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COLONIC DEVICE

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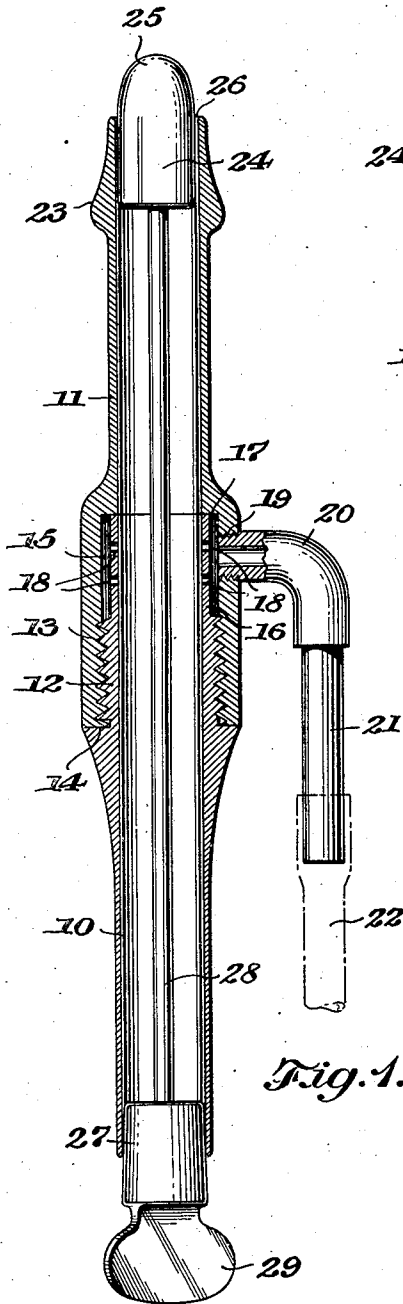


Fig. 1.

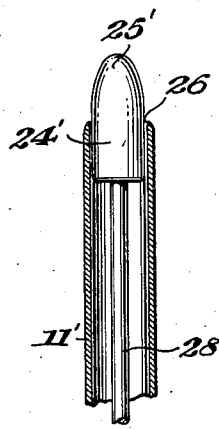


Fig. 3.

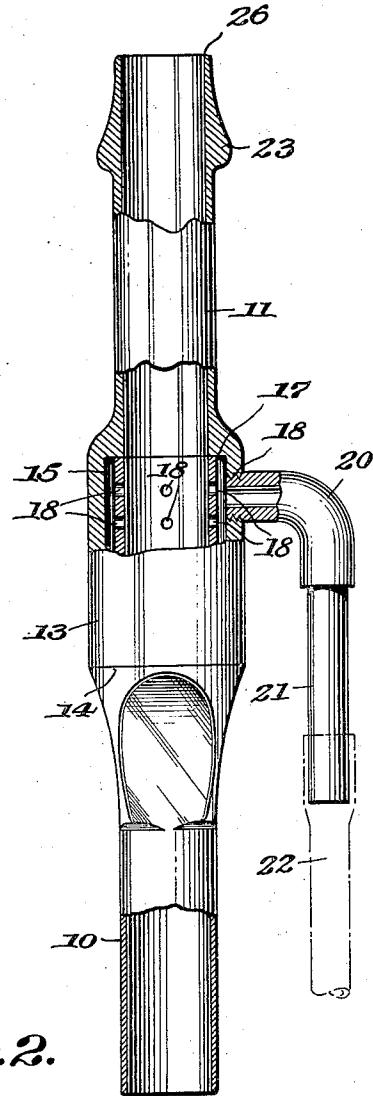


Fig. 2.

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UNITED STATES PATENT OFFICE

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COLONIC DEVICE

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7 Claims. (Cl. 128—229)

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This invention relates to the treatment of diseases and physical conditions of the body with medicine and physiotherapy. More particularly the invention relates to a device for use primarily in the treatment and relieving of certain diseased conditions of the human body, as for example, colitis and other intestinal inflammation or congestion.

In the treatment of certain diseases it has been found desirable to irrigate the affected parts, and this has presented certain difficulties in the insertion of the instrument and the free discharge of matter from the treated area. Considerable skill has been necessary in order to insert the implement used in treating, and to afford free discharge after the liquid has been injected.

It is an object of the invention to provide a device for the treatment of colitis, or the like, by means of which liquid may be readily injected and the liquid readily and freely discharged with any matter that it may carry.

Briefly stated, the invention comprises a body formed of a pair of threaded sections, with a straight smooth bore therethrough, and with a pipe for the admission of liquid into said bore. One end of the device is provided with a slightly enlarged head, forming a shoulder at the rear so that it may readily conform to the parts of the body and not become accidentally displaced. Each end of the bore is provided with a plug, the plug at the front end of the body having a rounded extremity projecting from the body to facilitate insertion of the device. This plug is also slightly smaller in diameter than the bore so that liquid may be discharged from the device around the plug. This plug is connected to another plug at the rear end of the bore by means of a rod so that the two plugs and the rod are in effect a unitary structure. The plug at the rear end of the device is slightly tapered and is adapted to snugly engage a correspondingly shaped end of the body so that a tight joint will be formed and liquid can only flow from the forward end of the device. The plug at the rear end of the body is provided with a wing or finger grip portion, by means of which the two plugs and connecting rod may be slightly twisted and rapidly removed to permit a rapid discharge or evacuation through the unobstructed bore of the instrument.

Further objects and advantages of the invention will be apparent from the following description taken in conjunction with the accompanying drawings, wherein:

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Fig. 1 is a longitudinal section illustrating one application of the invention;

Fig. 2, a part elevational, part sectional view; and

Fig. 3, a view of a slightly modified structure.

The device comprises a body formed of sleeve sections 10 and 11, the former having a thickened externally threaded portion 12 which is engaged by a corresponding thickened threaded portion 13 on the sleeve member 11. The sleeve 10 has a gradual curvature which terminates in a shoulder 14, which abuts against the threaded end of the threaded portion of the sleeve 11. The sleeve 11 is provided with a reduced unthreaded portion 15, and the sleeve 10 is likewise provided with a corresponding unthreaded extension 16, so that there is an annular space or chamber between the portions 15 and 16. The base of the unthreaded portion 15 of the sleeve 11 provides a shoulder 17, against which the free end of the reduced portion 16 abuts. In view of the fact that the sleeves 10 and 11 have bores of similar diameter an unobstructed passageway through the sleeves 10 and 11 is provided. The annular chamber between the portions 15 and 16 of the sleeve is provided with perforations 18 forming communications with said annular chamber, and the bore through the sleeves to permit liquid to pass from said chamber into said bore. In order to supply liquid to the chamber the sleeve 11 is provided with a threaded opening 19 for the reception of the threaded end of an elbow 20 in the opposite end of which is threaded or otherwise secured a tube 21 on which is adapted to be mounted a tube for supplying liquid to the device for injection into the patient treated. The forward or free end of the sleeve 11 tapers from its tip rearwardly to an annular shoulder or enlargement 23 to facilitate engagement with the parts of the body. To facilitate insertion a plug 24 is employed which has a rounded nose 25, said plug being of slightly less diameter than the internal diameter of the bore of the tube to provide an annular discharge passage 26 for the liquid entering the device through the tube 22. The sleeve 10 at its rear end is adapted to receive a tapered closure plug 27, and accordingly the end of the sleeve is provided with a taper corresponding to the taper of the plug. The plug is also provided with a finger portion or wing 29, by means of which it may be twisted to insert or remove the same. The plugs 24 and 27 are connected by a rod 28 so that when the parts are in position liquid 55 can flow into the bore and out through the dis-

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charge passage 26 until it is desired to permit the liquid to escape from the person treated, whereupon slight twisting of the plug 27 by the fiat portion 29 a rapid removal of both plugs rearwardly will permit a free, unobstructed passageway through which escape is readily possible.

The device is capable of being made in different sizes, and as shown in Fig. 3, the sleeve 11' is of smaller size, and without the shoulder 23, although the plug 24' and tip 25' are of a generally similar configuration, although slightly different.

It will be obvious to those skilled in the art that various changes may be made in the invention without departing from the spirit and scope thereof and therefore the invention is not limited by that which is shown in the drawing and described in the specification but only as indicated in the appended claims.

What is claimed is:

1. An implement for the treatment of the human anatomy comprising inner and outer connected aligned pipe sections providing a relatively straight unobstructed passage therethrough, said inner section having a reduced portion and said outer portion having an enlarged portion providing an annular chamber therebetween, a plurality of spaced orifices through said inner section providing communication between said chamber and said passage, an inlet pipe having communication with said chamber through said outer section for admitting fluid into said passage, a plug for each end of said passage, a rod connecting said plugs, one of said plugs closing the end of said passage and the other of said plugs being of a diameter less than that of said passage to permit flow of fluid therearound, and a gripping portion whereby said plugs and connecting rod may be withdrawn to permit rapid discharge through said passage.

2. A device for injecting fluid comprising a pair of connected aligned tube sections the bores of which form a substantially unobstructed passage, said device being provided with a plurality of spaced openings forming communication between the exterior and the interior of said bore, a plug in each end of said passage, the plug in the rear end of the passage forming a closure therefor, the plug in the front end of the passage being of slightly smaller diameter than that of the passage for restricting the discharge of fluid there from around said plug, the nose of said plug being rounded to facilitate insertion of the device.

3. A device for injecting fluid comprising a pair of connected aligned tube sections the bores of which form an unobstructed passage of substantially uniform diameter, said device being provided with a plurality of spaced openings forming communication between the exterior and the interior of said bore, a plug in each end of said passage, the plug in the rear end of the passage forming a closure therefor, the plug in the front end of the passage being of slightly smaller diameter than that of the bore passage for restricting the discharge of fluid there from around said plug, the nose of said plug being rounded to facilitate insertion of the device, and a rod connecting said plugs and forming therewith a unitary structure so that they may be inserted or received as a unit.

4. An implement comprising tube sections having cooperating portions by means of which the sections are connected and form a passageway, said tubes having adjacent said portions spaced surfaces providing an annular chamber, said sec-

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tions having passages providing communication between the exterior of said sections and the interior of the tube sections, a plug in the outer end of each of said sections, one of said plugs forming a closure for the end of the tube, and the other plug forming a restriction for the end of the tube, a rod connecting said plugs, and a grip portion by means of which said plugs and connecting rod may be quickly removed so that the passageway is unobstructed.

5. A device of the character described comprising a plurality of threaded tube sections having cooperating interiorly and exteriorly threaded portions forming a passage, said interiorly threaded portion having a slightly enlarged annular portion adjacent the base of the threads, said exteriorly threaded portion having an extension of slightly reduced diameter providing with the enlarged portion of the cooperating member an annular chamber disposed substantially concentrically with, but of larger diameter than said passage, means for supplying liquid to said chamber, and a plurality of circumferentially spaced apertures through said extension and forming communication between said chamber and the interior of said passage whereby fluid from the exterior may be admitted to said passage through said apertures.

6. A device for injecting fluid into the human body for treatment comprising a pipe section providing a bore and an end forming a nozzle, removable plug means restricting said bore adjacent said nozzle, means coacting with said plug means and defining a passage through which fluid may be discharged from said nozzle, removable plug means restricting said bore rearwardly of said nozzle, and means for supplying fluid into said bore between said removable plug means adjacent said nozzle and said removable plug means rearwardly of said nozzle, both said restricting plug means being removable to provide an unobstructed passage for the discharge of matter through said bore.

7. A device for injecting fluid into the human body for treatment comprising a pipe section providing a bore and an end forming a nozzle, removable plug means restricting said bore adjacent said nozzle, means coacting with said plug means and defining a passage through which fluid may be discharged from said nozzle, removable plug means restricting said bore rearwardly of said nozzle, said removable plug means being of a shape and projecting from the end of the nozzle in a manner to facilitate insertion of said nozzle and prevent the entry of matter into the nozzle, and means for supplying fluid into said bore between said removable plug means adjacent said nozzle and said removable plug means rearwardly of said nozzle, both said restricting plug means being removable to provide an unobstructed passage for the discharge of matter through said bore.

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