



(12) **DEMANDE DE BREVET CANADIEN**
CANADIAN PATENT APPLICATION

(13) **A1**

(22) Date de dépôt/Filing Date: 2019/05/28

(41) Mise à la disp. pub./Open to Public Insp.: 2020/11/28

(51) Cl.Int./Int.Cl. *A61F 2/44* (2006.01)

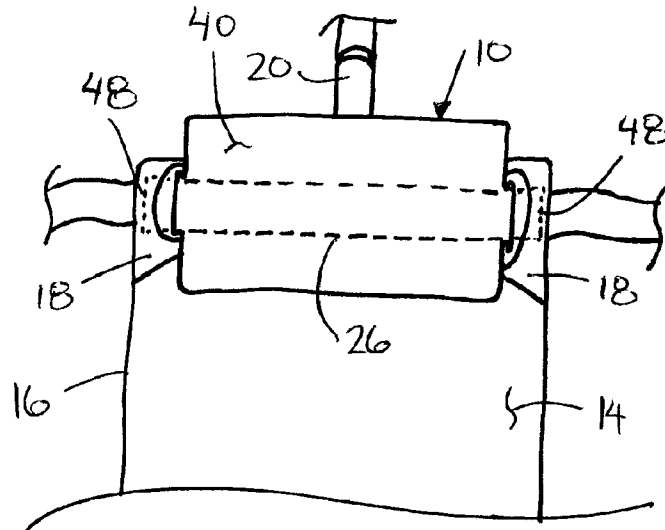
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(54) Titre : ELEMENT DE FIXATION DE RAIDISSEUR POUR SAC COLLECTEUR D'URINE

(54) Title: STIFFENER ATTACHMENT FOR URINE-COLLECTING BAG



(57) **Abrégé/Abstract:**

A stiffener attachment mounts on a urine-collecting bag to prevent undesirable folding or creasing of the bag. The bag includes front and rear panels defining a fluid containment space therebetween, two strap slots in the panels at top corners of the bag and a leg strap extending through the strap slots to secure the bag to a leg of a user. The stiffener attachment has a main body having a length equal to a space between the two strap slots in the bag and two end portions protruding beyond the opposing ends of the main body portion. The main body portion is stiffer than the bag. The end portions can be inserted into the strap slots, but the ends of the main body portion cannot such that the main body portion acts as a stiffener between the strap slots to resists the strap slots being pulled inwardly by the strap.

ABSTRACT

A stiffener attachment mounts on a urine-collecting bag to prevent undesirable folding or creasing of the bag. The bag includes front and rear panels defining a fluid containment space therebetween, two strap slots in the panels at top corners of the bag and a leg strap extending through the strap slots to secure the bag to a leg of a user. The stiffener attachment has a main body having a length equal to a space between the two strap slots in the bag and two end portions protruding beyond the opposing ends of the main body portion. The main body portion is stiffer than the bag. The end portions can be inserted into the strap slots, but the ends of the main body portion cannot such that the main body portion acts as a stiffener between the strap slots to resists the strap slots being pulled inwardly by the strap.

STIFFENER ATTACHMENT FOR URINE-COLLECTING BAG

FIELD OF THE INVENTION

The present invention relates to urine-collecting bags, commonly known as a leg bag, of the type supported on a leg of a person which may have a urinary disorder or who may not be able to move easily, and more particularly the present invention relates to attachment which can be secured to the urine-collecting bag to resist folding and creasing of the bag.

BACKGROUND

The leg bag is required when an individual has a medical issue that makes a catheter necessary. These issues could include urinary incontinence (leakage), urinary retention (not being able to urinate), surgery or another health problem. A catheter is inserted through the urinary tract into the bladder where a bulb is inflated with a saline solution, preventing the catheter from being removed. The urine can then flow freely into the bag.

Leg bags allow for greater freedom of movement to individuals requiring continual catheter use, and can be hidden under clothing. The leg bag is attached to the thigh or calf of either leg, as preferred by the user.

In the normal configuration, as the bag fills, the weight of the bag increases, the top strap holding the bag sags, and subsequently the top edge of the bag folds into its center, causing discomfort to the leg.

UK Patent Application, GB2092896 by John William Slater discloses an attachment for urine-collecting bags that comprises a stiffening member which is held between a bag and the wearer's leg in use so as to prevent folds arising in the vicinity of the inlet and enable passage of fluid through the inlet into the bag. The installation of the attachment requires the straps to be fully removed and reinserted through both

the attachment and the bag which can be difficult for some elderly users.

US patent application publication no. US 2011/0202024 A1 by Diedre Lisa Cozzens discloses a catheter leg bag support system for supporting and holding in place a catheter bag. An adjustable belt is secured around a user's waist, with a drop
5 down strap having an adjustable length attached to the belt. A hook and loop fastener wrap is provided on the drop down strap to attach to excessive catheter tubing in order to keep the tubing in a desired position. A reinforced stabilizer member is attached to the drop down strap to support a catheter bag, and can keep the catheter bag flat. Button posts attached to the reinforced catheter leg bag can quickly and easily connect
10 to a conventional catheter leg bag. The catheter bag is secured in place along a user's leg using a soft and stretchable band that can be adjusted as loose or tight as desired. The numerous straps and buttons is complex and cumbersome to attach to a user as compared to the simple straps of a conventional leg bag.

SUMMARY OF THE INVENTION

15 According to one aspect of the invention there is provided a stiffener attachment for a urine-collecting bag including front and rear panels defining a fluid containment space therebetween, two strap slots in the panels spaced apart across a top end of the bag and a leg strap extending through the strap slots to secure the urine-collecting bag to a leg of a user, the stiffener attachment comprising:

20 a main body portion having a length extending in a longitudinal direction between opposing ends of the main body portion which is approximately equal to a space between the two strap slots in the bag;

two end portions extending in a longitudinal direction outwardly beyond the opposing ends of the main body portion respectively;

25 each end portion having a height perpendicularly to the longitudinal

direction between opposing top and bottom edges of the end portion which is less than a corresponding height of the strap slots so as to enable insertion of the two end portions into the strap slots respectively;

each end of the main portion having a height perpendicularly to the longitudinal direction between opposing top and bottom edges of the main portion which is greater than the corresponding height of the strap slots to prevent the opposing ends from being inserted into the strap slots respectively;

the main body having a stiffness which resists bending about an axis oriented perpendicularly to the longitudinal direction which is greater than a corresponding stiffness of the bag.

The end portions of the attachment can be inserted into the strap slots, but the ends of the main body portion cannot such that the main body portion acts as a stiffener between the strap slots to resists the strap slots being pulled inwardly by the strap. More particularly, the attached is a rigid or stiff plastic member which prevents the folding of the top edge of the leg bag during use, and reduces the sagging of the bag on the leg.

The stiffener attachment can fit most leg bags that incorporate slots for the attachment straps. It must be manufactured from a plastic material that is sufficiently rigid to allow for the spreading of the upper edge of the leg bag, but pliable enough to fit to the contours of the leg. The side tabs must be of the correct size to fit into the strap slots, but allow sufficient room for the straps to be inserted and used correctly.

In the illustrated embodiment, the main body portion is rectangular in shape and the end portions are also rectangular in shape. When each end portion includes a pair of corners at a free outer end of the end portion, the pair of corners are preferably bevelled or rounded.

Preferably the height of each end portion is approximately equal to a height of the strap slots.

Preferably each end of the main body portion protrudes both upwardly from the top edge of the respective end portion and downwardly from the bottom edge of the respective end portion to define two shoulders at the end of the main body portion.
5 The two shoulders may be aligned along a common axis oriented perpendicularly to the longitudinal direction.

BRIEF DESCRIPTION OF THE DRAWINGS

One embodiment of the invention will now be described in conjunction
10 with the accompanying drawings in which:

Figure 1 is a front elevational view of the stiffener attachment shown separated from the urine-collecting bag;

Figure 2 is a rear elevational view of the stiffener attachment shown mounted on the urine-collecting bag; and

15 Figure 3 is a top view of the stiffener attachment shown mounted on the urine-collecting bag.

In the drawings like characters of reference indicate corresponding parts in the different figures.

DETAILED DESCRIPTION

20 Referring to the accompanying figures, there is a urine collecting bag stiffener attachment generally indicated by reference numeral 10. The attachment 10 is particularly suited for providing stiffening of a urine collecting bag 11 to prevent undesirable folding or creasing of the bag 11 which may otherwise cause discomfort to the user.

25 A typical urine collecting bag 11 with which the attachment 10 is intended

to be used, generally comprises a front panel 12 spanning a front side of the bag and a rear panel 14 spanning a rear side of the bag. The front and rear panels are fused to one another along a boundary seam 16 extending generally about a perimeter of the panels to surround a collection space between the panels which is capable of
5 containing fluids therein.

The front and rear panels are generally rectangular in shape to define a rectangular shape to the bag. The boundary seam is arranged such that the panels protrude outwardly beyond the boundary seam 16 at each of the four corners of the bag 11 to define four corner portions 18 in the bag which are outside of the boundary of the
10 containment space that contains fluid within the bag.

An inlet tube 20 is inserted between the front and rear panels to traverse the boundary seam at a central location along the top edge of the bag. The inlet tube includes a passage therethrough in open communication with the collection space within the bag. An outer end of the inlet tube is suitably arranged for connection to
15 suitable supply tubing such as the drainage tubing from a catheter of the user of the bag.

An outlet tube 22 is similarly inserted between the front and rear panels to traverse the boundary seam at a central location along the bottom edge of the bag. The outlet tube includes a passage therethrough in open communication with the
20 collection space within the bag so that fluids within the collection space can be drained out of the bag through the outlet tube at the bottom. A threaded cap 24 can be removably secured at the outer end of the outlet tube for selectively containing fluids in the bag by closing the passage of the outlet tube when the cap is mounted on the bag.

The bag 11 is secured to the leg of a user with a top strap 26 connected
25 to the bag at the top end thereof and a bottom strap 28 connected to the bag at a bottom

end thereof in which both straps are typically formed of an elastic material suitable for strapping about the circumference of the leg of the user. In order to couple the straps to the bag, the bag includes two top slots 30 penetrated through both the front and rear panels of the bag at the uppermost pair of corner portions 18 of the bag and two bottom
5 slots 32 penetrated through both the front and rear panels of the bag at the lowermost pair of corner portions 18 of the bag. Each of the slots is elongated and generally vertically oriented so as to be substantially parallel to the opposing upright sides of the bag. Each of the slots has a height between opposing top and bottom ends thereof which is approximately equal to or only slightly greater than a width of the strap between
10 the respective top and bottom edges thereof such that the straps can be readily inserted through the slots while providing proper support to the bag in a mounted position.

The top strap 26 is inserted from the front side through one of the top slots 30 followed by passing of the strap along the rear side of the bag 11 between the two top slots 30, followed by exiting of the top strap through the other top slot from the rear
15 side to the front side thereof. The bottom strap 28 is similarly inserted from the front side through one of the bottom slots 32 followed by passing of the strap along the rear side of the bag between the two bottom slots, followed by exiting of the bottom strap through the other bottom slots from the rear side to the front side thereof.

The attachment 10 according to the present invention comprises a single
20 panel of a stiff plastic material which is bendable, yet remains sufficiently resilient such that it is biased to return to a generally flat and planar configuration. More particularly the plastic material of the attachment 10 is a suitable thickness such that it is able to resist bending to a much larger degree than the plastic material forming the front and rear panels of the bag.

25 The attachment 10 includes a main body portion 40 which is generally

rectangular so as to have a length in a longitudinal direction between opposing ends 42 and so as to have a height perpendicular to the longitudinal direction between opposing top and bottom edges 44 and 46. The length of the main body portion is approximately equal to the space between the two top slots 30 or the two bottom slots 32 of the bag.

- 5 The height of the main body portion is three or more times greater than the width of the top and bottom straps between the corresponding top and bottom edges thereof.

The attachment 10 further includes two end portions 48 which are supported at longitudinally opposed ends of the main body portion to protrude longitudinally outward beyond the ends 42 thereof. Each of the end portions 48 is also
10 generally rectangular in shape. The length of each end portion 48 is defined in the longitudinal direction protruding outwardly from the corresponding end 42 of the main body portion to a respective free end of the end portion 48. The height of each end portion 48 is defined between opposing top and bottom edges of the end portion 48.

The height of each end portion is approximately equal to or slightly less
15 than the corresponding height of the slots in the bag so as to enable ready insertion of the end portions of the attachment 10 into the slot in a mounted position of the attachment on the bag. The length of each end portion may be similar to the height thereof such that a substantial portion of each end portion can be inserted into the respective slot.

20 Each of the end portions 48 is generally centred along the respective end 42 of the main body portion 40 between the top and bottom edges of the main body portion. In this manner, each end 42 of the main body portion protrudes both upwardly from the top edge of the respective end portion 48 and downwardly from the bottom edge of the respective end portion 48 to define two shoulders at the end of the main
25 body portion. The two shoulders are aligned along a common axis oriented

perpendicularly to the longitudinal direction.

Although being generally rectangular in shape, the protruding corners formed at the free outer end of each end portion 48 and the corners at each end 42 of the main body portion 40 are typically rounded or chamfered so as to prevent any sharp edges and so as to facilitate insertion of the end portions into the corresponding slots in the bag.

The attachment 10 is intended to be mounted against the rear side of the bag 11 so as to be rearwardly of the corresponding top strap 26 as shown. The opposing end portions 48 are inserted through the two top slots 30 from the rear side to the front side of the bag while the shoulders formed at the opposing ends 42 of the main body portion 40 abut the rear side of the bag 11 at respective locations immediately above and below the corresponding top slot 30.

Once the attachment 10 has been mounted in position on the bag, the bag 11 is trapped about the leg of a user in the usual manner such that the bag and the attachment 10 mounted thereon generally follow the curvature of the leg of the user as the bag extends partway about the circumference of the leg of the user. The main body portion of the attachment 10 has a stiffness which resist bending about an axis oriented perpendicularly to the longitudinal direction of the attachment 10 in which the stiffness is greater than the corresponding stiffness of the bag.

Although a single attachment 10 is shown mounted between the top slots 30 of the bag 11, in some instances it may desirable to provide an upper attachment 10 supported between the top slots 30 and a lower attachment 10 supported between the bottom slots 32. The lower attachment 10 would be mounted along the rear side of the bag 11 similarly to the mounting of the upper attachment 10 as described above.

As described herein, the stiffener attachment prevents folding of the leg

bag during use. The stiffener attachment is a thin but firm, plastic device with two opposing side tabs. The side tabs of the stiffener attachment insert into the strap slots of the leg bag and the stiffener attachment itself sits on the leg side of the bag with the strap in behind. An elasticized cuff can be placed around the leg at the level of the top of the leg bag to aid leg comfort. The stiffener attachment acts as a spreader, which serves two purposes - to eliminate the folding the top edge of the bag, and to reduce the sagging of the bag on the leg. Both actions serve to increase the comfort to the user when wearing the bag.

Since various modifications can be made in my invention as herein above described, and many apparently widely different embodiments of same made, it is intended that all matter contained in the accompanying specification shall be interpreted as illustrative only and not in a limiting sense.

CLAIMS:

1. A stiffener attachment for a urine-collecting bag including front and rear panels defining a fluid containment space therebetween, two strap slots in the panels spaced apart across a top end of the bag and a leg strap extending through the strap slots to secure the urine-collecting bag to a leg of a user, the stiffener attachment
 5 comprising:

a main body portion having a length extending in a longitudinal direction between opposing ends of the main body portion which is approximately equal to a space between the two strap slots in the bag;

10 two end portions extending in a longitudinal direction outwardly beyond the opposing ends of the main body portion respectively;

each end portion having a height perpendicularly to the longitudinal direction between opposing top and bottom edges of the end portion which is less than a corresponding height of the strap slots so as to enable insertion of the two end
 15 portions into the strap slots respectively;

each end of the main portion having a height perpendicularly to the longitudinal direction between opposing top and bottom edges of the main portion which is greater than the corresponding height of the strap slots to prevent the opposing ends from being inserted into the strap slots respectively;

20 the main body portion having a stiffness which resists bending about an axis oriented perpendicularly to the longitudinal direction which is greater than a corresponding stiffness of the bag.

2. The stiffener attachment according to claim 1 wherein the main body portion is rectangular in shape.

25 3. The stiffener attachment according to either one of claims 1 or 2

wherein the height of each end portion is approximately equal to a height of the strap slots.

4. The stiffener attachment according to any one of claims 1 through 3 wherein the end portions are rectangular in shape.

5 5. The stiffener attachment according to claim 4 wherein each end portion includes a pair of corners at a free outer end of the end portion, the pair of corners being bevelled or rounded.

6. The stiffener attachment according to any one of claims 1 through 5 wherein each end of the main body portion protrudes both upwardly from the top edge
10 of the respective end portion and downwardly from the bottom edge of the respective end portion to define two shoulders at the end of the main body portion.

7. The stiffener attachment according to claim 6 wherein the two shoulders are aligned along a common axis oriented perpendicularly to the longitudinal direction.

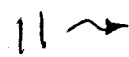


FIG. 1

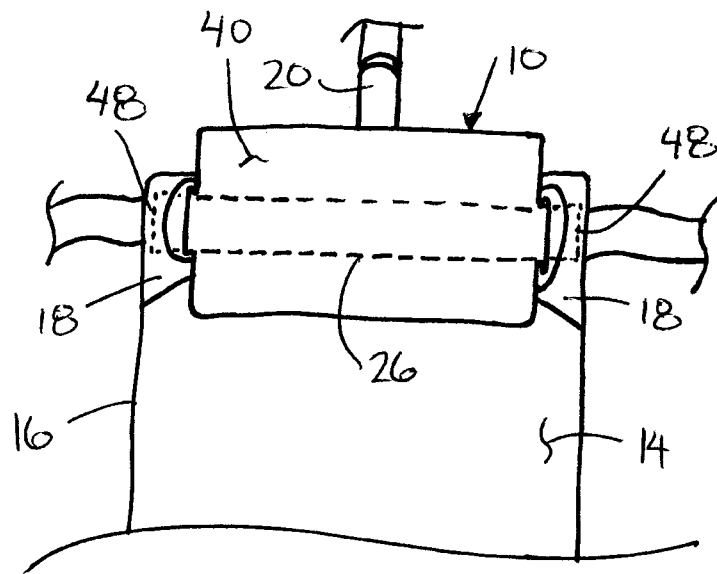


FIG. 2

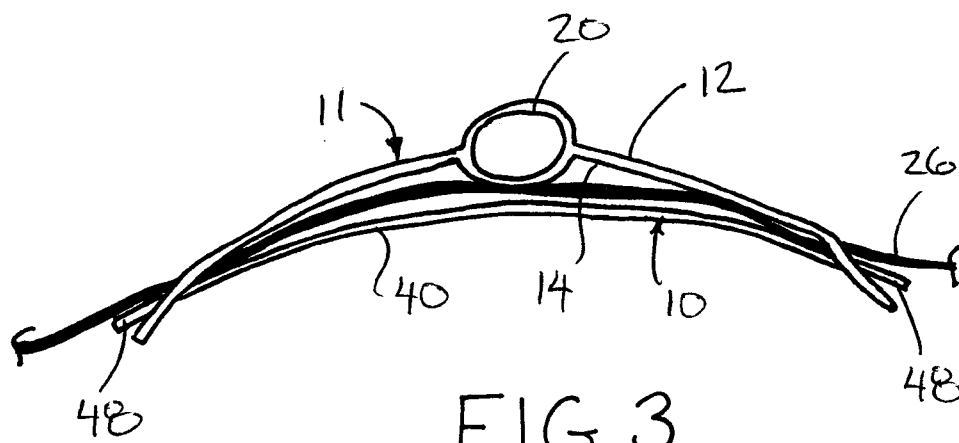


FIG. 3

