

No. 757,654.

PATENTED APR. 19, 1904.

H. M. GUILD.
SYRINGE.

APPLICATION FILED AUG. 12, 1903.

MODEL.

FIG. 1.

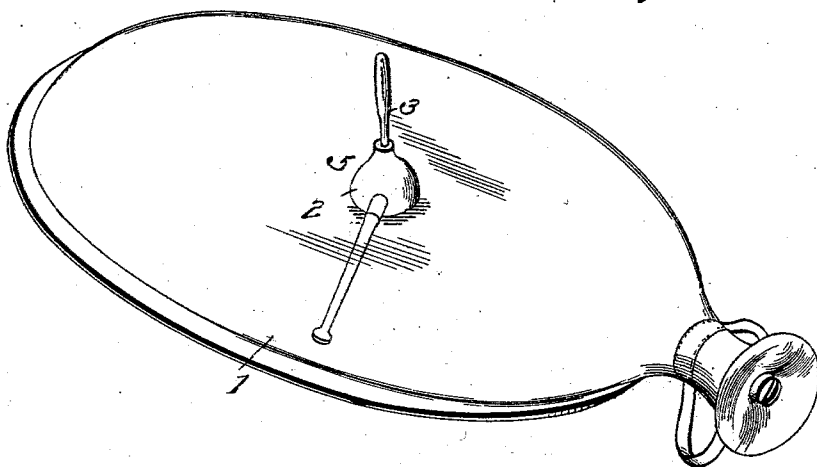


FIG. 2.

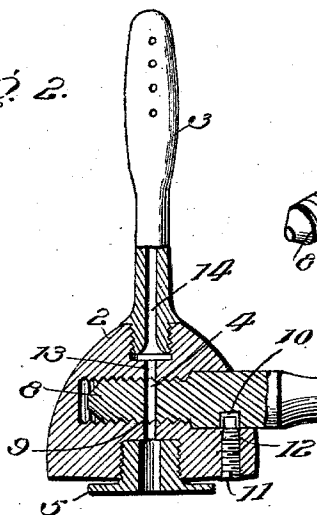
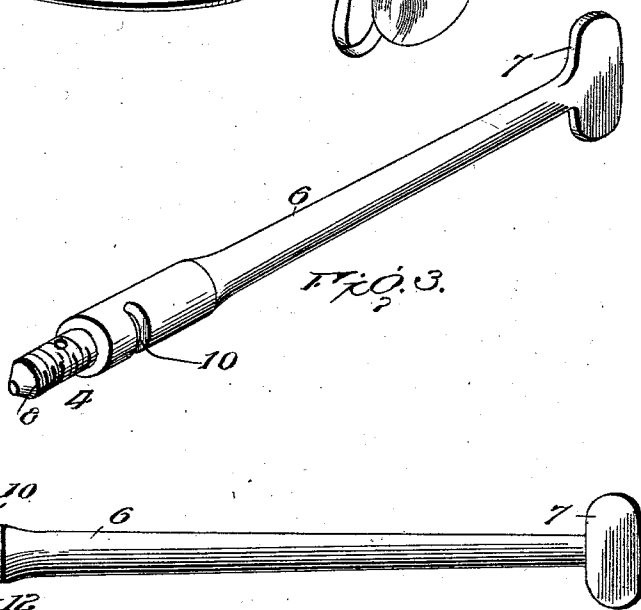


FIG. 3.



Inventor

Henry M. Guild

Witnesses

J. N. Wheeler

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R. M. Lacey, Attorney

UNITED STATES PATENT OFFICE.

HENRY M. GUILD, OF ERIE, PENNSYLVANIA; NORMAN J. MAXWELL, EXECUTOR OF SAID GUILD, DECEASED, ASSIGNOR, BY MESNE ASSIGNMENTS, TO CHARLES A. TYRRELL, OF NEW YORK, N. Y.

SYRINGE.

SPECIFICATION forming part of Letters Patent No. 757,654, dated April 19, 1904.

Application filed August 12, 1903. Serial No. 169,296. (Model.)

To all whom it may concern:

Be it known that I, HENRY M. GUILD, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Syringes, of which the following is a specification.

The purpose of this invention is to provide improvements in the type of syringes especially adapted for irrigating the rectum and flushing the colon or large intestine. This type of syringe involves a structure consisting of a reservoir for holding the fluid to be injected, a head carried by the said reservoir and secured thereto, and an injection-stem mounted upon the said head. Personal weight upon the reservoir is the motive power which forces the fluid into the colon without physical effort on the part of the user.

The invention *per se* relates particularly to the means for regulating the quantity of fluid passing through the injection-stem; and it consists in a peculiar form of valve disposed upon the head.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view showing the embodiment of the invention. Fig. 2 is a vertical sectional view through the head and adjacent the operating parts. Fig. 3 is a detail perspective view of the valve-operating stem.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

As hereinbefore premised, the invention

comprises a reservoir 1, which consists of a rubber bag or analogous receptacle in its preferred form, a head 2, secured to the reservoir 1, an injection-stem 3, mounted upon the head, and a valve 4, also suitably disposed upon the head and adapted for regulation of the quantity of liquid passing through the injection-stem 3.

The head 2 is of approximately conoidal shape and is secured to the reservoir by means of a plate 5. The injection-stem 3 is also threaded to the head at the upper portion thereof and is held in its proper position in the rectum by the natural restriction of the sphincter muscle. The valve 4 is provided with the valve-stem 6, having a knob 7 for manipulation of the valve. The valve is designed to be permanently attached to the head 2 and is provided with a reduced threaded end 8, and the valve is disposed in a transverse opening 9 upon the head 2. The valve-stem 6 is preferably integral with the valve 4, the two therefore constituting a single structural element. To hold the valve 4 from displacement from the head 2, the same is provided with an arcuate recess 10, and a stop 11 is threaded into the vertical opening 12 upon the head 2 and adapted to interlock with the arcuate recess 10 to prevent the aforesaid displacement of the valve 4. The stop 11 may be a screw or corresponding fastening device and besides preventing longitudinal displacement of the valve from the transverse opening 9 serves to limit the rotary movement of the valve. The limit of rotary movement of the valve in one direction disposes the valve with the valve-opening 13 in registry with the duct 14, through which the fluid passes to the injection-stem 3.

The peculiar form of stop 11 employed is advantageous in that the same is located so as to be housed, this being of importance for many obvious reasons. The stop also is disposed so as to form a twofold office—namely, as means for limiting the rotary movement of the valve and for preventing longitudinal dis-

placement thereof, thus obviating the provision of an auxiliary or independent element for accomplishing either of the above.

When turning the stem 6 to throw the opening of the valve 4 out of registry with the opening of the head 2, said valve receives a twofold movement—one rotary, the other longitudinal—by reason of its screw-thread connection with the head. This combined movement of the valve causes a wall of the groove 10 to ride upon a side of the stop 11, and the resultant wedging or cam action compels a crowding of the matching screw-threads of the parts 8 and 9, so as to prevent any possible leakage between the valve and head when the said valve is closed and the reservoir is subjected to pressure.

Having thus described the invention, what is claimed as new is—

1. In combination, a head provided with an injection-tube and an opening in communication with said tube, a rotary valve mounted in the said head and extended across the aforesaid opening thereof and having an opening to register therewith in one position of the valve, matching screw-threads between the valve and head to effect a simultaneous longitudinal movement of the valve with its rotary movement, and an interlocking groove and stop between the head and valve to limit the combined rotary and longitudinal movement thereof and to effect a crowding or closing of

the screw-threads of the valve and head by a cam or wedging action, substantially as described.

2. In a syringe, the combination of a conoidal-shaped head having a longitudinal valve-opening and a transverse opening extended into the head from one side and intersecting the valve-opening, the inner end portion of the transverse opening being closed, threaded and contracted, a valve having its inner end reduced and threaded to match the reduced threaded portion of the said transverse opening and provided with an opening to register with the aforesaid valve-opening, and having the enlarged portion adjacent to the threaded part provided with a circumferential groove, and a stop fitted into an opening of the head and extended into the said circumferential groove to act with a wall thereof by a cam or wedging action upon turning the valve to limit its combined rotary and longitudinal movement and effect a closing or crowding of the matching screw-threads between the valve and head, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY M. GUILD. [L. S.]

Witnesses:

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W. A. LONG.