube *b* is the tube which admits air into the bottle when the device is in use. Tube *b* stops even with the two ends of stopper A, while tube *c* is elongated at its outer end and properly shaped into a neck *d* for attaching a syringe pipe or hose.

The object of having tubes is to prevent the openings in stopper A from closing when the stopper is tightly pressed into the neck of a bottle. If, however, a sufficiently rigid substance is used in making the stopper A, the tubes may be dispensed with, in which case *b* and *c* would be parallel openings of different sizes passing through stopper A from end to end, while *d* would be a neck of some suitable substance properly attached at the outer end of the opening *c*.

A valve may be placed at the inner end of

tube or opening *b*, so arranged as to open inwardly toward the interior of the bottle when the attachment is in use. This is represented in the drawings as *e*. Its object is to prevent any liquid passing out through tube *b*. This valve, however, forms no essential part of my invention, and if tube *b* is sufficiently small in comparison to tube *c* it will not be necessary or desirable.

B is an ordinary funnel properly attached to the stopper A, its use being to enable any one using the syringe to fill the bottle without removing the stopper.

In Fig. 1, D is a bottle of ordinary size, the conical shape of stopper A enabling it to fit the necks of bottles of various sizes.

In Fig. 1, E is an ordinary syringe-pipe attached to the neck *d*.

To operate the device, the bottle D is filled with the liquid to be injected, and stopper A is fitted into the neck of the bottle. The bottle is then inverted and placed in some elevated position higher than any point in syringe-pipe E. The weight of the liquid in the bottle will then cause it to pass through tube *c*, while air will enter *b* and pass into the bottle to take the place of the liquid. When the bottle is emptied, it can be placed in an upright position and refilled by pouring the liquid into the funnel B, from which it will enter the bottle through tube *b*.

The principal advantages of my invention are its convenience and its cheapness, as in making it possible to substitute a bottle for the rubber bags now used in fountain-syringes it does away with the most expensive part of such syringes.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

A fountain-syringe consisting of a bottle having a stopper formed of suitable material, such as described, through which pass parallel tubes of different dimensions, the smaller provided with a check-valve at its inner end, the larger having suitably formed on its outer end a neck for attaching a syringe-pipe, substantially as and for the purposes described.

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Witnesses:

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