

[54] URINARY DRAINAGE DEVICE

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[58] Field of Search 128/283, 294, 295

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[57]

ABSTRACT

A urinary drainage device adapted to be slipped over and held on the penis of an incontinent patient to permit the patient to urinate and direct the urine to a container which comprises a stretchable neck portion adapted to hold the device on the penis, a hollow bulblike body portion for the penis and a narrow end portion adapted to be connected to a drainage tube.

7 Claims, 8 Drawing Figures

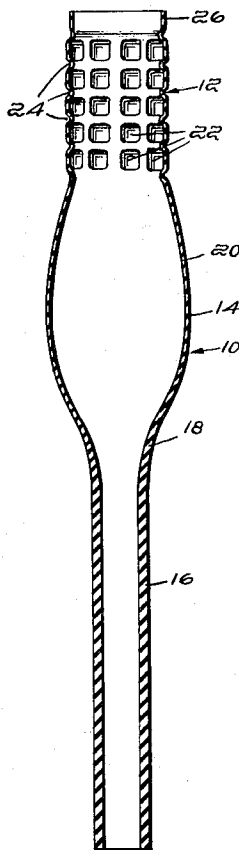


Fig. 1.

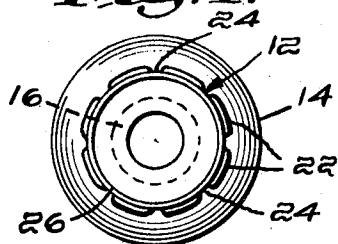


Fig. 2.

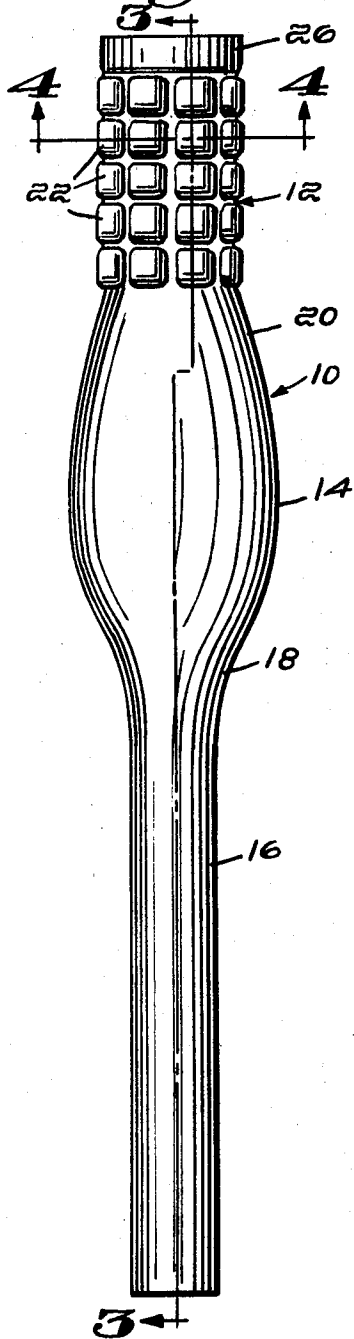
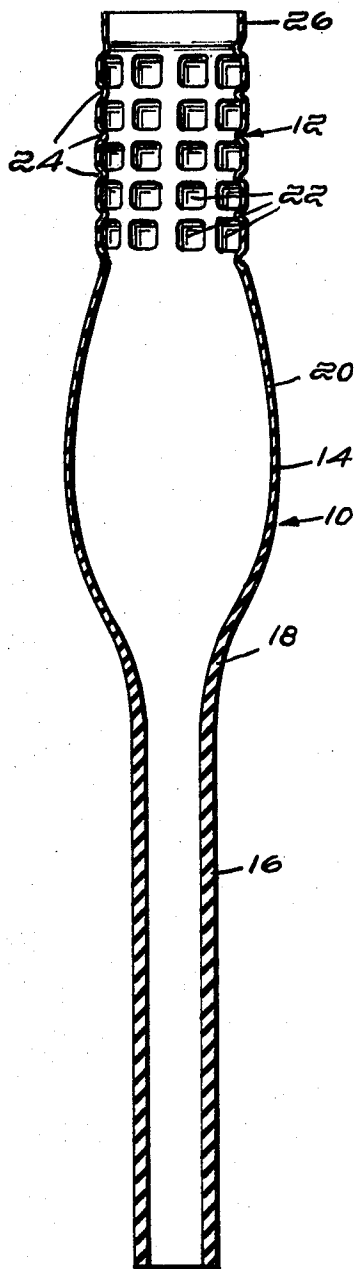


Fig. 3.



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Fig. 4.

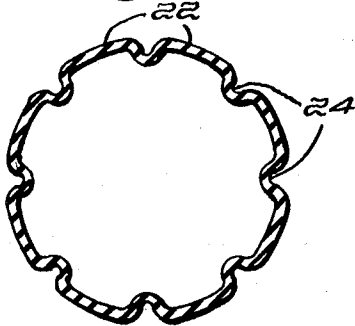


Fig. 7.

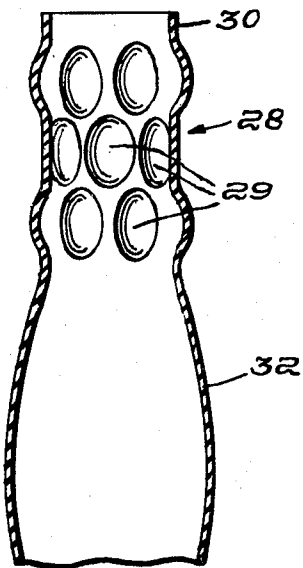


Fig. 5.

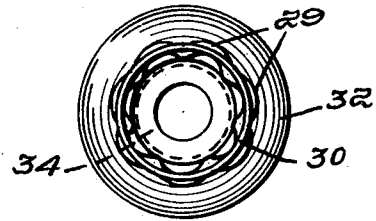


Fig. 6.

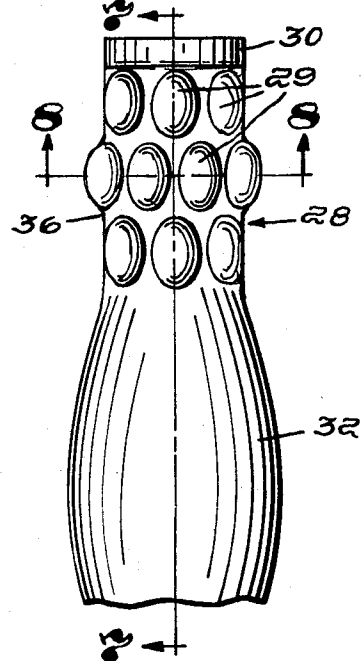
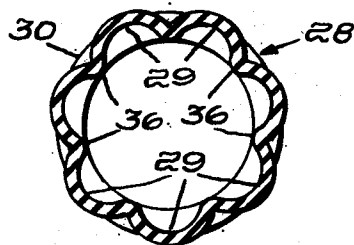


Fig. 8.



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URINARY DRAINAGE DEVICE

This invention relates to a urinary drainage device for incontinent patients.

The invention has for an object to provide a novel and improved urinary drainage device for use by incontinent patients which is sanitary, comfortable to wear and which is provided with novel means for retaining it in place and to prevent accidental displacement thereof.

With this general object in view and such others as may hereinafter appear, the invention consists in the urinary drainage device as hereinafter described and particularly defined in the claims at the end of this specification.

In the drawings illustrating the preferred embodiment of the invention:

FIG. 1 is an end view of the device;

FIG. 2 is a side elevation of the device of FIG. 1;

FIG. 3 is a cross sectional view taken on the line 3—3 of FIG. 1;

FIG. 4 is a cross sectional view taken on the line 4—4 of FIG. 2;

FIG. 5 is an end view of a modified form of the invention;

FIG. 6 is a fragmentary side elevation of the modified form of the device;

FIG. 7 is a cross sectional view of the device taken on the line 7—7 of FIG. 6; and

FIG. 8 is a cross section taken on the line 8—8 of FIG. 6.

In general, the present invention contemplates a novel and improved urinary device which is particularly adapted to be used by incontinent male patients in hospitals or nursing homes wherein the disposal or measurement of the patient's urine presents a problem since the patient is usually unconscious and has no control over his urinary discharge and is unable to relieve himself in a normal manner. The present device provides a sanitary and comfortable device to be slipped over the patient's penis and includes novel means for retaining the device comfortably in place so that accidental displacement thereof is reduced to a minimum.

Prior to the present invention the disposal or measurement of incontinent male patients' urine was accomplished in basically two ways — one, the patient was catheterized and in the other manner a condom is rolled over the end of a drainage tube and taped in place and the end cut off to form a passage into the tube. The condom is then rolled up over the patient's penis and secured thereto by tape. Each of the above means has rather serious disadvantages. It is not always desirable or safe to catheterize an incontinent patient since he may move in a manner such that the catheter is forcefully withdrawn and his bladder damaged or, in addition, irritation to the urinary tract may result from long periods of catheterization. The second means is obviously quite crude and has numerous disadvantages. In the first place, the condom may be easily broken as the patient twists or turns in bed causing the patient's urine to cover him and the bed which is not only uncomfortable but results in the necessity for numerous changes of bedding. Another perhaps more serious disadvantage resides in the fact that the glands of the penis rub against the end of the drainage tube and infection often results. The condom is often taped too tightly in place, thus causing a loss of blood circulation in the penis and discomfort as well as infection to occur. Another serious difficulty resides in the fact that urine is liable to back up within the device and cause serious irritation and infection of the patient's penis and accurate measurement of the patient's urine impossible due to seepage from the device.

The present invention provides a urinary drainage device wherein substantially all of the above disadvantages are eliminated. The present device includes a neck portion and a body portion for encircling the patient's penis and an integral narrow drainage tube portion to which may be connected another longer tube through which the urine may pass to be collected in a leg urinal or to a container secured to the side of a bed or positioned under the bed.

One of the principal advantages of the present invention lies in the novel structure of the neck portion wherein a plurality

of small suction cups, each separated by upstanding ribs, are provided in the inner surface thereof. The cups lightly but firmly grip the skin of the penis and the rib portions provide a series of dams to prevent urine passed by the patient from backing up or seeping from within the bulbous body portion. Thus, skin irritation is substantially prevented. The neck portion is elastic and clings firmly to the penis as it rises and falls or expands or contracts without being too constrictive.

Referring now to the drawings illustrating the preferred embodiment of the invention and particularly to FIGS. 1 and 2, 10 represents the present urinary drainage device which includes an elastic or stretchable hollow, tubular neck portion 12 of a size such that it may be slipped or rolled over the patient's penis to firmly grip the shaft thereof, an integral hollow bulblike body portion 14 into which the patient's penis is received and a rather narrow exit tube portion 16. As shown in FIGS. 3 and 4, the body portion 14 is preferably 3 inches in length and 1 1/2 inches in diameter and the neck portion may be 1 1/2 inches in length and 1 inch in diameter. The tube portion may be of any desired length. The above dimensions may vary and are illustrative only. It will be understood that the overall size of the present device may vary for different patients and the proportions of neck and body remain the same.

In practice, it is preferred to produce the present device by a dip molding process and is preferably made of latex rubber or a similar substance which is pliable and elastic.

In order to strengthen the body portion 14 of the device, the lower portion 18 thereof is molded to be of substantially twice the thickness of the upper portion 20. This provides sufficient strength to enable the device to resist possible rupturing due to stress applied as the patient turns or twists while the device is in place.

Referring now to FIGS. 2, 3 and 4 illustrating the preferred form of the invention, a plurality of substantially square depressions 22 defined by a series of intersecting raised ribs 24 are molded into the inner surface of the neck portion. A flat band 26 defines the outer end of the neck portion and is adapted to encircle and engage the uppermost end of the patient's penis. When the device is positioned on the penis, the suction cups grip and hold the device in place.

In a modified form of the present invention the device comprises a neck portion 28, a band 30 at the upper end thereof, a bulblike body portion 32 and a tubular exit or drainage portion 34. It will be apparent that the rib, neck, body and exit portions are similar to those portions defined in connection with FIG. 1. The basic difference between the two forms of the invention lie in the neck portion 28. As shown in FIGS. 5 through 8, a plurality of oval shaped concave depressions are molded therein and defined by upstanding ribs 36. The depressions form suction cups which grip the penis of the wearer and due to the suction created make the device difficult to dislodge once it is in operative position on the penis. The ribs 36 not only define the margins of the depressions but also form dams to prevent urine seepage as do the ribs 24 of FIG. 2.

From the foregoing description it will be apparent that the present novel urinary drainage device provides an economical, highly efficient and sanitary device for use primarily by patients who are unconscious or otherwise are unable to control the discharge of their urine. The device is not only comfortable to the wearer, but also substantially eliminates the causes of irritation, infection and discomfort frequently resulting from the use of prior devices.

Having thus described the invention, what is claimed is:

1. A urinary drainage device adapted to be worn by incontinent patients which comprise a hollow member having a stretchable neck portion, a bulblike body portion and a narrow end portion arranged to be connected to a drainage tube to direct the flow of the wearer's urine into a container, the neck portion having a plurality of suction cups integrally formed therein, said cups being defined by intersecting ribs, said cups gripping the wearer to prevent displacement of the device, and the ribs serving as dams to prevent a back flow of urine whereby to reduce irritation of the skin.

- 2. A urinary device as defined in claim 1 in which the upper end of the neck portion includes a smooth stretchable band.
- 3. A urinary device as defined in claim 1 in which the suction members are square in cross section.
- 4. A urinary device as defined in claim 1 wherein the suction members are oval in cross section.
- 5. A urinary device as defined in claim 1 wherein the suction members are defined by a plurality of ribs intersecting each other at right angles.
- 6. A urinary device as defined in claim 1 wherein the suc-

tion members are circular in cross sectional shape.

7. A urinary drainage device adapted to be worn over the penis of male patients who are unable to control their urinary functions comprising a hollow body member having a narrow neck portion and a narrow exit portion, means in the neck portion for retaining the device on the patient's penis, said means comprising a plurality of suction cups defined by intersecting ribs, and means integral with the exit portion for directing the flow of the patient's urine into a container.

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