S. G. WALKER.

SYRINGE.

APPLICATION FILED JAN. 8, 1916.

1,175,095. Patented Mar. 14, 1916.

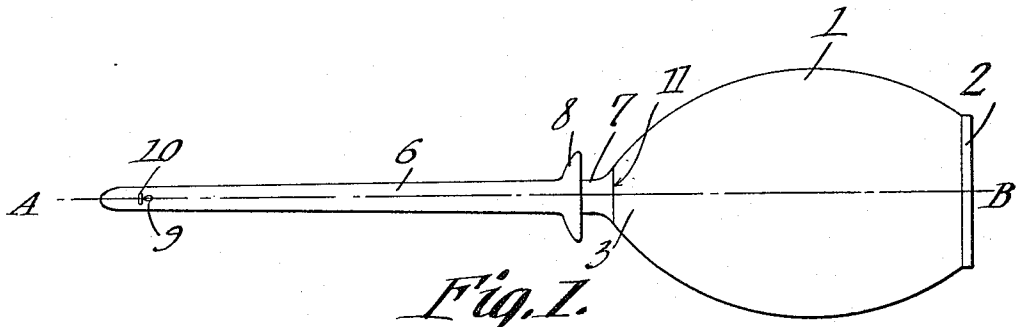


Fig. 1.

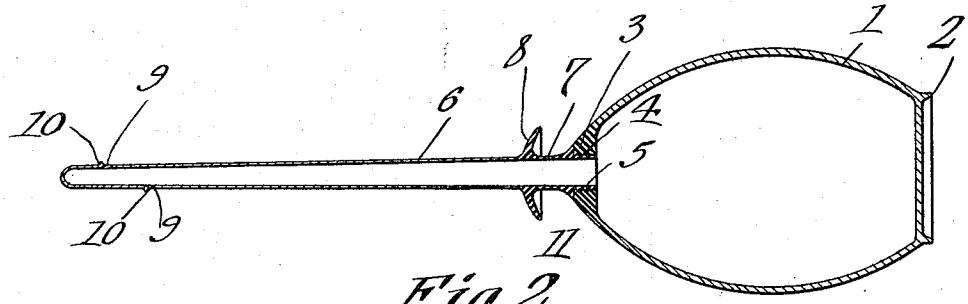


Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE.

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SYRINGE.

1,175,095. Specification of Letters Patent. Patented Mar. 14, 1916.

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To all whom it may concern:

Be it known that I, SAMUEL G. WALKER, a citizen of the United States, residing at Welch, in the county of McDowell and State of West Virginia, have invented a new and useful Syringe, of which the following is a specification.

This invention relates to syringes for use in treatment for constipation, one of the objects being to provide a syringe having a soft flexible cannula which can be inserted readily into the colon and which is so proportioned as to extend approximately as far as the sigmoid flexure, the flexibility of the cannula obviating any danger of abrasion or other injury such as often results from the use of a cannula of hard rubber or other hard material.

A further object is to provide a cannula having the outlet openings so arranged as to direct a discharged fluid back toward the bulb of the syringe, and as these outlets are located adjacent the sigmoid flexure, the fluid thus discharged will exert an outward pressure against the contents of the colon, thus to quickly and thoroughly cleanse the part without undesirable results.

A further object is to provide a cannula having a combined shield and finger piece formed integral therewith by means of which said cannula can be readily inserted into the colon.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is an elevation of the device. Fig. 2 is a longitudinal section therethrough on line A—B Fig. 1.

Referring to the figures by characters of reference 1 designates a bulb of flexible rubber and preferably provided with a flat base 2 so that it can be placed on end. This bulb is provided opposite the base with a nipple 3 in which is provided an opening 4 the wall of which is screw threaded. As before stated the bulb 1 is formed of flexible rubber but it is to be understood that the nipple 3 is formed of hard rubber. This nipple is designed to receive the threaded end 5 of the cannula 6 which is slightly tapered and has its outer end closed. The cannula is formed of soft flexible rubber for the greater portion of its length but the open end portion of the cannula is made of hard rubber, as shown at 7 and is externally screw threaded so as to engage the threaded wall of the opening 4. Formed integral with this hard portion 7 of the cannula is a collar 8 preferably concavo-convex and which constitutes a finger piece by means of which the cannula can be forced readily into position. Formed within the wall of the cannula near the closed or outer end thereof are ports or vents 9 located at different distances from the end of the cannula, these ports all discharging outwardly toward the bulb. It has been found in practice that where the cannula is eight inches in length, one of the openings 9 should be located approximately three-quarters of an inch from the end of the cannula, while the other opening should be located at about one and one-half inches from the said end of the cannula. By having the openings diverge outwardly toward the bulb, it will be apparent that when the bulb is compressed, the liquid contents thereof will rebound from the closed end of the cannula and flow outwardly in small jets through the openings 9 and toward the bulb. By inclining the openings as described there is little danger of their becoming clogged during the placing of the cannula in position. To further prevent the possibility of clogging, small nodes or guards 10 are formed on the cannula close to the openings and between said openings and the closed end of the cannula. As shown particularly in Fig. 1 the hard rubber end of the cannula has an annular shoulder 11 which bears against the nipple 3 when the parts are assembled.

In using the device, the cannula is inserted into the colon so as to extend approximately throughout the length thereof, the fingers being placed so as to press against collar 8 during this operation. After the cannula has been inserted up to the collar 8, the bulb 1 is compressed and the liquid contents thereof discharged in small jets through the orifices 9 and in the general direction of the outlet of the colon.

What is claimed is:—

A syringe of the class described including a flexible bulb having a non-flexible portion provided with an opening, a cannula flexible throughout the greater portion of its length and closed at one end and open at its other end, the open end portion of the cannula being of hard material and detachably seated within the opening in the bulb, and an annular finger piece integral with the hard portion of the cannula, there being apertures within the wall of the cannula at different distances from but adjacent the closed end thereof, said apertures being extended along lines diverging outwardly from the cannula toward the bulb, and outwardly extending projections integral with the cannula and close to the openings, said projections being located between said openings and the closed end of the cannula.

In testimony that I claim the foregoing as my own, I have hereto affixed by signature in the presence of two witnesses.

SAMUEL G. WALKER.

Witnesses:
AL HUFFORD,
CHAS SIGNOR.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."