April 14, 1953 E. F. NELSON 2,634,727

COLOSTOMY APPLIANCE

Filed April 11, 1949 2 SHEETS—SHEET 1

Fig. 1.

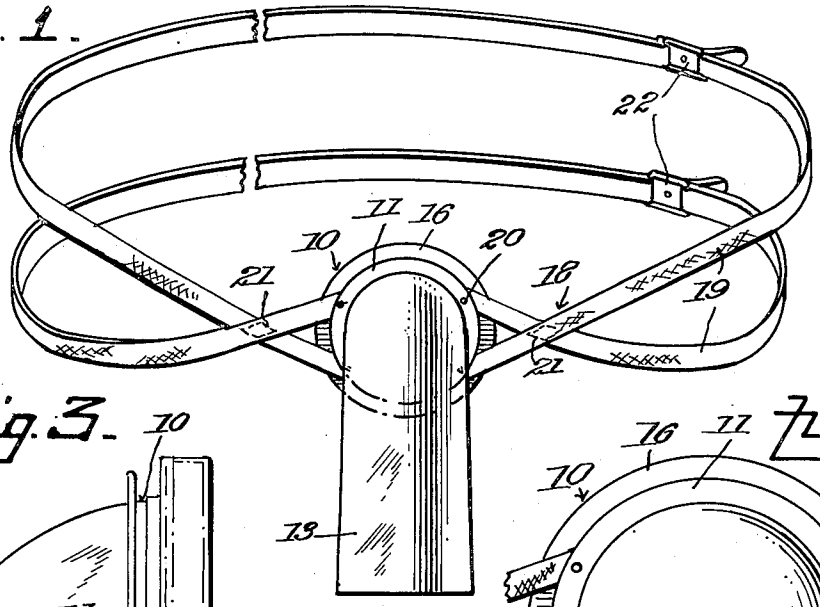


Fig. 3.

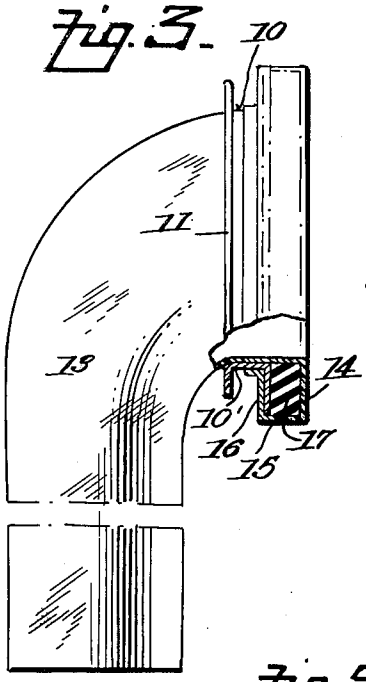


Fig. 4.

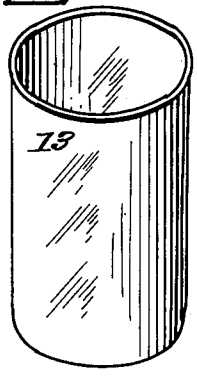


Fig. 2.

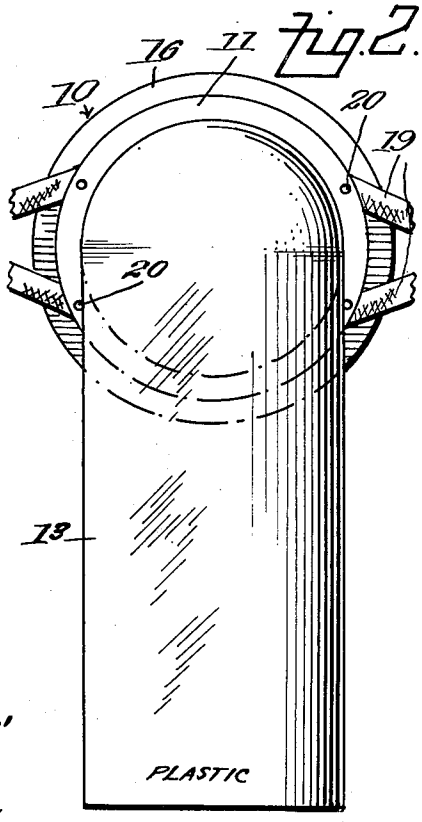


Fig. 5.

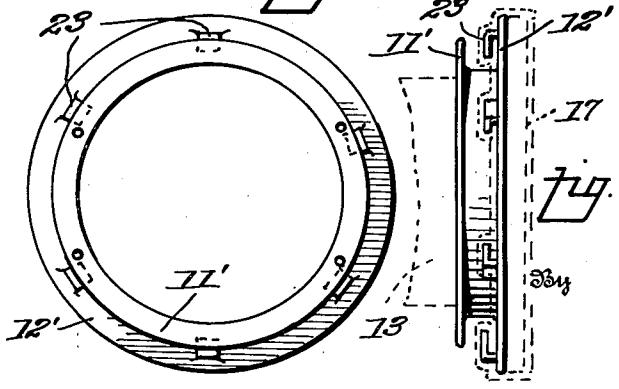


Fig. 6.

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Fig. 7.

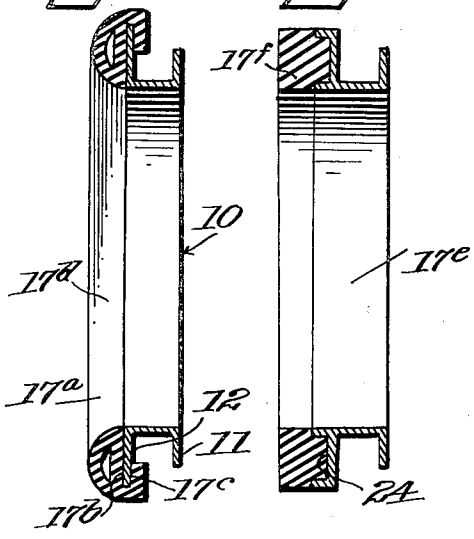


Fig. 8.

Fig. 11

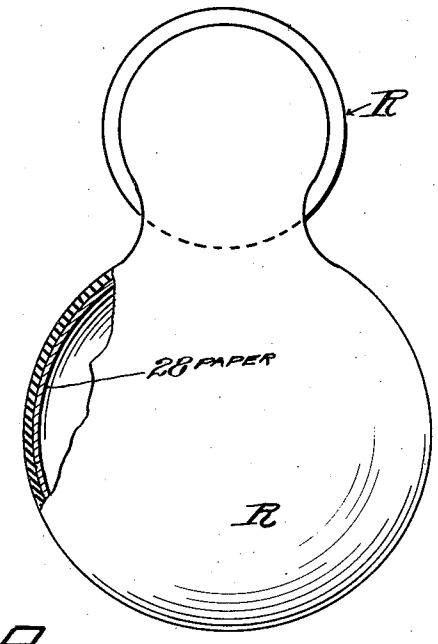
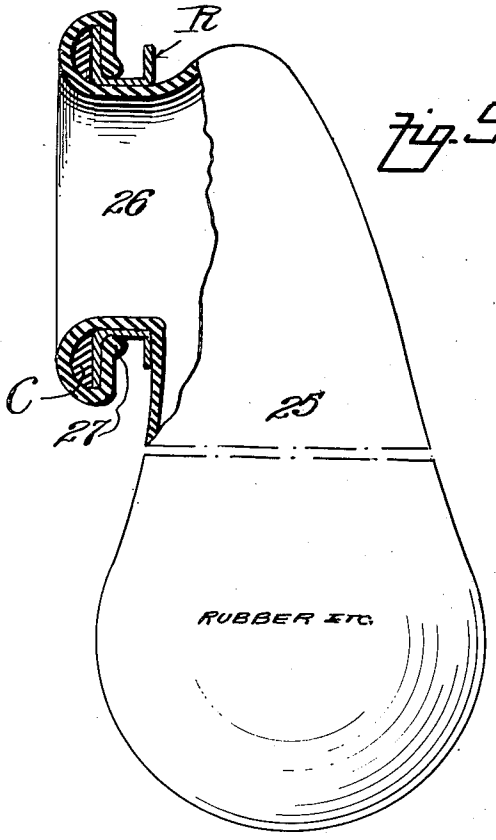


Fig. 9.



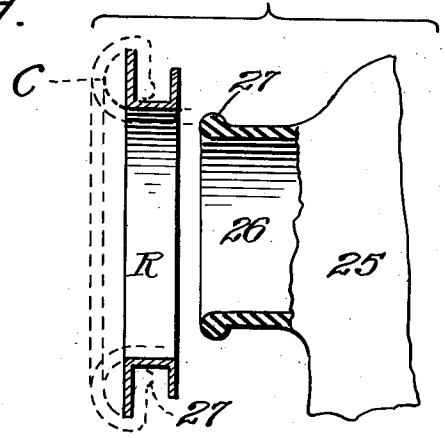


Fig. 10.

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Patented Apr. 14, 1953 2,634,727

UNITED STATES PATENT OFFICE

2,634,727

COLOSTOMY APPLIANCE

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Application April 11, 1949, Serial No. 86,709

1 Claim. (Cl. 128—283)

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This invention relates to a colostomy appliance.

It is generally aimed to provide an improved structure having a mounting ring and coacting discharge receiving pouch or bag which is light in weight, inexpensive and may be thrown away or discarded after a single use, one in which the bag is of a material capable of being stretched into and remaining in fitting and self-retaining engagement with said ring, and which will so cover and protect said ring that it cannot be contacted by the body discharge and hence require other than normal cleaning.

Another object is to provide a construction which may be comfortably worn and wherein the pouch or bag will retain and protectively cover a cushioning ring against the mounting ring.

A further object is to provide a construction optionally having means to prevent turning of the pouch or bag on the mounting ring.

Still further an object is to provide a construction of mounting ring which is well adapted to be carried by a pair of belts crossing and attached together relatively close to the mounting ring.

Various additional objects and advantages will in part be pointed out and otherwise become apparent from a consideration of the description following taken in connection with the accompanying drawings illustrating an operative embodiment wherein—

Fig. 1 is a view in perspective illustrating the colostomy appliance with its attaching harness;

Fig. 2 is an enlarged front elevation looking toward the ring and coacting pouch or bag;

Fig. 3 is a side elevation partly broken away, of the coacting ring and bag;

Fig. 4 is a detail perspective view of the bag;

Fig. 5 is a front elevation of a modified form of attaching ring;

Fig. 6 is an edge elevation of the attaching ring of Fig. 5 in association with a fragment of the coacting bag,

Figs. 7 and 8 are detail cross-sections through modified cushion rings and associated attaching rings;

Fig. 9 is a view partly in side elevation and partly in section through a modified form of the appliance;

Fig. 10 is a view more in detail showing the normal construction and suggesting the method of attachment of the parts of Fig. 9, and

Fig. 11 is an elevational view taken at right-angles to the last figures and of a further modification.

Referring specifically to the drawing wherein like reference characters designate like or similar

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parts throughout the views, and first to the form of Figs. 1 to 4, 10 designates an attaching ring having a relatively narrow flange 11, and a relatively wide flange 12 parallel therewith, which flanges are integrally connected together by a tubular or neck portion 13. This attaching ring may be made of a metal such as aluminum or steel, hard rubber, plastic or any other suitable material.

The large flange 12 is adapted to be disposed flat against the body of the wearer in surrounding relation to the artificial opening. This ring 10 is adapted to carry a pouch or bag 13 which is open only at the top or mouth. Such bag 13 is at the upper or mouth portion extended through the ring at the neck 10' preferably being of the same diameter as the inside diameter of such neck. The mouth or open portion of bag 13 is then extended laterally at 14, inwardly at 15, and returned at 16, under flange 12 in parallelism to the portion 14. Preferably the bag 13 is made of rubber hydrochloride, nylon or another suitable plastic or the equivalent, to enable such bag to be stretched into the form and position described and best illustrated in Fig. 3. The bag will retain such shape and position of Fig. 3, without danger of detachment or displacement, regardless of the weight of its contents.

Said outwardly extending portion 14 may fit intimately against the inner surface of the flange 12, but optionally a cushioning ring 17 flat, tubular or otherwise, of soft rubber, sponge rubber or any equivalent, initially separate from the ring and the bag, is enclosed by the bag and held in contact with said inner surface of the flange 12. Alternatively, ring 17 may be cemented to flange 12 and even occupy a recess or groove therein. The portion 14 is applied directly against the bag so that the ring 10 and cushion 17 (if employed) will be completely closed along the line of the body discharge and hence the ring 10 and cushion 17 will not require cleaning other than normal cleaning from time to time.

The ring 12, with the bag 13 operatively suspended therefrom, may be attached to the body of the user in any suitable manner, for instance by the harness shown at 18, which consists of a pair of flexible straps 19 riveted or otherwise fastened at 20 to suitable openings in the smaller flange 11 of the ring 10. These straps are preferably crossed and stitched together as at 21 at front or back relatively close to the ring and additionally are preferably equipped with a suitable adjustable buckle at 22.

After use, the bag 13 may be readily pulled

off of the ring 10, straightening itself at the stretched portion of the mouth which attached it to the ring in order to recede through the ring opening. The bag is intended to be discarded after a single use, and as it is of a relatively inexpensive material a supply is to be kept on hand by the user and a new one substituted upon discard of a used one.

By reason of the fact that the smaller flange 11 is spaced outwardly from the larger ring, and the latter temporarily becomes embedded in the body of the wearer, such flange 11 forms an effective outwardly offset means whereby the appliance may be grasped or held incidental to application and removal with respect to the body and also with respect to application and removal of the bags.

The ring 17 in forming a cushion aids in the structure being worn comfortably, and will further form in effect a seal with the body to prevent leakage as the body discharge passes into the bag.

In lieu of making the bag 13 of rubber hydrochloride or nylon, it may be made of any other plastic or even rubber provided it has the ability to stretch and in stretched condition retain adjacent the ring the shape described and shown in Fig. 3. It will be clear, of course, that the bag 13 initially is preferably of the same diameter throughout.

Various changes may be resorted to provided they fall within the spirit and scope of the invention. For instance, I may use the modified form of ring shown in Fig. 5 in lieu of that disclosed in the preceding figures. This modified form of ring has, for example, a plurality of lugs 23 disposed between flanges here designated 11' and 12', which are the equivalent of those at 11 and 12, respectively, since the modified ring otherwise is identical with that at 10. These lugs 23 form projections or an unevenness whereby a bag 13 mounted thereon in the same manner as disclosed in the preceding form at the stretched mouth portion, will engage the hooks or projections 23, avoiding any tendency of the bag to turn relatively to the ring while in place or while being handled especially in detaching it from the ring. These lugs 23 are of hook-shape and may be struck out from the flange 12' or they may be provided in any other desired manner or the flange 12' at the corresponding location may otherwise be roughened in order to accomplish the same function mentioned, since the bag does not need to be punctured or otherwise impaired by the lugs 23 or the equivalent.

This modified ring of Figs. 5 and 6 may be made of the same material as the ring of the preceding form, and it may optionally employ the cushion 15 of the preceding form.

In the modified form of Fig. 7, I employ a cushion ring 17^a of the same material as and in lieu of that shown at 17. Ring 17^a is hollow, rounded and provided with a flange 17^c to clip the same removably to the ring 10 with the margin of flange 12 fitted in a groove 17^b. Ring 17^a may be unbroken or split as preferred as at 17^d.

Fig. 8 discloses another form of attaching ring designated 17^e wherein an optionally unbroken or split cushioning ring 17^b of the same materials and of either of the previously described shapes is interfitted optionally with or without cement, in an annular recess 24 of the larger flange of the attaching ring.

In the modified form of Figs. 9 and 10, a bag 25 which may be adapted optionally for a single use or repeated use and may be of kidney shape or otherwise of elastic or stretchable material like rubber or the materials from which bag 13 is made, has an attaching neck 26 which is passed removably through an attaching ring R and optionally through a cushioning ring C, which rings R and C may be of any of the forms previously described. Neck 26 has a marginal reinforcing bead 27 and such neck and bead are of less diameter than that of the ring opening so that the bead and adjacent portion of the neck may be stretched or dilated over the larger flange of ring R and then contracted between the flanges, that is, be attachable and removable from the ring R or from and to the full and dotted line positions of Fig. 10.

Fig. 11 discloses the form of Figs. 9 and 10 modified in that the bag R is adapted for reuse a number of times but is lined with a removable paper or other bag 28 to be discarded after a single use.

I claim as my invention:

A colostomy appliance comprising a mounting member provided with a body-engaging surface and a receiving opening, and a bag of stretchable and inherently shape-retaining nylon having a mouth portion passing through said opening and removably stretched over said surface.

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