

Nov. 9, 1965

D. E. SMITH ETAL
COLOSTOMY ATTACHMENTS

3,216,420

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2 Sheets-Sheet 1

Fig. 1

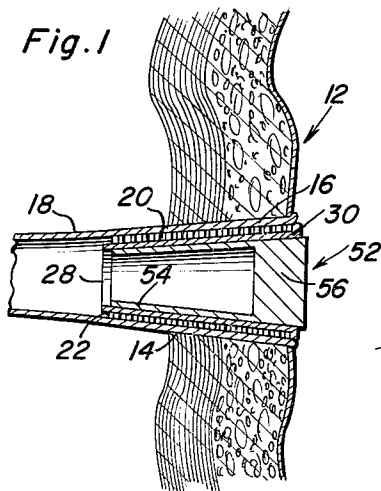


Fig. 2

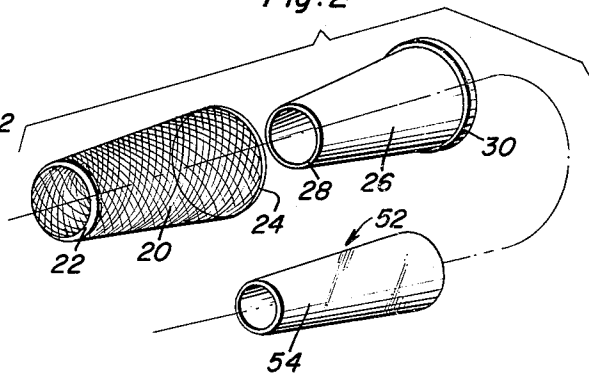


Fig. 4

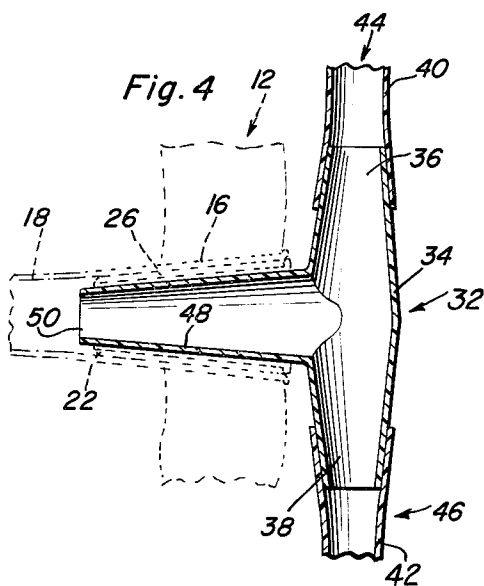
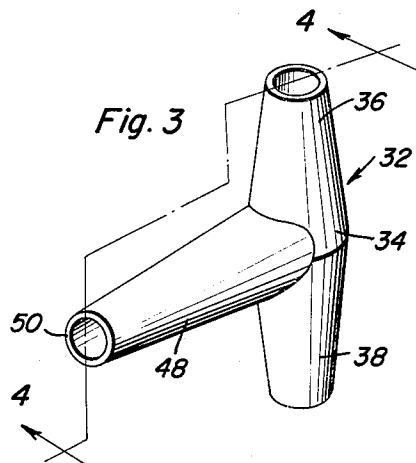


Fig. 3



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2 Sheets-Sheet 2

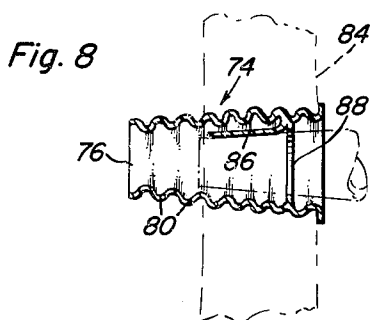
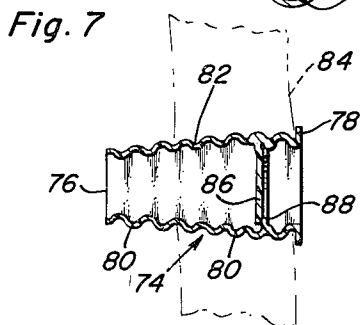
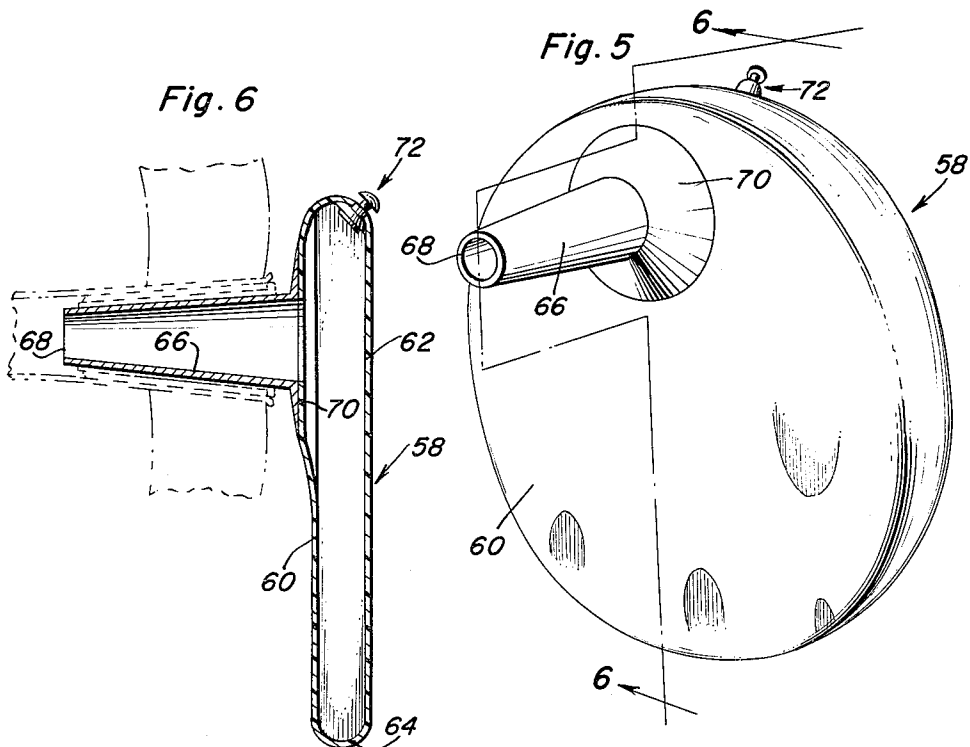
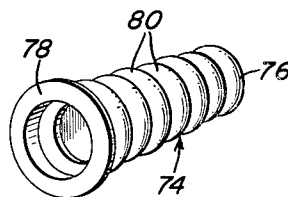


Fig. 9



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3,216,420

COLOSTOMY ATTACHMENTS

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4 Claims. (Cl. 128—283)

The present invention relates to an improved colostomy attachment which is expressly designed and adapted for use in conjunction with a surgically prepared orifice in the user's abdomen and the combination therewith of selectively usable manually applicable and removable attachments.

As is evident from the preceding general statement of the subject matter of the invention the overall concept comprehends not only the means which is inserted and retained in the abdominal orifice but the multipurpose attachment means such as, for example, a fecal matter collection and disposal bag, a readily applicable and removable closing plug which is adapted to be used when the bag is not being used, and a specially constructed T-shaped attachment for use when irrigation is needed or necessary as the case may be.

Briefly summarized, the colostomy attachment is characterized, generically interpreted, by open ended tubular insert means. This means constitutes and provides a bushing and is designed and adapted to fit into the abdominal orifice in a manner to line and rigidify the same, to prevent shrinkage and consequent gradual closing of the orifice and which when anchored in its intended position provides a receiver and retainer for manually applied and removed accessories and appliances.

With respect to the readily attachable and detachable accessories and appliances these will vary in construction and purpose. However, each appliance embodies an attaching and retaining adapter which when in use is fitted telescopically into the colostomy attachment or orifice and thus securely and reliably anchored in place.

More particularly, novelty is predicated on the means so far set forth and wherein the colostomy bag is eccentrically provided on its attachable wall or proximal side with a conical adapter susceptible of being fitted telescopically into the socket portion provided therefor in the aforementioned tubular insert means. This bag serves to collect and facilitates the disposal of fecal matter and waste material and when in use minimizes the likelihood of undesirable leakage of waste material, irritation, infection and embarrassing odors.

Irrigation from time to time is not only recommended but is essential. Therefore in carrying out the invention a simple T-shaped attachment is provided and is adapted to accommodate appropriate hoses which when attached thereto and with the adapter thereof fitted in place effective irrigation and drainage of the intestine with maximum sanitation and a minimum of discomfort is accomplished.

The invention also features the adoption and use of an insertable and removable plug which constitutes a stopper and which is temporarily brought into play to check drainage from the intestines and to eliminate, while the plug is in use, the necessity of wearing the aforementioned colostomy bag. With this closing facility it will be evident that the user thereof may then be able to participate in swimming, other outdoor sport events and activities without fear of embarrassment or such unfortunate difficulties as are encountered when a protruding and bulky bag is of necessity being used.

Then, too, it is an aspect of the invention that the insert means should be either corrugated for secure anchorage and retention in the abdominal orifice or should

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comprise an open ended conical sleeve or the like which is provided around its exterior with a milled, knurled or specially fabricated surface which permits the adhesion of flesh thereto and consequently achieves good anchorage for the tubular or equivalent insert means.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a view showing a fragmentary portion of the user's abdomen in section, which illustrates the abdominal orifice and associated terminal end of the intestine and, what is more important, shows the insert means (one embodiment thereof) and an insertable and removable safety-type closure or plug;

FIGURE 2 is an exploded view in perspective showing the two component parts which go to make up the insert means and, in addition, the manually insertable and removable and removable closing plug;

FIGURE 3 is a view in perspective of the T-shaped attachment which is used in the manner illustrated in FIGURE 4 for irrigating purposes;

FIGURE 4 is a view in section taken approximately on the plane of the irregular section line 4—4 of FIGURE 3 and which shows how the attachment is applied (in phantom lines) with hose-ends connected thereto;

FIGURE 5 is a view in perspective illustrating the aforementioned colostomy bag;

FIGURE 6 is a view in section taken approximately on the plane of the line 6—6 of FIGURE 5 and wherein the bag is illustrated in place in connection with the abdominal orifice with the insert means therein;

FIGURE 7 is a view showing a portion of the abdomen (in phantom lines) and illustrating a modified type of insert means which is not only corrugated but normally closed by a pressure opened flap valve;

FIGURE 8 is a view based on FIGURE 7 showing the valve pushed to open position; and

FIGURE 9 is a view in perspective of the insert means by itself.

Reference will be made first to the tubular insert means one adaptation of which is illustrated in FIGS. 1 and 2 and the other in FIGS. 7, 8 and 9. Referring first to FIGS. 1 and 2, and more particularly FIG. 1 the numeral 12 denotes a fragmentary portion of the user's body, the abdomen, for example which is illustrated as having a colostomy or orifice 14 therein and wherein the terminal end portion 16 of the intestine 18 is united therewith.

The colostomy attachment may be and is, in the present described embodiment, of two-part construction. In fact, the means comprises an outer sleeve 20 which, as is shown, is of truncated conical form with its reduced inner open end denoted at 22 and its outer end at 24. This sleeve constitutes a liner for the abdominal orifice and in practice it is not only of tapering or truncated conical form, it is made from acceptably suitable foraminous material whereby when it is inserted or installed in the manner illustrated in FIG. 1 it will be securely anchored in place by reason of the fact that the flesh and body tissues will adhere thereto and during the process of healing will virtually join therewith thus to provide an efficacious lining for the abdominal orifice. The inner sleeve is denoted at 26 and is fitted telescopically into the outer sleeve and has an inner end 28 and a flange 30 at its outer end. The flanged outer end abuts the corresponding outer end 24 of the outer sleeve and both sleeves are approximately of the same length and are appropriately joined together so that the inner sleeve,

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which is imperforate, provides a reinforcing liner and bushing for the outer sleeve. However, the two sleeves 20 and 26 considered as an entity constitute the open ended tubular insert means, the latter constituting a socket-like receiver for the accessories or appliances each of which, broadly speaking, comprises a readily applicable and removable attachment.

With reference first to the attachment or appliance in FIGS. 3 and 4 this comprises a hollow T-shaped plastic or equivalent device denoted generally at 32, the same comprising a hollow body 34 with outwardly oppositely tapering end portions or necks 36 and 38. These necks provide for the attachment thereto of the terminal end portions 40 and 42 of irrigating hoses 44 and 46. These hose ends are shown attached to the body in its position of use illustrated in the phantom line showing in FIG. 4. As illustrated in both FIGS. 3 and 4 the irrigating attachment 32 is provided with a truncated conical or tapering adapter 48 whose inner tapering end 50 is shown projecting through and beyond the mechanical or artificial colostomy comprising the insert means of FIGS. 1 and 2.

With reference again to FIGS. 1 and 2 it will be evident that the numeral 52 designates an insertable and removable tapered closing plug or closure which is hollow if desired and the inner tapering end thereof being denoted at 54. The outer solid or closed end is denoted at 56 as illustrated in FIG. 1. This plug should be fitted and retained by friction in place when it is being used. Its purpose as already suggested is to enable the user to plug or close off the abdominal orifice when participating in swimming and outdoor and equivalent games and activities. It is obvious that the outer end portion of the plug 52 will be of such construction that it may be caught hold of with one's fingers for the purpose of inserting and removing it. The illustration in FIGURES 1 and 2 does not go into detail in respect to this aspect of the plug construction.

Normally and generally speaking the mechanically prepared colostomy or abdominal orifice in FIGS. 1 and 2 is designed and adapted to accommodate an attachable and detachable colostomy bag which is denoted generally (FIGS. 5 and 6) by the numeral 58. This bag may be of any appropriate material and preferably embodies an inner proximal circular wall 60 and opposed spaced parallel outer or distal walls 62 and a peripheral portion 64 joining the walls together. The truncated conical adapter in this instance is again of rigid material and it is denoted here by the numeral 66, the inner insertable end being denoted at 68 and the outer flanged end 70 being vulcanized or otherwise securely attached to the wall 60 to assume a position eccentric to the axis of the bag as a unit. The peripheral wall 64 may be and preferably is provided at an appropriate place with a normally closed venting valve 72 of the approximate construction shown in FIG. 6. The valve is normally closed but when pushed open serves to vent gases from the interior or chamber portion of the bag.

As is evident the various attachments illustrated are equipped with correspondingly constructed adapters so that the one specially prepared abdominal orifice, more particularly the insert or socket means serves to accommodate the interchangeable attachments each provided with a standardized adapter which is telescopically fitted in place and held by friction. It will be understood, however, that the adapters may vary in shape and material to correspond with the receiving and retaining socket therefor.

It is within the purview of the invention to employ a single sleeve-type insert such as the one denoted at 74 in FIGS. 7, 8 and 9. Here again the insert comprises an open ended sleeve or truncated conical tube the inner reduced end of which is denoted at 76, the outer larger flanged end at 78. The body portion here is corrugated

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as at 80, the corrugations serving, obviously, to facilitate retention of the sleeve once it is in place in the orifice 82 in the abdomen 84. In this construction and arrangement a normally closed flap valve is provided, said valve being denoted at 86 and being integral and cooperable with the seating ring 88.

It is regarded as significant here to mention that although certain of the male and female coacting component parts are shown and described as tapered or of truncated conical form the "taper" is thought not to be essential in that such interfitting or telescopically connected component parts may vary in cross-section, need not depend on friction for junctional connection with each other. In fact, it is within the purview of the concept to utilize, if deemed proper by the manufacturer, O-rings or equivalent mechanical fastening and packing elements.

Then, too, and while it is desirable to rely in part on the idea of the artificial colostomy growing in the surgical orifice such is not essential. This is to say, it is not intended to convey the impression that the body tissues must necessarily adhere to the surfaces of the component parts with which they coact.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. For use in conjunction with an abdominal surgical colostomy characterized by an abdominal orifice and the customarily connected terminal end portion of the intestine; insert means for the orifice comprising an outer fabricated foraminous truncated conical sleeve fitted and anchored in the orifice, an inner complementary truncated conical sleeve fitted within the outer sleeve and attached thereto and provided at an outer end with an abutment flange, a colostomy bag having a side provided with an eccentrically laterally projecting truncated conical adapter, said adapter being designed and adapted to be fitted telescopically and frictionally into said inner sleeve in a manner to locate the bag adjacent to the exterior of the abdomen of the wearer.

2. For use in conjunction with an abdominal surgical colostomy characterized by an abdominal orifice and the customarily connected terminal end portion of the intestine; insert means for the orifice comprising an outer fabricated foraminous truncated conical sleeve fitted and anchored in the orifice, an inner complementary truncated conical sleeve fitted within the outer sleeve and attached thereto and provided at an outer end with an abutment flange, a readily attachable and detachable irrigating device comprising a hollow T-shaped member embodying an elongated hollow body having axially aligned open-ended tapering necks for the attachment thereto of end portions of communicable fluid circulating hoses, said body portion having a lateral truncated conical adapter of a length and transverse cross-sectional dimension permitting the same to be telescopically fitted and friction-retained in communicable and cooperative relation in the bore of said sleeve.

3. For use in conjunction with an abdominal surgical colostomy characterized by an abdominal orifice and the customarily connected terminal end portion of the intestine; insert means for the orifice comprising an outer fabricated foraminous truncated conical sleeve fitted and anchored in the orifice, an inner complementary truncated conical sleeve fitted within the outer sleeve and attached thereto and provided at an outer end with an abutment flange, a manually applicable and removable closing plug, said plug having a tapering body por-

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tion fitted telescopingly and frictionally retained in the bore of said sleeve and serving to thus plug and close the sleeve, said plug when in its fully closed position having a minimal outer end portion projecting beyond the corresponding outer end of the sleeve to enable the user to catch hold of the same in a manner to insert and remove said plug.

4. For use in conjunction with an abdominal surgical colostomy characterized by an abdominal orifice and the customarily connected terminal end portion of the intestine; insert means for the orifice comprising an outer fabricated foraminous truncated conical sleeve fitted and anchored in the orifice, an inner complemental truncated conical sleeve fitted within the outer sleeve and attached thereto and provided at an outer end with an abutment flange, a colostomy bag having proximal and distal walls, said proximal wall being adapted to be opposed to the user's body and adjacent to the outer end of said sleeve when being used and having an eccentrically positioned laterally projecting adapter, said adapter being open-ended and hollow and fitted telescopically into the inner sleeve and serving to thus support the bag for use by the cooperating adapter fitting into said inner sleeve, said bag being provided with normally closed manually openable valve means on a peripheral surface thereof and which is readily accessible for release of otherwise entrapped gases.

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