

[54] **SURGICAL DRAINAGE APPLIANCE**
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 McClelland & Maier

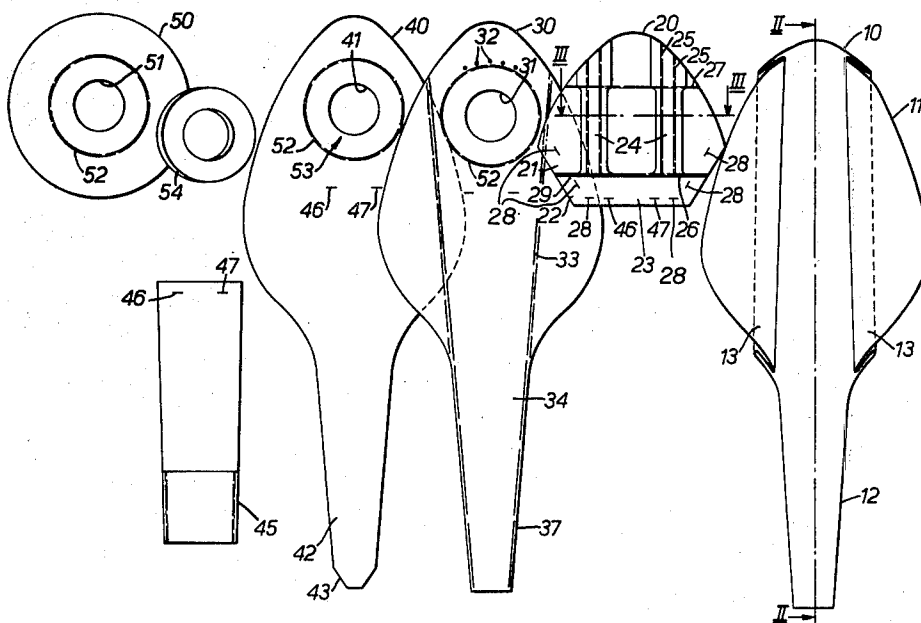
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[52] **U.S. Cl.** **128/283**
 [51] **Int. Cl.** **A61f 5/44**
 [58] **Field of Search**..... 128/283, 294, 295

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[57] **ABSTRACT**
 A surgical drainage appliance is disclosed, suitable for use in ileostomy and ureterostomy, which is made of thin sheet plastic material and has gas filled plastic cushions located on either side of inlet for the stoma so as to protect it in use. A gap is left in the cushions below the inlet for the stoma. In a preferred arrangement provision is made for flushing the stoma without removing the appliance from the patient.

16 Claims, 9 Drawing Figures



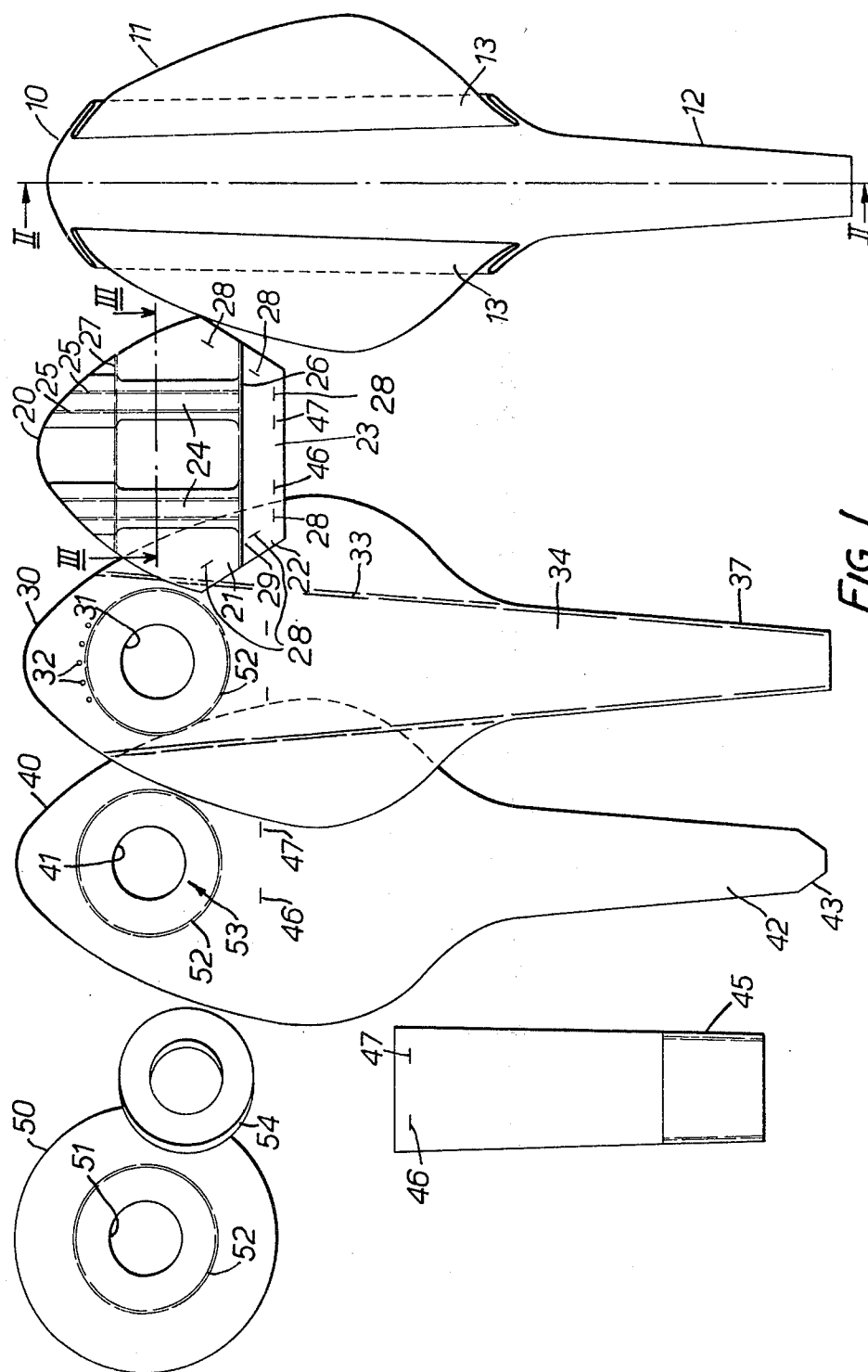
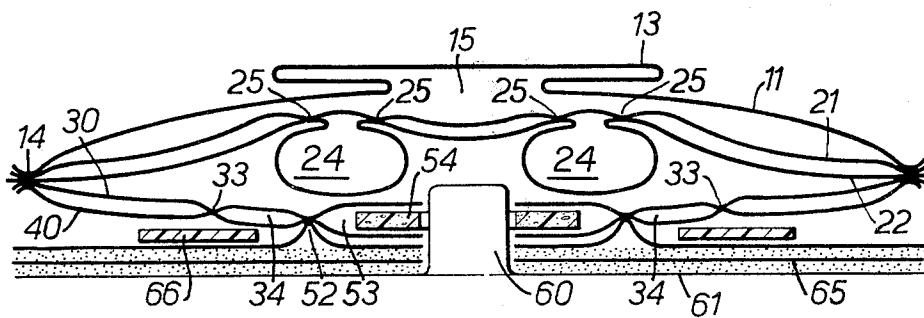
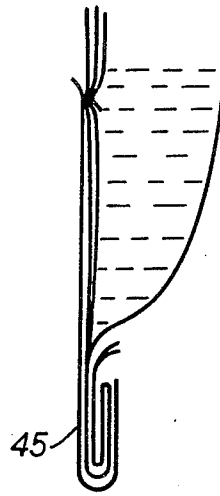
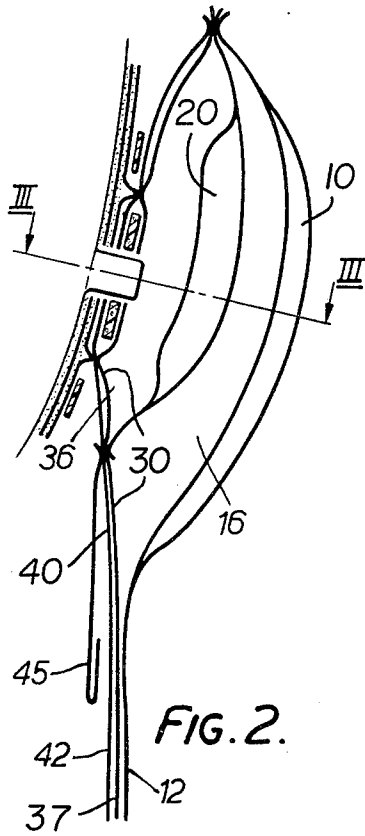


FIG. 1.



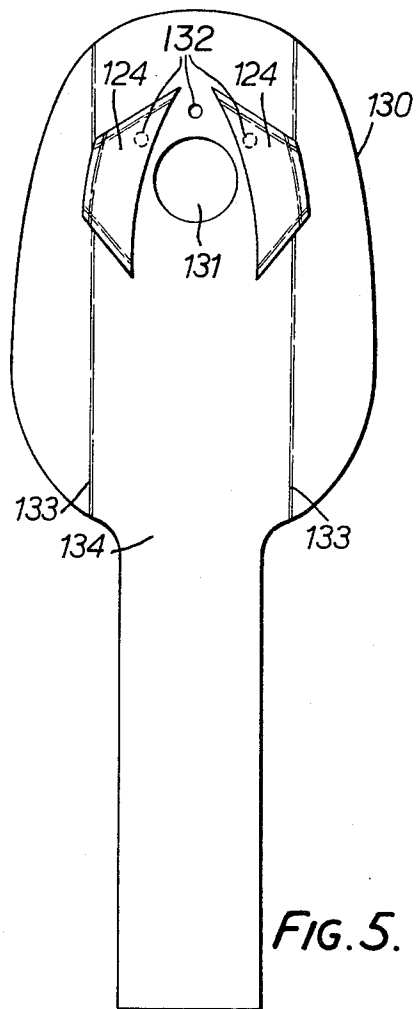


FIG. 5.

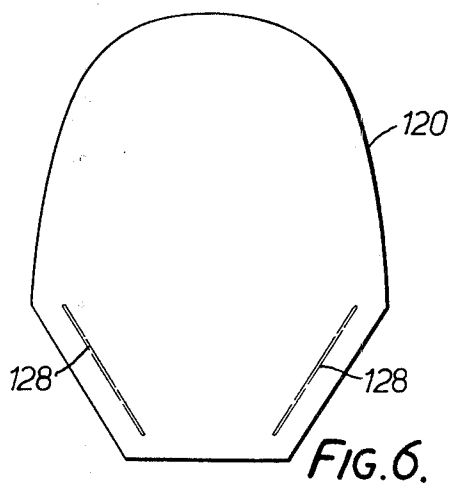


FIG. 6.

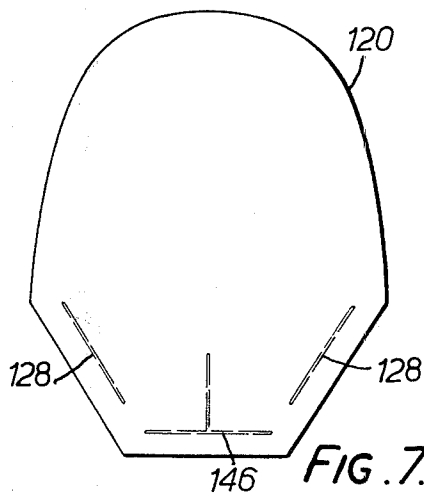


FIG. 7.

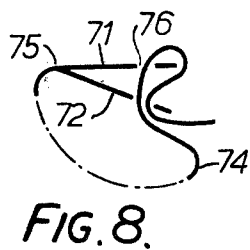


FIG. 8.

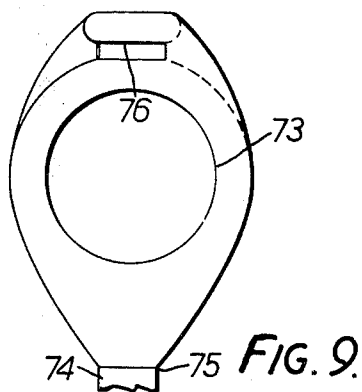


FIG. 9.

SURGICAL DRAINAGE APPLIANCE

The present invention relates to improved surgical drainage appliances particularly adapted for use for collecting urine or urine and faeces from patients who have undergone ureterostomy or ileostomy or colostomy operations respectively. A consequence of these operations is that the relevant normal body tract is diverted from its usual outlet from the body and is brought out of the body on either side of the stomach area via a piece of bowel, or isolated bowel in case of ureterostomy the stoma, or other suitable duct means. The urine or urine and faeces or faeces are then discharged out of the body involuntarily since the outlet of the stoma is not under the control of a sphincter muscle and means have to be provided for continuous collection of this waste matter and intermittent disposal with the minimum of effort on the part of the patient and the minimum of inconvenience.

Conventional appliances of this type comprise a flexible, desirably disposable, bag, for example of thin translucent polymer or plasticized polyvinyl chloride or rubber sheet, provided with an inlet aperture for fitting over the stoma, so that the stoma is in communication with the inside of the bag, and desirably outlet means from the bag and means for securing the bag to the patient in fixed relationship to the stoma.

It is desirable to protect the stoma against damage and indeed even against the weight of bed clothes since it is very delicate.

It has been proposed to use rigid plastic flanges surrounding the stoma but these are uncomfortable in use and add to the cost and bulk of the appliance.

It has also been proposed to attach a ring of foamed plastic material to the body contacting wall of the bag surrounding the duct but this introduces extra manufacturing problems and also cavities and crevices around the stoma which could cause post operative problems.

According to one aspect of the present invention a surgical drainage appliance comprises a flexible watertight bag provided with an inlet aperture for fitting over the stoma so that the stoma can communicate with the inside of the bag, means for securing the bag to the patient so that at least the inlet aperture is held in fixed relationship to the patient and cushioning means for the stoma located around only part of the inlet aperture and defining a gap at at least one point in the cushioning means.

In a simple form of the appliance the cushioning means can be carried by the front wall of the bag. In a more sophisticated form of the appliance the bag has a valve wall dividing the bag into two or more compartments whilst allowing intercommunication. The cushioning means may be carried by this valve wall on its face which is juxtaposed to the stoma.

The cushioning means do not extend right around the stoma since this could interfere with flow out of the stoma and thus preferably there is an opening at at least one side of the cushioning means, preferably at what will be the bottom edge in use.

The cushioning means preferably comprise a pair of straight cushions which may be parallel to each other and which have an opening between their top and bottom i.e. they extend in a generally vertical direction.

If desired they could diverge outwardly at one or both ends and could also be curved instead of straight.

They are preferably each about 1 diameter of the stoma wide e.g. 0.75 to 2 diameters wide and about 2 to 4 diameters long e.g. 1.5 to 3 cms wide and 4 to 7 cms long. In the free uncompressed state they are about 1 cm thick or more broadly 0.5 to 2 cms thick.

The cushioning means are preferably filled with gas e.g. air under atmospheric or near atmospheric pressure so as to be very soft and easily distorted. However a soft foam plastic or rubber cushioning material or granules of such material could be used instead. This however is not preferred since it would increase the cost and complexity of manufacture.

The valve wall is preferably attached to the wall in which the inlet opening is formed at points adjacent its lower edge so that liquid can drain from this inlet compartment into a larger compartment formed between the front wall and the valve wall. The portion of the valve wall extending below the points at which it is joined to the wall in which the inlet opening is formed act to hinder or prevent flow of liquid back from the larger storage compartment into the inlet compartment.

The front wall is preferably made expansible by having one or more e.g. 2, 3 or 4 pleats or folds in it e.g. extending in a generally vertical direction in use.

The appliance is preferably also provided with a suitable outlet opening and closure means. This may comprise a tube and clip arrangement but it is preferred to use an outlet means of the type described and claimed in British patent specification No. 45285/70 (Eakin Case 1).

Thus the outlet means preferably comprise a tube of thin polymer sheet material and the appliance is provided with a pocket into which the tube can be inserted in flattened form folded back on itself so as to constitute a seal to the outlet from the bag. The folded back tube is held flattened in the pocket by the liquid in the tube upstream of the fold and the outlet can be simply opened by pulling the flattened tube out of the pocket.

The means for securing the bag to the patient can conveniently be a suitable adhesive applied to the outside of the bag around the aperture for the duct or stoma or a double sided adhesive plaster similarly arranged. In addition the flange or the bag could be provided with fixing means for attachment of a belt or brace surrounding or hanging over the patients body so as to support the weight of the bag when full and reduce the drag of the bag on the patients body.

According to another aspect of the present invention a surgical drainage appliance comprises a flexible watertight bag provided with an inlet aperture for fitting over the stoma so that the stoma can communicate with the inside of the bag, means for securing the bag to the patient so that at least the inlet aperture is held in fixed relationship to the patient and flushing means for introducing clean flushing liquid into the bag above the stoma whilst the bag is attached to the patient.

This aspect of the invention can with advantage be used in combination with the cushioning means of the first aspect of the invention and indeed the preferred form of the cushioning means is specifically designed to facilitate use of these flushing means.

The flushing means may be provided by having the wall carrying the inlet opening (the intermediate wall) provided at least above the stoma with a back wall so as to form a double walled structure affording a flushing passage. One or more small flushing holes may be

formed in the intermediate wall just above the inlet opening and closable inlet means may be provided to enable flushing liquid to be introduced into the flushing passage.

In one convenient form of the invention the flushing passage extends up from the end of the outlet passage up the rear face of the intermediate wall around the inlet for the stoma and thus to the flushing holes above the inlet for the stoma. This enables the flushing operation to be carried out more easily.

This form of flushing passage can be folded up with the outlet passage and placed in the pouch mentioned above when it is wished to close it.

Thus in this form of the invention the flushing passage is formed in attachment with the outlet passage. Thus flushing can only be carried out when the outlet passage is open. In some situations this might not be desirable and thus the flushing passage could be formed separate from the outlet passage and two separate closure pouches could be provided arranged back to back.

The flushing passage is conveniently formed merely by providing a complete double back and intermediate wall sealed around its edges and sealed around the inlet for the stoma. However in order to get more rapid flushing with minimum use of liquid the two walls could be sealed so as to define a more restricted flushing passage e.g. by sealing along lines diverging from their lower region upwards.

The sealing around the inlet from the stoma is preferably spaced away from the opening so as to leave an annular pouch around the opening. A sealing ring can be located therein during manufacture or inserted just prior to use.

The sealing ring may be of any conventional material e.g. Karaya or other medicinally acceptable or curative materials or blends thereof e.g. with inert carriers such as oils e.g. glycerine.

In a further alternative the sealing ring is made of sponge or foam rubber or plastic e.g. with cell dimensions of 0.1 to 1 or 2 mms e.g. about 0.5 to 1 mms impregnated with a dry gum or starch powder or a gum and oil blend e.g. of Karaya or other medicinally acceptable or curative materials or blends thereof e.g. with inert carriers such as oils e.g. glycerine.

A Karaya ring or backing could also be used between the patient and this ring. The rubber ring would have the advantage as compared with the Karaya ring of not being water soluble.

The invention may be put into practice in various ways and one specific embodiment and one modification thereof will be described by way of example with reference to the accompanying drawings in which:

FIG. 1 is an exploded front elevational view of a surgical drainage bag in accordance with the present invention;

FIG. 2 is a diagrammatic vertical cross section on the line II—II of FIG. 1 showing the bag in use on a patient with the emptying tube open;

FIG. 3 is a diagrammatic horizontal cross section on the line III—III of FIG. 1 (also shown in FIG. 3) showing the bag just about to be placed in position and in a slightly exaggerated manner to show more clearly the various parts of the bag and the various places at which the layers are attached to each other;

FIG. 4 is a partial vertical cross section similar to FIG. 3 showing the emptying tube closed and the bag partially filled;

FIG. 5 is a front elevation view of part of a bag similar to that shown in FIG. 1 but modified as to its shape and the location of the cushioning means;

FIG. 6 is a similar view to FIG. 5 of the same modified form of bag showing an arrangement suitable for ileostomy;

FIG. 7 is similar to FIG. 6 but shows an arrangement suitable for ureterostomy.

FIG. 8 is a diagrammatic plan view showing a belt and load bearing support for attaching the bag to the patient, and FIG. 9 is a front elevational view of the load bearing support shown in FIG. 8.

The drainage bag can be used for any surgical drainage purpose e.g. ureterostomy where only fluids are being drained and the bag acts as an external bladder or ileostomy where both fluids and solids are being drained and the bag acts as an external bladder and bowel combined.

The drainage bag shown in FIGS. 1 to 4 has a front wall 10 which has a generally oval upper half 11 with its long axis vertical in use and leading down into a central tail 12 about the same length as the oval upper half 11. The oval upper half 11 has pleats or folds formed in it to allow it to expand in use e.g. the pleats 13 may be arranged vertically e.g. parallel to each other or diverging apart from each other towards the tail 12 as shown in FIG. 1.

Behind the front wall 10 is a one way valve wall 20 which extends about half way down the oval upper half 11 of the front wall.

Behind the wall 20 is an intermediate or flushing wall 30 of the same shape as the front wall 10 but having a hole 31 for the stoma in the centre of the upper half of the oval upper half 11 and no pleats.

This wall 30 also has an arcuate arrangement of small flushing holes 32 located above the hole 31 and spaced about one radius of the hole 31 from its edge.

Behind the wall 30 is a back wall 40 of the same shape as the wall 30 except that it does not have the flushing holes 32 above its hole 41 for the stoma. Also the bottom of its tail 42 is chamfered at 43 rather than being square.

Behind the wall 40 is an attachment wall 50 which is circular but could be of any desired shape. It has a central stoma hole 51 of the same size as the holes 31 and 41.

Also behind the wall 40 there is a pouch or bag 45 into which the tails 12, 37 and 42 can be folded (as shown in FIG. 4). This feature is subject matter of my British patent specification No. 45285/70 Casel.

A modified arrangement is shown in FIGS. 5, 6 and 7. Here the valve wall 20 is simplified and does not carry the cushioning members which instead are carried by the intermediate wall 30.

Thus in this arrangement as shown in FIG. 5 the intermediate wall 130 differs in shape from the wall 30 also the flushing passage 134 differs in shape from the flushing passage shown in FIGS. 1 and 3 due to different location of the weld lines, 133.

The cushioning means 124 are trapezoid in shape and are located on either side of the inlet opening 131 with their lower edges further apart than their upper edges. The cushions 124 are welded along three sides and are also welded to the wall 130. The wall 130 has three flushing holes 132 spaced in an arc above the hole 131.

The valve wall 120 shown in FIG. 6 only has two welds at its lower end 128 and leaves a gap at its bottom edge. This arrangement can be used for ileostomy.

For ureterostomy it is preferred to use a bottom weld 146 as well to prevent back flow of urine.

Apart from these differences and the different outline shape the only other difference from the arrangement shown in FIGS. 1 to 4 is that the front wall 110 has two pairs of folds 113 in it instead of only one pair.

The air bubble cushion arrangement has been found surprisingly not only to separate the valve wall from the intermediate wall and thus prevent pressure being applied to the stoma but also to preserve an air space around the stoma during one. This airspace seems to reduce the tendency for faeces (when used in ileostomy) to be pressed around the stoma.

This has the advantage that faeces tend to digest the stoma, avoiding such digestion enables the bag to be used for longer periods of time.

The bag is assembled as follows.

The wall 30 is attached to the wall 40 by diverging weld lines 33 to form a flushing channel 34 which will be described in more detail below.

Any suitable method of attaching could be used e.g. heat and pressure or ultrasonic or high frequency welding or solvent welding or adhesives and when welding is referred to herein it is intended that it should include any such suitable method.

The walls 30, 40 and 50 are superimposed with the holes 31, 41 and 51 in registry and the tails 37 and 42 in register. A circular weld 52 is then formed around the holes 31, 41 and 51 at about twice the radius of these holes.

This weld 52 forms a pouch 53 in which can be located any suitable sealant for the stoma. Thus a soft plastic flange or compressible foam ring could be located in the pouch or as is preferred a plastic gum ring e.g. of Karaya or other polysaccharide natural gum or an equivalent synthetic gum which may be blended with a non volatile carrier e.g. an oil such as glycerine to render the composition softer and preferably such as to melt slightly under body heat so as to conform very accurately to the stoma 60 and stomach wall 61 and form a good seal.

If used, a Karaya or other gum ring 54 may be located in position prior to the formation of the weld 52 and in this case the hole 51 need not be formed until the appliance is just about to be used when it could be cut out with a sterilized blade. This would have the advantage of protecting the Karaya ring against deterioration in the air during storage of the appliance. Alternatively the ring could be inserted into the pouch just before use.

The assembly operation continues with the formation of the wall 20. This is formed of two pieces of film 21 and 22 of identical shape except that the rear piece 22 is substantially wider than the front piece 21 and extends below it to form a one way valve skirt 23.

The wall 20 has two air filled pockets 24 arranged on either side of the vertical centre line of the device and preferably parallel thereto leaving a space between them for the stoma and thus forming a cushion on either side of the stoma 60. Any other orientation which left a space like this for the stoma could be used and the pockets 24 do not have to be parallel to each other though this simplifies production. The pockets could be filled with a foam plastic or rubber instead of air.

The wall 20 is formed as follows:

The rear wall 22 is folded around flat mandrels to form two pairs of parallel pleats the pleats in each pair facing each other with a small space between them, the sheet 21 is then laid over these pleats and four parallel welds lines 25 are formed and the mandrels are removed. The pockets are then opened up to the shape shown in FIG. 3 and a transverse lower weld line 26 formed right across the two sheets 21 and 22 to seal the lower ends of the pockets 24. The pockets filled with air are then sealed at their other end by an upper transverse weld 27. (The pockets could be filled with a foam plastic prior to this weld if desired.) The double walled structure is then trimmed to the desired shape shown in FIG. 1.

The wall 20 is then superimposed on the assembly of walls 30, 40 and 50 and spot welded to the intermediate and rear walls at six spaced apart points 28 located at the edges of the skirt 23.

The assembly is then turned over and the pouch 45 is attached by spot welding to the rear face of the wall 40 at the points 46 and 47 so as to form additional spot welds between the skirt 23 and the intermediate wall 30. The spot welds 28, 46 and 47 leave gaps 29 between them.

The front wall with its folds in position is then superimposed on top of the walls 20, 30, 40 and 50 and a weld 14 is formed all the way around the oval edge of the walls 10, 20, 30 and 40 and down the sides of the tails 12, 37 and 42 leaving the top and bottom ends of the tails 12, 37 and 42 open. As mentioned above a flushing passage 34 is thus formed between the walls 30 and 40 whilst an outlet passage 15 is formed between the walls 12 and 37.

An inlet compartment 36 is thus formed between the top half of the wall 30 and the wall 20 and a storage compartment 16 between the front wall 10 and the cushioning wall 20 and the lower half of the intermediate wall 30.

Any suitable method of attaching the components together could be used e.g. heat and pressure welding or ultrasonic welding or solvent welding or adhesives and when welding is referred to herein it is intended that it should include any such suitable method.

When a soft plasticized polyvinyl chloride or polyethylene or polypropylene film is used heat and pressure welding is the most convenient method. Any suitable thickness of film can be used and preferably a transparent or translucent film is used. However an opaque film could be used if desired.

With polyethylene film thicknesses in the range 0.005 inches to 0.020 inches are satisfactory but thick film e.g. up to 0.050 inches or more could be used. The film should however be such that the appliance is flexible and thus takes up the minimum of space and is cheap thus being disposable if necessary. Ultra violet light degradable plastics could be used but biodegradable plastics should be avoided.

The appliance is used as follows:

A double sided adhesive plaster 65 has a hole cut in it to surround the stoma and is applied to the stomach wall 61 surrounding the stoma. The stomach wall has been cleaned and suitably prepared. A load bearing supporting arrangement is slipped between the plaster 65 and the wall 40. This arrangement is usually a disc 66 of strong plastic with a central hole for the stoma

and lugs at opposite sides for attachment to a sling or belt which passes around the patients body.

Alternatively the arrangement shown in FIGS. 8 and 9 could be used. This consists of two oval sheets 71 and 72 of thin (0.1 0.5 1 mm thick) unplastercized polyvinyl chloride plastic or metal having central coincident holes 73 and an elastic belt 74 secured between them at a hinged end 75. The other ends of the sheets are formed with slots 75 having one open end, the slots being opposed to each other so that when the sheets 71 and 72 are brought together the slots form a closed end aperture 76. The free end of the elastic belt is fed into the slot as shown in FIG. 8 and can be readily adjusted for tightness. In use the tension in the belt holds the sheets 71 and 72 together. In order to free the belt it is only necessary to lift up sheet 71 and slip the belt out of the open ended slots.

The Karaya gum ring 54 is placed in the pouch 53 and the ring slipped over the stoma and the wall 50 smoothed out and pressed against the adhesive plaster 65 already secured to the stomach wall 61. The disc 66 is then attached to the belt (not shown) which is placed round the patients body and adjusted to fit comfortably.

The tails 12, 37 and 42 are folded up into the bag 45 as shown in FIG. 4 to close the outlet passage 15.

The device is then left in position and fluids emerge from the stoma and drain into the inlet compartment 36 and then through the gaps 29 between the valve skirt and the wall 30 into the storage compartment 16. This compartment can accommodate a much larger volume than the compartment 36 by virtue of its expansibility afforded by the folds 13 in the front wall 10. The valve unit 23 acts to prevent or reduce flow of liquid back into the compartment 36 because the weight of fluid in the compartment 16 if it rises above the level of the skirt will tend to hold it closed against the intermediate wall 30.

In order to empty the device the tails are merely pulled out of the pouch 45 and placed in a suitable receptacle.

The device is also provided with a flushing arrangement so that it can be used for multiple fillings and emptyings without needing to be removed from the patient for cleaning.

Thus after the bag has been emptied the inlet compartment and stoma can be flushed by inserting an enema or similar device into the flushing passage 34 at its bottom end forcing a suitable flushing fluid, e.g. weak antiseptic or normal (Nonal) saline solution up the tube so that it flows out of the holes 32 and flows down around the stoma over the inside walls of the compartment 16 and thence out through the gaps 29 and the outlet passage 15.

Alternatively the end of the bag may be lifted up and filled with flushing fluid the end of the outlet tube placed in the pouch and dropped down to the usual position. The bag is then pressed flat with the hand and this forces the fluid up through the holes 32 causing flushing and flow down through the gaps 29 and the passage 15 which can then be opened to drain the bag.

The storage compartment 16 can be flushed by introducing the enema into the passage 15.

In a further modification one or both corners of the pouch 45 are cut off so that the pouch will automatically drain.

What I claim as my invention and desire to secure by Letters Patent:

1. A surgical drainage appliance comprising:

a flexible water tight bag having a front wall and an intermediate wall having means defining an inlet aperture for fitting over a stoma, whereby said stoma can communicate with the inside of said bag; means for securing said bag to a patient so that at least the portion of said intermediate wall adjacent said inlet aperture is held in fixed relationship to said patient;

cushioning means for said stoma comprising a pair of cushions positioned upon either side of said means defining said inlet aperture and extending in a vertical direction when said bag is in use so as to provide openings or gaps above and below said stoma; and

flushing means for introducing clean flushing liquid above said stoma, between said cushions and into said bag while said appliance is attached to said patient whereby said stoma is entirely cleansed.

2. An appliance as set forth in claim 1 wherein:

said front wall is made expansible by having one or more pleats or folds formed therewith extending in a generally vertical direction when said appliance is in use.

3. An appliance as set forth in claim 1 wherein:

said flushing means are provided by having said intermediate wall provided in part above said stoma with a back wall secured thereto so as to form a double passageway structure defining a flushing passageway closed off from said inlet aperture, at least one small flushing hole being formed within said intermediate wall above said inlet aperture so as to interconnect said flushing passageway with an inlet compartment also defined within said bag, closeable inlet means being provided to enable flushing liquid to be introduced into said flushing passageway.

4. An appliance as set forth in claim 3 wherein:

an outlet passageway communicating with said inlet compartment comprises a tube of thin polymer sheet material and said appliance is provided with a pocket located upon said appliance so that said tube can be inserted within said pocket in a flattened form folded back upon itself so as to constitute a seal to said outlet passageway from said bag, and said flushing passageway extends vertically upwardly from inlet means defined within said flushing passageway along the rear face of said intermediate wall, around, but closed off from, said inlet aperture of said stoma, to said at least one flushing hole above said inlet aperture of said stoma, and to said outlet passageway.

5. An appliance as set forth in claim 4 wherein:

said flushing passageway is formed adjacent to said outlet passageway and can be closed along with said passageway by folding up said flushing passageway defining means with said outlet passageway tube and placing said means and said tube within said pocket.

6. A surgical drainage appliance comprising:

a flexible water tight bag having a front wall and an intermediate wall having means defining an inlet aperture for fitting over a stoma, whereby said stoma can communicate with the inside of said bag;

means for securing said bag to a patient so that at least the portion of said intermediate wall adjacent said inlet aperture is held in fixed relationship to said patient;

a valve wall dividing said bag into at least an inlet compartment and a storage compartment while allowing intercommunication between said compartments;

resilient cushioning means for said stoma comprising a pair of cushions located within said inlet compartment for protecting said stoma and for maintaining said inlet compartment in an open condition and flushing means for introducing clean flushing liquid above said stoma, between said cushions and into said bag while said appliance is attached to said patient whereby said stoma is entirely cleansed.

7. A surgical drainage appliance as set forth in claim 6 further comprising:

outlet means communicating with the inside of said bag comprising a tube of thin polymer sheet material and a pocket integrally formed upon said appliance so that said tube can be inserted within said pocket in a flattened form folded back upon itself so as to constitute a seal to said outlet means.

8. An appliance as set forth in claim 6 wherein: said cushioning means are carried by said valve wall upon the face thereof which is juxtaposed to said means defining said inlet aperture.

9. An appliance as set forth in claim 6 wherein: said cushioning means are curved cushions.

10. An appliance as set forth in claim 6 wherein: said cushions are 0.75 - 2 times the diameter of said stoma in width and thickness and are 2 - 4 times the diameter of said stoma in length.

11. An appliance as set forth in claim 6 wherein: an outlet passageway communicating with said storage compartment comprises a tube of thin polymer sheet material; and said appliance is provided with a pocket located upon the appliance so that said tube can be inserted within said pocket in a flattened form folded back upon itself so as to constitute a seal to said outlet passageway from said bag.

12. An appliance as set forth in claim 6 wherein: said cushions are formed of thin polymer sheet material and are filled with air under atmospheric pressure.

13. An appliance as set forth in claim 6 wherein: said valve wall is attached to said intermediate wall at points adjacent its lower edge whereby liquid can drain from said inlet compartment into said storage compartment and said valve wall also ex-

tends below the point at which it is joined to said intermediate wall so as to prevent reverse flow of said liquid back into said inlet compartment from said storage compartment.

14. A surgical drainage appliance comprising: a flexible water tight bag having a front wall and an intermediate wall having means defining an inlet aperture for fitting over a stoma, whereby said stoma can communicate with the inside of said bag within which an inlet compartment is defined; means for securing said bag to a patient so that at least the portion of said intermediate wall adjacent said inlet aperture is held in fixed relationship to said patient;

passageway means for flushing said stoma with fluid defined by a back wall attached to the outside of said intermediate wall, means for controlling fluid passage at the stoma including a flushing passageway being closed off from said inlet compartment except by means of at least one small flushing hole provided within said intermediate wall above said inlet aperture and said stoma which is provided to interconnect said flushing passageway with said inlet compartment; and

closeable inlet and outlet means being respectively provided within said flushing passageway and said inlet compartment so as to enable said flushing liquid to be introduced into the flushing passageway, said flushing hole and said inlet compartment.

15. An appliance as set forth in claim 14 wherein: a storage compartment comprising a tube of thin polymer sheet material is also defined within said bag so as to communicate with said inlet compartment and said outlet means;

said appliance is further provided with a pocket located upon said appliance so that said tube can be inserted within said pocket in a flattened form folded back upon itself so as to constitute a seal to said outlet means from said bag; and

said flushing passageway extends vertically upwardly from said inlet means along the rear face of said intermediate wall, around, but closed off from, said inlet aperture for said stoma, and to said at least one flushing hole disposed above inlet aperture of said stoma and to said outlet means.

16. An appliance as claimed in claim 15 wherein: said flushing passageway is disposed adjacent to said outlet means and can also be closed by folding said passageway along with said outlet means and placing said passageway and said outlet means within said pocket.

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