

No. 862,507.

PATENTED AUG. 6, 1907.

C. E. QUIMBY.
RECTAL INJECTION APPARATUS.
APPLICATION FILED OCT. 6, 1906.

Fig. 1.

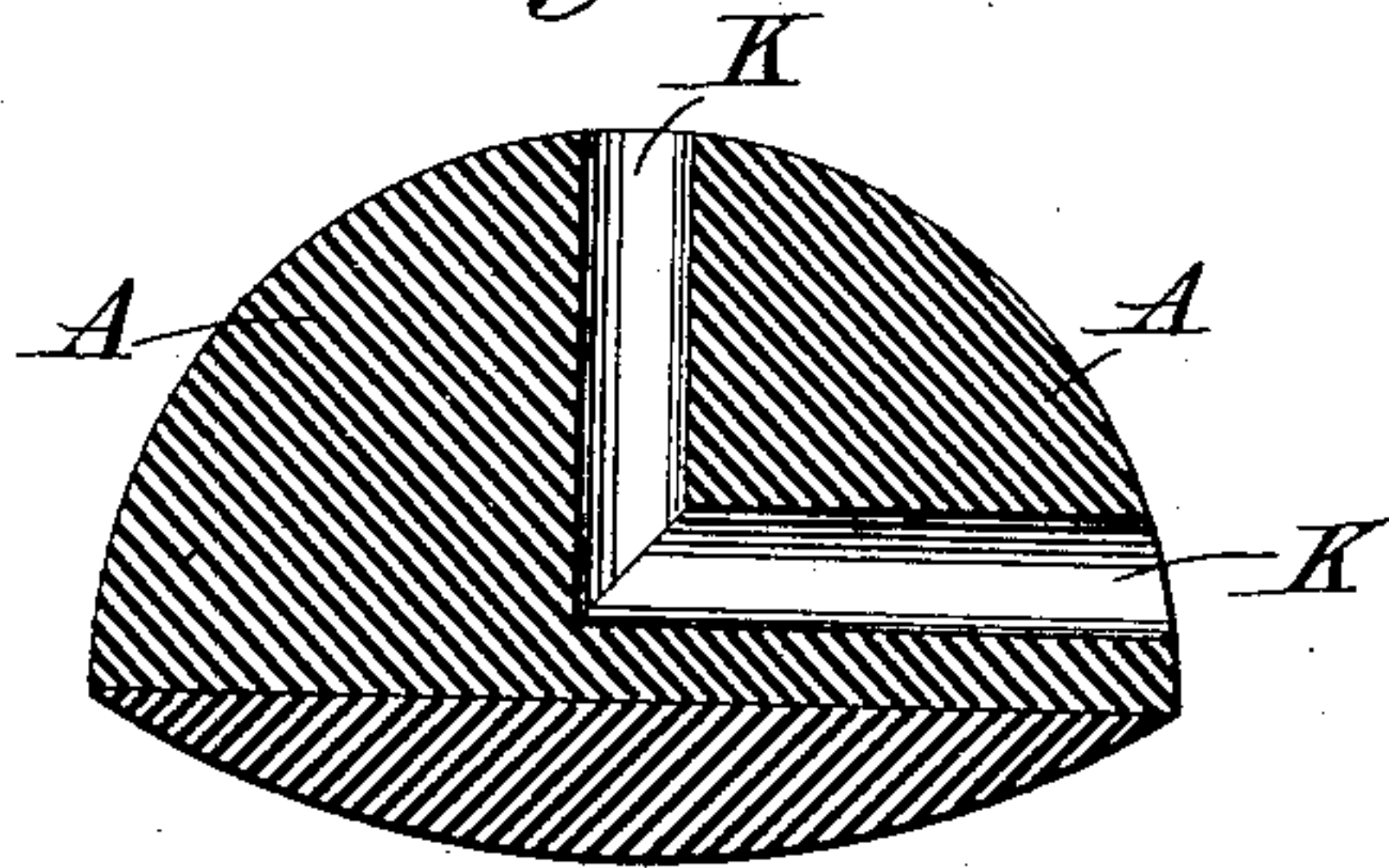


Fig. 2.

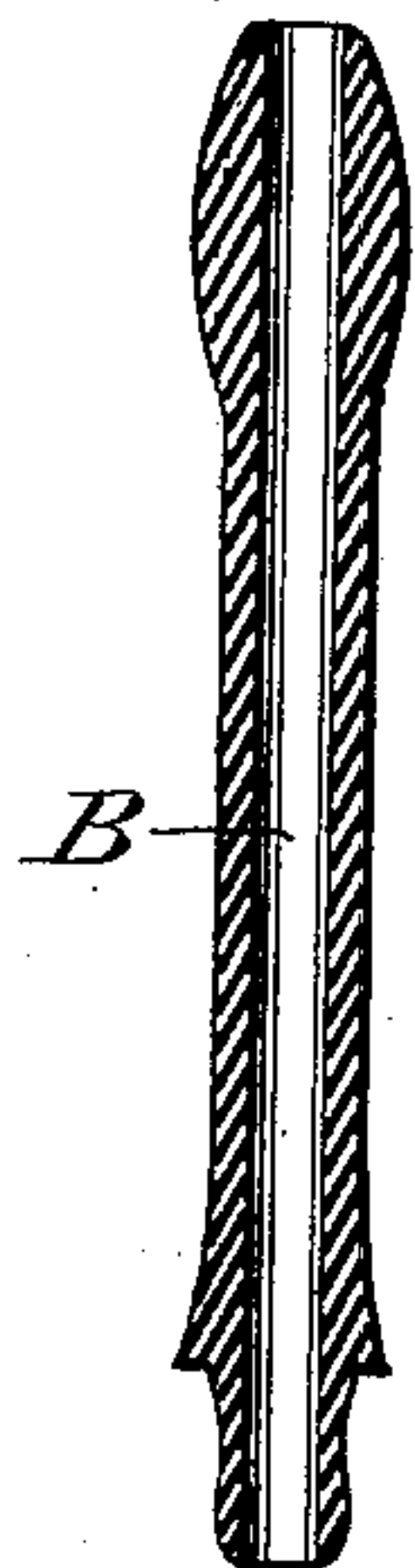


Fig. 3.

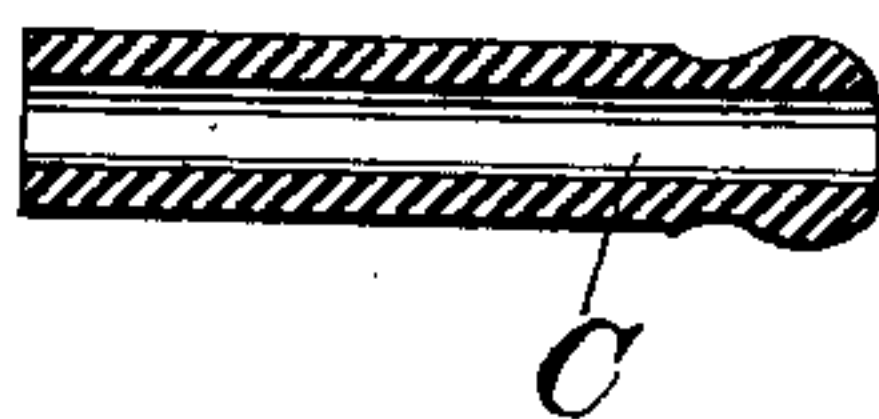
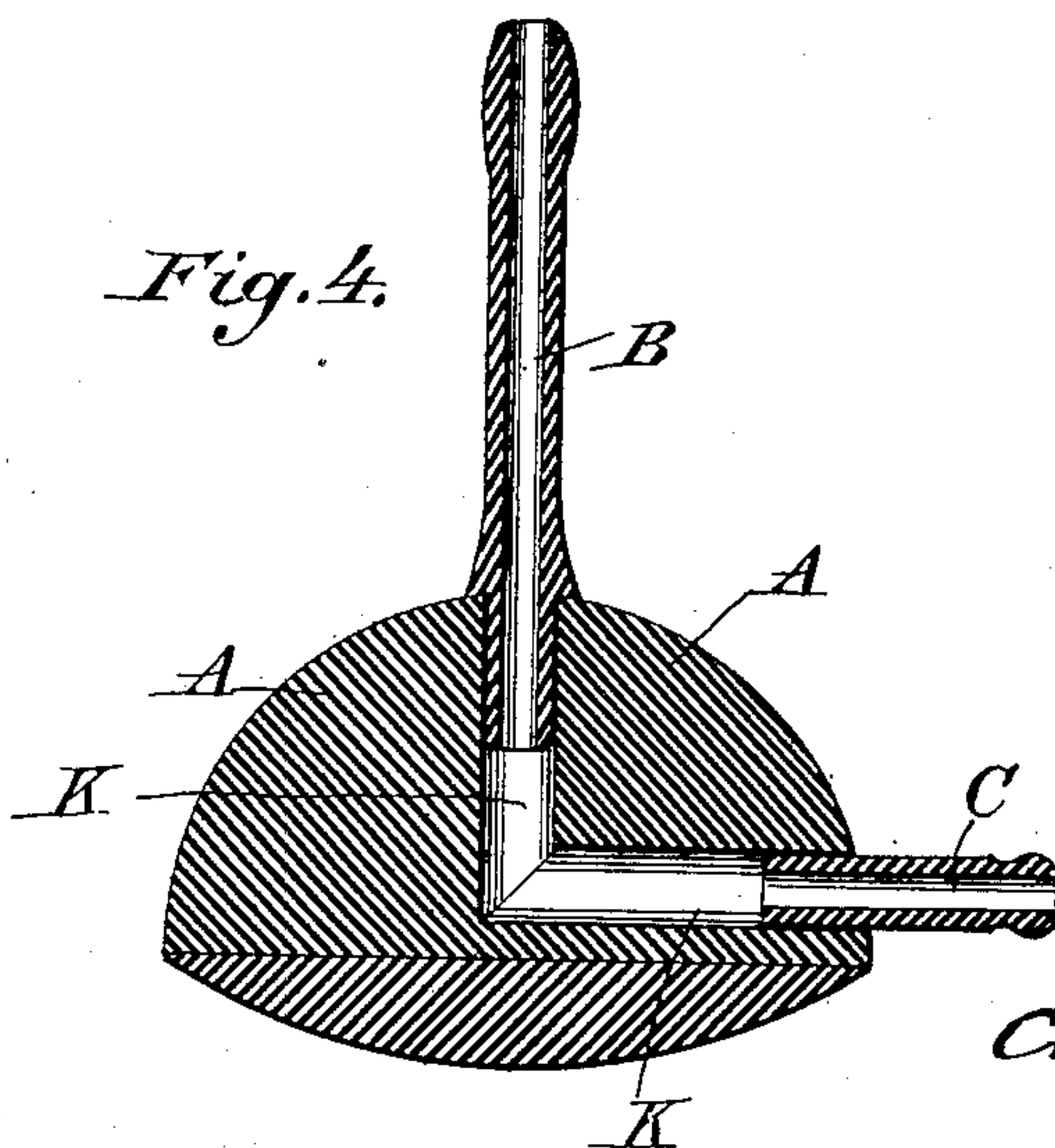


Fig. 4.



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UNITED STATES PATENT OFFICE.

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RECTAL INJECTION APPARATUS.

No. 862,507.

Specification of Letters Patent.

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Application filed October 5, 1906. Serial No. 337,630.

To all whom it may concern:

Be it known that I, CHARLES ELIHU QUIMBY, a citizen of the United States, residing at No. 44 West Thirty-sixth street, borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Rectal Injection Apparatus, of which the following, in connection with the attached drawings, which are made a part hereof, is a full, clear, and accurate description.

My invention is designed to render more safe, efficient and comfortable the injection of fluids into the human rectum and colon; and is based on the fact that reflex contraction of the colon with consequent pain and inability to retain fluid is caused, not by stretching of the colon but, by stretching of the sphincter ani muscle. My invention prevents such stretching by reason of its shape, and by giving support to said muscle. It further avoids mechanical irritation of the rectum by reason of its adjustability in use.

My invention consists of a so-called "pressure bulb" designed to act as a support to the anus and rectum.

The novelty of my invention is in the shape, consistence and construction of said bulb and its freedom from hampering attachments.

In the drawings, to which reference is made, this bulb is shown in its preferred form, and the several parts are designated by reference letters.

Figure 1. is a mesial section of the pressure bulb in the axis of a portion of the tube that is molded in the bulb. Figs. 2. and 3. show in section the remaining portions of the tube. Fig. 4. is a similar section of the parts in combination.

1st. *The pressure bulb.* (Fig. 1.) The novel features of this part are its shape, size and elasticity. The object of this bulb is not to plug the anal opening, something that can not be done if attempted, but to support and prevent stretching of the sphincter ani muscle. Its superior supporting surface is, therefore, made convex, being a segment of a sphere or other similar solid. To avoid pressure on and injury of the tissues by the rectal tube attached to this bulb it is necessary that the bulb be susceptible of adjustment by the position of the patient, and of readjustment during the process of injection. To this end the base of support is also made convex. The most available form is the combination of a hemisphere of about two inches diameter with a segment of a sphere of longer diameter. This bulb, (Fig. 1., A.), is molded of soft rubber, or other elastic material, with an opening or tube, K, passing from one side at the base to the pole of the hemisphere. Generally sufficient elasticity is obtained by making the bulb of soft rubber; but for special conditions it may be made hollow and filled with air or fluid, in which case it will assume any shape desired under pressure.

2nd. *The tube.* This may be a soft rubber or other tube that can be carried through the opening K, in the bulb; but it is more convenient for common use to have hard rubber anal terminals, (Fig. 2., B.), which may be of assorted lengths, and similar supply tips (Fig. 3., C.), both to be inserted in the openings of the tube K, in the bulb A.

Combination. In the more generally available form the fixed portion of the injection tube K, is molded in the bulb A, and the supply tip C, inserted at the base and the anal terminal B, at the pole of the hemisphere. (Fig. 4.).

Application. As thus arranged connection is made at the tip C with any form of syringe, the anal terminal is then inserted within the rectum and the patient, if able, sits down on any convenient support. In this position the bulb is pressed upwards, the sphincter muscle is raised and any stretching of said muscle by the weight of water in the rectum is made impossible. Reflex contraction of the bowel is thereby avoided and the patient is able to retain much larger quantities of fluid without distress than by any other method. When the patient is unable to sit up the same pressure and support may be obtained by the hand of the nurse. The adjustment of the bulb to avoid pressure and irritation by the rectal tube, with the patient sitting, is readily made by slight motions of the body, as the bulb rolls on its convex base in any direction.

My invention may be used with any form of syringe; but it is peculiarly adapted for use with a closed bag, on which the patient sits, making the weight of the body the injecting force.

My invention presents the following combination of actions and freedom from defects not found, as I believe, in any other similar device. Automatic adjustment; by reason of shape and freedom from attachments. Elevation and support of sphincter muscle; from shape and size. Uniformity of pressure; from elasticity. Prevention of reflex intestinal contraction with colic; by action on sphincter muscle. Availability with any form of injector.

Having thus described my invention I claim as new and desire to secure by Letters Patent;

An attachment for syringe nozzles consisting of an elastic bulb having a convex upper surface adapted to the support of the anus and rectum and an imperforate convex lower surface as its base of support; said attachment being provided with a lateral opening for the supply tube connecting by a canal with a superior central opening adapted to receive a syringe nozzle as and for the purposes specified.

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