

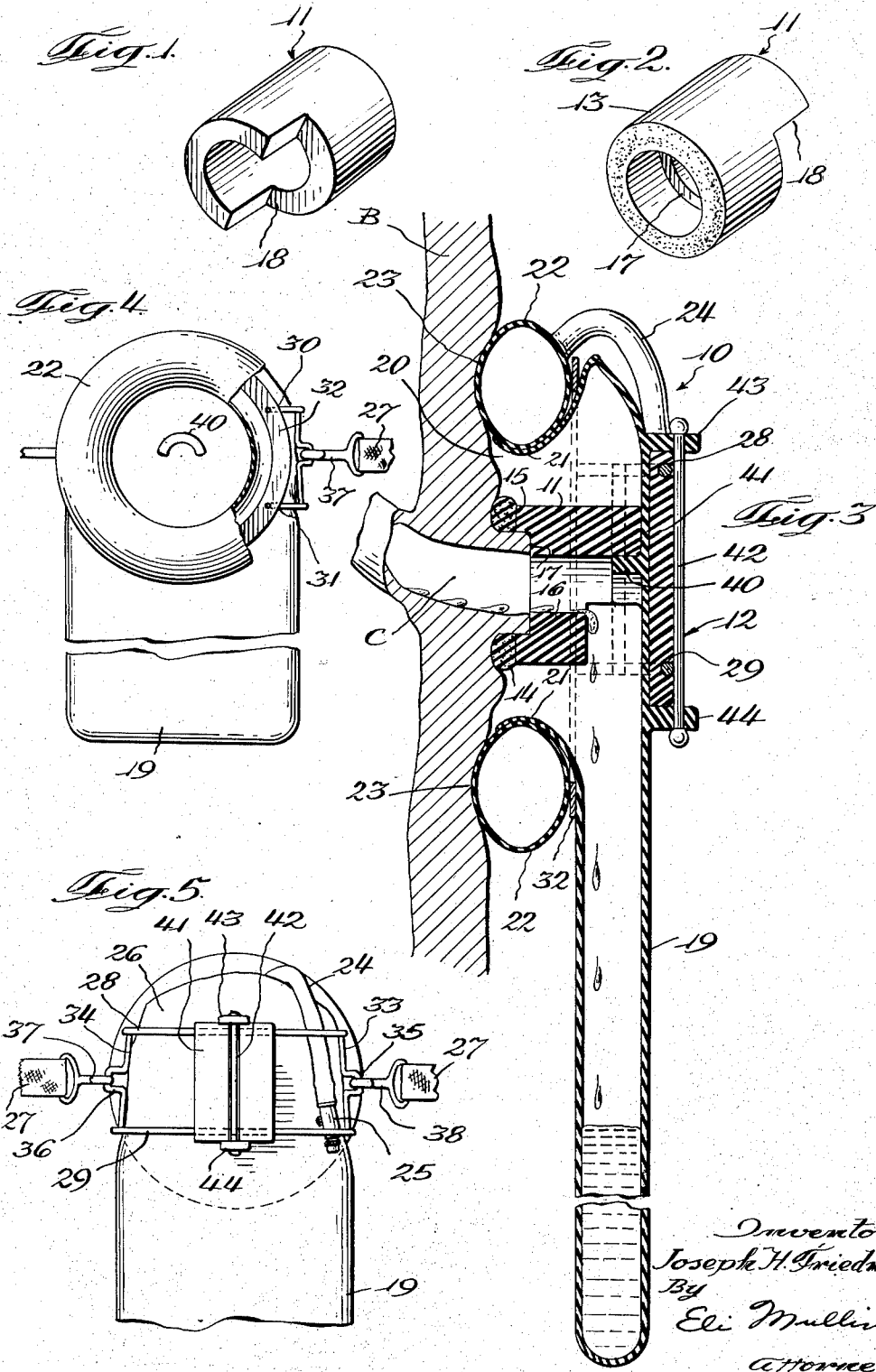
Aug. 7, 1951

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2,563,597

ILEOSTOMY SURGICAL DEVICE

Filed Oct. 23, 1948



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UNITED STATES PATENT OFFICE

2,563,597

ILEOSTOMY SURGICAL DEVICE

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Application October 23, 1948, Serial No. 56,173

12 Claims. (Cl. 128—283)

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This invention relates to a surgical device and more particularly to an improved appliance for use in certain abdominal operations such as colostomies and ileostomies.

It is well known in the medical profession that prolapse of the bowel or colon is a serious and apprehensive complication which often follows abdominal surgery such as colostomy or ileostomy. In such cases the bowel or colon may prolapse or protrude itself out of the incision to such an extent that the patient must be hospitalized and treated for considerable periods of time. In fact, oftentimes it is necessary to resort to further surgery to shorten the protrusion. Obviously, such a condition endangers the health of the patient, inconveniences him, is expensive to treat and, in the case of treatment by surgery, the number of operations is limited.

It is, therefore, a primary object of this invention to afford a surgical appliance which will prevent or at least minimize the occurrence of such complications.

An object relating thereto is to provide a device which will prevent prolapse of the bowel or colon. More particularly the device is designed to retain the end of the organ in position without interfering with the discharge of feces therefrom.

Another object is to provide a colostomy and/or ileostomy cup or pouch having a prolapse-preventing device associated therewith.

A further object is to afford a colostomy and/or ileostomy pouch which may be used with or without a prolapse-preventing device to prevent the escape of fluids and gases.

Still another object is to provide a colostomy and/or ileostomy appliance with improved body-sealing means.

And yet another object is to provide a simply constructed, yet effective and inexpensive colostomy and/or ileostomy surgical device.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel features of construction, arrangement and a combination of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportion, size and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

For the purpose of facilitating an understanding of my invention, I have illustrated in the accompanying drawings a preferred embodiment

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thereof, from an inspection of which, when considered in connection with the following description, my invention, its mode of construction, assembly and operation, and many of its advantages should be readily understood and appreciated.

Referring to the drawings in which the same characters of reference are employed to indicate corresponding or similar parts throughout the several figures of the drawings:

Fig. 1 is a perspective view of the prolapse-preventing member of the device showing the outer end thereof;

Fig. 2 is a perspective view of the same member showing the opposite end thereof;

Fig. 3 is a full sectional view of the assembled invention illustrating the same in operational position;

Fig. 4 is a front elevational view of the pouch member of the device; and

Fig. 5 is a fragmentary elevational view of the improved device, viewed from the rear.

Turning now to the drawings reference numeral 10 indicates generally an assembled device comprising a prolapse-preventing member 11 and a colostomy and/or ileostomy pouch or container 12.

The member 11 comprises a cylindrically shaped tube 13 which may be made of any suitable material, although the embodiment chosen for illustration is made from a rather hard rubber composition. A soft-rubber annular ring 14 is affixed as by vulcanizing to the inner face 15 of the tube 13. The tube 13 is not of uniform cross-section but is formed with a thickened portion 16 to afford an annular inner shoulder 17, the purpose of which will become apparent as the description proceeds. The outer-end of the tube 13 has a portion of the cylindrical wall cut-out as at 18, the function of which will likewise later become apparent.

Although the embodiment illustrated shows the member 11 as an unitary tube, the construction may be varied by employing two concentric tubes, one fitting tightly within the other. Such a construction may be used to vary the position of the inner shoulder 17 with respect to the tube face 15.

Turning now to the description of the container 12, the embodiment chosen for illustration comprises a long flat pouch 19 which may be formed of a material such as rubber. The pouch 19 is provided near its top with a round opening 20 obliquely disposed in relation to the pouch. The marginal edges of the wall of the pouch 19 surrounding this opening 20 are outwardly flanged

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to provide a neck 21, and the same are continuously affixed, as by adhesion, to an annular, inflatable tube 22.

It is this tube 22 which cushions the pouch against the body B of the wearer and seals the same as at 23 circumferentially about the incision. Thus the end of the bowel or colon C protrudes for a short distance into the mouth 20 of the pouch. A tube 24 terminating at one end with the annular tube 22 and at the other with a one-way-valve 25 permits inflation of the annular cushion 22. Means for removably fastening the pouch to the body of the wearer is provided and comprises a wire yoke 26 and an elastic belt 27 which encircles the body of the wearer and attaches to the yoke.

The yoke 26 comprises a framework of two, parallel, longitudinally-disposed wires 28 and 29 fitted across the back of the pouch 19 and positioned opposite the pouch mouth 20. The ends of the wires 28 and 29 are bent around the sides of the pouch and attached as at 30 and 31 to an annular ring 32. This ring is designed to be slipped over the tube 22 and fitted snugly around the neck 21. A pair of lateral connecting wires 33 and 34 connect to the longitudinal members 28 and 29, one at each side of the pouch. These lateral wires may be bent as at 35 and 36 to provide connecting bars to which strap-end connecting buckles 37 and 38 may be attached.

To permit association of the prolapse-preventing member 11 with the container 12, a novel structure is utilized. To the inner surface of the back wall of the pouch 19, an outwardly protruding curved ledge 40 is affixed. This ledge is positioned on the wall opposite the mouth 20 so that the outer end of the member 11 may be supported thereon; the curvature of the tube 13 and tab 40 being complementary.

A stiff bracing member 41 is affixed to the back of the yoke 26 to prevent the pouch wall 19 from yielding when the device is placed in operational position. The brace is positioned directly behind the support tab 40 and may be further braced and affixed by a vertical stud 42. This stud is itself affixed to the pouch by means of parallelly-aligned, outwardly-protruding tabs 43 and 44 through which the ends of the stud 42 are threaded.

Fig. 3 illustrates the operational position of the device in which the inner end of the tube 11 is placed over the end of the colon C so that the tip bears against the shoulder 17. This prevents prolapse of the organ. The mouth 20 of the pouch 12 is placed over the device and positioned so that the outer end portion of the tube B rests upon the ledge 40 with its outer end abutting the back wall of the pouch 19 as shown in Fig. 3 of the drawings. It should be noted that the cut-out portion 18 of the tube 13 is positioned at the bottom so that there is adequate clearance between the backwall of the pouch 19 and at least a portion of the tube 13. Hence the drainage of feces from the colon C into the pouch 19 cannot be blocked or cut-off by pressure of the pouch against the outer-end of the tube. The elastic belt 27 is then passed around the body of the wearer and the buckles snapped onto the connecting bars 35 and 36. Thus the pouch itself bears against the body of the wearer so that the member 11 is retained in position over the end of the colon C and the entire device is sealed to the body B by the tube 22 as at 23. Moreover the soft-rubber ring 14 further seals the device and also

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cushions it at this point to prevent undue irritation to the wearer.

It should be obvious that such a device as described hereinabove not only prevents prolapse of the colon or bowel while simultaneously permitting ready discharge of feces, but also affords an improved pouch for collecting the discharge. It affords a double seal of the container against the body with non-irritating cushions at the points of contact, and the device itself is simple, sanitary and permits complete freedom of movement by the wearer.

It is believed that my invention, its mode of construction and assembly, and many of its advantages should be readily understood from the foregoing without further description, and it should also be manifest that while a preferred embodiment of the invention has been shown and described for illustrative purposes, the structural details are nevertheless capable of wide variation within the purview of my invention as defined in the appended claims.

What I claim and desire to secure by Letters Patent of the United States is:

1. In a device of the character described, a prolapse-preventing member comprising a short hollow tube having an inner shoulder spaced from the inner face of said tube, said tube having a portion of its wall adjacent the outer end removed.

2. In a device of the character described, a prolapse-preventing member comprising a short hollow tube having an inner shoulder spaced from the inner face of said tube, said tube having a portion of its wall adjacent the said outer end removed, and an annular cushion affixed to the inner face of said tube.

3. A colostomy or ileostomy appliance comprising a pouch, an upper portion of the inner wall of said pouch having a mouth formed therein, an annular inflatable cushion surrounding said mouth, an outwardly protruding curved ledge affixed to the inner surface of the backwall of said pouch opposite said mouth, a body-encircling belt and means for securing said belt to said pouch.

4. In combination with a colostomy or ileostomy pouch, a prolapse-preventing member comprising a short rubber tube adapted to fit over the end of an exposed organ, and an annular inner shoulder within said tube bearing against the end of said organ, said shoulder disposed in a plane at right angles to said tube.

5. In combination with a colostomy or ileostomy pouch, a prolapse-preventing member comprising a short rubber tube adapted to fit over the end of an exposed organ, an annular inner shoulder within said tube bearing against the end of said organ, a lower portion of the tube wall adjacent the outer end of said tube removed, and a soft-rubber annular cushion affixed to the inner end of said tube.

6. A colostomy or ileostomy appliance comprising a pouch, an upper portion of the inner wall of said pouch having a mouth formed therein, an annular inflatable cushion surrounding said mouth, an outwardly protruding curved ledge affixed to the inner surface of the backwall of said pouch opposite said mouth, a prolapse-preventing tube supported within said pouch by said ledge, a wire yoke surrounding an upper portion of said pouch, a stiff bracing member affixed to said yoke behind said ledge, and a body-encircling belt removably fastened to said yoke.

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7. In a device of the character described, a prolapse-preventing member comprising a hollow tube having an inner shoulder spaced from the inner end-face of said tube and disposed in a plane at right angles to said tube, said tube adapted to fit over the end of an exposed human organ with the end of said organ in prolapse-preventing abutment with said inner shoulder.

8. A colostomy or ileostomy appliance comprising a pouch, an upper portion of the inner wall of said pouch having a mouth formed therein, an outwardly protruding curved ledge affixed to the inner surface of the backwall of said pouch opposite said mouth, a prolapse-preventing tube supported within said pouch by said ledge, a wire yoke surrounding an upper portion of said pouch, a stiff bracing member affixed to said yoke behind said ledge, and a body-encircling belt removably fastened to said yoke.

9. A colostomy or ileostomy appliance comprising a pouch, an upper portion of the inner wall of said pouch having a mouth formed therein, an outwardly protruding curved ledge affixed to the inner surface of the backwall of said pouch opposite said mouth, a wire yoke surrounding an upper portion of said pouch, a stiff bracing member affixed to said yoke behind said ledge, and a body-encircling belt removably fastened to said yoke.

10. In a device of the character described, a colostomy pouch having a mouth formed therein, a mounting member positioned within said pouch and affixed thereto, a prolapse-preventing tube supported within said pouch by said mounting member, a yoke surrounding a portion of said

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pouch and a bracing member affixed to said yoke behind said mounting member.

11. In combination with a prolapse-preventing tube a colostomy or ileostomy appliance comprising a pouch having a mouth formed therein, a mounting ledge positioned opposite said mouth within said pouch and affixed thereto, said ledge adapted to support said prolapse-preventing tube, and means for supporting said pouch in operational position about the body of a wearer.

12. A colostomy or ileostomy appliance comprising a pouch having a mouth formed therein, a protruding curved supporting member positioned opposite said mouth within said pouch and integrally formed therewith, a yoke surrounding a portion of said pouch and bracing means affixed to said yoke behind said mounting member.

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