United States Patent [19]

Marsan

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[54] **DISPOSABLE IRRIGATOR DRAIN WITH STOMA CONE FOR OSTOMY PATIENTS**

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[52] **U.S. Cl.** **128/227,** 128/283

[51] **Int. Cl.** **A61m 3/00**

[58] **Field of Search** ..... 128/227, 283, 228, 240, 128/241, DIG. 24

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[57] **ABSTRACT**

This invention is for an irrigator drain for ostomy patients, particularly for irrigating into the stomas of colostomy patients. It is characterized by the provision of a stoma cone fixed to the outer or rear wall of a drain tube whereby to facilitate the application of the irrigator into the stoma; also to features of novelty and improvement which make the irrigator low in cost of manufacture and economical for disposal after a single use.

2 Claims, 5 Drawing Figures

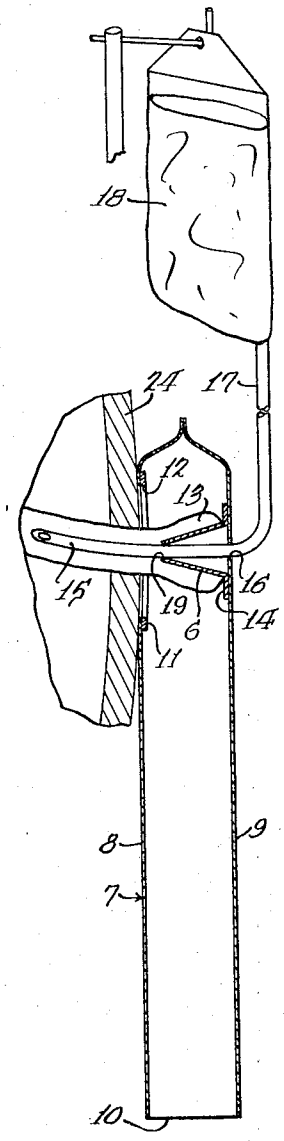


Fig. 1.

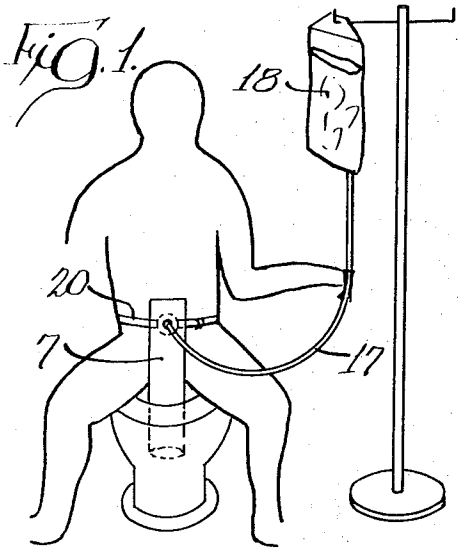
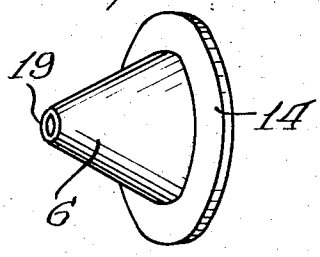


Fig. 2.



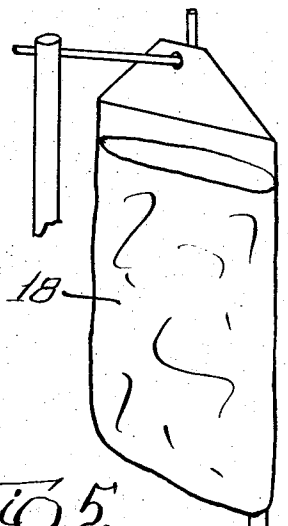


Fig. 5.

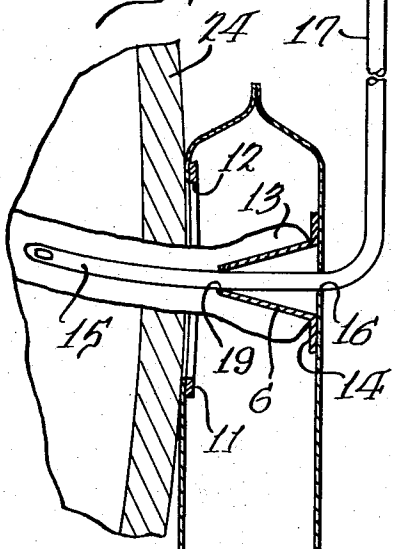


Fig. 3.

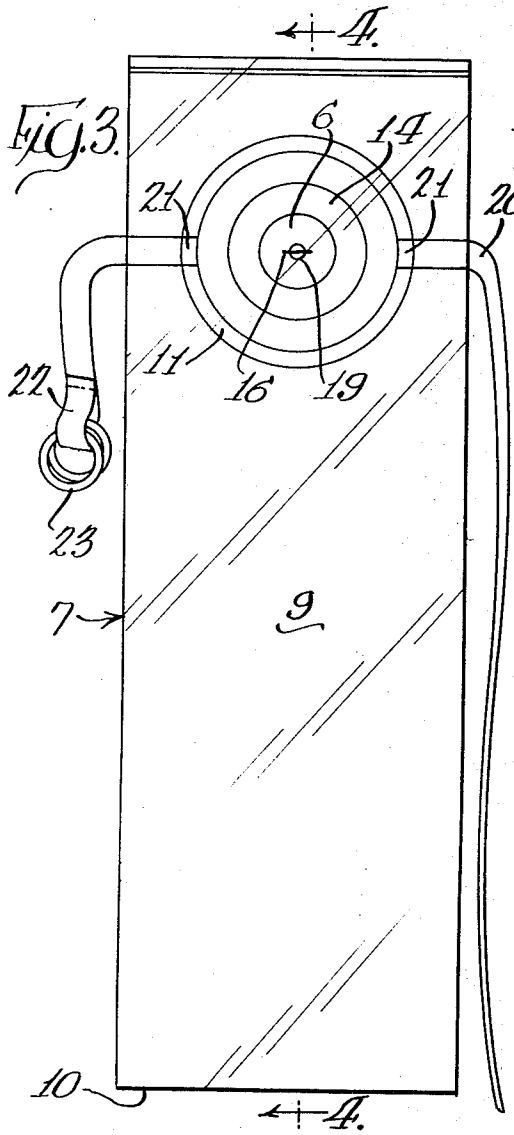
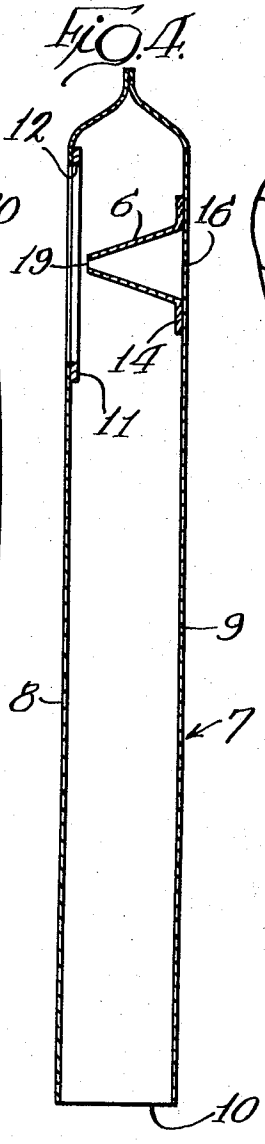
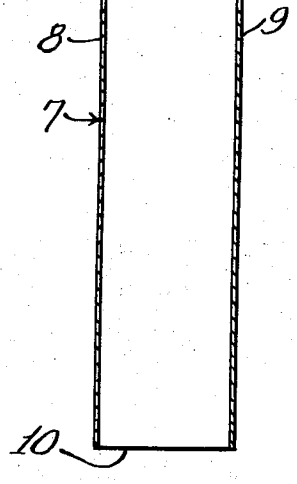


Fig. 4.





DISPOSABLE IRRIGATOR DRAIN WITH STOMA CONE FOR OSTOMY PATIENTS

The primary object of this invention is to provide a new and improved irrigator for ostomy patients, particularly for colostomy.

Heretofore, various devices and appliances have been used for irrigating purposes, including my inventions desclosed in U.S. Pat. Nos. 2,928,393, 3,292,625, and 3,672,370. Also in the prior art is an irrigator having a stoma cone which said cone is advertised to sell about **4.00** dollars to **5.00** dollars. These I consider to be relatively high cost and also objectionable because they are designed to be re-used and must be washed and sterilized after each use.

Another object of my invention is, therefore, to provide an irrigator unit of such new and improved construction it can be manufactured and sold below the cost of present irrigators.

Another object is to provide a new and improved irrigator of such low cost as to make it disposable after each use, thereby not only benefiting the patient but being most helpful to hospitals and institutions which handle irrigators and are happy to dispose of these irrigators as well as other appliances and equipment adapted for disposal.

Other objects and advantages of my invention will be appreciated by those skilled in this art as the invention becomes better understood by reference to the following description when considered in connection with the accompanying drawings, in which

FIG. **1** illustrates the usual method used by a colostomy patient to irrigate the bowel;

FIG. **2** is an isometric view of a stoma cone such as is used with my invention;

FIG. **3** is a front view of an irrigator drain illustrating an assembly of parts which comprise a disposable irrigator of my invention;

FIG. **4** is a vertical section taken on the section line **4—4** of FIG. **3**; and

FIG. **5** is a diagramatic view illustrating an assembly of parts in the use of my invention as applied to a patient.

It will be understood that these drawings are diagramatic as to sizes and shapes for the purpose of illustrating the principles of my invention.

Referring more particularly to the drawings, my invention is characterized by the provision of a stoma cone designated generally by **6** preferably disposed inside the drain tube which is designated generally by the reference numeral **7** and having what I term front and rear sides or film walls **8** and **9**, respectively. The drain tube may be of any low cost material and preferably I use a thin polyethylene film suitable for heat sealing to other components of the irrigator, as will be presently noted. The bottom end of the drain tube is open as at **10** so that the discharge falls into the commode or other receptacle. The drain tube has a stoma-receiving opening in its front side near the top surrounded by a gasket **11** having a relatively large central opening **12** registering with the stoma-receiving opening in the drain tube. The gasket may be of suitable material but preferably I use a plastic ring which may be heat sealed to the front wall of the drain tube. The stoma **13** enters the opening **12** as noted in FIG. **5**. The stoma cone **6** is preferably located inside the drain tube and has a flat annular rim **14** which is fixed to the inner side of the wall **9**. When the drain tube is a polyethylene material it is preferred to also make the stoma cone of the same or similar material so that the cone may be united entirely around its rim **14** to the film by conventional heat sealing, thus fixedly connecting the stoma cone to the drain tube. When the stoma cone is located inside the drain tube as shown in the drawings a small slit **16** is made in the rear wall centrally within the rim **14** of the cone. The catheter **15** is pushed through this slit opening and also through the tightly fitting opening **19** at the point of the cone and into the stoma as shown in FIG. **5**. The catheter connects with a tube **17** to an enema bag **18** or any suitable source of water supply. In actual practice the cone is inserted into the open end of the stoma and spreads the stoma sufficiently to make a water-tight connection without harm to the stoma, as illustrated diagramatically in FIG. **5**. The catheter **15** is carefully pushed into the stoma a suitable distance as is well known in this art.

With my invention the stoma cone can be easily inserted into the stoma **13** by reason of the fact that the rim **14** of the cone serves as a relatively wide hand grip which may be easily manipulated. The rim **14** also prevents the cone being inserted farther than necessary into the stoma.

It is preferred to hold the drain tube in position on the abdomen **19** of the patient by the use of a low cost belt such as **20**, of heat fusible material as in my U.S. Pat. No. 3,695,268 with the ends **21** of the belt heat sealed to the gasket and also to the drain tube if desired. Also as shown in FIG. **4**, I provide a short elastic piece **22** for tension at one end of the belt and cinch rings **23** for locking the free ends of the belt to hold the drain tube taught on the patient.

Low cost of the irrigator is further effected by the improved stoma cone. To this end I employ low cost aluminum molds to form thin flat sheets of polyethylene or other suitable material, wood, plaster, or plastic into numerous cones. The cones adjoin sufficiently to allow for the rims **14** to be die cut from the sheet. The cone shapes are formed by conventional vacuum techniques. This low cost is an important factor in making the irrigator available as a disposable article.

The stoma cones can also be made by injection molding but the high mold cost can only be justified when the quantity is large enough.

The irrigating function is well known in this field and after completing the supply of fluid into the stoma the catheter will be removed and the discharge from the stoma will be into the drain tube.

It will be understood that in the practice of this invention changes may be made in details and embodiments without departing from the spirit and scope of the invention as expressed in the appended claims, in which

I claim:

1. An irrigator drain with stoma cone for ostomy patients comprising, in combination with a catheter tube adapted for connection to a source of liquid supply for the irrigation action, a drain tube having front and rear side walls of flexible film, the front wall having a stoma-receiving opening, a cone positioned within the drain tube in alignment with the stoma-receiving opening and with its pointed end adjacent to said opening, the cone having at its wide end an annular outwardly extending peripheral wall fixed to the rear film wall of the drain tube and adapted to be grasped by hand from the rear

side of the drain tube for manipulation of the cone to insert its pointed end into the opening in the discharge end of the stoma and for inserting the cone into said discharge end of the stoma sufficiently to make a liquid-tight connection between the cone and the stoma without harm to the stoma, the pointed end of the cone having a relatively small opening for tight fitting of the catheter tube with the cone when said tube is passed through the cone and into the stoma in performing the catheter action.

2. An irrigator as set forth in claim 1, wherein the cone is positioned entirely within the drain tube and the annular wall of the cone is fixed to the inner side of the rear film wall of the drain tube, and wherein said rear wall of the drain tube has a relatively small slit opening for passage of the catheter tube into the cone.

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