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T. H. McDONELL
INCONTINENCE DEVICES
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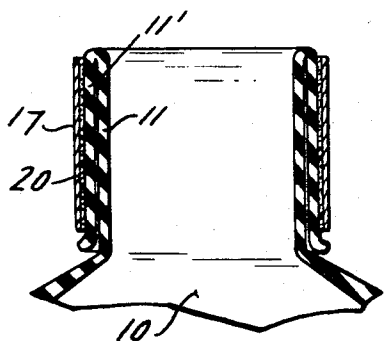
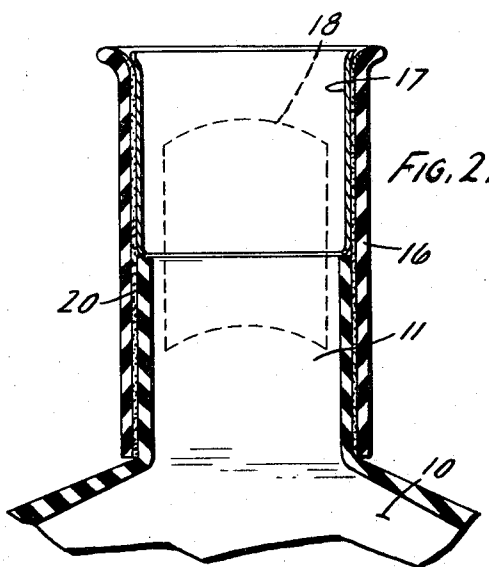
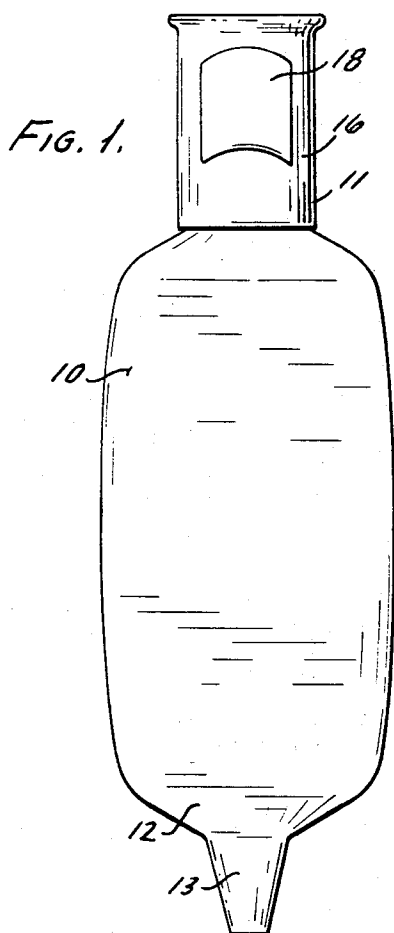
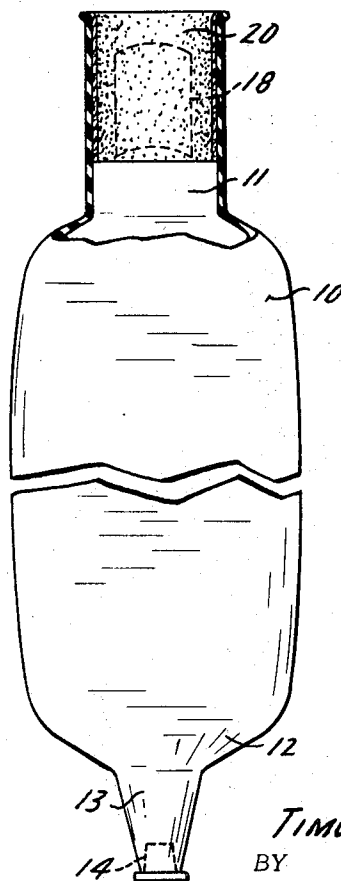


FIG. 4.



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ABSTRACT OF THE DISCLOSURE

A male incontinence sheath is provided which is generally tubular in form and is made of thin, elastic and flexible rubber-like material, said sheath having a tapered lower end portion terminating in a nozzle adapted to have a drain tube separably secured thereto, and said sheath including a highly elastic neck member having a non-irritant adhesive coating on the inner surface thereof, said neck member having finger gripping means thereon to facilitate the installation and removal of said sheath.

This invention relates to improvements in incontinence devices, and more particularly to a novel sheath-type incontinence device adapted to be worn by male patients who cannot control their urinary discharge.

Heretofore various types of devices have been used with incontinent patients to avoid wetting clothes or the soiling of beds, etc., which is embarrassing for the patient as well as unsanitary and likely to cause bed sores. In addition, the necessity for frequently changing the patient's soiled garments and bed sheets is extremely time-consuming, which is a problem in many hospitals and nursing homes wherein there is a shortage of attendants. The use of a catheter or other indwelling evacuating device to drain a patient's bladder is unsatisfactory because they have been found to cause infection in many instances, and the trend of modern medical practice is to discourage the use of such internal instruments. Unfortunately, the external sheath-type incontinence devices heretofore employed with male patients are also unsatisfactory because they are difficult to put on, they are uncomfortable to wear, and they are likely to work loose and slip off in a short time, particularly if the patient is ambulatory.

With the above considerations in mind, the principal object of the present invention is to provide a novel and improved incontinence sheath which is relatively easy to put on, which is not uncomfortable to wear, and which is firmly secured in position once it has been applied on a patient.

Further objects of the present invention are to provide a novel and improved incontinence sheath which is adaptable to fit male patients of various sizes, which will not bind or strangle, and which novel sheath is leakproof and completely reliable in use.

A still further object of the present invention is to provide an improved incontinence sheath which is inexpensive to manufacture, thereby providing an economical disposable device which eliminates the tedious chore of washing and sanitizing the sheath for re-use, as is done with many of the relatively expensive incontinence devices in present use.

With the above and other objects in view, which other objects and advantages will become apparent hereinafter, the invention comprises the improved sheath-type incontinence device described in the following specification and also any and all modifications or variations thereof as may come within the spirit of said invention, and within the scope of the appended claims.

In the accompanying drawing, wherein two forms of the invention are illustrated, and wherein the same reference numerals designate the same or similar parts in all of the views:

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FIG. 1 is a side elevational view of one form of the improved incontinence sheath;

FIG. 2 is an enlarged fragmentary vertical sectional view through the upper portion of the sheath illustrated in FIG. 1;

FIG. 3 is a side elevational view of another preferred form of said incontinence sheath, with the upper portion thereof broken away and shown in section; and

FIG. 4 is an enlarged fragmentary sectional view of the sheath illustrated in FIG. 3 with the neck portion thereof turned back upon itself.

Referring now more particularly to the drawing, the improved incontinence sheath comprising the present invention is generally tubular in form and includes a body portion 10, an open upper end portion or neck 11 of reduced diameter, and a tapered lower end 12 terminating in a depending nozzle 13. In the use of an incontinence device of the general type shown, the upper portion of the sheath is fitted over the patient's male member and an elongated flexible drain tube (not shown) is attached to the nozzle 13 on the sheath lower end and is directed to a suitable container or receptacle where the patients' urine is collected, said container being periodically emptied by an attendant.

In accordance with the present invention said tubular sheath is formed of a highly elastic and flexible rubber or rubber-like material, including latex, and said sheath material is substantially thinner and less rigid than the material employed in conventional incontinence sheaths. The result is not only a sheath which is less expensive to manufacture, but which thin, lightweight and pliable device is less cumbersome and uncomfortable to wear. It is to be understood, of course, that numerous natural or synthetic material could be employed, and the invention is not to be limited in this respect. Moreover, the invention is not to be confined to a sheath identical in design and shape to that shown in the drawings. It is contemplated, for example, that the sheath body and neck portions could be of the same diameter, in lieu of the illustrated design, and all such variations in the appearance or shape of the sheath are intended to be covered herein as may come within the spirit of said invention.

Preferably, the material forming the upper, neck portion of the sheath is extremely thin and elastic so that it can be easily applied on a patient as described, and the sheath body 10 is molded somewhat thicker and more rigid in order to eliminate excessive twisting. Moreover, the lower, nozzle end 13 of the sheath is relatively thick to provide a rigid mounting member on which the elongated drain tube (not shown) can be wedgingly secured. A closure plug 14 (FIG. 3) can be provided for said nozzle when the tube is not attached.

As hereinabove mentioned, one of the disadvantages of prior incontinence sheaths is that they are difficult to install on the patient. With the present invention, however, the thinner, more elastic nature of the material forming the sheath neck permits said neck portion 11 to be easily manually stretched open and fitted over the patient's male member, and the lightweight, pliable nature of said material eliminates excessive binding or strangulation, which can cause edema of the distal parts.

With respect now more particularly to the upper neck portion 11 of the form of the present invention illustrated in FIGS. 1 and 2, it will be seen that adhesively or otherwise secured to and around the exterior periphery of said neck, and extending a substantial distance thereabove, is a sleeve 16 which is formed of suitable highly elastic material, and the inner surface of which sleeve is covered with a suitable non-irritative adhesive substance 20 (FIG. 2), such as is well known in the medical and surgical arts. Said sleeve may be of any desired height, and prior to use of the sheath a readily-removable paper or

plastic strip 17 (FIG. 2) preferably covers the adhesive-coated inner surface of said sleeve to prevent opposed portions of said surface from inadvertently sticking together and also preventing foreign objects from adhering thereto, thus promoting sanitation. When it is desired to use the sheath said adhesive-covering strip 17 can be quickly and easily pulled off and discarded, there being a small projecting tab or the like to facilitate the grasping and removal of said strip.

With reference again to FIG. 1 of the drawing, a short length or piece 18 of less elastic material is secured on the exterior of the sleeve 16, there being a similar piece (not shown) on said sleeve at a point diametrically opposite said first piece. Said lengths of material 18 are permanently secured to said sleeve along their side edges and the material portions between said side margins are free to permit an attendant to insert one or more fingers therebeneath to manually stretch and spread the sleeve and sheath neck portion during application, as will be hereinafter seen.

With reference now to FIGS. 3 and 4 of the drawing, illustrated therein is another form of the present invention that may be preferred in many instances because of its simplified design and lower cost. In this simplified version the sheath is similar to that shown in FIGS. 1 and 2 with the exception that the sleeve 16 surrounding the exterior of the sheath neck has been eliminated. In this form of the invention the adhesive coating 20 is carried directly on the inner surface of the sheath neck 11, and the gripping elements 18 are secured on the outer surface of said neck.

In FIG. 3 the upper, neck portion 11 of the sheath is shown without any paper or plastic covering the adhesive inner surface thereof in order to permit a clear view of said adhesive 20, but it is to be understood that in actual practice a suitable covering strip such as the strip 17 in FIG. 4 will ordinarily be utilized. In FIG. 4 the upper portion 11' of the sheath neck is shown turned back upon itself to expose the adhesive surface 20 and a protective strip 17 is carried in covering relation therewith. This arrangement provides ready access to said protective strip to facilitate its removal, and the sheath can be packaged in this form if desired.

In the use of the novel incontinence sheath comprising the present invention on a male patient who cannot control his urine discharge, the attendant first tears off the protective paper strip 17 covering the adhesive-coated inner surface of the neck. He then inserts his fingers under the gripping elements 18 on the neck exterior and manually stretches and spreads the upper end of said sheath and slips it onto the patient's male organ, as described. With the sheath thus positioned the attendant can release the gripping elements 18 and the elastic nature of said sheath neck portion will cause it to closely surround the male member with the adhesive inner surface 20 of said sheath adhering thereto. The result is a secure engagement which is not only leakproof, but which is also slip-proof and minimizes the possibility of the sheath becoming disengaged when the patient moves. Moreover, because of the thin, flexible nature of said neck portion said sheath will not bind or strangle the wearer.

When it is desired to remove the present incontinence sheath the attendant has merely to re-insert his fingers beneath the gripping elements 18 and manually spread the upper portion of said sheath, slight manual force freeing the adhesive connection and permitting the withdrawal of said sheath. It is contemplated that because of its low cost the present sheath will ordinarily be discarded after short use, in contrast to the more expensive conventional incontinence devices which are often tediously cleaned and sanitized for re-use.

From the foregoing description it will be seen that the present invention provides a novel incontinence sheath device for male patients which is a definite improvement in the art. Unlike prior sheaths intended for the same

purpose, the present device is easy to put on, and it is not uncomfortable to wear. Moreover, once the sheath has been applied on a patient it is firmly secured in position by means of adhesive and it will not work loose or come off, as sometimes occurs with conventional sheath-type incontinence devices. A further important advantage of the present sheath is that it is relatively inexpensive to manufacture and can be economically disposed of after short use.

Still further advantages of the novel and improved incontinence sheath comprising the present invention are that its elastic nature makes said sheath readily adaptable for patients of various sizes, it will not bind or strangle, and it is leakproof and completely reliable in use.

As hereinabove mentioned, it is to be understood that the invention is not to be limited or confined to a sheath identical in all respects to the forms illustrated and described herein. It is contemplated, for example, that in lieu of the illustrated adhesive arrangement a separate adhesive strip could be utilized. In short, it is to be understood that the novelty inherent in the present sheath is the combination of a highly elastic rubber or latex sheath with an adhesive inner surface which ensures that said sheath is firmly secured in position once it has been applied on a patient. It is this unique combination of structural features that is the essence of the present invention and it is intended to cover herein not only the illustrated forms of sheaths incorporating said combination but also any and all modifications or variations thereof as may come within the spirit of said invention, and within the scope of the following claims.

What I claim is:

1. An incontinence sheath for use on a male patient, comprising: a tubular body formed of thin elastic and flexible rubber-like material; a tapered lower end portion formed on said sheath body terminating in a nozzle adapted to have a drain tube removably secured thereto; a highly elastic neck member on the upper end of said sheath having an open top; said neck member comprising a sleeve secured to and around the exterior of the sheath neck and projecting upwardly therefrom, said sleeve being formed of a more flexible and elastic material than said sheath proper, a plurality of gripping means on and projecting from the surface of said neck member adapted to be manually engaged to stretch said neck member open to receive a patient's male member; a non-irritant adhesive coating on the inner surface of said neck member adapted to securely maintain said sheath in position on the patient's male member; and a readily-removable covering strip over said neck member adhesive inner surface.

2. The incontinence sheath recited in claim 1 wherein each of said plural gripping means comprises a piece of material having its opposite ends secured to said neck member and having a free, loop-like intermediate portion under which an attendant can insert a finger to facilitate the manual stretching of said sheath neck member to an open condition.

3. The incontinence sheath recited in claim 2 wherein said gripping means comprise a pair of elastic material pieces arranged on diametrically-opposed sides of said sheath neck member.

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