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An agency of Industry Canada

CA 2726348 C 2016/01/19

(11)(21) **2 726 348**

(12) **BREVET CANADIEN**
CANADIAN PATENT

(13) **C**

(86) **Date de dépôt PCT/PCT Filing Date:** 2009/05/29
(87) **Date publication PCT/PCT Publication Date:** 2009/12/10
(45) **Date de délivrance/Issue Date:** 2016/01/19
(85) **Entrée phase nationale/National Entry:** 2010/11/30
(86) **N° demande PCT/PCT Application No.:** CA 2009/000756
(87) **N° publication PCT/PCT Publication No.:** 2009/146534
(30) **Priorité/Priority:** 2008/06/02 (US61/057,960)

(51) **Cl.Int./Int.Cl.** ***A61J 19/00*** (2006.01)

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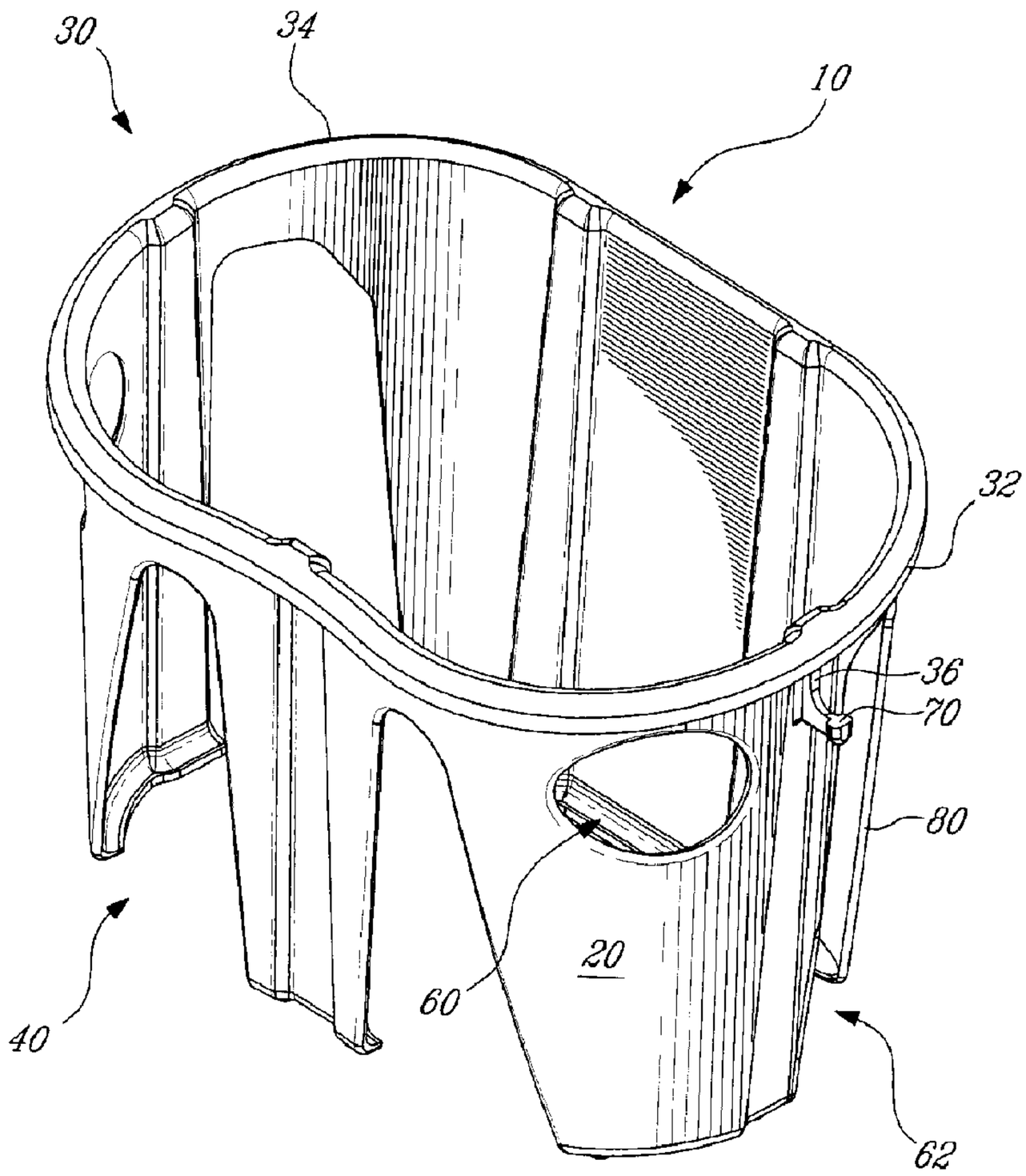
(54) **Titre : SUPPORT A MAIN DE VOMIT BAG**
(54) **Title: HAND-HELD VOMIT BAG HOLDER**



(57) **Abrégé/Abstract:**
A hand-held vomit bag holder comprising a tubular wall defining a hollow space adapted to receive a vomit bag, and having an upper end and a lower end. A vomit bag can be attached to vomit bag attachments adjacent to the upper end of the tubular wall. At

CA 2726348 C 2016/01/19

(11)(21) **2 726 348**

(13) **C**

(57) **Abrégé(suite)/Abstract(continued):**
least one apertured handle for receiving at least one finger of a user can be present in the tubular wall. At least two diametrically opposed neck strap connectors can be present and adjacent to the upper end of the tubular wall for attaching a neck strap. A downwardly protruding arm can extend from the upper end of the tubular wall, spaced-apart from the tubular wall and engageable to a graspable structure.

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
10 December 2009 (10.12.2009)

PCT

(10) International Publication Number
WO 2009/146534 A1

(51) **International Patent Classification**:
A61J 19/00 (2006.01)

(21) **International Application Number**:
PCT/CA2009/000756

(22) **International Filing Date**:
29 May 2009 (29.05.2009)

(25) **Filing Language**: English

(26) **Publication Language**: English

(30) **Priority Data**:
61/057,960 2 June 2008 (02.06.2008) US

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(81) **Designated States** *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) **Designated States** *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

[Continued on next page]

(54) **Title**: HAND-HELD VOMIT BAG HOLDER

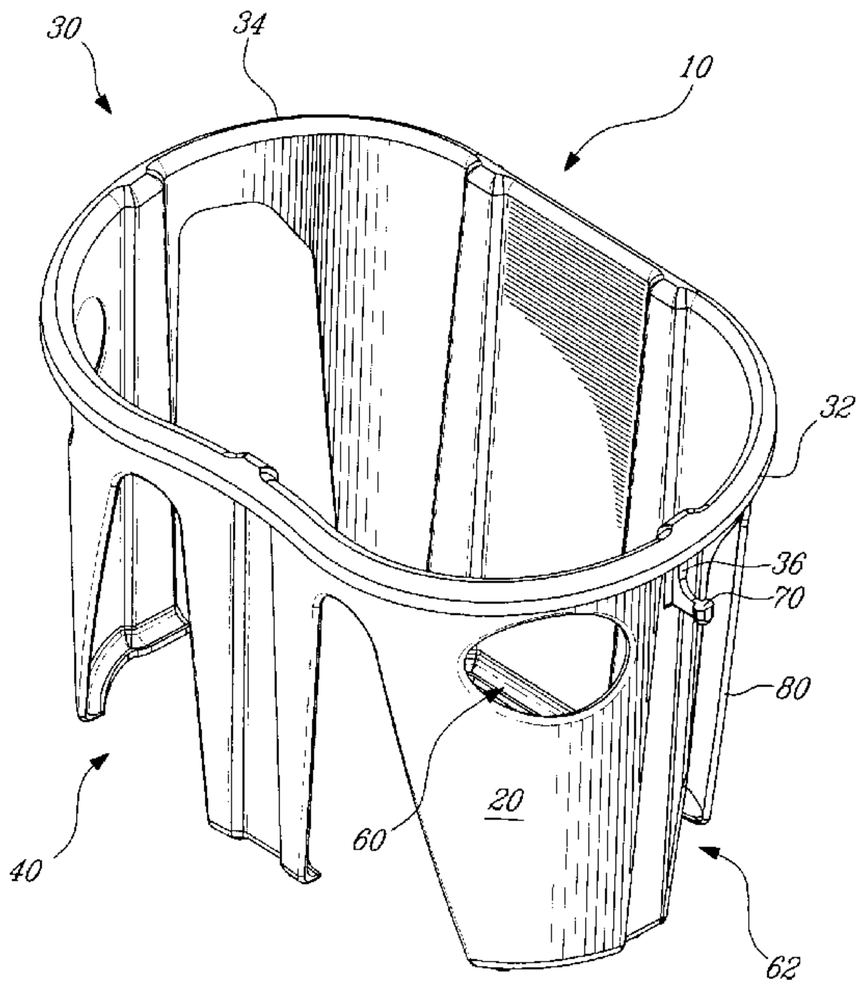


Fig-1

(57) **Abstract**: A hand-held vomit bag holder comprising a tubular wall defining a hollow space adapted to receive a vomit bag, and having an upper end and a lower end. A vomit bag can be attached to vomit bag attachments adjacent to the upper end of the tubular wall. At least one apertured handle for receiving at least one finger of a user can be present in the tubular wall. At least two diametrically opposed neck strap connectors can be present and adjacent to the upper end of the tubular wall for attaching a neck strap. A downwardly protruding arm can extend from the upper end of the tubular wall, spaced-apart from the tubular wall and engageable to a graspable structure.

WO 2009/146534 A1

WO 2009/146534 A1

Published:

— *with international search report (Art. 21(3))*

Hand-Held Vomit Bag Holder

TECHNICAL FIELD

The invention relates to a holder for a vomit bag, more particularly to a holder holding a vomit bag for use by a patient during vomiting episodes.

BACKGROUND OF THE ART

Medical conditions or unusual situations, such as stress-related situations, can lead to vomiting by a subject. It is known to provide vomit bags to subjects potentially exposed to such conditions or situation, in order to allow them to collect the vomit right from the mouth or nose before it reaches the ground, another being or an object of the subject's environment. Typically, the subject grabs the vomit bag by both sides and positions it aligned with and adjacent to his mouth and/or nose.

Since vomiting is a sudden and often unpredictable condition, the gripping of the vomit bag and opening before positioning it near the mouth and nose is not always possible. Also, the grabbing force of the hands should be sufficient for resisting to the expulsion force of the vomit so that the subject will not drop the bag. This can be complicated by the momentary increase in involuntary movements occurring during vomiting.

In addition, subject having limited or restrained use of their hands are unable to use such vomit bags by themselves, including paralyzed or unconscious subjects. Also, subjects surprised by the need to vomit while resting or sleeping rarely have the time to reach for a vomit bag, open it, and position it in front of their mouths and noses.

After use, a typical vomit bag cannot be put aside, even for a small moment, before being carried to disposal because the soft nature of the bag will often cause it to tilt and spill its content.

Therefore, there is a need for allowing use of a pre-opened vomit bag by a subject in an awaken or sleeping state. There is also a need for a system allowing the subject a better grip of the vomit bag to ensure it will stay in place during the vomiting. There is

further a need for a system allowing a subject having a restricted or impaired use of his hands to use a vomit bag.

SUMMARY

It is an object of the present invention to provide a hand-held vomit bag holder which addresses at least one of the above-mentioned needs.

In accordance is a first aspect of the invention, there is provided a hand-held vomit bag holder comprising a tubular wall defining a hollow space adapted to receive a vomit bag, and having an upper end and a lower end longitudinally opposite the upper end; a vomit bag attachment adjacent to the upper end of the tubular wall; and a first apertured handle extending through the tubular wall and adapted and configured to receive at least one finger of a first hand of a user for holding the vomit bag holder.

In accordance with another aspect, there is provided a vomit bag holder comprising a tubular wall defining a hollow space adapted to receive a vomit bag, and having an upper end and a lower end longitudinally opposite the upper end, the length of tubular wall between the upper end and the lower end being at least that of the width of four fingers of a user; a vomit bag attachment adjacent to the upper end of the tubular wall; and at least a first and a second diametrically opposed neck strap connectors adjacent to the upper end of the tubular wall for detachably attaching a neck strap to the neck strap connectors.

In accordance with yet another aspect, there is provided a vomit bag holder comprising a tubular wall defining a hollow space adapted to receive a vomit bag, and having an upper end and a lower end longitudinally opposite the upper end; a vomit bag attachment adjacent to the upper end of the tubular wall; and a downwardly protruding arm extending from the upper end of the tubular wall, spaced-apart from the tubular wall, and engageable with a graspable structure.

In accordance with yet another aspect, there is provided a vomit bag holder comprising a tubular wall defining a hollow space adapted to receive a vomit bag, and having an

upper end and a lower end longitudinally opposite the upper end; a vomit bag attachment adjacent to the upper end of the tubular wall; an apertured handle extending through the tubular wall and adapted and configured to receive at least one finger of a user; at least a first and a second diametrically opposed neck strap connectors adjacent to the upper end of the tubular wall; and a downwardly protruding arm extending from the upper end of the tubular wall, spaced-apart from the tubular wall, and engageable with a graspable structure.

In accordance with yet another aspect, there is provided a hand-held vomit bag holder comprising a tubular body having a first end with a bag attachment, a second end longitudinally opposite the first end, and a space inside the tubular body, at least the first end being open and communicating with the space inside the tubular body to allow removable insertion of a body of a vomit bag with an open end of the vomit bag being held by the bag attachment; the vomit bag holder being characterized in that the length of tubular body between the first end and the second end is at least that of the width of four fingers of a user.

In this specification, the term “vomit” is intended to mean liquids, solids or a combination of both, expulsed forcefully from one's body through the mouth and sometimes the nose. It is used as a synonym for body waste, throw up contents, body fluid, emesis discharge, regurgitation, etc.

In this specification, the term “user” is intended to mean a human being susceptible of vomiting. It includes adults and children, patients in hospitals, pregnant women, sick individuals, nauseating subjects, etc.

BRIEF DESCRIPTION OF THE DRAWINGS

Having thus generally described the nature of the invention, reference will now be made to the accompanying drawings, showing by way of illustration a preferred embodiment thereof and in which:

Fig. 1 is a perspective view of an example of a hand-held vomit bag holder;

Fig. 2 is a left side view of the vomit bag holder shown in Fig. 1;

Fig. 3 is a front view of the vomit bag holder shown in Fig. 1;

Fig. 4 is a top view of the vomit bag holder shown in Fig. 1;

Fig. 5 is a illustration of a user grabbing the vomit bag holder shown in Fig. 1 in his hands;

Fig. 6 is a illustration of a user placing the vomit bag inside the vomit bag holder, opening the vomit bag and securing the vomit bag to the bag attachment of the holder shown in Fig. 1;

Fig. 7 is a perspective view of the vomit bag holder shown in Fig. 1 provided with a vomit bag for use and gripped to a rail of a hospital bed;

Fig. 8 is a illustration of a user wearing the vomit bag holder provided with a vomit bag using a neck strap around his neck;

It will be noted that throughout the appended drawings, like features are identified by like reference numerals.

DETAILED DESCRIPTION

Referring now to the figures, an example of a vomit bag holder is designated by numeral 10 in Fig. 1. The vomit bag holder 10 has a tubular wall 20 forming the body of the vomit bag holder 10 and defining a hollow space. The tubular wall 20 has an upper end 30 longitudinally opposite to a lower end 40. The transversal cross-section of the vomit bag holder is of obround shape with a slight curve along one of the straight sides in this example, although other cross-sectional shapes can be used in alternate embodiments. In the illustrated embodiment, the vomit bag holder has a width of 4.639 inches and a length of 7.53 inches.

The flat lower end 40 of tubular wall 20 allows to rest the vomit bag holder 10 on a flat horizontal surface without spilling the contents of a vomit bag (see Fig. 6) mounted thereto, for example.

The height of the back of the vomit bag holder is greater than the height of the front of the vomit bag holder. In the illustrated example, the height of the front of the vomit bag holder 10, which corresponds to the distance between the front side of the upper end 30 and the lower end 40 is at least the width of four fingers. The height of the back of the vomit bag holder 10 is greater than that of the front to ensure that a higher proportion of the expulsed vomit is caught by the vomit bag. In this case, it is about 5.22 inches at the back and about 4.475 inches at the front.

The ends 30 and 40, particularly the upper end 30, can have a blunt or a rounded shape. The tubular wall 20 can also outwardly bend at an end, particularly at the upper end 30, in a pointed or rounded way, to bend the upper end 30 of the tubular wall 20 below the top 34 of the vomit bag holder 10, as illustrated in Fig. 1. In an embodiment, the upper end 30 and lower end 40 are defining a substantially flat end to the tubular wall 20, as illustrated in Fig. 2 and Fig. 3. Various designs can be applied to the upper end 30 and lower end 40 of the tubular wall 20, and to the top 34 of the vomit bag holder, in order to increase comfort when in contact with or near the mouth and nose of a user.

The upper end 30 and the lower end 40 can be formed by the continuity of the tubular wall 20 and produced as such, or be assembled to the tubular wall 20 after being separately manufactured. The upper end 30 and lower end 40 can be made of a different material than the tubular wall 20, such as, for example, a material having an improved adherence or an improved rigidity over the material of the tubular wall 20.

Located at or near the upper end 30 is a bag attachment. The vomit bag holder is designed for use with disposable vomit bags which are shaped to fit the particular design of the holder, and to be removably securable to the attachment. Typically, the body portion of a vomit bag is inserted into the hollow space defined by the tubular wall

20, with the open end of the vomit bag being secured to the attachment, at the upper end 30 of the tubular wall 20.

Shown in Fig. 1 is a bag attachment including the outwardly and downwardly extending rim 32 spaced-apart from the upper end 30 and defining, with the tubular wall, a peripheral channel. The peripheral channel is designed to receive therein receives the upper periphery of the vomit bag. The closure means of the bag can be used to secure the bag to the holder. For example, if the bag comprises a closure string slidably mounted to an upper end of the bag, the closure string can be used to tie the opening of the bag to the rim. The string is inserted in the channel and tightened to secure the vomit bag to the vomit bag holder 10. The vomit bag, secured to vomit bag holder 10, extends over the rim 32 and in the hollow space. In this example, the bag measures 25 cm by 25 cm.

Alternatively, the vomit bag can include an elastic band (not shown) which secures the vomit bag to the vomit bag holder 10 by applying pressure to the outer face of the vomit bag holder, proximate to the upper end 30.

Examples of other bag attachment includes, without limitations, a pressure-operated attachment of the vomit bag onto the whole upper end 30 of the vomit bag holder 10, a Velcro^{TM}-like attachment to or near the upper end 30, or a plurality of attachment points such as protrusions, tips, pins, slits, snaps and the likes. Care must, however, be taken in choosing the attachment as perforation or breakage of the vomit bag while held in the holder is to be avoided.

Prior to use, the body of the vomit bag is positioned into the hollow space defined by the tubular wall 20 and the open end of the vomit bag is maintained in an open state by being attached to the bag attachment of the vomit bag holder 10. This arrangement allows for a ready access and immediate use of the vomit bag, the vomit bag being secured in an open position by the bag attachment. This is shown in Fig. 6. The vomit bag holder is placed on a table by the user to facilitate the placement of the vomit bag within the vomit bag holder.

In use, the user firmly grasps the vomit bag holder 10 by holding it on both sides with the palm of the hand and his fingers. Fig. 5 shows a user grabbing the vomit bag holder shown in Fig. 1 in his hands. Fig. 7 shows the vomit bag holder provided with a vomit bag. In Fig. 5, the vomit bag holder is not provided with a vomit bag to allow visualization of the placement of the fingers of the user. The user lifts the vomit bag holder next to his face and places his mouth and nose aligned with and adjacent to the obround hollow space. The user is then able to vomit inside the vomit bag provided in the vomit bag holder.

After use, gravity acts on the vomit inside the vomit bag, which retains the vomit bag within the vomit bag holder 10 by the bag attachment. After use, the substantially planar lower end 40 of the vomit bag holder can be momentarily deposited on a planar surface to allow the user to rest, prior to having to dispose of the used vomit bag.

In the illustrated embodiment, the lower end 40 of the vomit bag holder 10 is open. In alternate embodiments, it can be closed.

The generally obround shape of the illustrated vomit bag holder 10 defines a left side 22, a right side 24, a front side 26 and a rear side 28 of the tubular wall 20, as illustrated in Fig. 4. While, in the embodiment shown, the left side 22 and the right side 24 are semi-circular, and the front side 26 and rear side 28 are substantially straight to form the general obround shape of the vomit bag holder 10. In various embodiments, they can be of any shape allowing the formation of a sufficiently large hollow space to receive vomit from the user. As illustrated, the front side 26 can define a slight curved recess which can allow for an improved comfort of the user.

In the illustrated embodiment, two apertured handles, exemplified as thumb openings 60 in Fig. 1, are defined through the tubular wall on opposite transversal sides, and two additional apertured handles, exemplified as slit openings 62 in Fig. 1, on opposite transversal sides allow the user to insert his fingers therein. This helps the user in firmly grasping the tubular wall and for preventing the holder and the bag held therein from sliding downwardly when a downward vomiting force is exerted thereon. On each side, the combination of the thumb opening 60 and of the slits opening 62 form a handle. In

the illustrated embodiment, thumb openings 60 have a radius of 0.594 inches and slit openings 62 have a width of 1.284 inches.

In alternate embodiments, different shapes or forms of handles can be used instead of the handle described above and depicted. Also, a different configuration of openings can be provided. For example, at least one of the left side 22 and right side 24 of the vomit bag holder 10 can have an opening 60 allowing for at least one finger to be inserted into the tubular wall 20. This opening 60 allows for the user to securely and firmly grab the vomit bag holder 10. The opening 60 can receive any fingers, including the thumb, or a plurality of fingers from a single hand. A plurality of openings 60 can be present on at least one of the left side 22 and right side 24 to accommodate a plurality of fingers from a single hand. In an embodiment, the opening 60, or plurality of openings 60, on the left side 22 is symmetrically reproduced on the right side, forming at least a pair of openings 60 on each sides. The pair or plurality of pairs of openings 60 on each of the left side 22 and right side 24 can be diametrically opposed, or arranged in any other way to allow for a firm grip of the vomit bag holder 10 by the user and ensure the stability of the vomit bag holder 10 during and after use, whether the bag holder 10 is held by the user or put aside in any way described herein. Alternatively, at least one opening on at least one of the left side 22 and the right side 24 can take the form of a recess or slit 62 in the lower end 40 of the tubular wall 20, allowing for the insertion of at least one finger, preferably four fingers, from a single hand to be inserted into the tubular wall 20.

In an embodiment, the upper end 30 further includes a neck strap connector 70 to detachably attach a neck strap which is to be used to attach the vomit bag holder to the neck of a user, with the holder in ready position below the mouth of the user. The neck strap connector 70 can be a protrusion, a recess, or any other attachment, and is located at or near the upper end 30. In an embodiment illustrated in Fig. 1, the neck strap connector 70 is a protrusion extending outwardly from a downwardly extending protrusion 36 of the outwardly bent upper end 30. Any other type of neck strap connector 70 allowing for the attachment of a neck strap for the suspension of the vomit bag holder 10 in a stable manner, i.e. by ensuring the upward position of the vomit bag

holder 10, prior, during or after use, can be used. Fig. 8 shows a user wearing the vomit bag holder on a neck strap using the neck strap connector.

In an embodiment, the upper end 30 includes at least two neck strap connectors 70, symmetrically located on both sides of the vomit bag holder 10, to ensure the stability of the vomit bag holder 10 when suspended by a neck strap attached to the neck strap connectors 70. The two neck strap connectors 70 on or near the upper end 30 on each of the left side 22 and right side 24 can be diametrically opposed, or arranged in any other way to ensure the stability of the vomit bag holder 10 during and after use, whether the vomit bag holder 10 attached by a neck strap is suspended to, for example, the neck of the user, a hook, or a similar device. Positioning the neck strap connectors 70 transversally aligned with the center of gravity of the bag and holder combination, can help preventing unwanted tipping over of the bag's contents. In the illustrated embodiment, neck strap connectors 70 are provided at 0.541 inches from the upper end 30, in the middle of left side 22 and right side 24. The head of the protrusion is 0.198 inches wide.

The neck strap can be a ribbon able to support the weight of the vomit bag holder holding a vomit bag full of vomit. A paper or cardboard ribbon could be used, for example. However, it should be easily breakable and/or easily releasable from the neck strap connector to ensure that interventions, such as medical interventions, can be done on the user rapidly and efficiently. In one embodiment, the neck strap is a perforated cardboard ribbon, and the neck strap connectors 70 are protrusions, the user selecting a hole for the ribbon in which to penetrate the protrusion for each side, depending on a required position of the vomit bag holder on his chest. The cardboard ribbon can break next to a perforation if a sufficient threshold force is applied on the vomit bag holder. Alternatively, one or both of the neck strap connector can break if a sufficient threshold force is applied on the vomit bag holder, thereby ensuring access to the abdomen of the user.

The rear side 28 of the vomit bag holder 10 further includes a downwardly protruding gripping arm 80, extending from or near the upper end 30 of the vomit bag holder 10.

The gripping arm 80 can be directly extending from or near the upper end 30, or be joined to or near the upper end 30 by a hinge 82 attached to the arm top 84, or by any other kind of similar arrangement.

The downwardly protruding arm for engaging a graspable structure can be defined by the rear section 28 of the tubular wall itself. More particularly, both apertured handles 62 are aligned thereby defining a continuous channel wherein the graspable structure can be inserted. Thus, to engage a graspable structure (not shown), the structure is inserted in both apertured handles 62. This is shown in Fig. 7 and in Fig. 2 where the graspable structure is shown in broken lines.

The gripping arm 80 allows for the engaging or gripping of the vomit bag holder 10 on any graspable structure, such as and without being limitative a bed safety rail, providing stability to the gripped vomit bag holder 10, prior or after use. Preferably, the tilting of the gripped vomit bag holder 10 is sufficiently limited to avoid spilling of the vomit contained in the vomit bag.

The gripping arm 80 can be flexibly and resiliently extending from or near the upper end 30, in a way that allows for a backward displacement of the gripping arm 80 relative to the plane to the rear side 28 of the vomit bag holder 10. The displacement of the gripping arm 80 away from the rear wall 28 creates a space defined by the side walls 22, 24 and the gripping arm 80, in which a graspable structure can be removably inserted or engaged. Preferably, when the force resiliently spacing the gripping arm 80 away is removed, the gripping arm 80 moves towards holder, removably engaging, retaining or gripping, any graspable structure inserted between the gripping arm 80 and the side walls 22, 24. Examples of graspable structure to be used with such an embodiment of the invention include the arm of an armchair or of a wheel chair, or the wall or rail on the side of a hospital bed.

In an alternative embodiment, the arm bottom 86 is spaced-apart from the rear of the vomit bag holder 10, when not in use. The spacing between the arm bottom 86 and the vomit bag holder 10 is sized and shaped to removably engage any graspable structure inserted between the gripping arm 80 and the rest of the holder.

In an embodiment, the resilient force of the gripping arm 80 towards the holder increases the stability of the gripped vomit bag holder 10 and limits its tilting. The tilting can be frontal (perpendicular to the plane of the rear wall 28) or lateral (parallel to the plane of the rear wall 28). It will be understood that a greater resilient force is needed to prevent the lateral tilting of the vomit bag holder 10 than the frontal tilting. The length of the gripping arm 80 should be sufficient to stably grip the vomit bag holder 10 to the graspable structure, such as, for example, at least one fourth, preferably one half, and more preferably the full height of the vomit bag holder 10. The width and thickness of the gripping arm 80 should also be sufficient to stably hold the gripped vomit bag holder 10 to the graspable structure and limit its tilting. Alternately, two or more interspaced grips or arms can be used instead of one, for example.

In an embodiment, the vomit bag further includes an absorbent material layer, such as a gel, which captures liquids. The absorbent material layer substantially instantaneously holds liquids to ease handling. For example, neutralized, cured, and/or reticulated polyacrylate can be used. This absorbent material layer can form an integral part of the bag or can be provided separately and simply be placed in the bag.

The absorbent material layer can be a distinct component from the bag or it can be provided as a single-piece. For example, the gel agent can be in powder crystal or fiber form, spread out over or stuck to the bottom of the bag. It can be contained in a sachet which is placed or affixed to the bottom of the bag. For example, it can be glued. The sachet can be made of a water soluble material or made of a material that is made fragile by the liquid so that it breaks upon contact with it (e.g. paper or cellulose wadding). Alternatively, the gel agent can be inserted into a non-woven device or affixed to adhesive paper or simply affixed to or placed at the bottom of the bag.

The gel agent can include products to improve comfort conditions. For example, it can include deodorants, antiseptics, virucides, antiretroviral, microbicides, bactericides, fungicides, or reagents, etc.

In an embodiment, the vomit bag is a prior art hygienic bag, made of a liquid-proof material. In an embodiment, the vomit bag is a plastic bag. The vomit bag should be sized for attachment to the bag attachment of the vomit bag holder.

The embodiments described above are intended to be exemplary only. The scope of the invention is therefore intended to be limited solely by the appended claims.

CLAIMS:

The embodiments of the invention for which protection is sought are as follows :

1. A hand-held vomit bag holder comprising
a tubular wall defining a hollow space adapted to receive a vomit bag, and having an upper end and a lower end longitudinally opposite the upper end;
a vomit bag attachment adjacent to the upper end of the tubular wall; and
a first apertured handle extending through the tubular wall and adapted and configured to receive at least one finger of a first hand of a user for holding the vomit bag holder.

2. The hand-held vomit bag holder of claim 1, wherein said first apertured handle is a combination of two closely-spaced openings in said tubular wall.

3. The hand-held vomit bag holder of claim 2, wherein said first apertured handle is a round opening adapted to receive a thumb of said first hand of said user and a slit opening adapted to receive at least one other finger of said first hand of said user.

4. The hand-held vomit bag holder of any one of claims 1 to 3, further comprising a second apertured handle symmetrically disposed on an opposite side of the tubular wall, said second apertured handle being adapted and configured to receive at least one finger of a second hand of the user for holding the vomit bag holder.

5. The hand-held vomit bag holder of any one of claims 1 to 4, further comprising at least a first and a second diametrically opposed neck strap connectors adjacent to the upper end of the tubular wall for detachably connecting a neck strap to the neck strap connectors.

6. The hand-held vomit bag holder of claim 5, wherein said neck strap connectors are protrusions extending outwardly from opposite sides of said tubular wall.

7. The hand-held vomit bag holder of claim 6, wherein said protrusion is located adjacent said first apertured handle.

8. The hand-held vomit bag holder of any one of claims 1 to 7, wherein said tubular wall has a length between the upper end and the lower end at least that of the width of four fingers of a user.

9. The hand-held vomit bag holder of any one of claims 1 to 8, wherein said vomit bag holder has a gripping arm, said gripping arm being a downwardly protruding arm of a rear wall section of said tubular wall extending from the upper end of the tubular wall, spaced-apart from apertured side wall sections of said tubular wall, and engageable with a graspable structure.

10. The hand-held vomit bag holder of claim 9, wherein the downwardly protruding arm is flexibly and resiliently attached to the upper end of the tubular wall.

11. The hand-held vomit bag holder of any one of claims 1 to 10, wherein at least the upper end being open and communicating with the space inside the tubular body to allow removable insertion of a body of a vomit bag with an open end of the vomit bag being held by the bag attachment.

12. The hand-held vomit bag holder of any one of claims 1 to 11, wherein said upper end has an outwardly and downwardly extending rim forming part of the vomit bag attachment.

13. The hand-held vomit bag holder of any one of claims 1 to 12, wherein the hand-held vomit bag holder is substantially obround.

14. The hand-held vomit bag holder of any one of claims 1 to 13, wherein said upper end at a rear of said vomit bag holder is raised higher than said upper end at a front of said vomit bag holder.

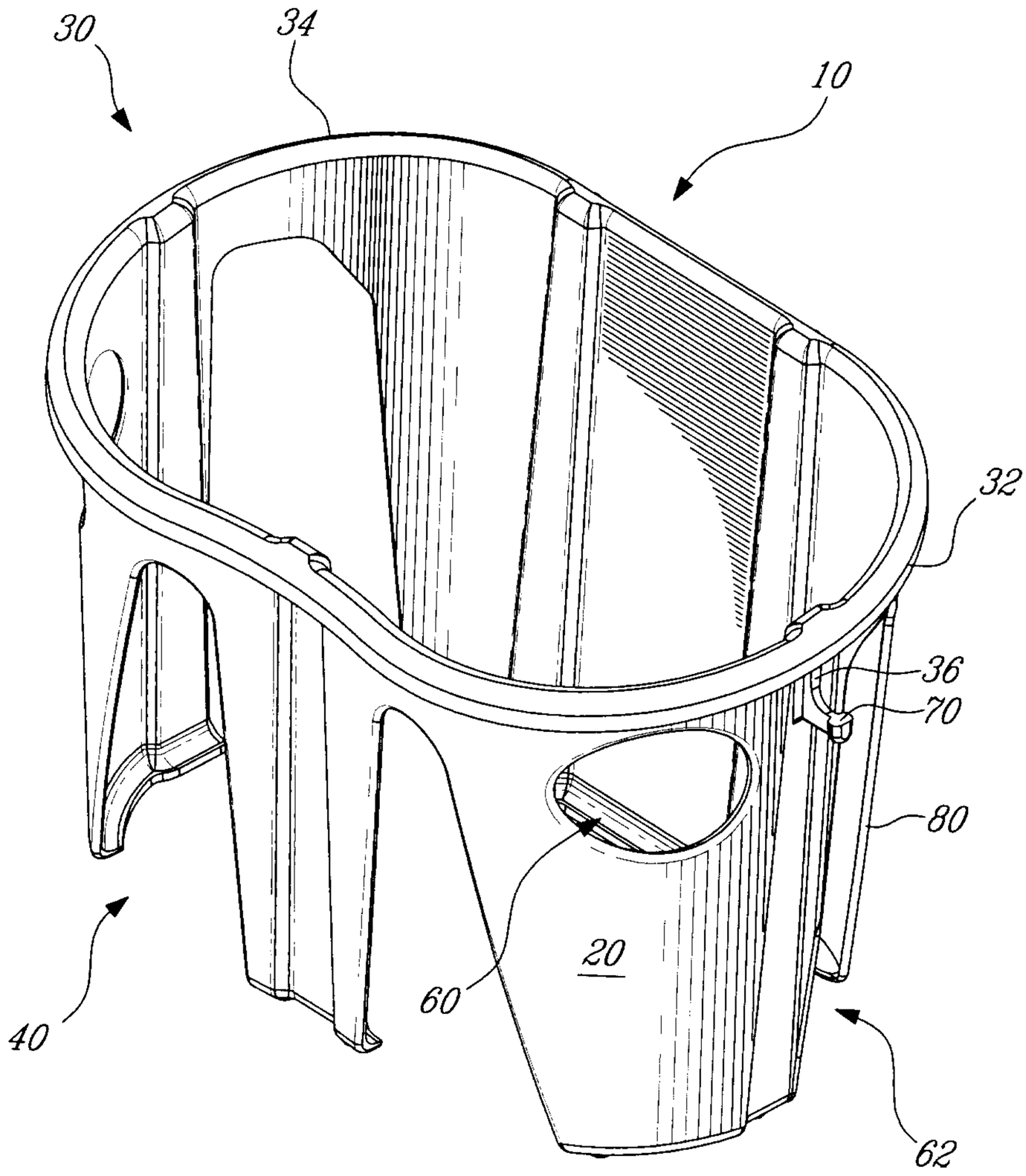


Fig-1

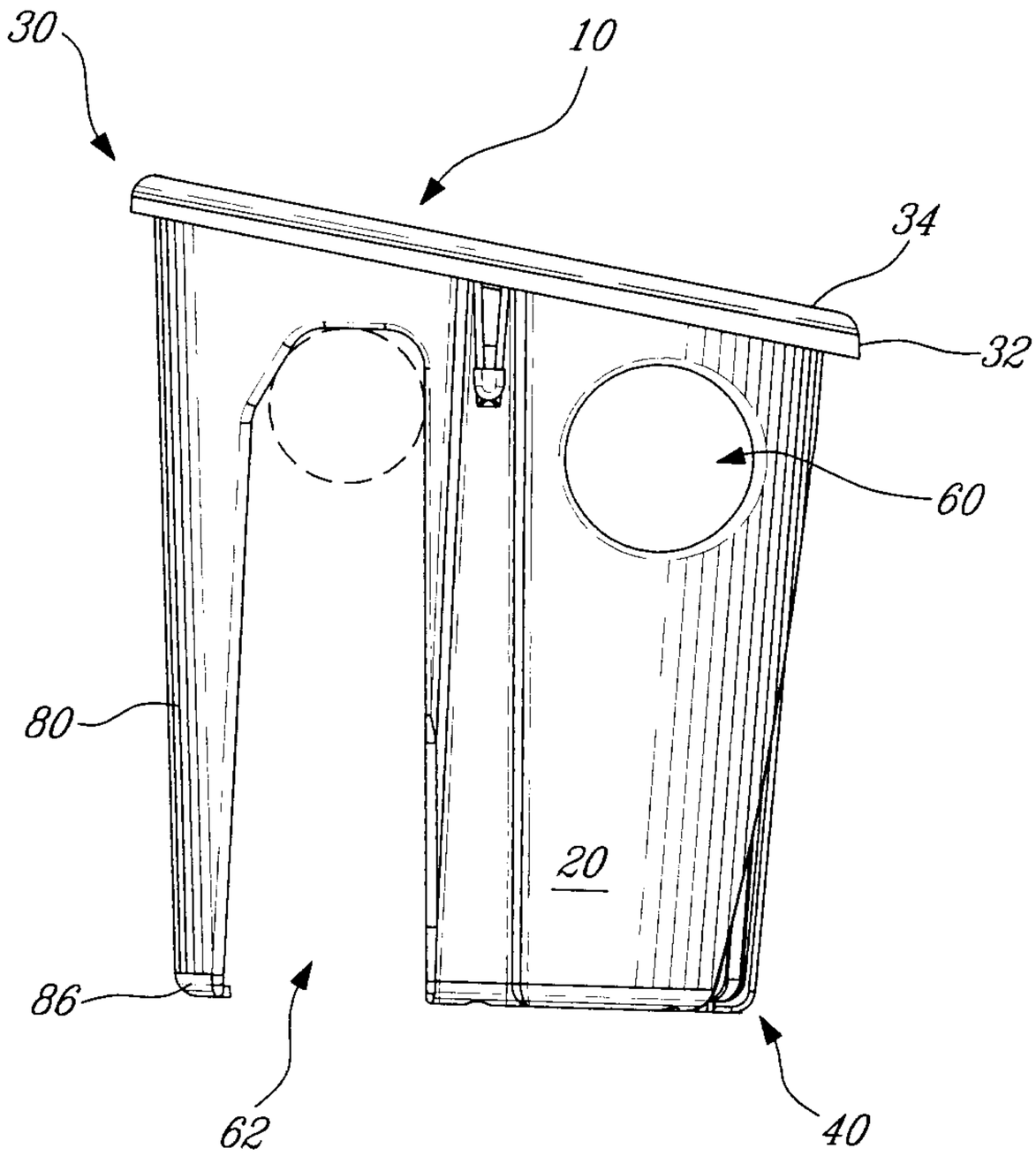


Fig-2

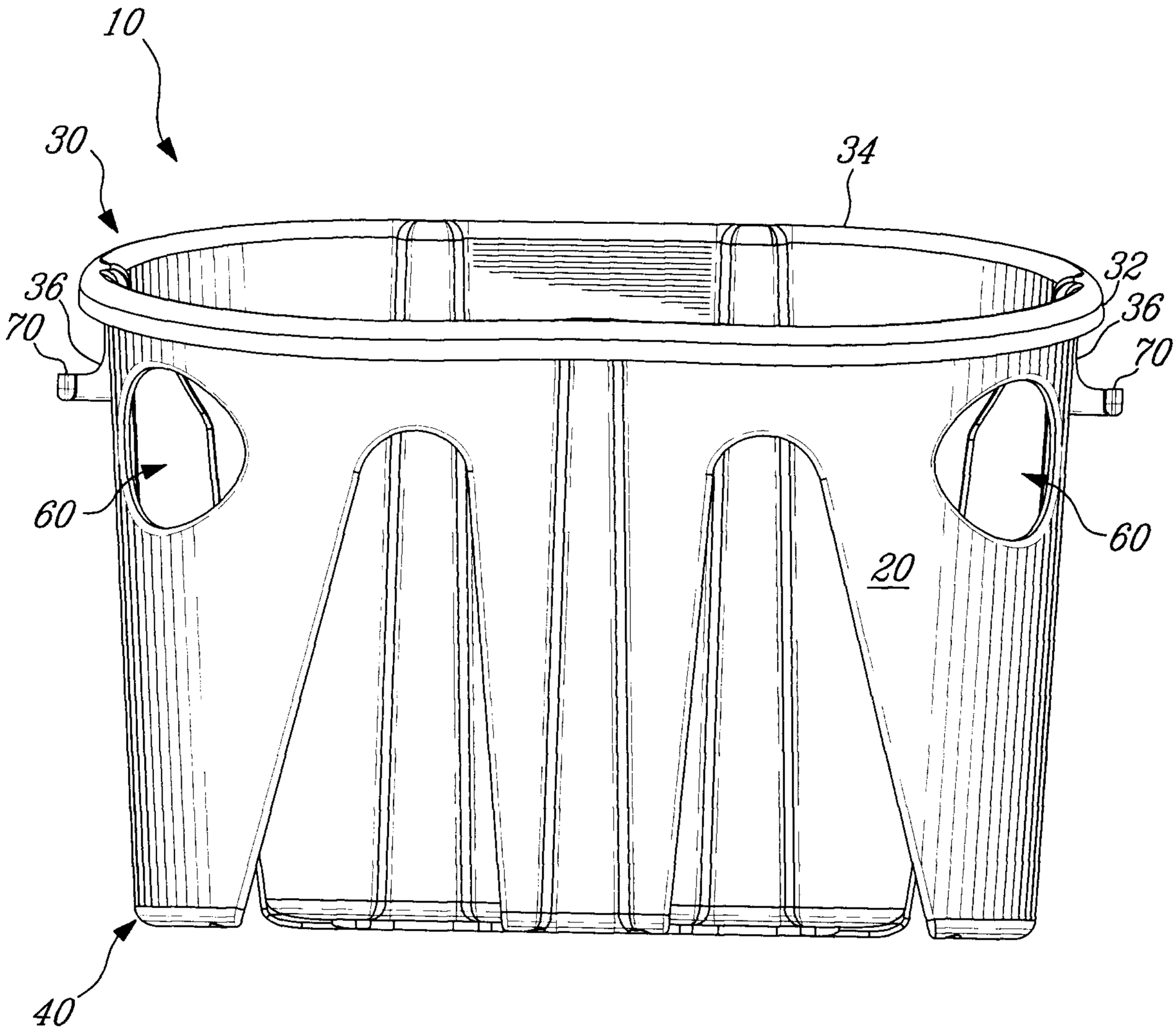


Fig. 3

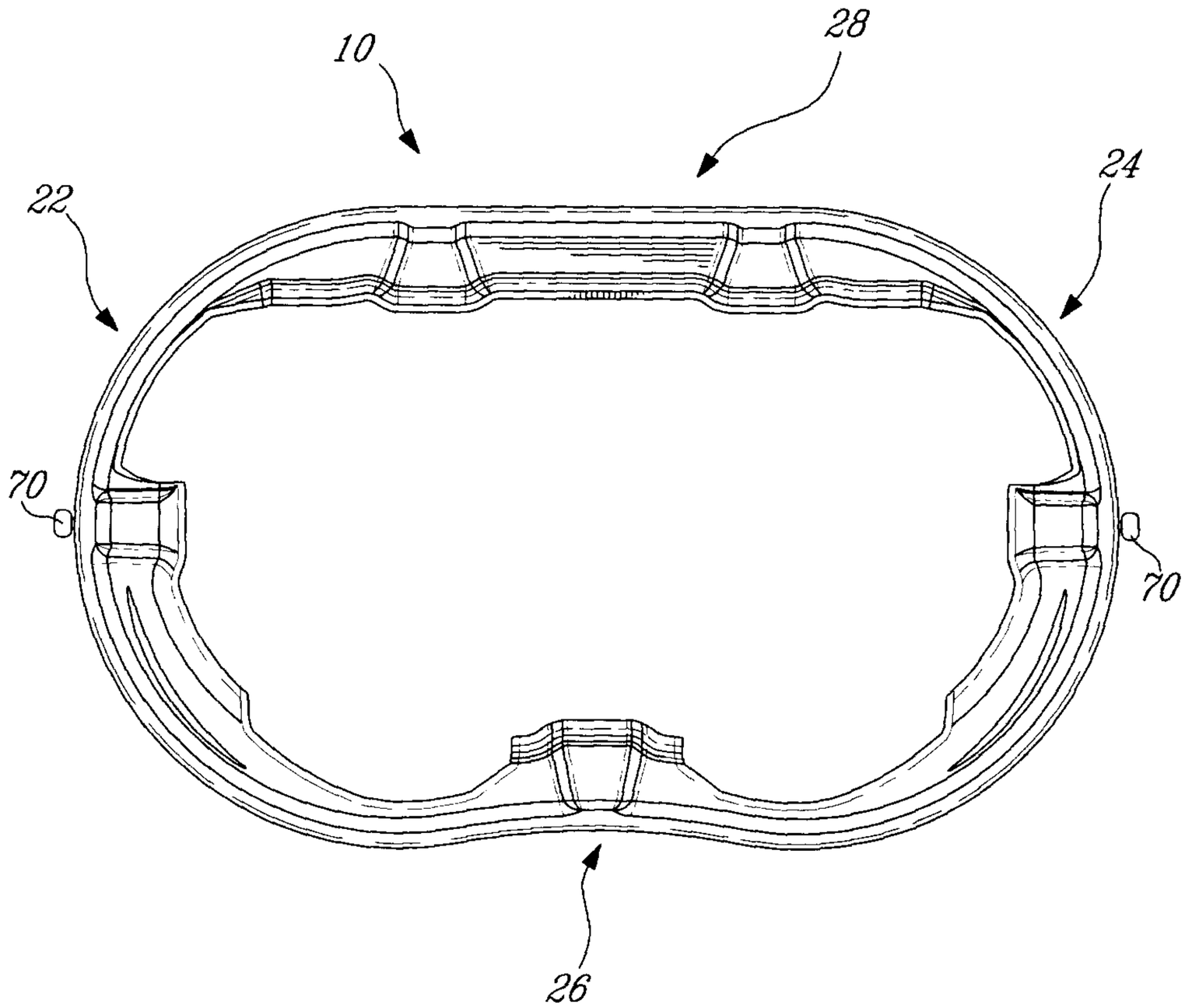


Fig-4

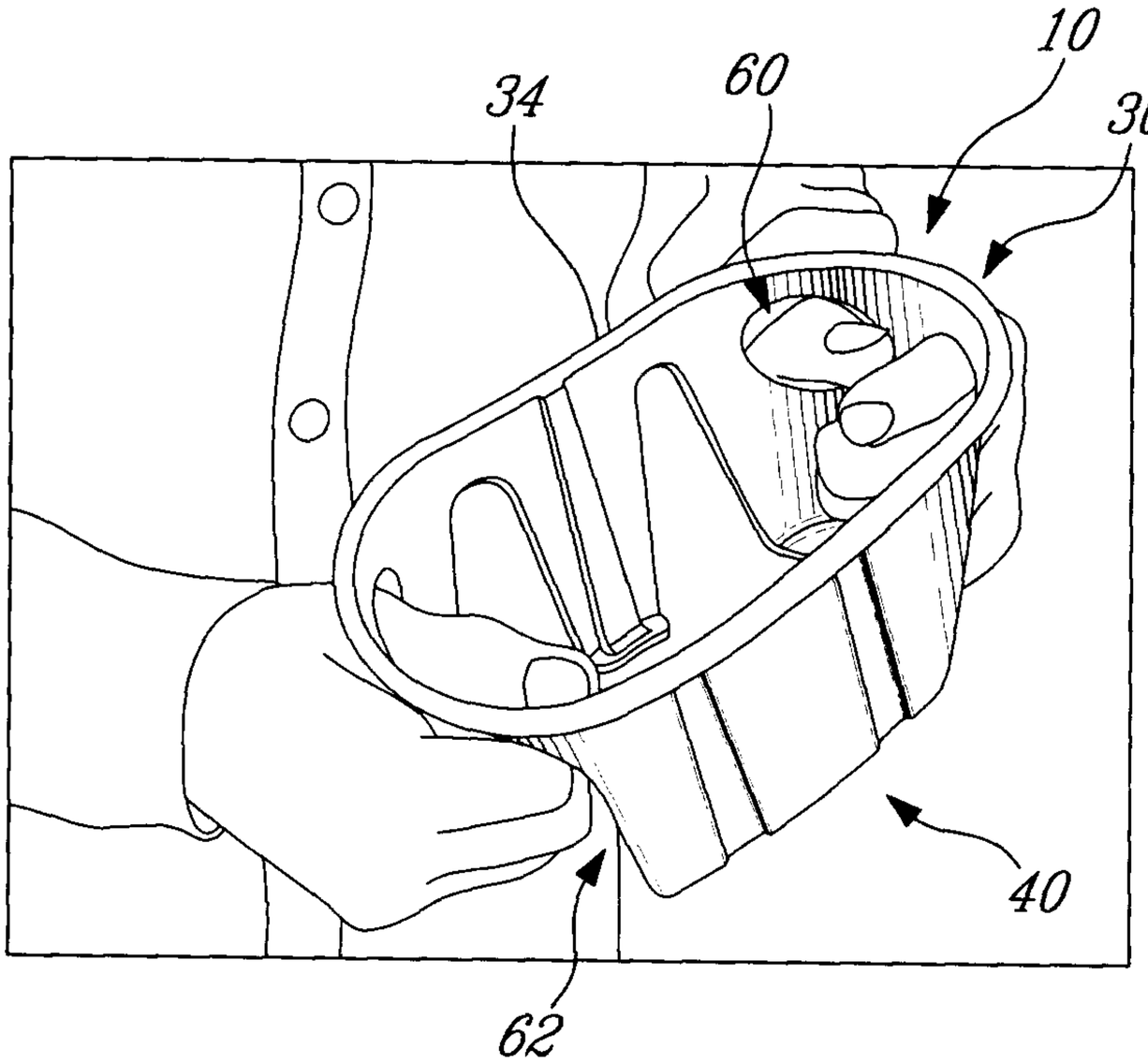


Fig-5

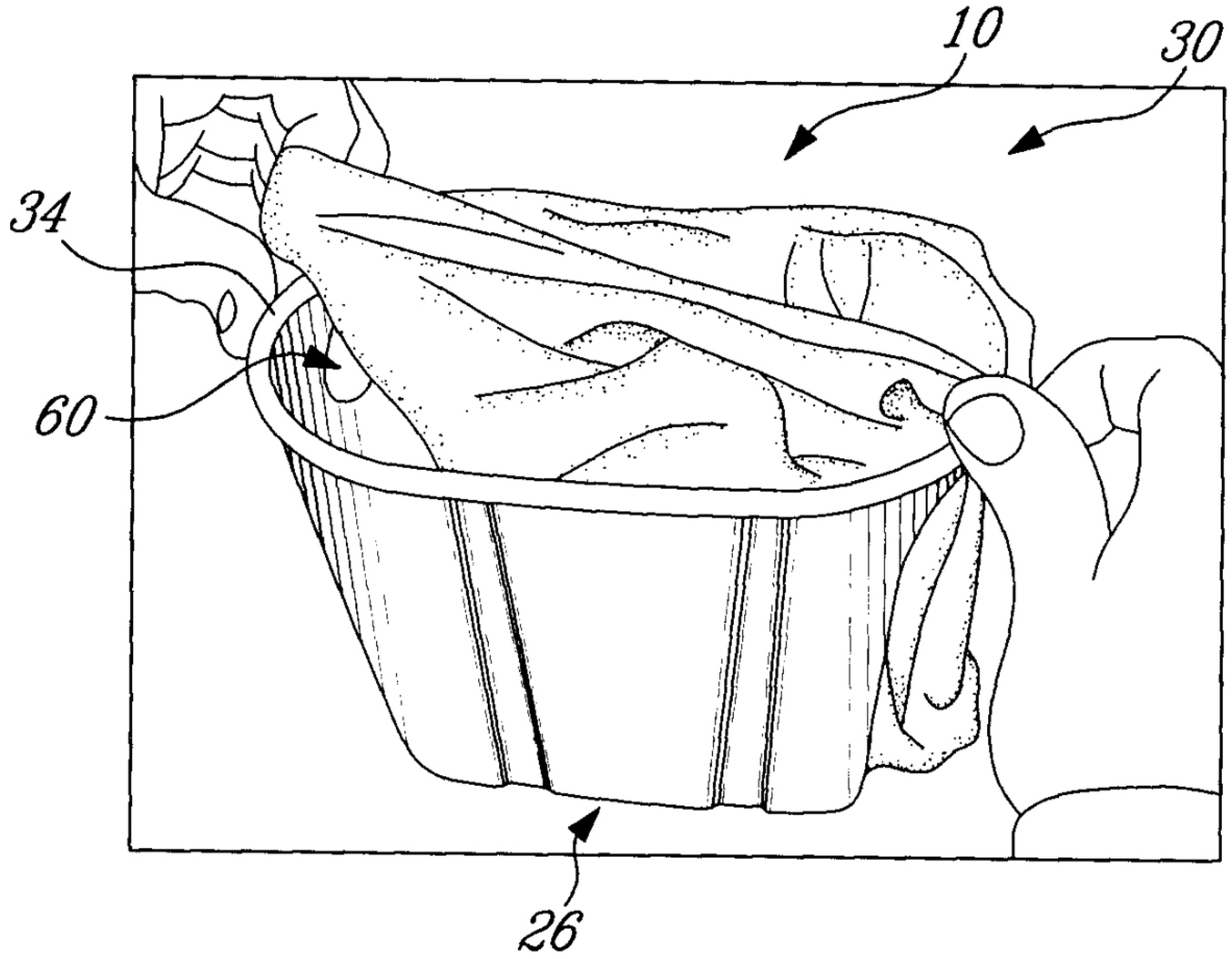


Fig-6

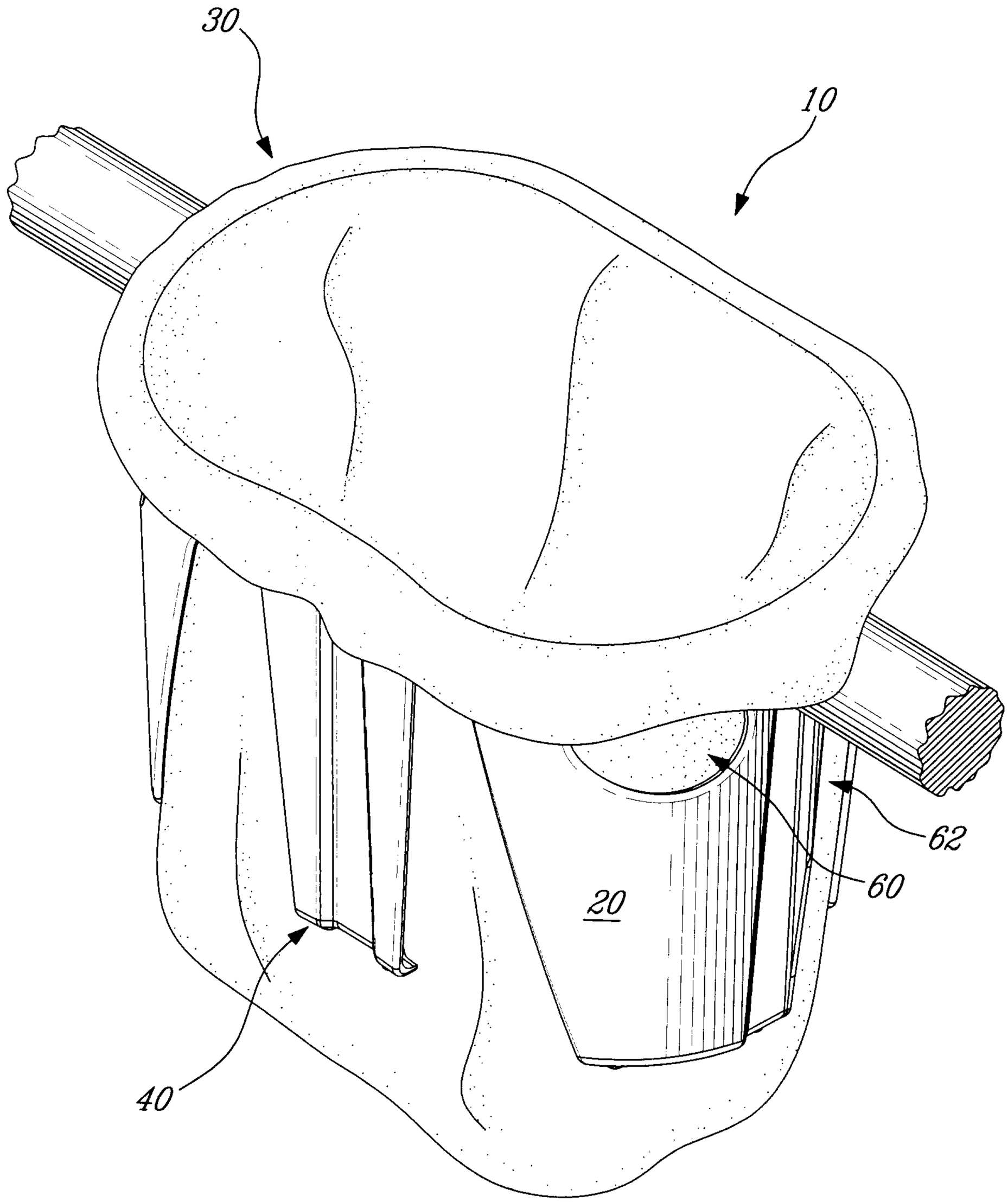


Fig. 7

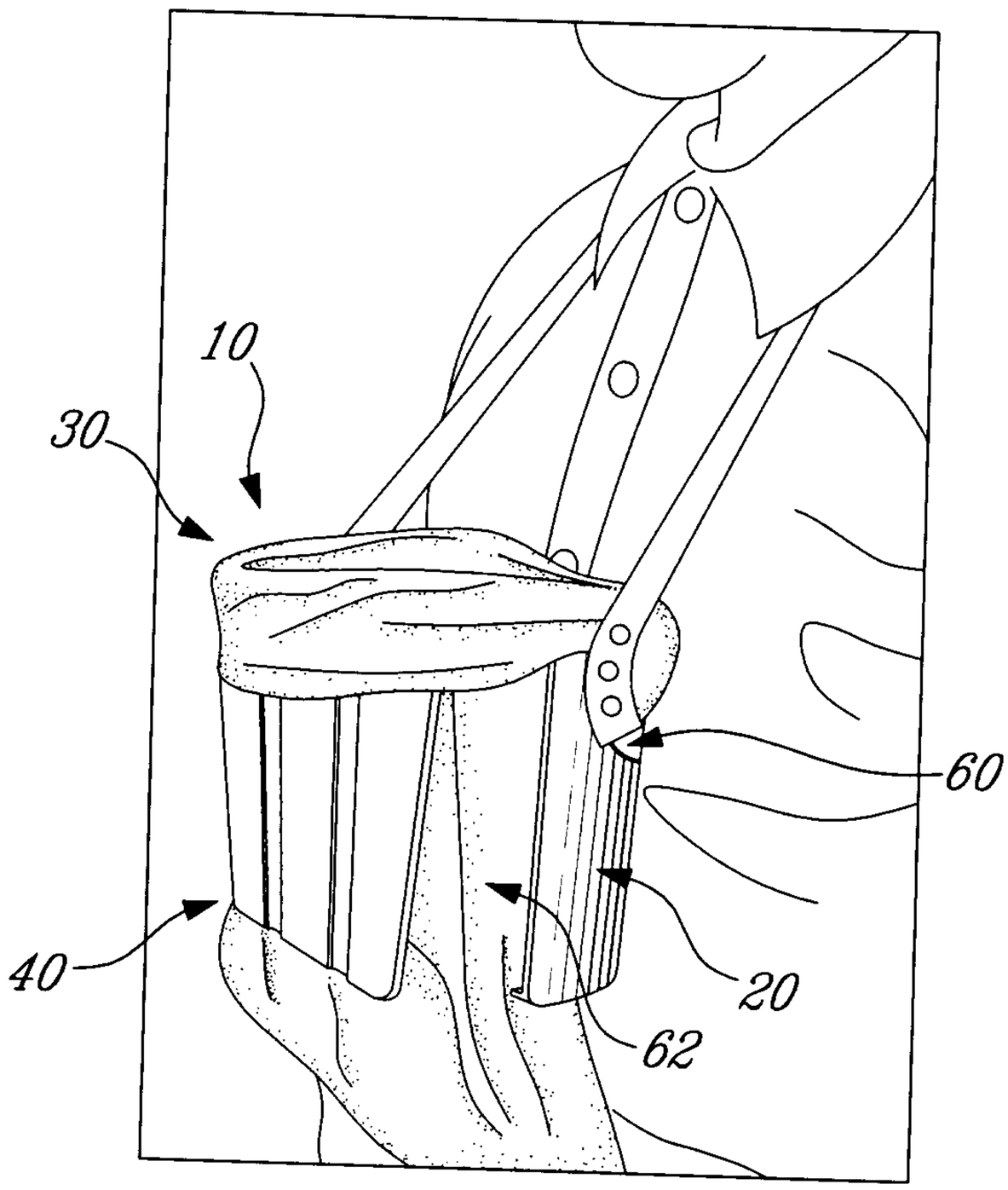
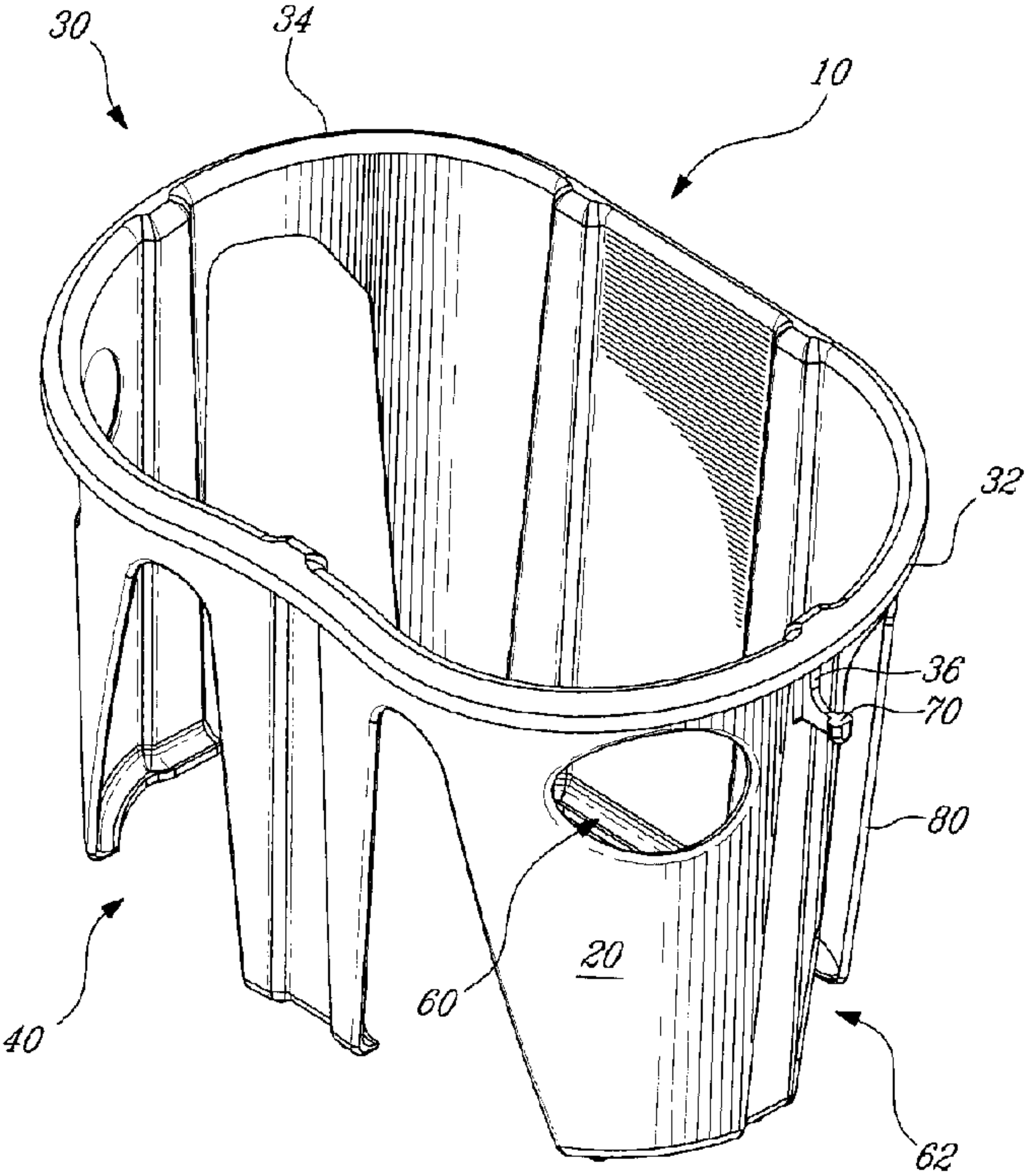


Fig. 8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