F. B. Richardson,

Syringe.

No. 37,522. Patented Jan. 27, 1863.

Fig 1

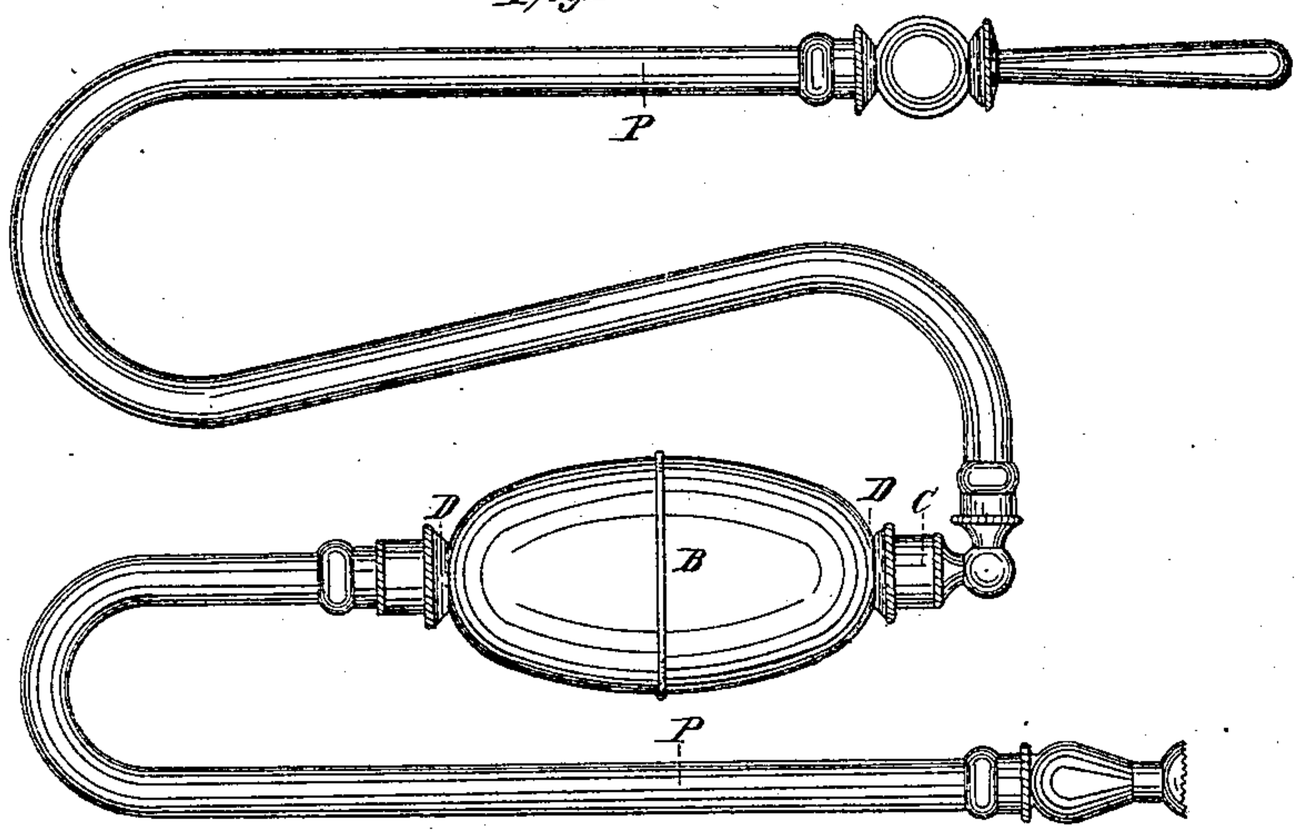


Fig. 2

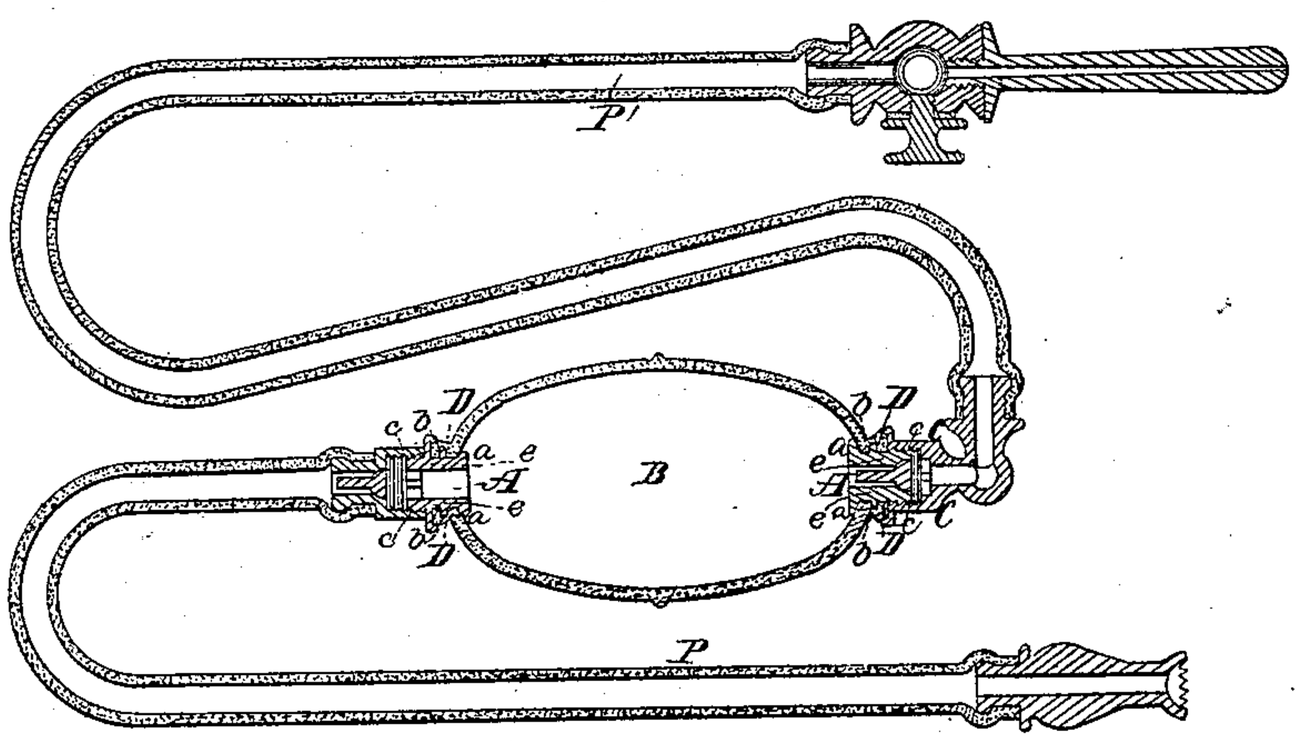
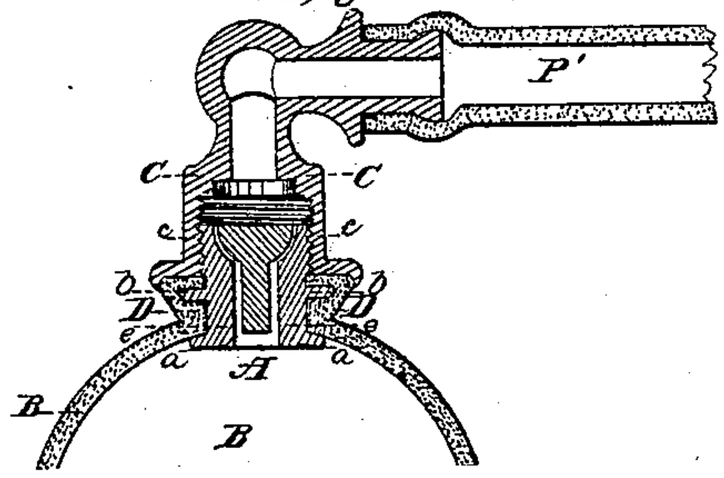


Fig. 3



Witnesses

James McNamara

D. C. Haley

Inventor

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UNITED STATES PATENT OFFICE.

FRANCIS B. RICHARDSON, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN ELASTIC-BULB ENEMA-SYRINGES.

Specification forming part of Letters Patent No. **37,522**, dated January 27, 1863.

To all whom it may concern:

Be it known that I, FRANCIS B. RICHARDSON, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in the Elastic-Bulb Enema-Syringe; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 denotes a side elevation, and Fig. 2 a longitudinal section, of an enema-syringe provided with my invention, which consists in a new connection for the elastic bulb and either of its flexible branch pipes. Fig. 3 is a section, on an enlarged scale of my invention.

In the drawings, B denotes the bulb, and P P′ the induction and eduction branch pipes of an elastic-bulb enema-syringe. A is the perforated connection plug or tube, which is made of metal, and, as usually constructed, has a head or flange, *a*, and a screw, *c*. A screw cap C, to which the branch pipe is connected, screws on the male screw *c* of the plug A. It has been customary to screw the said cap down upon the bulb, and so as to compress the elastic bulb between the cap and the flange, such being for the purpose of making a close joint. It has been found that although a tight joint may be produced when the syringe is first made, yet, by compressions of the bulb, leakage about the joint will soon ensue, as every compression of the bulb during use of the instrument or syringe tends to open the joint more or less. In order to prevent such opening of the joint, I not only construct the plug A with an annular or circumscribing projection, *b*, (arranged at or near the base of the screw *c*, and at the upper part of the neck or part *e* of the plug, which is encompassed and grasped by the orifice or mouth of the bulb,) but I make the elastic bulb at its mouth with an overlapping or recessed neck, D, formed to receive the part or projection *b* and go entirely around it and between it and the cap C, and so that the cap, when screwed far enough on the screw *c*, may be caused to firmly compress the interlaying portion of the neck D against the part or projection *b*. In this way I am enabled to make a tight joint or connection of the bulb B and its plug A, one which will not be affected by the alternate compressions and expansions of the bulb during the process of working the syringe.

I do not claim a connection consisting of a perforated screw-plug, nor do I claim to confine the mouth of a bag to such by means of an annulus or cap-screw screwed on the perforated screw-plug, and so as to compress that part of the bag about its mouth between the head of the plug and such annulus or screw-cap; but

I claim—

My new improvement in a syringe-connection, the same consisting not only in having a bearing-neck, *e*, extending below the annular projection or shoulder *b*, or its equivalent, made upon the plug A, but in having the bulb-neck D embrace the neck *e* and the annular projection or shoulder *b*, and be compressed on the latter by the screw-cap C, substantially as specified.

FRANCIS B. RICHARDSON.

Witnesses:

R. H. EDDY,
F. P. HALE, Jr.