

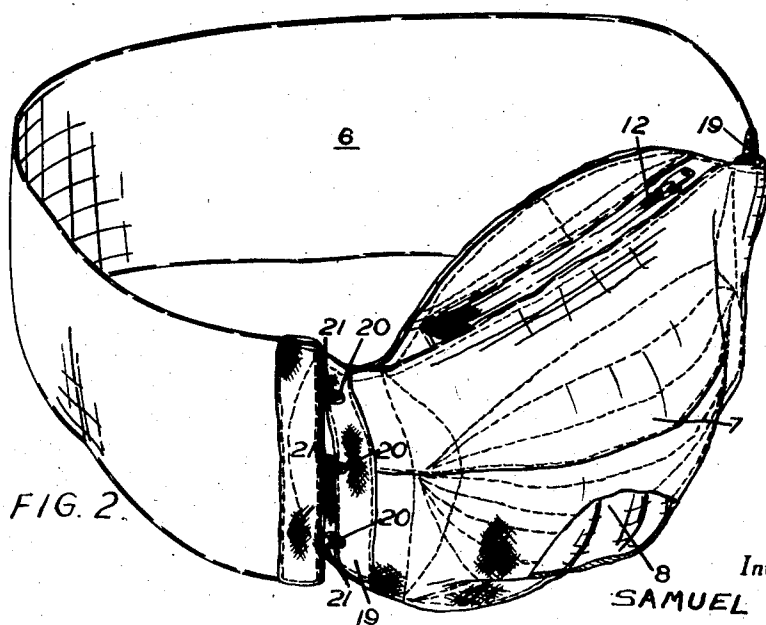
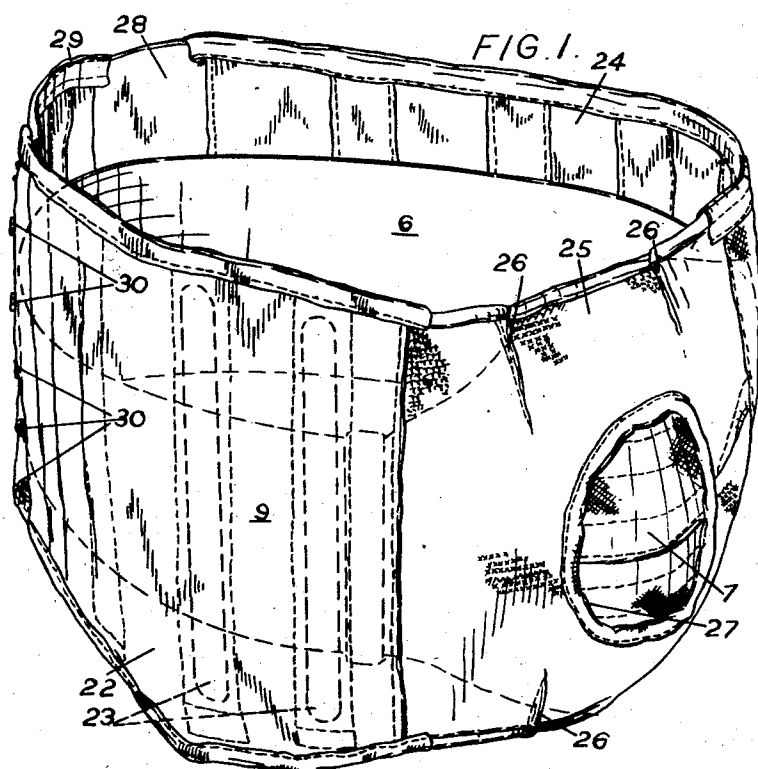
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S. BERG
COLOSTOMY DEVICE

2,688,327

Filed July 31, 1951

5 Sheets-Sheet 1



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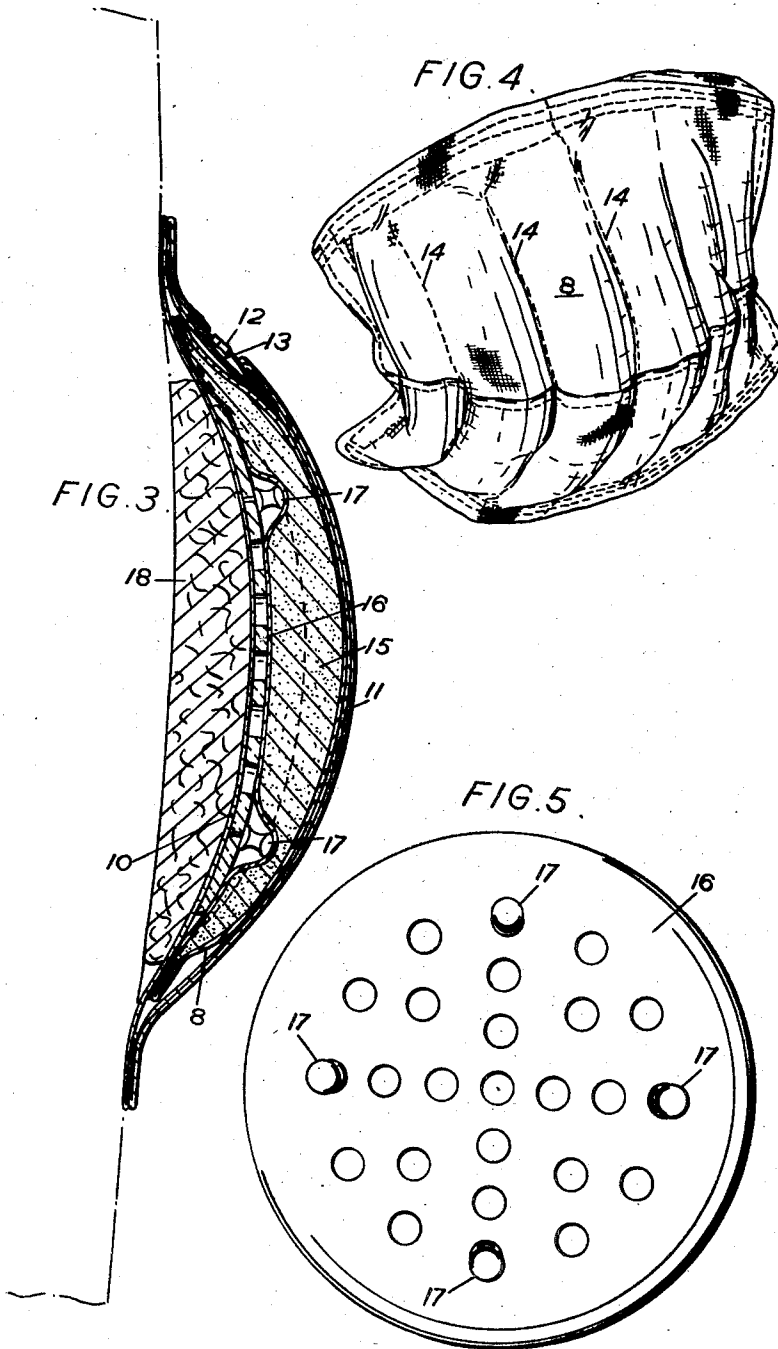
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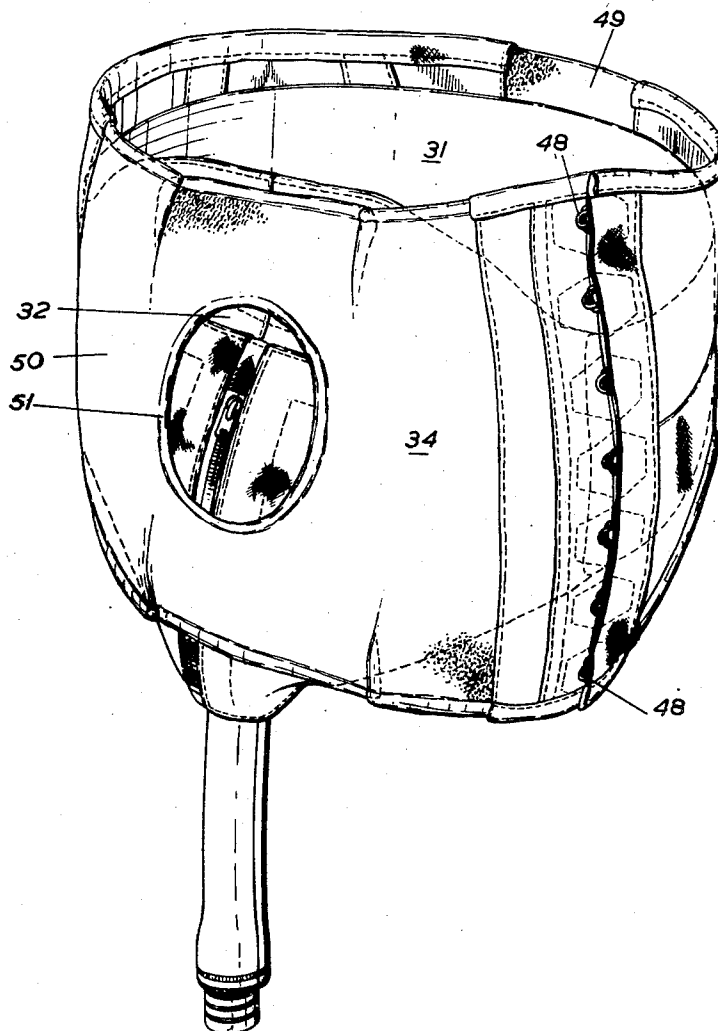
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FIG. 6.



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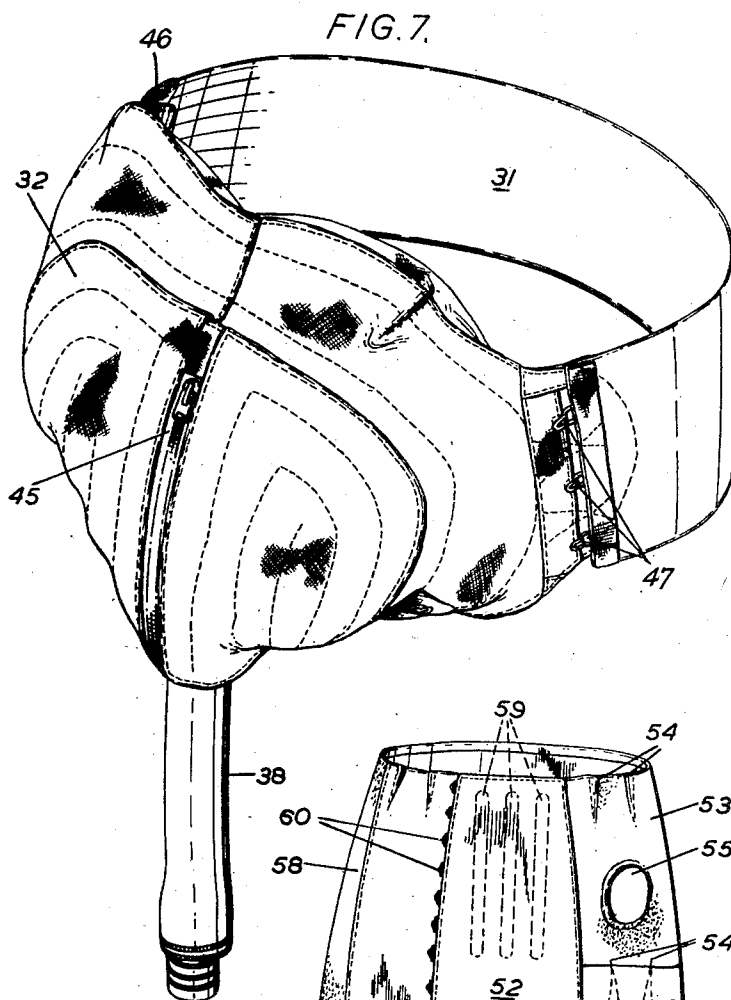
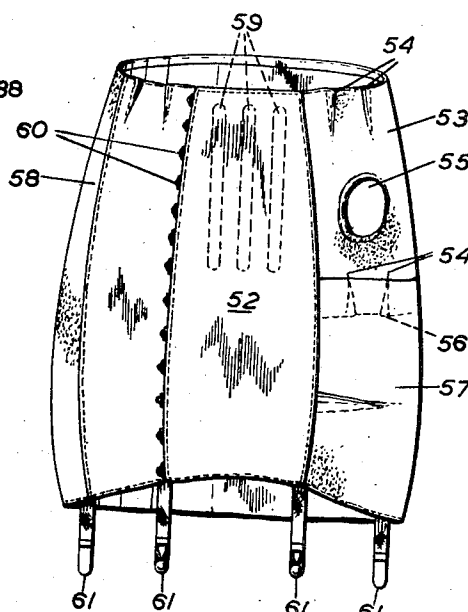


FIG. 11.



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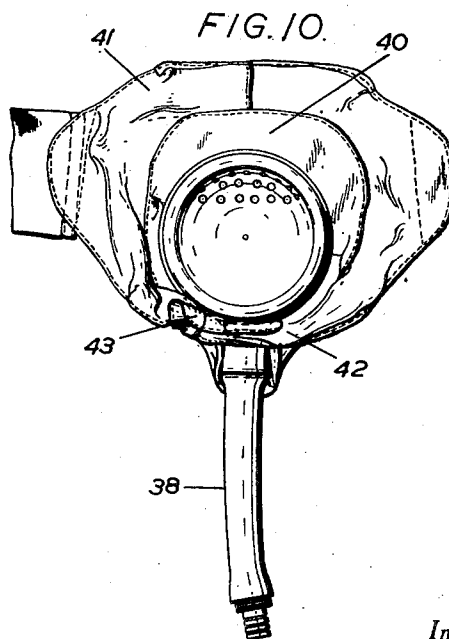
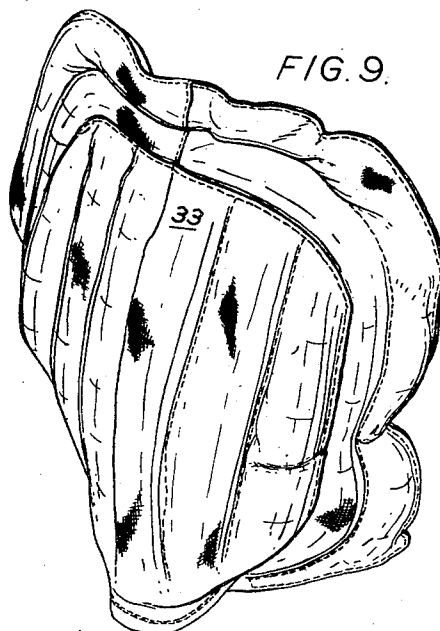
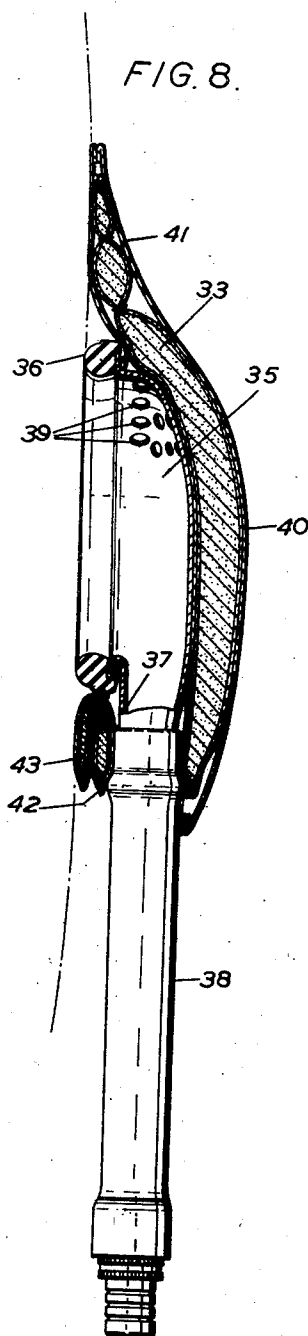
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UNITED STATES PATENT OFFICE

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COLOSTOMY DEVICE

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Claims priority, application Great Britain
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8 Claims. (Cl. 128—283)

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This invention relates to colostomy belts and like appliances.

Such appliances usually consist of a belt adapted to support a receiving element, such as an absorbent pad, or a collecting vessel, over the abdominal opening of the user. While these appliances afford a measure of protection for the user, he nevertheless usually finds his activities somewhat circumscribed by the necessity of attending frequently to personal hygiene.

The main object of the invention is to provide various forms of appliance having improved protective properties and each incorporating a deodorising element, whereby the user may achieve a substantial degree of confidence in its use and independence in his movements.

The invention is illustrated in the accompanying drawings, of which:

Figure 1 is a perspective view of a colostomy appliance as a whole;

Figure 2 is a perspective view of the underbelt and pocket of the appliance;

Figure 3 is a sectional view through the centre of the pocket and its contents;

Figure 4 is a perspective view of a charcoal pad which is incorporated in the pocket;

Figure 5 shows in front elevation a perforated shield used in conjunction with the charcoal pad;

Figure 6 is a perspective view of an analogous appliance for use with a fistula,

Figure 7 is a perspective view of the underbelt and pocket of the appliance;

Figure 8 is a sectional view through the centre of the pocket, deodorising pad and collecting vessel;

Figure 9 is a perspective view of the deodorising pad;

Figure 10 is a rear elevation of the appliance as seen from the left hand side of Figure 8; and

Figure 11 shows a corset adapted for use with a colostomy appliance.

The appliance shown in Figure 1 is constructed for use with a side colostomy, and it comprises an underbelt 6 of elastic material to which a pocket 7 containing a charcoal pad is fitted, and an overbelt 9 giving abdominal support which is designed to be worn over the underbelt 6.

The pocket 7 is of fabric material, having a piece of porous material 10 on the body side, and a piece of strong closely woven material 11 on the side away from the body. Both pieces 10 and 11 are suitably cut and stitched with darts or other usual devices to give a bulge away from the body, the outer piece 11 being rather more

bulged to provide a cavity to take the charcoal pad 8. The latter pad may conveniently be introduced through a sliding clasp fastener 12 near the top of the outer piece 11, and arranged with its upper edge beneath a tuck-over flap 13 which is stitched into the pocket 7.

The charcoal pad 8 is made of a porous fabric material, quilted by means of transverse lines of stitching 14, to provide a number of cells into which a deodorising material 15 is packed fairly firmly. The preferred deodorising material is activated charcoal in a granular form which will not readily crumble, hardwood charcoal being a suitable kind for this purpose. The fabric of the pad 8 is cut and joined in such a manner that when it is filled with the charcoal 15 it bulges at the centre so as to conform with the shape of the pocket 7. The pad 8 is fitted in the pocket 7 with its lines of stitching 14 vertical, that is, transverse to the run of the belt 6, and in this way the charcoal filling 15 resists any tendency of the pad 8 to collapse either transversely or inwardly as the result of the belt 6 pulling sideways on the pocket 7.

A curved perforated shield made, for example, of plastic material, is fitted in the pocket 7 between the inner piece 10 and the pad 8, and it is provided with four pegs 17 which partially embed themselves in the quilting of the pad 8 to prevent the shield 16 slipping about. When correctly placed, the shield 16 provides a support for an absorbent pad 18 placed against the body, which support is intended to counteract any tendency for the development of a colostomy hernia. The edge of the shield 16 is on a diameter which is less than the width of the pocket 7, and is set well back behind the absorbent pad 18 so that it exerts no local pressure on the body.

The pocket 7 has side pieces 19, to each of which are attached hook fasteners 20 which are engageable with eyes 21 attached to each end of the under belt 6. This belt 6 is made of elastic material, and its purpose is to hold the pocket 7 together with the absorbent pad 18 in place on the wearer when the outer belt 9 is removed. The main support for the pocket 7, however, is the overbelt 9 which is constructed to give abdominal support, as is usually required for colostomy patients.

The belt 9, illustrated, being constructed for a side colostomy location, has a front panel 22 made of corsetry material reinforced in the usual way by steel spiral stays 23, while a rear panel 24 of lesser depth is constructed in a similar fashion. The panels 22 and 24 are joined on the colostomy

side by a side piece 25 of elastic material with darts 26 running from its upper and lower edges to form a bulge which can accommodate the shape of the pocket 7. Furthermore, the central part of this side piece 25 is cut away to form a circular opening 27 which relieves the central part of the pocket overlying the colostomy opening from pressure, while the elastic surround serves to hold the periphery of the pocket 7 firmly but gently against the body. In this connection the elastic side piece 25 and the pocket 7 containing the charcoal pad 8, and shield 16, which the side piece 25 retains against the body are made sufficiently large to avoid giving any excessive pressure in the immediate vicinity of the colostomy opening, as any such excessive pressure can stimulate unduly frequent bowel action.

The portion of the belt 9 opposite the elastic sidepiece 25 has a further section 28 of elastic material inserted between the rear panel 24 and an end piece 29, while this end piece 29 is adapted to be secured by hook-and-eye fastenings 30 to the side of the front panel 22. The belt 9 in the form shown is illustrative, and apart from the elastic side piece 25, its construction may be varied, if desired, to suit the need of the wearer. For example, in the case of a frontal colostomy, the piece 25 will have to be arranged in front between panels which are constructed to support the sides of the abdomen.

It will be apparent that if the provision of means to locate and hold the charcoal pad 8, the shield 16 and the absorbent pad 18 on the body were the only consideration, the over-belt 9 would suffice for this purpose. The employment of the relatively light elastic underbelt 6, however, with its hook fastenings 20 close to the pocket 7, enables the wearer to change the absorbent pad readily when desired without being encumbered by the overbelt 9.

It has been found that the protective properties of the appliance are such that the tiresome procedure of clinical irrigation may be substantially reduced in frequency or even eliminated entirely, and it is suggested, without prejudice, that the relief from mental stress and from physical strain afforded by the appliance may be a substantial contributory factor to this end.

The appliance shown in Figures 6-10 is designed for use with a fistula wherein it is necessary to provide a collecting vessel for excrement of a more fluid nature than is usual in colostomy cases. The appliance comprises an underbelt 31, of elastic material to which a pocket 32 containing a charcoal pad 33 is fitted, and an overbelt 34 giving abdominal support which is designed to be worn over the underbelt 31.

The pocket 32 is adapted to hold a collecting vessel 35 against the body for which purpose the vessel 35 has a circular opening fitted with a moulded rubber ring 36, which contacts the body, and a discharge nozzle 37, to which a rubber tube 38 is fitted for attachment to a suitable receptacle. The upper part of the collecting vessel 35 is formed with multiple perforations 39 for venting gases discharged from the fistula.

The pocket 32 and pad 33 are made of materials similar to those referred to in the preceding example, but they are more complex in shape since they are arranged to fit over the front of the collecting vessel 35, around the ring 36 and around the discharge nozzle 37. The pocket 32 accordingly has a central portion 40 which overlies the front of the collecting vessel 35, a surrounding portion 41 which surrounds the ring 36,

and a pair of cross-over fingers 42, 43, forming part of the surrounding portion 41 which are arranged to be tucked around the body side of the nozzle 37. The finger 42 is secured to the surrounding portion 41 by a hook and eye fastener 44, as shown in Figure 7.

The charcoal pad 33 is, of course, of the same general shape as the pocket 32, since it is required to fit snugly within all portions of the pocket 32. Access to the interior of the pocket 32 is provided by a centrally placed sliding clasp fastener 45.

The pocket 32 has side pieces 46 to which the underbelt 31 is attached by hook-and-eye fasteners 47. The overbelt 34 in this example, is also constructed as an abdominal support belt, made in part of corsetry material reinforced in the usual way by steel spiral stays. The ends of the belt 34 are adapted to be joined by hook-and-eye fasteners 48. The belt 34 illustrated has a narrow rear panel 49 of elastic material and a much wider front panel 50 of the same material which is shaped top and bottom by means of darts to accommodate the pocket 32 and support it with its contents evenly against the body. The central part of the front panel 50 is cut away to form an opening 51 which relieves the central part of the pocket from pressure. The abdomen is thus supported uniformly except for the circular area within the rubber ring 36 of the collecting vessel 35.

Any noxious odours dissipated through the perforations 39 in the collecting vessel 35 will be absorbed by the central portion of the charcoal pad 33, while any leakage outwards past the ring 36 will be absorbed by the surrounding portion of the pad 33.

Figure 11 shows an overbelt for women for use with a colostomy appliance. This belt 52 is deeper than the overbelts in the preceding examples, since it is designed to serve also as a corset. The panel 53 of elastic material overlying the colostomy, in the example located at the side, is formed with darts 54 from its top and bottom edges, and with an opening 55 which relieves the pressure over the centre of the appliance as before. The lower edge 56 of the panel 53 does not extend to the bottom of the belt 52, but overlaps a second elastic panel 57 which is independent of the panel 53 and shaped to the required body fitting. Apart from a further elastic panel 58 on the opposite side, the remainder of the belt 52 is fabricated in the usual way from corsetry material and may be reinforced where appropriate by spiral steel stays, for example, as shown at 59. The belt 52 is joined by hook and eye fasteners 60 and is provided on its lower edge with suspender fastenings 61.

Deodorising pads fabricated in the manner described in the examples, are not strictly limited to use in colostomy and like cases, but may be used also as appliances over discharging wounds.

I claim:

1. A surgical belt for the collection of discharges from an abdominal aperture comprising in combination an inner belt and an outer belt, said inner and outer belts cooperating with each other in a superimposed relationship, said inner belt adapted to hold a discharge collecting device against the abdominal aperture and comprising an outwardly bulged pocket adapted to be placed over said discharge collecting device, and a deodorizing pad disposed within said pocket, said outer belt, adapted to furnish abdominal support, having an aperture therein

adapted to overlie at least a portion of said bulged pocket.

2. A surgical belt for the collection of discharges from an abdominal aperture comprising in combination an inner belt, an outer belt and a discharge collecting device, said inner and outer belts cooperating with each other in a superimposed relationship, said inner belt adapted to hold said discharge collecting device against the abdominal aperture and comprising an outwardly bulged pocket adapted to be placed over said discharge collecting device, a deodorizing pad and a perforated shield disposed within said pocket, said outer belt, adapted to furnish abdominal support, having an aperture therein adapted to overlie at least a portion of said bulged pocket.

3. A surgical belt in accordance with claim 2, wherein said bulged pocket is detachably secured to said inner belt.

4. A surgical belt in accordance with claim 2, wherein said discharge collecting device is an absorbent pad.

5. A surgical belt in accordance with claim 2, wherein said discharge collecting device is a hollow receptacle.

6. A surgical belt in accordance with claim 2, wherein said shield is disposed within the portion of said pocket nearest the discharge collecting device, and said absorbent pad is disposed within the portion of said pocket remote from the discharge collecting device.

7. A surgical belt for the collection of discharges from an abdominal aperture, comprising in combination an inner belt, an outer belt and

an absorbent pad, said inner and outer belts cooperating with each other in a superimposed relationship, said inner belt adapted to hold said absorbent pad against the abdominal aperture and comprising an outwardly bulged detachably secured pocket adapted to be placed over said absorbent pad, a deodorizing pad and a perforated rigid concave shield disposed within said bulged pocket, said outer belt, adapted to furnish abdominal support, having a resilient portion and an aperture therein adapted to overlie at least a portion of said bulged pocket, said deodorizing pad comprising a fabric cover, said fabric cover being quilted to form a plurality of closed cells, and a filling of deodorizing material contained within said cells of the quilting.

8. A surgical belt for the collection of discharges from an abdominal aperture in accordance with claim 7, wherein said deodorizing material is granulated charcoal.

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