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2,129,054

COLOSTOMY APPLIANCE

Filed Feb. 17, 1937

Fig. 1.

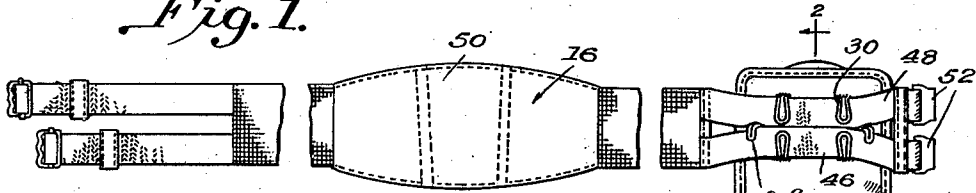


Fig. 2.

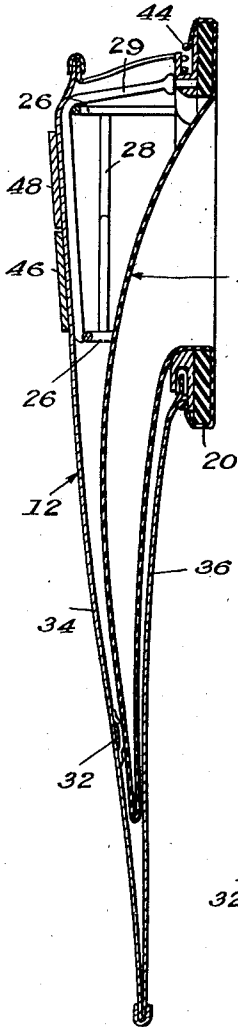


Fig. 4.

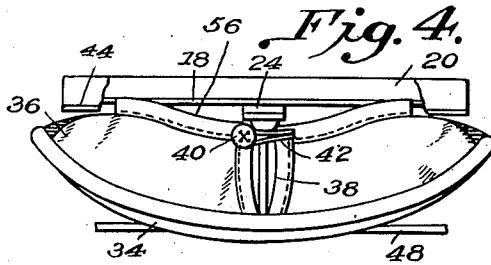


Fig. 3.

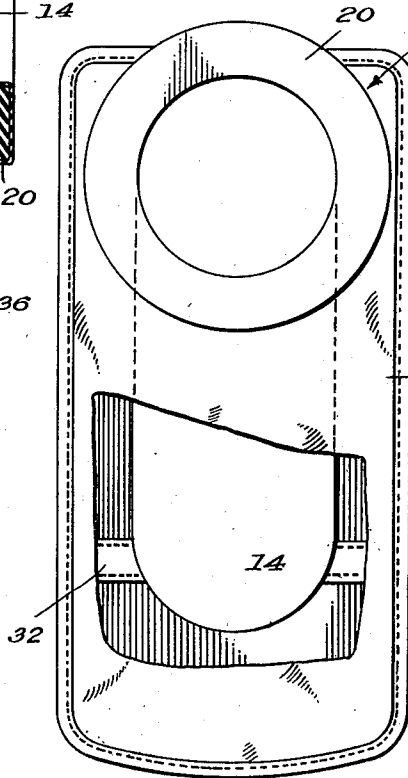


Fig. 5.

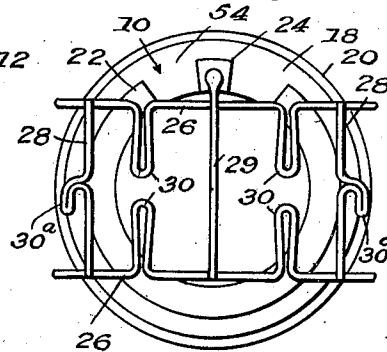
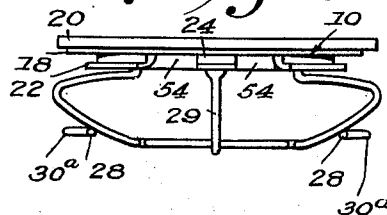


Fig. 6.



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COLOSTOMY APPLIANCE

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8 Claims. (Cl. 128—283)

This invention relates to surgical appliances, and more particularly to an appliance to be utilized by patients who have undergone a colostomy or other similar abdominal operation.

Following a colostomy operation it is necessary to provide a drainage receptacle for covering the incision made in the body. This receptacle must fit snugly around the incision in order to collect the escaping discharge without possibility of leakage. Furthermore, the appliance must be capable of being kept in a most sanitary condition in order to avoid embarrassing odors, and to minimize possibilities of infection.

One object of the invention is to provide a device of the above nature which will be thoroughly sanitary and in which the existence of odors may be avoided or reduced to a minimum.

A further object is to provide a device of the above nature which may be exactly adjusted to the body of the wearer in a manner to preclude leakage.

A further object is to provide a device of the above nature which does not cause body discomfort due to a construction which permits the use of perspiration absorbing materials in the major part of the area where the appliance comes in contact with the body.

A further object is to provide a device of the above nature which will be inconspicuous when worn by the user and which will maintain a substantially flat position against the users body at all times.

A further object is to provide a device of the above nature which will minimize the possibilities of infection by the use of a construction such that none of the materials discharged from the body can come in contact with any portion of the appliance other than a disposable member.

In view of these and other objects which will become apparent as the description of the device proceeds, there has been illustrated in the accompanying drawing, in which like reference numerals indicate like parts throughout, a preferred form of the invention.

In the drawing:

Fig. 1 is an elevational view of the colostomy appliance attached to a body encircling belt;

Fig. 2 is an enlarged cross-sectional view taken on line 2—2 of Fig. 1;

Fig. 3 is a face view of the discharge receptacle with one wall of the outer pouch broken away to show the discharge receiving sack within;

Fig. 4 is a plan view of the device associated with a supporting frame showing the pouch

pulled away from the frame at the top thereof to show underlying structure;

Fig. 5 is a rear view of the supporting frame; and

Fig. 6 is a plan view of the supporting frame 5 shown in Fig. 5.

My colostomy appliance comprises a frame 10, a pouch 12 supported by the frame 10, a discharge receiving sack 14, and a body encircling belt 16.

More particularly, the frame 10 is comprised 10 of a rigid ring 18 constructed of metal, moldable plastic, or the like. To the face of the ring 18 is attached a flexible body contacting cushioning member 20. The inner periphery of the body contacting member 20 is substantially co-ex- 15 tensive with the inner periphery of the ring 18. The body contacting member 20, however, extends radially beyond the outer periphery of the ring 18 for the purpose of imparting a greater degree of flexibility so that it may conform more 20 readily to the contour of the user's body.

On the rear face of the ring 18 is a flange 22 which, with the rear face of the ring 18, forms a groove 24. Later it will be seen how the groove 24 cooperates with the edge defining the opening 25 in a colostomy pouch to fasten pouch to the frame securely.

A belt engaging frame extends laterally from the rear face of the ring 18 and can also be used to provide support for back member 34 of the 30 pouch. This frame comprises two substantially oval-shaped wire stay members 26; one attached to the upper segment of the ring 18, and the other attached to the lower segment of the ring 18. The structure may be rendered more rigid 35 by means of bracing stay 28. Stays 28 are provided to hold the belt away from the flange 22 and to furnish support for hooks 30a. The frame members 26 are provided with loops 30 by bending a portion of the members 26 upon themselves in 40 a vertical plane. The loops 30 are adapted to extend through eyelets in the pouch 12 for the purpose of positioning a body encircling belt. The lower loops 30 are also employed to support the back member 34. Each of the belt supporting 45 stays 28 is formed with a down-turned hook 30a, and these hooks likewise extend through eyelets in the pouch 12 and act as guides for the lower section of a double belt member, as will be explained more fully hereinafter. 50

The pouch 12 is constructed of flexible material, preferably a fabric of perspiration absorbing qualities. In constructing the pouch it is desired to provide a construction which will lie substantially flat. To this end two pieces of material are 55

bound around their outer edges, and to further contribute to this factor a stiff stay 32 is provided in one wall of the pouch. The pouch therefore consists of a back member 34 and a face member 36. A forward opening substantially the size of the groove 24 in the frame member 10 is provided on the front face of the pouch and near the top thereof. This opening may be continued horizontally to the upper edge of the pouch, as shown at 38 in Fig. 4, in order to facilitate the assembly of the pouch with the frame 10. The outer corners of the opening continuation 38 may be joined by means of a button 40 and an elastic loop 42, or by any other suitable means.

The rear face of the pouch 34 is provided with eyelets to correspond with the positions of the belt guides 30 and 30a of the frame 10.

Heretofore colostomy appliances have acquired tedious care to prevent the development of objectionable odors and maintain the appliance at all times in a sanitary condition. Elaborate devices and treatments have been resorted to with indifferent success. The present invention eliminates the serious objection heretofore found in devices of this character by utilizing a thin moisture-proof disposable lining member 14 which completely insulates the pouch and frame from the material discharged from the body. This membrane-like lining member 14 may be made of latex or other similar elastic material. It is possible that the lining member 14 may be made of other materials of non-elastic properties. In the preferred form, however, an elastic lining member is desirable. The liner 14 is preferably provided with a reenforced elastic bead 44 at its open end so that in operation the open end of the sack or liner 14 may be expanded over the outer periphery of the body contacting member 20, and upon release thereof the reenforcing bead 44 will contact behind the frame member 10 and securely hold the sack in position. With this construction it will be seen that it is impossible for discharge to come in contact with any portion of the device with the exception of the sack 14 itself. Even the body contacting face is adequately shielded from contact with discharge.

A prime requirement of appliances of this sort is that they provide positive safeguards against leakage. Toward this end I have provided a sectional body encircling belt having members 46 and 48 which may be independently adjusted. The belt 16 may be a two-part belt throughout, but in the preferred form a single member 50 is provided with the separate belt sections 46 and 48 at its ends. Each belt section is provided with separable fasteners 52 by which independent adjustment of the sections 46 and 48 may be made. By referring to Fig. 1 it will be seen that the section 48 is positioned under the upper loop members 30, while the section 46 is positioned under the lower loop members 30. Furthermore, the hooks 30a restrain the section 46 against upward movement. Accordingly a slightly greater pressure may be brought to bear against the lower segment of the frame 10 whereby a more effective contact of the body contacting member 20 with the body of the user may be secured.

Hereinabove has been described a construction consisting of a frame 10 and a separable pouch 12. This construction is preferred to facilitate occasional cleaning of the pouch 12. It appears obvious, however, that the broad principles of the invention may be as effectively practiced in constructions which do not embody a separable pouch and frame member. Accordingly, in some

instances it may be desirable to attach the pouch 12 to the frame 10 permanently. It is even possible to utilize the sack 14 and the body adjusting member with prior devices to advantage. It is also possible, by the use of two lining sacks one of which is made of fabric material and one of moisture proof material, to use the device with all of its advantages without pouch 12.

It is believed that the operation of the appliance will be understood from a reading of the above description in connection with the drawing which forms a part of this application. However, a brief summary may nevertheless be useful. In preparing the appliance for use the patient will assemble the frame 10 with the pouch 12. The rear of the frame 10 is inserted through the forward opening in the face 36 of the pouch 12 and the loops 30 and hooks 30a are then guided through the eyelets in the rear side 34 of pouch 12. Thereafter, the edge 56 defining the opening in the pouch 12 is positioned within the groove 24 of the frame 10, and the closure device 40-42 is fastened. Thereafter the closed end of sack 14 is placed through the ring 18 and the open end of the sack 14 is expanded over the outer periphery of the body contacting member 20. Thereafter it is only necessary to attach the appliance to a belt as hereinabove described, and to adjust the belt to the body of the user.

In order to facilitate the removal of liner 14 frame 10 has been provided with cut away portions 54 through the flange member 22 to provide room to grasp the bead 44 of the liner when contracted behind frame member 10.

It will be noted that the sack 14 is not necessarily as large as the pouch 12. However, as discharge is received by the sack 14 the same will expand against the walls of the pouch 12, which serve to prevent excessive expansion of the sack 14. In other words, the pouch 12 imparts strength to the sack 14 which is not inherent in the sack itself. The natural tendency of the pouch 12 to lie flat is abetted by the stay 32 even though rather heavy discharge occurs. It is only necessary for the user to supply himself with a number of lining sacks to maintain the device in sanitary condition at all times. Further, if the user so desires or occasions demand, that the closure around the incision be kept surgically sterile, this can be readily accomplished by the use of sterile liners since the liner completely insulates the incision and the discharge therefrom from the rest of the appliance. The size and weight of the lining sacks is so insignificant that a large number may be carried on the person of the user without any inconvenience.

From the above description it will be seen that my invention is effective to secure the advantage stated, and while I have illustrated the principles of my invention in a single preferred embodiment it is to be understood that modifications may readily be made by those skilled in the art without departing from the spirit of the invention. Therefore I do not wish to be limited in the exercise of my invention other than by the limitations which may be imposed by the subjoined claims.

I claim:

1. In a colostomy appliance, a pouch having an opening in one side at the upper portion thereof, a flat body contacting ring surrounding said opening, a disposable moisture-proof sack lining the entire internal surface of said appliance, said lining having an open end contacting and attached to the outer periphery of said ring, and means

for holding said appliance in body contacting position.

2. In a colostomy appliance, a flexible pouch having an opening in one side at the upper portion thereof, a flat body contacting ring surrounding said opening, a disposable moisture-proof sack lining the entire internal surface of said appliance, said lining having an open end contacting and attached to the outer periphery of said ring, and means for holding said appliance in body contacting position.

3. In a colostomy appliance, a flexible pouch having an opening in one side at the upper portion thereof, a flat body contacting ring surrounding said opening, an elastic moisture-proof lining within said pouch adapted to receive discharge, said lining having an open end adapted to be expanded over the outer periphery of said ring whereby the same is held in place, and means for holding said appliance in body contacting position.

4. In a colostomy appliance, a flat flexible pouch having an opening in one side at the upper portion thereof, a flat body contacting ring surrounding said opening, an elastic moisture-proof lining within said pouch adapted to receive discharge, said lining having an open end adapted to be expanded over the outer periphery of said ring whereby the same is held in place, a transverse stay in the wall of said pouch for maintaining the same in a flat condition, and means for holding the appliance in body contacting position.

5. In a colostomy appliance, a flexible pouch having a forward opening in one side adjacent the top thereof, a frame comprising a body contacting ring and means to the rear of said ring for supporting said pouch with its opening adjacent thereto, an elastic moisture proof lining attached to the outer periphery of said ring and extending over the body contacting face thereof and into said pouch, and means for holding said appliance in body contacting position.

6. In a colostomy appliance, a frame comprising a rigid flat ring having a flexible cushioning member overlying the front face thereof, a flexible pouch having a forward opening in one side adjacent the top thereof, a groove formed at the rear face of said ring adapted to receive the edge defining the opening in said pouch, a frame ex-

tending laterally from the rear face of said ring for maintaining the upper end of said pouch in uncollapsed condition, an elastic moisture-proof lining within said pouch adapted to receive discharge, said lining having an open end adapted to be expanded over the outer periphery of said cushioning member whereby the same is held in place, and a belt for holding said appliance in body contacting position.

7. In a colostomy appliance, a frame comprising a rigid flat ring having a flexible cushioning member overlying the front face thereof, a flexible pouch having a forward opening in one side adjacent the top thereof, a groove formed at the rear face of said ring adapted to receive the edge defining the opening in said pouch, a frame extending laterally from the rear face of said ring for maintaining the upper end of said pouch in uncollapsed condition, an elastic moisture-proof lining within said pouch adapted to receive discharge, said lining having an open end adapted to be expanded over the outer periphery of said cushioning member whereby the same is held in place, a body encircling belt bearing against the lower segment of said ring and a second body encircling belt bearing against the upper segment of said ring whereby the device may be adjusted in body contacting position.

8. In a colostomy appliance, a frame comprising a rigid flat ring having a flexible cushioning member overlying the front face thereof, a flexible pouch having a forward opening in one side adjacent the top thereof, a groove formed at the rear face of said ring adapted to receive the edge defining the opening in said pouch, a frame extending laterally from the rear face of said ring for maintaining the upper end of said pouch in uncollapsed condition, an elastic moisture-proof lining within said pouch adapted to receive discharge, said lining having an open end adapted to be expanded over the outer periphery of said cushioning member whereby the same is held in place, a body belt holding and positioning means at the top and bottom of said frame and extending through said pouch for receiving and holding a body encircling belt, an adjustable belt cooperating with the upper of said means, and a second adjustable belt cooperating with the lower of said means.

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