

(No Model.)

R. PARKER.
FOUNTAIN SYRINGE.

No. 356,544.

Patented Jan. 25, 1887.

Fig. 1.

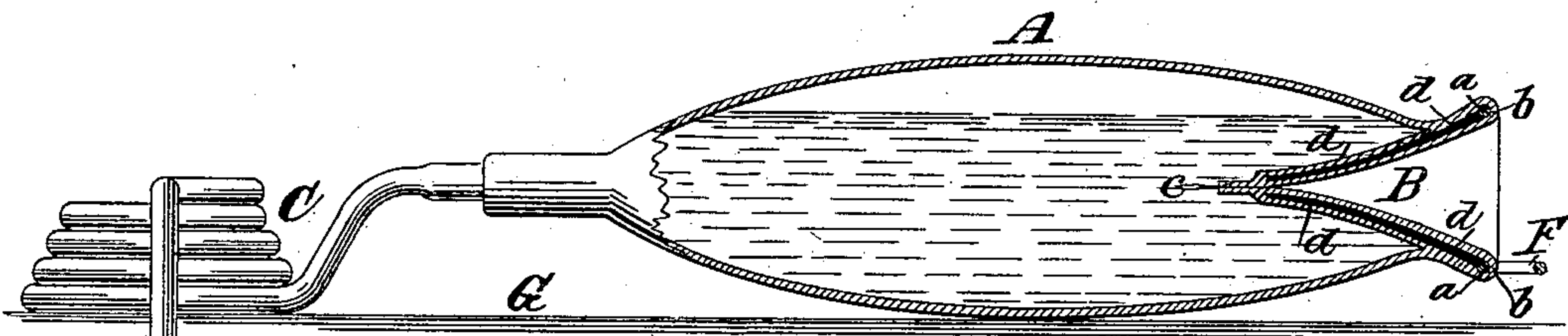


Fig. 2.

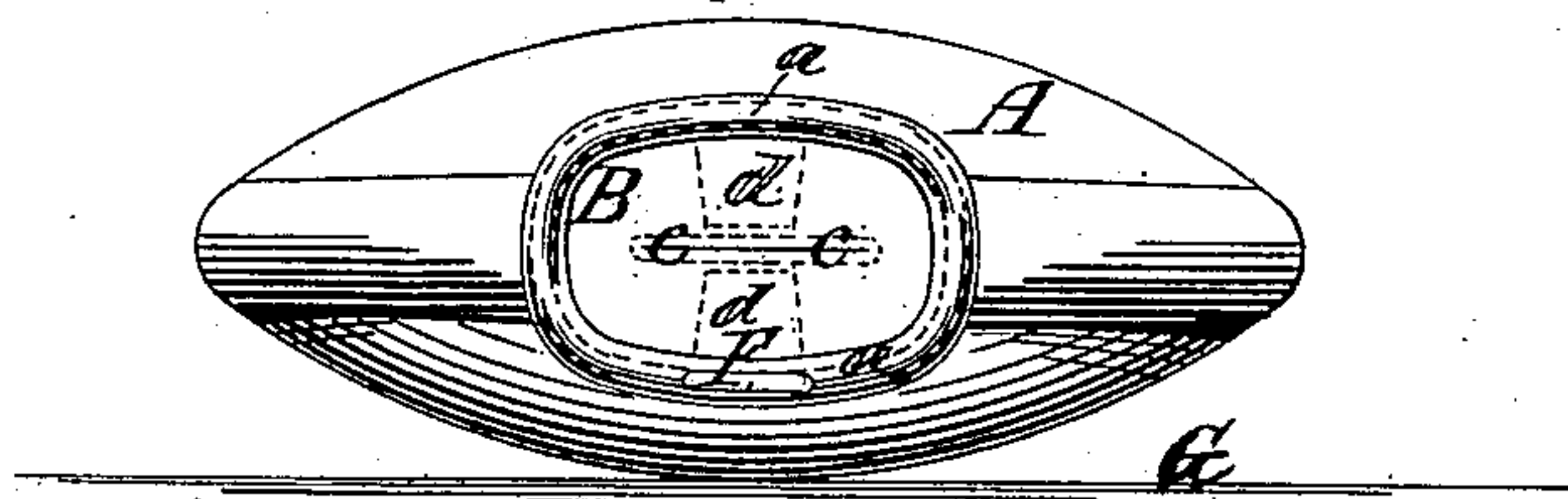
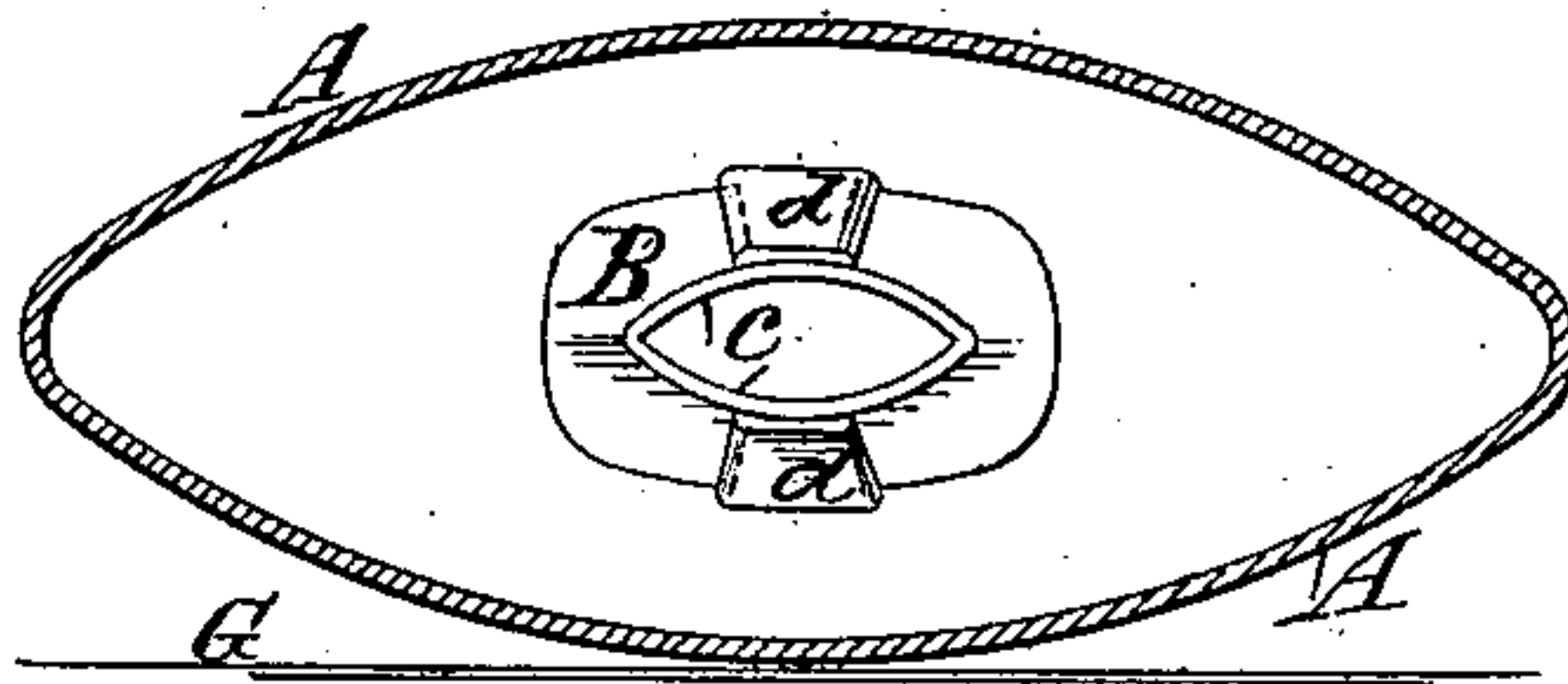


Fig. 3.



Witnesses.
Emil Hunter
Fred Haynes

Inventor.
Russell Parker
by his attorneys
Brown & Hall

UNITED STATES PATENT OFFICE.

RUSSELL PARKER, OF BROOKLYN, NEW YORK.

FOUNTAIN-SYRINGE.

SPECIFICATION forming part of Letters Patent No. 356,544, dated January 25, 1887.

Application filed November 11, 1886. Serial No. 218,527. (No model.)

To all whom it may concern:

Be it known that I, RUSSELL PARKER, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Fountain or Gravity Syringes, of which the following is a specification.

Heretofore syringes of the class known as "fountain" or "gravity" syringes have been commonly provided with a reservoir in the form of a bag having a wide mouth at the top and an outlet-opening at the bottom leading through a flexible tube to a discharge-nozzle, the flow being regulated by means of a tube-compressor or stop-cock attached to the flexible outlet-tube. When the reservoir thus constructed is filled, the liquid is liable to spill out through the mouth of the bag in the act of suspending it or handling it, and great care is required to keep the mouth always upward to avoid spilling the contents.

The object of my invention is to overcome this inconvenience and defect, and to provide for syringes of this class a bag which may easily be filled, and while full may be handled without liability to spill the contents, and may be laid down with the mouth in other than an upright position without overflowing.

The invention consists, principally, in the combination, with a syringe-bag, of a collapsible throat attached to the mouth of the bag in such manner that it will be closed in its normal condition against the escape of liquid from within, yet will yield and open readily to permit the pouring in of liquid to fill the bag.

The invention further consists in certain details of construction and combinations hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side view of a fountain-syringe constructed according to my invention, the liquid-bag and its collapsible throat being shown in section, the throat being closed. Fig. 2 is a view looking into the mouth and throat of the bag; and Fig. 3 is a vertical section of the mouth and throat, showing the throat open for admitting liquid to the bag.

Similar letters of reference designate corresponding parts in the several figures.

A represents a bag of india-rubber or other flexible water-proof material.

B designates a self-collapsible throat, united at *b* with the mouth of the bag. The mouth

of the bag and the external orifice of the throat are kept extended by a stiffening-ring, *a*, of wire or other material, inserted at their junction. The throat B is gradually contracted from the mouth inward until it assumes a flat form, and its edges are brought close together on a straight line, as shown at *c c* in Figs. 1 and 2, in the normal condition of the throat, the bag and the throat when made of india-rubber being vulcanized in this shape, so that the natural elasticity of the rubber renders the throat self-closing, like a valve, at the inner edges, *c*.

The throat may be formed integral with the body of the bag by making the bag with a long neck and turning the neck backward and inward to the interior of the bag, a fold being produced at the point *b*, where the stiffening-ring *a* is inserted; or the throat may be made separately and united with the bag at the point *b*.

In order to assist the collapsion of the throat, springs *d*, of metal, may be incorporated into the india-rubber, one on each side of the throat, the said springs being maintained in position by being held in the fold between the mouth of the bag and the throat, as shown in Fig. 1.

The bag is represented with a flexible tube, C, nozzle D, and tube-compressor E, and is also represented as furnished with a ring, F, at its mouth, by which to suspend it, when desired, all as in bag-syringes heretofore used.

To fill this bag, it is held in an upright position, and on liquid being poured into its mouth the inner part, *c*, of the throat B opens as a valve to admit the entry of the liquid into the body of the bag, as shown in Fig. 3. On the bag being filled sufficiently and the pouring being discontinued, the valvular interior of the throat will close by self-collapsion, and its inner edges will come so close together as to tightly inclose the contents, so that the bag may be laid upon a shelf, G, or on any other convenient support, as shown in Fig. 1, in case of there being no convenience for its suspension, and the syringe may be used while the bag is so supported.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with the water bag or reservoir of a fountain-syringe, of a self-col-

lapsible throat adapted to the mouth of the bag, substantially as described, for the purpose of closing it.

2. The combination, with the water bag or
5 reservoir of a fountain-syringe, of a stiffening-
ring surrounding the mouth of the said bag or
reservoir for keeping it open, and a flexible
throat, the outer margin of which, united with
the said mouth, is kept open by said ring, and
10 the inner margin of which is flattened to form
a self-closing valve, substantially as herein
described.

3. A water-bag for fountain-syringes hav-
ing its neck turned backward and inward to

form a self-closing throat, substantially as and 15
for the purpose herein described.

4. The combination, with the bag or reser-
voir and the stiffening-ring *a*, applied to its
mouth to keep it open, of the collapsible throat
B, united with the mouth, and the springs *d d*, 20
applied within the said throat for the purpose
of assisting to close its inner end, substantially
as herein described.

RUSSELL PARKER.

Witnesses:

FREDK. HAYNES,
HENRY J. McBRIDE.