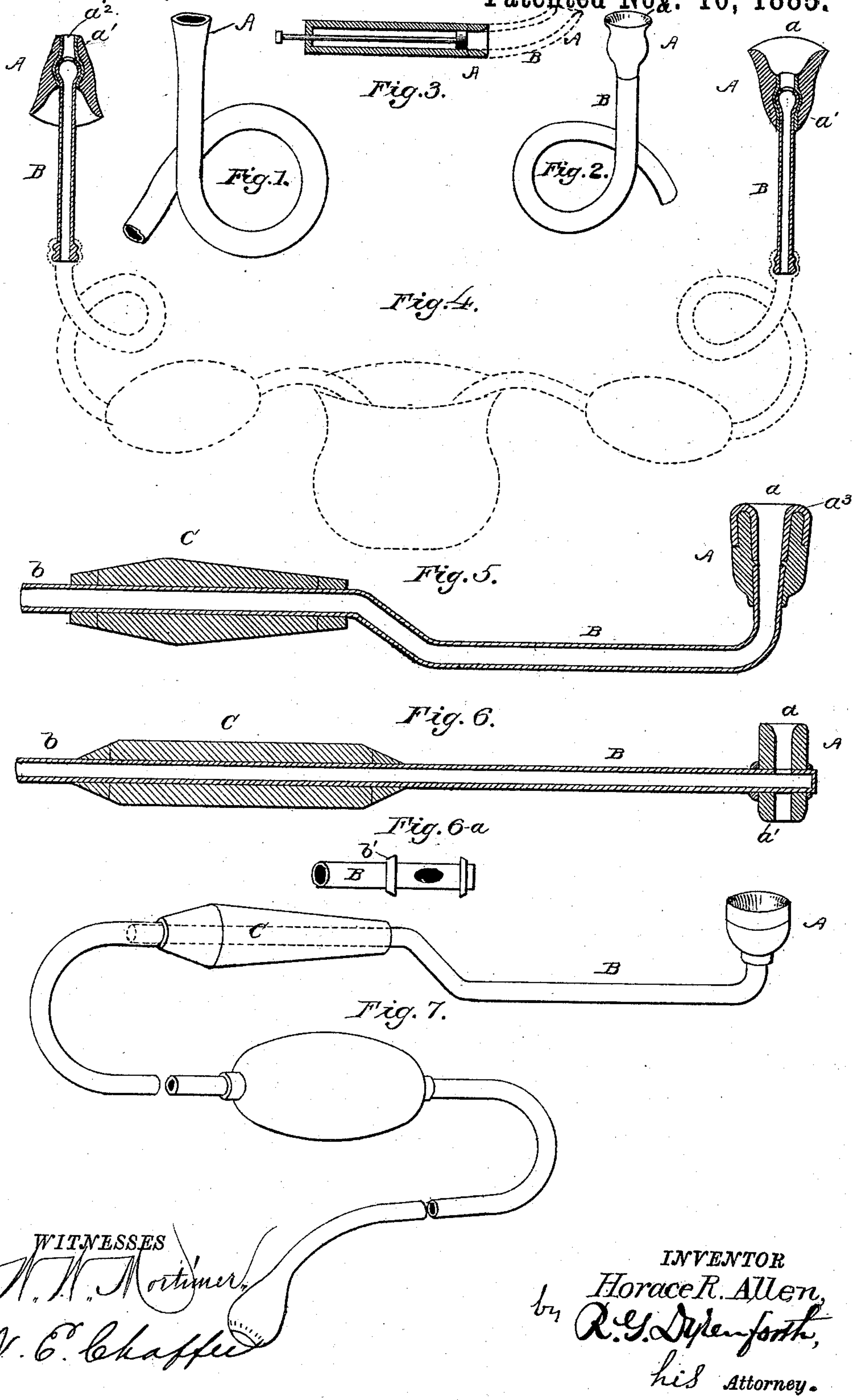


(No Model.)

H. R. ALLEN.
SYRINGE, &c.

No. 330,084.

Patented Nov. 10, 1885.



WITNESSES

W. H. Mortimer

W. C. Chaffee

INVENTOR

Horace R. Allen,
by R. G. Dyrenforth,
his Attorney.

UNITED STATES PATENT OFFICE.

HORACE R. ALLEN, OF INDIANAPOLIS, INDIANA.

SYRINGE, &c.

SPECIFICATION forming part of Letters Patent No. 330,084, dated November 10, 1885.

Application filed August 10, 1885. Serial No. 173,898. (No model.)

To all whom it may concern:

Be it known that I, HORACE R. ALLEN, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Syringes, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to means for injecting fluids into the body.

The object is to inject fluids, particularly liquids, into openings in the body—such as deep ulcers, fistulas, sinuses, but especially the rectum—without insertion of any instrument, such as the nozzle of a syringe, whereby all unpleasant sensation, irritation, and pain consequent upon such insertion are avoided, and in case of injection into the rectum, where the external parts are sensitive—as from flux, hemorrhoids, ulceration, fissure, or other cause—the tenesmus and severe pain so often following the introduction of a syringe-nozzle are obviated.

The invention consists, generally, in a syringe, a syringe attachment, or douche having an orifice or conduit adapted to fit the outer portion of an opening, particularly the lower part of the rectum or the anus. The invention consists, particularly, in various embodiments hereinafter more fully described.

In the accompanying drawings, forming part of this specification, like letters and marks of reference indicate corresponding parts.

Figure 1 is an elevation showing perhaps the most primitive form of embodiment of the invention. Fig. 2 is an elevation showing a flexible pipe having a flaring eduction end, which may be either integral with the pipe or separate from and capable of attachment thereto. Fig. 3 is a longitudinal sectional view of a syringe having the eduction end conformed to fit upon or against an opening. Fig. 4 is a vertical sectional view of an attachment embodying the invention, and showing its application to a syringe reversibly, whereby either the small end or the expanded or flaring end may be brought into use, as the circumstances of the case may demand. Fig. 5 is a longitudinal sectional view showing the

invention as embodied in a convenient and readily-operative instrument or form of use. Fig. 6 is a similar view showing the attachment proper reversible, as in Fig. 4, but permanently connected to the tube. Fig. 6^a is an elevation showing the outer end of the shank in Fig. 6, where the reversible attachment is applied. Fig. 7 is a perspective view of an instrument embodying the invention and applied to a suitable syringe.

In purging a cavity or canal it is frequently desirable to effect the purpose without insertion therein of any part of the instrument employed. This may be the case as well where an injection is to be made as with water or any medicated or antiseptic substance in liquid or gaseous form, as where a cavity with collapsible walls—such as a sinus in the soft parts—is to be depleted. It is especially desirable, however, when injections are to be made *per anum*, and the parts are in an irritated or sensitive condition. To this end means are here devised which can be operatively employed externally, or nearly so, and several forms of a device and of its embodiment to effect the purpose are illustrated, although it is obvious that the mere form of any one of them may be changed without deviating from the invention.

Referring to the drawings, A indicates the part or attachment to be applied. This part may be of hard or soft rubber or any other suitable material, and, as shown in Fig. 1, may be either the normal or widened opening *a* at the end A of a pipe, B, of sufficient firmness to retain its shape when pressed into an operative position, as against the anus; or, as shown in Fig. 2, a tubular piece or head, A, of suitable size, separable from or integral with the pipe, and having a cup-shaped or flaring mouth or orifice, *a*; or, as shown in Fig. 3, an appropriately-shaped mouth in a syringe. The orifice or head should be of the proper diameter to fit operatively just at the opening.

When in any of the forms of embodiment of the invention the widened or flaring orifice is applied to the anus and pressed against the edges of the same, and has connection with a douche, faucet, or syringe from which liquid passes under a sufficient static pressure,

or is forced, the liquid will readily pass up into the rectum without escaping laterally, gently finding its way through the natural channel without undue and forcible distention of the same, and at the same time supplying a gentle bath to the external parts and to the region of the sphincter muscle.

Sometimes it is desirable to apply the orifice against the verge of the rectum, just outside of the sphincter muscle. In such case it is well to have the end of the head somewhat conical, and the form of device shown in Fig. 4, in which the attachment A is shown as removable and reversible, and with a conical end, a' , as well as a flaring end, a , may be employed. Here the attachment is shown as applied upon the nozzle B of an ordinary syringe by passing either end of the tube of the head over the same. The tube may be lined with soft rubber, a^2 , to form an elastic socket and tight joint, though this is not necessary where the attachment itself is of soft rubber.

The more convenient form of the invention is one in which it is embodied as shown in Figs. 5 and 6, and where the part A is applied upon a suitably bent or a straight shank, B, which may be hollow and serve as a conduit for the liquid, and be provided with a handle, C. As shown here, the shank extends through the handle and beyond it, forming an end, b , to be inserted into the education-pipe of a syringe. Instead of the projecting end, the handle itself may be constructed to fit over an education-tube.

To make the part A soft where it is to be applied, and the better to prevent lateral escape of liquid, it is well to provide it with a covering of rubber or other suitable material, as shown at a^3 .

The hollow shank B may be employed as a handle to sustain a cone or other shaped pad or bulb, with or without a discharge-tube, which pad will then be a head, A, the end of the handle entering the pad or bulb below where it is suitably shaped or enlarged to receive it.

Where it is desirable to have a conical as well as a flaring mouth, the form of attachment shown in Fig. 6 may be employed. Here

the attachment is placed upon the end of the pipe B, which is closed at the end, supplied laterally with a hole, as shown in Fig. 6^a, and provided with a collar, b' , against which the attachment rests, being held in place by a suitable nut, collar, or other device on the end of the pipe B. The tube through the attachment A is over that portion of the pipe in which is the hole, so that when it is desired to use either the end a or the end a' it is only necessary to turn the head A on the pipe B until the respective part of the tube registers with the hole, when the liquid or other substance employed will flow from that end. In this case the head A is reversible to use either the flaring or the conical end without having to be detached. The head A thus forms a stop-cock, whereby either end of its tube may be used by simply turning it to register with the hole in the pipe B, the liquid being prevented from escaping from the other end. When the attachment A is turned into a position where no part of either end of its tube will be opposite the hole, there will be no escape of liquid at all.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A syringe, syringe attachment, or douche having an orifice or a conduit adapted to fit the outer portion of an opening—such as the lower end of the rectum, or the anus—substantially as described, and for the purpose specified.

2. In combination with a suitable pipe, conduit, shank, or nozzle, a head provided with one or more discharge-orifices adapted to fit the lower or outer portion of the anus, substantially as and for the purpose described.

3. In combination with a head, A, a tube or shank, B, and a handle, C, substantially as and for the purpose described.

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

HORACE R. ALLEN.

Witnesses:

R. G. DYRENFORTH,
W. W. MORTIMER.