Feb. 12, 1963 L. BERGER 3,077,192

INTERCHANGEABLE DISC FOR SURGICAL DRAINAGE DEVICE

Filed Feb. 1, 1962 2 Sheets-Sheet 1

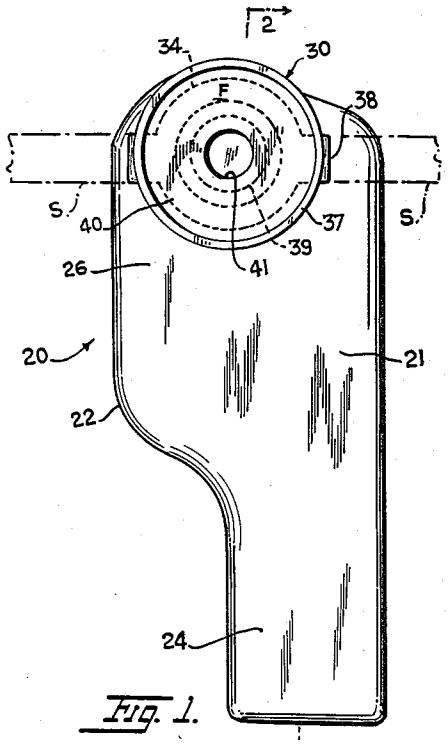


Fig. 1.

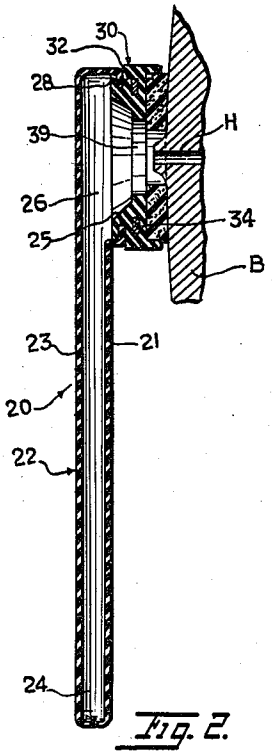


Fig. 2.

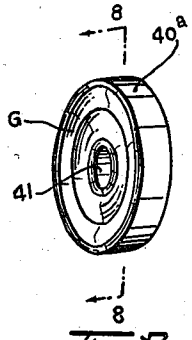
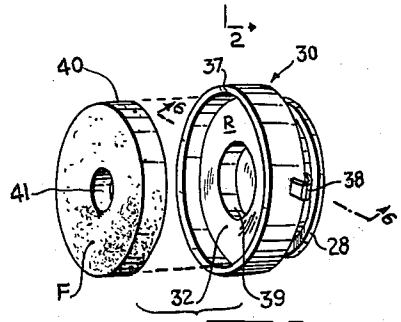


Fig. 7.



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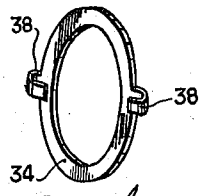

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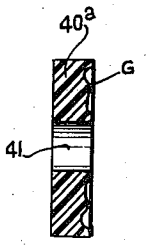

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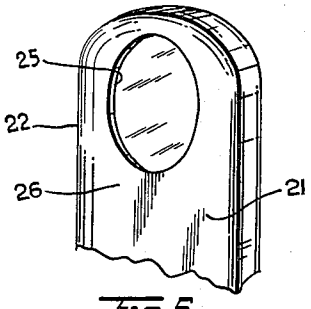

Fig. 5.

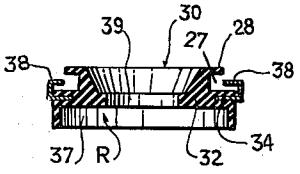

Fig. 6.

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INTERCHANGEABLE DISC FOR SURGICAL DRAINAGE DEVICE

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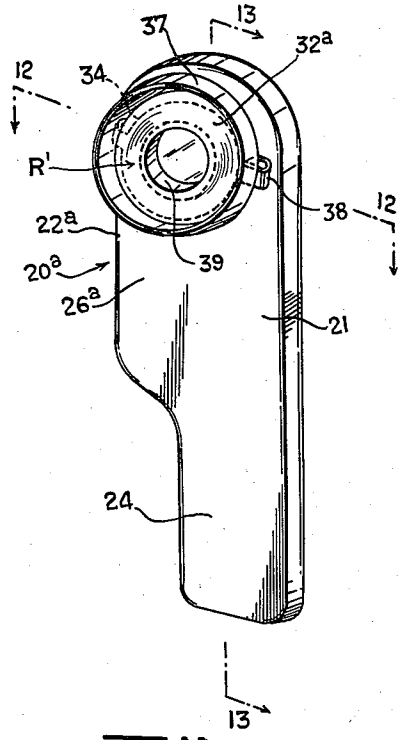

Fig. 11.

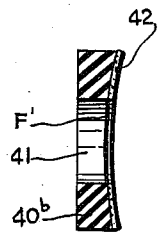

Fig. 9.

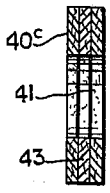

Fig. 10.

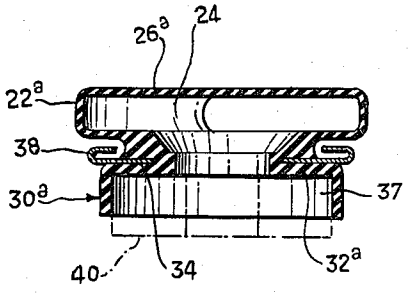

Fig. 12.

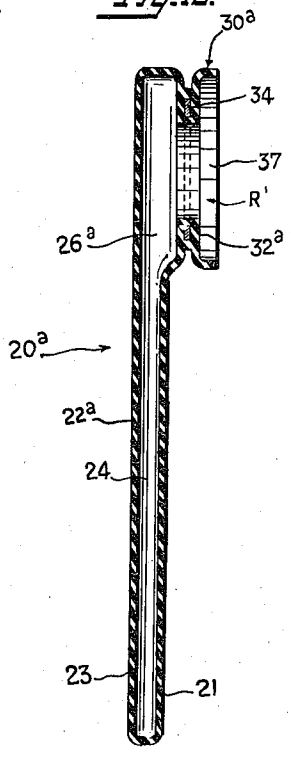

Fig. 13.

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3,077,192
INTERCHANGEABLE DISC FOR SURGICAL DRAINAGE DEVICE

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Filed Feb. 1, 1962, Ser. No. 170,405
2 Claims. (Cl. 128—283)

This invention relates to the art of surgical drainage devices.

According to the invention there is provided an improved support for a drainage bag assembly including a shallow cup-shaped member provided with a flange adapted to engage the rim of an opening in the drainage bag. A resilient annular disk may be removably inserted in the cup-shaped member to overlay the body of the wearer. The disk has an opening which is axially aligned with an opening in the wearer's body. The disk may be made of sponge rubber or a variety of other materials, and may have a smooth or grooved face. The cup-shaped member may be formed of rubber and may be integrally molded with the drainage bag. A flexible stiffener ring may be embedded in the cup-shaped member. This ring may have hooks extending outwardly of the member for engaging ends of a strap.

A principal object of the invention is to provide a surgical appliance adapted to effect drainage of a body opening with greater comfort to the wearer thereof, greater protection to the lining of the body opening, improved sanitation, etc.

A further object is to provide a drainage bag assembly for a colostomy opening or the like, in which the assembly is adapted to support resilient pressure disks of various types.

Another object is to provide a novel cup-shaped support for a resilient pressure pad, the support having a flexible flange engageable with a rim of an opening in a drainage bag.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

FIG. 1 is a side elevational view of an assembly embodying the invention.

FIG. 2 is a longitudinal sectional view taken on line 2—2 of FIG. 1.

FIG. 3 is an exploded perspective view of parts of the assembly.

FIG. 4 is a perspective view of a resilient ring employed in the assembly.

FIG. 5 is a perspective view of part of a drainage bag.

FIG. 6 is a sectional view taken on line 6—6 of FIG. 3.

FIG. 7 is a perspective view of a resilient disk.

FIG. 8 is a sectional view taken on line 8—8 of FIG. 7.

FIGS. 9 and 10 are sectional views similar to FIG. 8 of other resilient disks.

FIG. 11 is a perspective view of another drainage appliance according to the invention.

FIG. 12 and FIG. 13 are sectional views taken on lines 12—12 and 13—13, respectively, of FIG. 11.

Referring first to FIGS. 1 and 2, there is shown a surgical appliance assembly 20 including a flexible rubber or plastic bag 22 having opposed walls 21, 23. This bag may have a closed or open narrow lower tubular end 24. If the bottom end 24 is open, it may be closed by a suitable clamp (not shown). The upper or wider

end 26 of wall 21 of the bag is formed with a round hole 25, best shown in FIGS. 2 and 5. Detachably engaged with the bag is a dished support member 30. This member has an annular flange 28 formed at the rear thereof and defining a groove 27 with the annular back 32 of the support member. The rim of hole 25 can be stretched to fit over the flange and into the groove 27 so that the bag is removably supported on the support member 30. Embedded in the back 32 of the support member is a flat springy metal ring 34, best shown in FIGS. 2 and 4. This ring stiffens the back 32 of the support member. Diametrally opposed extensions are formed at opposite edges of the ring. These extensions are bent to form hooks 38 adapted to engage ends of a strap S shown in dotted lines in FIG. 1. The strap may extend around the wearer's body to secure the appliance assembly thereon.

The support member 30 has a forwardly extending cylindrical flange 37 which defines a shallow dished recess R with the forward side of the back 32 of member 30; see FIGS. 2 and 3. In this dished recess removably fits an annular disk 40 having a central hole 41 somewhat smaller than central hole 39 in member 30. This hole aligns with drainage hole H formed in the wearer's body B as indicated in FIG. 2.

The disk 40 is made of soft sponge rubber and its forward face F extends outwardly of the free edge of flange 38 since the disk 40 is thicker than the depth of the dished recess R.

The assembly of bag 22, support member 30 and disk 40 provides a comfortable, sanitary, surgical drainage appliance for draining waste from the body opening H. The resilient disk 40 conforms in shape to curved or irregular body contours. Instead of forming the disk 40 of sponge rubber, it may be made of flexible solid rubber or plastic; it may have a putty-like viscous mass; it may be a mass of fibrous material such as cotton; or one or more layers may be made of porous paper or cellulose.

In FIGS. 7 and 8 the disk 40^a is shown made of plastic. The disk 40^b of FIG. 9 is made of solid resilient rubber. The disk 40^c of FIG. 10 is made of a plurality of layers 43 of fibrous material secured to each other by adhesive. The front surface F of disk 40 may be flat. Alternatively, the surface may be curved convex or concave. Surface F' of disk 40^b shown in FIG. 9 is concave and is coated with a pressure sensitive tacky, adhesive layer 42 which insures that the disk is held securely and prevented from lateral movement when the tacky layer is placed against the skin of the wearer's body.

Disk 40^a is formed with an annular groove G in which a suitable viscous medicament or ointment may be placed for therapeutic purposes.

Regardless of the consistency of the mass of the annular disk, it will conform to the contour of the wearer's body around hole H to prevent leakage of liquids. The disk can readily be removed from the dished recess and replaced with another when required.

In FIGS. 11–13 is shown another assembly 20^a in which the upper part 26^a of bag 22^a is integrally formed with the support member 30^a at annular back 32^a of the dished recess R'. Ring 34 is embedded in the back 32^a. In other respects the assembly 20^a is similar to assembly 20 and corresponding parts are identically numbered. Disk 40 or one of the equivalent disks 40^a–40^c may be removably inserted in the recess R' for the same sanitary, sealing purposes as described above.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and that various changes and modifications may

be made within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:

1. A surgical drainage assembly, comprising a bag having flexible, opposed walls, one of said walls having an opening therein, an annular support member having an annular back and forwardly extending cylindrical flange defining a dished recess, an annular flange integral with said back and defining an endless groove therewith, said opening in the one wall having a rim removably seated in said endless groove, an annular resilient disk removably seated in said recess, the thickness of said disk being greater than the depth of said recess, said disk having a free annular end surface extending beyond said member to conform with the contour of a wearer's body surface, said disk having a central hole aligned axially with the openings in said member and said one wall, and a flat springy, annular ring embedded in said annular back, said ring having diametrally opposed extensions extending outside of said annular back, said extensions being formed with hooks for engaging ends of a strap to support the bag on the wearer's body.

2. A surgical drainage assembly, comprising a bag having flexible, opposed walls, one of said walls having an opening therein, an annular support member having an annular back and forwardly extending cylindrical flange defining a dished recess, an annular flange integral with said back and defining an endless groove therewith, said opening in the one wall having a rim removably seated in said endless groove, an annular resilient disk removably seated in said recess, the thickness of said disk being greater than the depth of said recess, said disk having a free annular end surface extending beyond said member to conform with the contour of a wearer's body surface, said disk having a central hole aligned axially with the openings in said member and said one wall, and a flat springy, annular ring embedded in said annular back, said ring having diametrally opposed extensions extending outside of said annular back, said extensions being formed with hooks for engaging ends of a strap to support the bag on the wearer's body, said disk having a groove in said end surface to receive a medicament.

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