

G. J. HARRIS.  
SYRINGES.

No. 176,953.

Patented May 2, 1876.

Fig. 1.

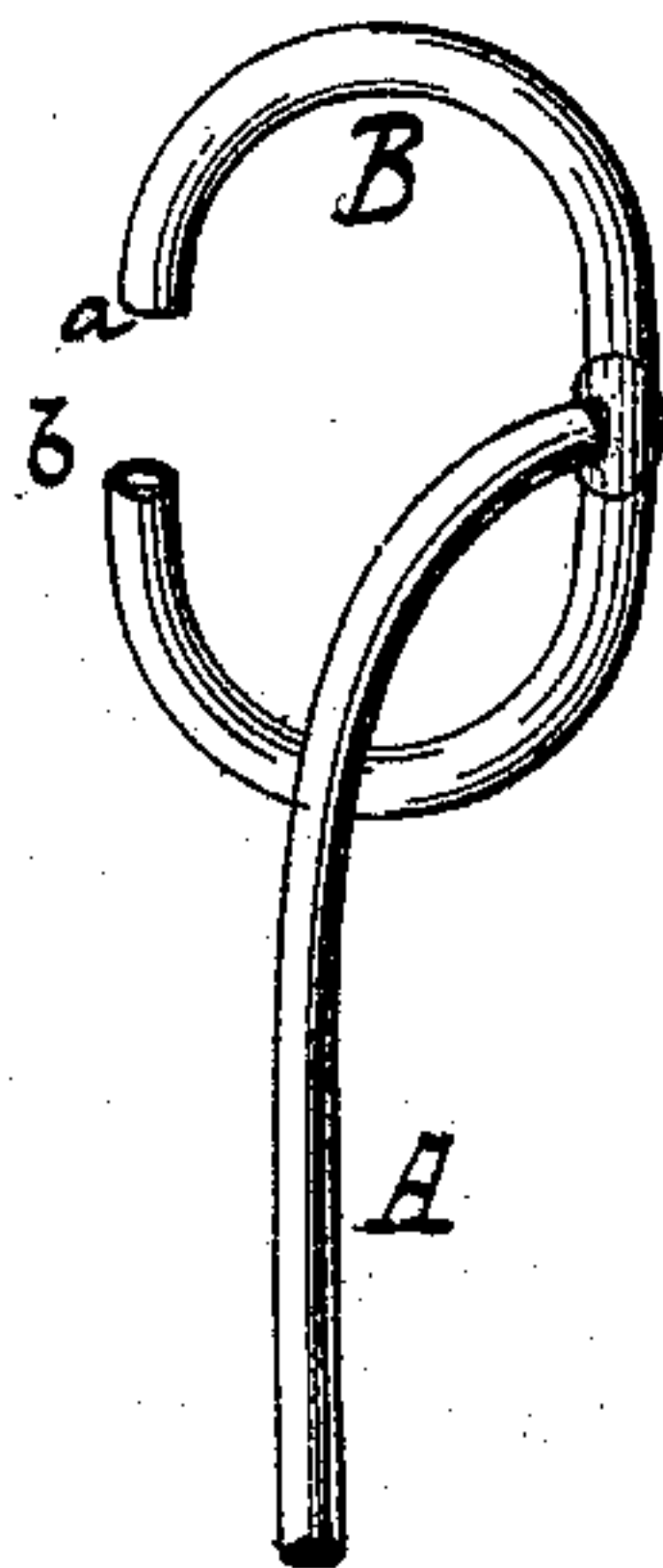
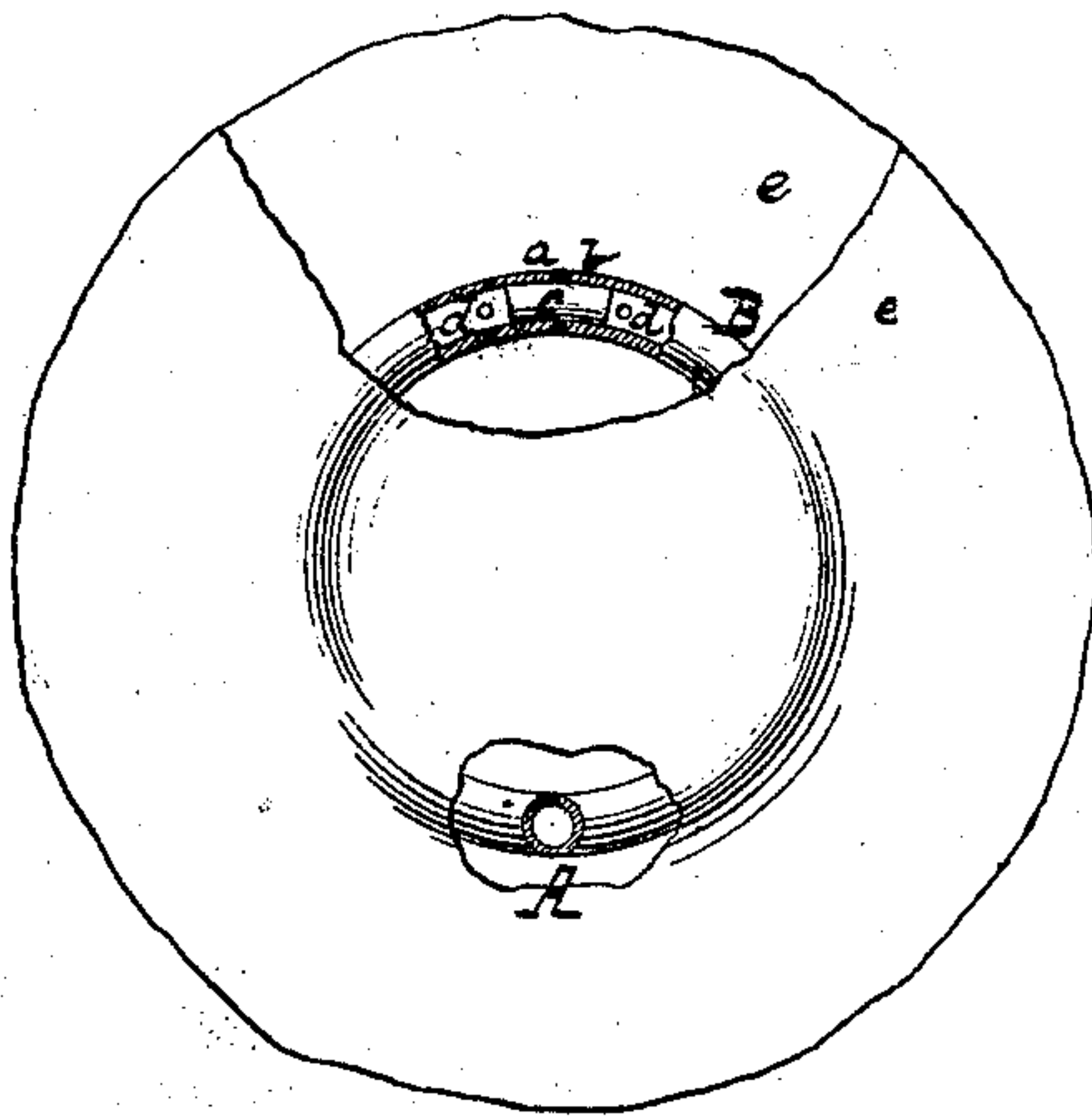


Fig. 2.



Witnesses.

Otto Hufeland

Robt. E. Miller

Inventor.

Ges J Harris

per  
Van Sartwood & Hauff  
Attorneys

# UNITED STATES PATENT OFFICE

GEORGE J. HARRIS, OF BROOKLYN, E. D., NEW YORK.

## IMPROVEMENT IN SYRINGES.

Specification forming part of Letters Patent No. **176,953**, dated May 2, 1876; application filed April 6, 1876.

*To all whom it may concern:*

Be it known that I, GEORGE J. HARRIS, of Brooklyn, E. D., in the county of Kings and State of New York, have invented a new and useful Improvement in Syringes, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a perspective view of the spout of my syringe before the same is closed and covered. Fig. 2 is a sectional face view of the same when it is finished.

Similar letters indicate corresponding parts.

This invention relates particularly to an improvement in the spouts for syringes; and my invention consists in the combination of an annular elastic spout with the injection-pipe of a syringe, said annular spout being inclosed between two layers of silk or other suitable material, so that when the spout is inserted into an opening it forms a packing, whereby the liquid injected into said opening is prevented from flowing out.

In the drawing, the letter A designates the injection-pipe of a syringe, which syringe may be of any desirable construction. With this injection-pipe is combined an annular spout, B, which is, by preference, formed of india-rubber, in one piece with the pipe; and in order to accomplish this object the annular spout has to be made with open ends, *a b*, so that, after the vulcanizing process is completed, the wire used in forming said spout can be withdrawn. After the annular spout

and the injection-pipe have been formed, the open ends of the spouts are closed by inserting therein a plug, *c*, of hard rubber or other suitable material, and thereby said spout is brought in the form shown in Fig. 2. On each end of the plug *c* is formed a hole, *d*, in the spout, and finally said spout is inclosed between two layers, *e*, of silk or other suitable material, the covering on one side being perforated with holes, to correspond to the holes *d* in the spout.

By these means a spout for a syringe is obtained which, when inserted into an opening, readily adapts itself to the shape of said opening and forms a packing, whereby the liquid injected is prevented from flowing out.

My spout is of particular advantage for female syringes, for the purpose of preventing waste of the medicated liquid used for injection; also, for increasing the effect of the injected liquid and the convenience of using the syringe.

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

The combination of an annular elastic spout, B, with the injection-pipe A of a syringe, substantially as herein shown and described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 1st day of April, 1876.

GEORGE J. HARRIS. [L. S.]

Witnesses:

W. HAUFF,  
E. F. KASTENHUBER.