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SELF-CARRIED URINAL FOR MALE USE

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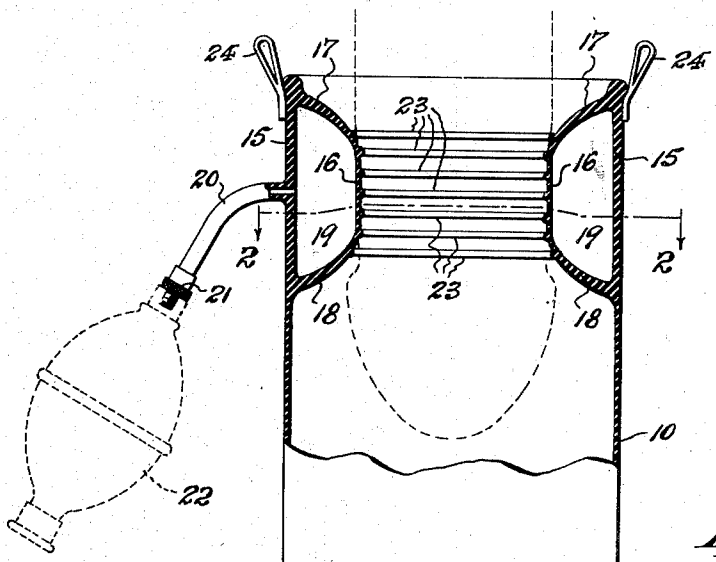

Fig. 1

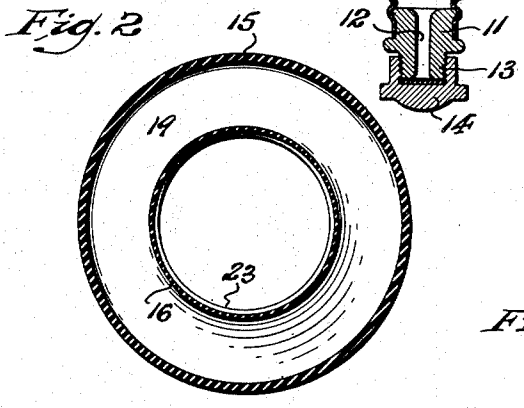

Fig. 2

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SELF-CARRIED URINAL FOR MALE USE

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4 Claims. (Cl. 128—295)

This invention relates to self-carried urinals for male use, and the invention has reference, more particularly, to a urinal reception bag adapted to be attached to and carried on the person of the user to receive involuntary discharge of urine.

The invention has for an object to provide a urinal reception bag into which the penis of the user can be inserted, said bag having an inflatable elastic annular cell within the mouth thereof to encircle the inserted penis, whereby to both comfortably and securely affix the bag to the latter for support and carriage thereby, as well as to effectively seal the bag thereto against leakage.

The invention has for a further object to provide a urinal bag body made of rubber or like elastic material, wherein the inflatable elastic annular cell within the mouth thereof comprises a relatively thin internal elastic wall joined to a relatively thick external elastic wall which forms the mouth end portion of the bag body, whereby the internal wall of the cell readily stretches and expands in response to air under pressure introduced into said cell, so as to firmly embrace the inserted penis with bag body supporting and sealing effect, while the external elastic wall of the cell, although less readily stretchable, is nevertheless adapted for sufficient stretching effect to yield and accommodate the cell to such variations in size of the inserted penis as may from time to time occur, thus avoiding exercise by the inflated cell of unduly restrictive or painful pressure upon the penis, and thereby assuring the comfort of the user of the bag without impairing security of its attached supported relation to the penis, or its leakproof sealed relation thereto.

Another object of the invention is to provide the penis contacting surface of the internal wall of the supporting and sealing cell of the bag body with means adapted to effect both strong gripping as well as tight sealing engagement with the inserted penis.

The above and other objects will be understood from a reading of the following detailed description of this invention in connection with the accompanying drawings, in which:

Fig. 1 is a longitudinal sectional view, in part elevation, of the self-carried male urinal bag according to this invention; and Fig. 2 is a transverse sectional view therethrough, taken on line 2—2 in Fig. 1.

Referring to the drawings, the reference character **10** indicates the body of the urinal reception bag, which is made of a liquid impervious, flexible material, such as rubber or the like. Suitably connected with the closed bottom end of the bag body **10** is a nipple **11** providing an axial drain passage **12**. The outer end portion **13** of said nipple is externally screw-threaded. If the bag is to be used merely as a urine drip collector, said nipple **11** is closed by an internally screw-threaded cap **14**, which is adapted to be screwed onto said end portion **13** thereof, thus closing the bottom end of the bag. If the user is required to use, in addition to the bag body **10**, a large capacity urine receiver (not shown), which is ordinarily strapped to and carried upon a leg of the user, then the cap **14** is removed and a conduit or tube (not shown) is coupled to the nipple **11** and led from the bag body **10** to said receiver.

Provided within the open top or mouth end of the bag body **10** is an inflatable hollow annular elastic cell of substantially semi-circular cross-sectional shape, the same being formed by a straight external or back wall and a

bowed or curved internal or front wall. The external or back wall of said cell comprises a preferably thickened continuation of the wall of the bag body, and thus provides a normally perpendicular wall section **15**. The internal or front wall of the cell is integrally joined by its upper and lower margins to the inner face of the back wall section **15**, so as to bow outwardly therefrom into the interior of the bag body mouth. Said internal or front cell wall comprises a relatively thin midsection **16**, joined to the back wall section **15** by top and bottom marginal portions **17** and **18**, which are preferably of tapering thickness toward said thin midsection **16**. The thus related cell walls enclose a cell chamber **19** into which air under pressure can be introduced and confined with desired expanding effect upon the cell.

Communicating with the cell chamber **19**, through the back wall section **15** thereof, is an inflation tube **20**, which terminates in a valved coupling **21** to which a suitable air pump bulb **22** (shown by broken lines in Fig. 1) can be detachably connected and operated to inflate the cell with compressed air. After inflation of the cell, the air pump bulb **22** is detached, and the valve coupling **21** of the inflation tube **20** is closed, thereby confining the air under pressure within the cell.

To apply the urinal bag in use, the annular elastic cell is deflated, whereupon the user can easily insert the penis into the open top or mouth of the bag body **10** and through the deflated cell. The bag body having been thus applied, air under pressure is introduced into the cell chamber **19**, whereby to inflate and expand the cell, so as to cause the latter to firmly engage and embrace the inserted penis. Owing to the fact that the midsection **16** of the internal or front wall of the cell is relatively thin, and therefore the most easily stretchable part of the cell, the pressure of the inflating air meets a minimum resistance at such wall area, with the consequence that such wall area readily bulges out under the pressure so as to be forced into close and tightly snug fitting gripping and sealing engagement with the penis. Since the external or back wall section **15** of the cell is relatively thick as compared with the thin front wall mid-section **16**, and therefore less easily stretched, it offers greater resistance to the pressure of the inflating air, so that the major force of the air pressure is desirably directed against the front cell wall and toward the penis engaged by the latter; nevertheless the external or back wall section **15** of the cell is elastically yieldable to a degree sufficient to respond to external pressure exerted upon the cell as a whole by such enlarging variations in size of the penis as may from time to time occur, thus permitting the cell to expand and contract as a whole in compensation of variations of penis size, without exercising unduly restrictive or painful pressure upon the penis, and without relaxing the supporting and sealing grasp of the cell upon the latter.

Owing to the substantially semi-circular shape of the internal or front wall of the cell as based upon and backed by the normally straight relatively thick external or back cell wall, and as connected with the latter by the thickening top and bottom marginal portions **17** and **18**, the inflated cell is self-braced in a cantilever-like manner, against undue perpendicular vibration of the bag body, when the latter is attached by the cell to the penis, and consequently risk of loosening, shift or displacement of the bag body relative to the penis is substantially avoided, thus further assuring maintenance of good supporting and sealing connection of the bag body with the latter.

To further assure secure non-slipping and sealing grasp of the penis by the inflated attachment cell of the bag body, it is desirable to roughen the penis contacting surface of the internal or front wall of said cell. One and a preferable means for this purpose comprises a plurality of vertically spaced, externally projecting annular ribs **23**, which are formed as integral parts of the internal or front wall of the cell.

When attached to the penis by the inflatable annular cell, the urinal reception bag is so strongly and securely supported thereby that, in most cases wherein the user is not required to be unduly active, or when used by bed patients or by wheel chair patients, there is no necessity for use of additional body attached supporting harness,

straps, belts or the like. However, if the user desires to employ additional support of such character, the bag body **10** may be provided with attachment loops **24** for connection of the bag body to such additional support.

Having now described my invention, I claim:

1. A self-carried urinal receiver for male use comprising an upwardly open bag body having within the open mouth thereof an inflatable annular elastic cell formed by an external wall extending substantially in the plane of the bag body wall and an internal wall of substantially semi-circular cross-section joined by its top and bottom margins to said external wall, whereby to enclose an annular air chamber projecting into and around the bag body interior, means to introduce air under pressure into said chamber whereby to expand the cell for the purposes described, and said internal wall of the cell having a plurality of vertically spaced annular ribs projecting from its outer surface.

2. A self-carried urinal receiver for male use comprising an upwardly open bag body having within the open end mouth thereof an inflatable annular elastic cell formed by an external wall extending substantially in the plane of the bag body wall and an internal wall of substantially semi-circular cross-section joined by its top and bottom margins to said external wall, whereby to enclose an annular air chamber projecting into and around the bag body interior, said external wall of the cell being of substantial thickness and the internal wall of the cell being relatively thin so as to offer less resistance to cell expanding stretch than does said external wall, said internal wall of the cell having a plurality of vertically spaced annular ribs projecting from its outer surface, and means to introduce air under pressure into said chamber whereby to expand the cell for the purposes described.

3. A self-carried urinal receiver for male use comprising an upwardly open bag body having within the open mouth thereof an inflatable annular elastic cell formed by an external wall extending in the plane of the bag body wall and an internal wall of substantially semi-circular cross-section joined by its top and bottom margins to said external wall, whereby to enclose an annular air chamber projecting into and around the bag body interior, said external wall being of substantial thickness, said internal wall comprising top and bottom marginal portions corresponding in thickness to the thickness of the external wall at points of juncture therewith and thence tapering to merge with a relatively thin mid-section which offers minimum resistance to cell expanding stretch, said thus formed internal wall being adapted to stabilize the cell against undue perpendicular vibration, and means to introduce air under pressure into said chamber whereby to expand the cell for the purposes described.

4. A self-carried urinal receiver for male use as defined by claim 3, wherein the mid-section of the internal wall of the cell is provided with a plurality of vertically spaced annular ribs projecting from its outer surface.

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