

Title: A Container for an Umbrella and Method of Manufacturing Thereof

Field of the Invention

The present invention is directed to containers for umbrellas which act to prevent a wet umbrella from dripping out of the container. ✓ The invention also extends to a method of manufacturing such containers.

Background to the Invention

It is known that preventing wet umbrellas from dripping on to surfaces or objects which should not get wet. Following the drive to reduce plastic waste, more shops are introducing biodegradable paper bags which may even dissolve when wet. ✓

Previously, wrapping machines ✓ have been used to stop water dripping from an umbrella, particularly within department stores. The machine wraps a layer of thin plastic, typically lightweight cellophane, around the umbrella several times. This ensures that the umbrella is tightly wrapped to form a waterproof barrier. However, removing the wrapped plastic is difficult and often resulted in water being thrown around or the plastic on the floor which defeated the purpose of the wrapping. ✓

This was replaced with drip-catching bags. These bags are typically long, thin plastic bags which are designed to hold a wet umbrella. The bags may be branded in the shop's colours or logo. Different sizes of bag were made for different sized umbrellas. Typically, the bags had a Velcro (RTM) or hook and loop fastener, a drawstring or elastic at their open end so that the user can seal the bag around the umbrella. Ideally this sealed over the handle such that the umbrella was fully sealed. However, again the issue of removing the umbrella from the bag resulted in dislodged water and wet entrances to shops. ✓

A further version was developed, which will be explained in detail later with respect to Figures 1 and 2, ✓ to attempt to combat this. First and second bags were provided outside the shop, separated by tear-off strips or other lines of weakness. One of the bags is an inner bag which receives the umbrella and comprises a plurality of holes in its surface. This is inserted into the, larger, outer bag. Water runs from the umbrella through the holes in the inner bag

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and collects in the outer bag. However, in use water may splash from the outer bag back on to the umbrella – particularly if the umbrella is carried in non-vertical orientations. ✓

There is therefore a need for an improved container for an umbrella.

Statement of Invention

A container for an umbrella according to the present invention is provided according to claim 1.

As water flows via gravity from the first portion to the second ✓ portion, the restricting portion inhibits its return passage. Thus, the water does not splash back to the umbrella as much and there is less water spillage when removing the umbrella. ✓

Preferably, [claim 2]. The water catching portion holds water in the second portion to make sure that the water stays away from the umbrella in the container. ✓

Preferably, [claim 3]. An absorbent material ensures the water is not loose in the second portion and thereby improves the drying of the umbrella. ✓

Preferably, [Claim 4]. Such a polymer absorbs a large volume of water for its size. Therefore, the size of the second portion can be minimized. ✓

Preferably, [Claim 5]. A closing mechanism holds the umbrella in place and prevents water leaking. This therefore reduces any spillage. ✓

Preferably, [Claim 6]. As the water-catcher means there is very little water in the container these less water tight sealings may be used. This allows a more secure closing. ✓

Preferably, [Claim 7]. This stops the umbrella contacting any water and thereby improves the drying. ✓

Preferably, [Claim 8]. The mechanism allows the ✓ adjustment of the degree to which backflow of water is inhibited. This therefore helps ensure water does not flow back onto the umbrella.

Preferably, [Claim 9]. A drawstring is an effective and simple mechanism. ✓

Preferably, [Claim 10]. This reduces the necessary material and thereby increases the ease and reduces the cost of manufacturing. ✓

Preferably, [Claim 11]. Glueing produces a strong bond to acts as a reliable restriction. ✓

Preferably, [Claim 12]. This is a particularly effective restriction mechanism as it only leaves a small gap for water flow. ✓

Preferably, [Claim 13]. Multiple layers increase the strength, making it less likely to break upon insertion of the umbrella.

Preferably, [Claim 14]. The tortuous path still allows water to flow down with gravity, but makes it much harder for random splashes to work their way out. ✓

Preferably, [Claim 15]. The weight of the umbrella deforms the thinner layer, making the openings thus wider to encourage water run-off. The thick inner layer impedes water progress by being pushed together. Therefore water is trapped in the second portion. ✓

Preferably, [Claim 16]. The sequentially increasing in thickness layers produces the effect of claim 15 discussed above in sequential layers as well, thereby further trapping the water. ✓

Preferably, [Claim 17]. The glue reinforces the separator to ensure the layers do not come apart. ✓

Preferably, [Claim 18]. The one-way valve ensures water cannot come back up even when bounced or carried irrespective of orientation, this therefore increases the drying ability. ✓

Preferably, [Claim 19]. This stops the tip of the umbrella from naturally blocking the valve and hence improves the flow of water therethrough. ✓

Preferably, [Claim 20]. The reinforcement helps ensure the valve stays in place and hence that the container continues to work. ✓

Preferably, [Claim 21]. A water-permeable membrane can have the umbrella tip resting on it and still work to allow water through. This therefore increases versatility and reduces the risk of damage to the restriction portion. ✓

Preferably, [Claim 22]. This results in a flared shape which helps direct water downwards. ✓

Preferably, [Claim 23]. This allows the water to be easily drained and hence the container is easily reusable. ✓

Preferably, [Claim 24]. The amount of water collected can be checked. This allows the user to know when to drain the container. ✓

Preferably, [Claim 25]. A rigid container may protect the umbrella. ✓

Preferably, [Claim 26]. The ridges hold the umbrella away from the sides for faster drying. ✓

Preferably, [Claim 27]. This allows the container to be used for different umbrella shapes, increasing its reusability. The telescope design ensures any outer branding is not deformed. ✓

Preferably, [Claim 28]. This allows a long umbrella to be easily carried vertically. ✓

A method of manufacturing a container for an umbrella is provided according to claim 29. This method achieves a container with the benefits discussed above.

Brief Description of the Figures

The present invention will now be described, by way of reference only, with respect to the accompanying Figures in which:

Figure 1a shows a prior art inner ✓ bag;

Figure 1b shows a prior art ✓ outer bag;

Figure 2 shows the prior art ✓ inner bag of Figure 1a retained within the prior art outer bag of Figure 1b;

Figure 3 shows a container for an umbrella according to the present invention; ✓

Figure 4 shows a further container for an umbrella according to the present invention; ✓

Figure 5 shows a further container for an umbrella according to the present invention; ✓

Figure 6 shows a further container for an umbrella according to the present invention; ✓

Figure 7a shows a layer structure for a restriction portion suitable for use with a container for an umbrella according to the present invention; ✓

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Figure 7b shows a version of the layer structure of Figure 7a, having been deformed by the insertion of an umbrella. ✓

Detailed Description

Figures 1a, 1b and 2 show a prior art umbrella bag, assembly 1000. This bag assembly 1000 is comprises an inner bag 1200 shown in Figure 1a and an outer bag 1400 shown in Figure 1b. ✓

The inner bag 1200 comprises an opening 122 at a first end. This opening allows insertion of an umbrella 100 therewithin. A surrounding wall 126 of the inner bag 1200 extends from the opening 122. This wall 126 is arranged to surround the umbrella 100 in use. A plurality of holes 124 are formed in this surrounding wall 126 to allow water to pass from the umbrella 100, through the holes 124 and into the outer bag 1400. ✓

The outer bag 1400 is longer than the inner bag 1200 such that it can receive both the umbrella 100 and the inner bag 1200 through its opening 142. The outer bag 1400 is waterproof to retain water therein. A drawstring 148 is provided in the outer bag 1400 to secure the inner bag 1200 and umbrella 100 therewithin, as shown in Figure 2. ✓

In use, a user places their umbrella within inner bag 1200, then places inner bag 1200 and umbrella 100 within outer bag 1400. They then pull the drawstring 148 to secure this assembly 1000. The water on the umbrella 100 passes through holes 124 in the inner bag 1200 such that it is then retained in the outer bag 1400 away from the umbrella 100. Thus, the umbrella 100 is dry when removed. ✓ However, as discussed the water may pass back through the holes 124 and prevent the umbrella 100 from drying, thereby defeating the purpose of the assembly 1000. ✓

Figure 3 shows a simple embodiment of a container 200 according to the present invention. The term 'container' as used throughout the specification extends to bags, tubes and other devices suitable for retaining an umbrella 100. ✓

The container 200 comprises a waterproof material forming a waterproof receptacle 26. The waterproof receptacle 26 comprises an opening 22 at a first end. Extending away from this opening 22 is a first portion 50. In use, the first portion 50 receives and retains the umbrella 100. A drawstring 28 or other closing mechanism (such as Velcro (RTM)/hook and loop fasteners,

elastic etc) is provided near the opening 22 for securing an umbrella in the container 200. ✓

A second portion 40 extends from the first portion 50 distal to the opening 22. The second portion 40 includes a closed end which can retain water. ✓

A restriction portion 30 is formed between the first and second portions 50, 40. This restriction portion 30 acts to separate the portions 30,40. The restriction portion 30 inhibits water from flowing from the second portion 40 to the first portion 50. In the embodiment of Figure 3, the restriction portion 30 may be formed by crimping or glueing the outer wall of the receptacle 26. ✓

The receptacle 26 further comprises a longitudinal carrying handle 27. This handle 27 extends from near to the opening ✓ 27 towards the second portion 40 and aids in vertical transport of long umbrellas 100.

The use of this embodiment (which may likewise apply to subsequent embodiments) is as follows. A wet umbrella 100 is inserted through the opening 22 into the first portion 50 of the receptacle 26. Water drips from the umbrella 100 into the second portion 40. The restriction portion 30 then prevents this water from returning to the first portion 50 and hence the umbrella 100 remains dry. ✓

Preferably, the restriction portion 30 is about 10 cm from the lower end of the second portion 40. The container 200 of any of the embodiments may be preferably biodegradable, provided ✓ that it is still waterproof. The container 200 may preferably be flared such that the portion of the container 200 near the opening 22 is wider than the first portion 50 near to the second portion 40 in order to encourage water to flow into the second portion 50. ✓

Figure 4 shows an improved version of the container 200 of Figure 3. This container 200 is generally similar ✓ to the container 200 of Figure 3. However, it further comprises an adjustment mechanism ✓, in the form of drawstring 38, for adjusting the restriction portion 30 to alter the extent to which the passage of water is inhibited. Any suitable adjustment mechanism may be used, such as Velco (RTM)/hook and loop fasteners, or elastic. This improves the water retention in the lower portion 40, in particular for embodiments of the container 200 in which the restriction portion 30 is formed by crimping. The drawstring 38 extends around the restriction portion 30 to allow it to dialate and/or constrict. ✓

A water-catching portion 42 may be inserted into the second portion 40. The water-catching portion 42 acts to retain any water which it contacts within its structure. ✓ In preferred embodiments, this water catching portion 42 may be in sponge material. Alternatively, the water-catching portion 42 may be a super-absorbent polymer such as those used in babies nappies. ✓

As the water-catching portion 42 retains the water, a container 200 incorporating this is particularly suitable for replacing the upper closure drawstring 28 with a less-watertight closing mechanism. For example, the closing mechanism may be Ziplock (RTM), a clip or even a conventional zipper. ✓

Figure 5 shows a further embodiment of the container 200. This container 200 is generally as described with respect to the previous figures. A water-catching portion 42 is provided within the lower portion 40 as discussed above. ✓

In this embodiment, the restriction portion 30 is formed as a separator of waterproof material. The separator extends across the receptacle 26 ✓ and has an opening 32 formed therein. Preferably, the opening ✓ 32 may be in the form of a slit which is sized to be smaller than the average size of an umbrella tip 12 to prevent the tip 12 entering the second portion ✓ 50. The separator may be formed integrally with the receptacle or attached thereto by any suitable mechanism.

In alternative embodiments, the separator may not have a defined opening 32, but may instead be a water-permeable membrane ✓. Such membranes are common in sailing jackets. The membranes allow water to pass in a single direction (in this case from the first portion 50 to the second portion 40) while still allowing air to pass through. ✓

Figure 6 shows a version of the separator design of Figure 5. In this embodiment, a one-way valve 34 is provided in the opening 32 of the separator. ✓ The one-way valve 34 only allows water to flow in one direction – from the first portion 50 into the second portion 40 and not in the reverse direction. This valve 34 may be an off-the-shelf ✓ component. Thus, even if the container 200 is bounced around or upended no water can pass back. ✓ To ensure the valve 34 stays in place, an additional reinforcement may be used. ✓ For example, this may be a layer of waterproof reinforcing glue or a fourth layer of reinforcing material. The valve 34 is offset from the central container axis X–X to prevent an umbrella tip 12 from blocking the valve 34. ✓

Figure 6 also shows a sealable opening 46 formed in the second portion 40. This sealable opening 46 may be used with any of the embodiments disclosed herein. A bung 44 act to selectively seal the opening 46 such that the container 200 is easily drainable and reuseable. ✓

Figure 7a shows a layer structure which may act as the separator. A plurality of layers 36 are provided, each of which has an opening 32 for the passage of water. Each opening 32 is sized to prevent an umbrella tip from passing through. ✓

Each opening 32 in a layer 36 is offset from the opening 32 in the immediately adjacent layers. ✓ This forms a tortuous or serpentine path which the water must flow through. ✓ The water will flow through this path under the influence of gravity from the first portion 50 to the second portion 40. However, this is unlikely to occur due to any splashes in the reverse direction ✓.

The layers 36 may have varying thicknesses. For example, the layer 36e nearest the second portion 50 may be thicker than the other layers 36a–d. ✓ As shown in Figure 7b, the thinner layers 36a–d deform and bend under the force applied by the umbrella tip 12. These bent layer 36a–d encourage faster water run-off. ✓ The lower, thick layer 36e does not deform as much and here impedes water looking to escape the second portion 40. This effect can be enhanced by having a graduated scale of thickness in the layers 36, with each layer from the top layer 36a getting thicker towards the thickest bottom layer 36e. ✓

While the previous embodiments generally use a flexible waterproof membrane, this is not essential. Instead, the container 200 may be formed of a rigid waterproof material, for example a tube or casing closed with a lid. This would still include any of the previously discussed features, in particular the first and second portion 50,40 and the restriction portion 30. The rigid container 200 may include a plurality of ridges on an inner surface of the first portion 50. These ridges would space an umbrella 100 from the inner surface and hence improve the drying as the canopy of the umbrella 100 would not stick to the inner surface. ✓

Such a rigid container 200 may also be extendable. This could be achieved by the receptacle 26 having a plurality of sections concertinaed together, such

as via one unclear word hinges, as in a drinking straw. However, this would deform any logos or branding formed thereon. ✓

Alternatively, the receptacle 26 may comprise first and second telescopic segments sealed to one another in a watertight manner. This would allow the container 200 to be used with any size of umbrella. The first and second portions 50,40 may each be a separate telescopic portion. Alternatively, one or both of the sections 50, 40 may span multiple telescopic segments. ✓

While the present invention has been describe with respect the the accompanying figures these are exemplary only. Any features disclosed in one figure/embodyment may be combined with another where appropriate and not explicitly ruled-out in the description. ✓

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CLAIMS

1. A container ✓ for an umbrella ✓ comprising:

A waterproof receptacle formed from a waterproof material, the receptacle comprising: ✓ = unitary

- a) an opening ✓ at a first end for inserting an umbrella;
 - b) a first portion ✓ extending from the opening for retaining an umbrella ✓
 - c) a second portion ✓ extending from the first portion distal to the opening, the second portion for retaining water ✓; and
 - d) a restriction ✓ portion separating the first and second portions, for inhibiting water in the second portion passing into the first portion. ✓
2. The container of claim 1, further comprising a water-catching portion arranged within the second portion for retaining water. —
 3. The container of claim 2, wherein the water-catching portion comprises an absorbent material. 1
 4. The container of claim 3, wherein the absorbent material is a super-absorbent polymer. ½

5. The container of any preceding claim, further comprising a closing mechanism for closing the opening to secure the container around the umbrella.
6. The container of claim 5, when dependent upon any of claims 2 to 4, wherein the closing mechanism is a Ziplock (RTM), clip or zip.
7. The container of any preceding claim, wherein the restriction portion arranged to prevent an umbrella in the first portion from extending into the second portion.
8. The container of any preceding claim, further comprising an adjustment mechanism for adjusting the restriction portion to alter the inhibition of water.
9. The container of claim 6, wherein the adjustment mechanism comprises a drawstring extending around the restriction portion.
10. The container of any preceding claim, wherein the restriction portion is formed from an outer wall of the receptacle.
11. The container of claim 10, wherein the restriction portion is formed by glueing a part of an inner surface of the outer wall to another part of the inner surface of the outer wall.
12. The container of any of claims 1 to 9, wherein the restriction portion comprises a separator of waterproof material extending across the receptacle, the separator comprising an opening for allowing the passage of water from the first portion to the second portion.
13. The container of claim 12, wherein the separator comprises a plurality of layers of waterproof material, each comprising an opening for allowing the passage of water from the first portion to the second portion.
14. The container of claim 13, wherein each opening in each layer of waterproof material is offset from the opening in adjacent layers, thereby forming a tortuous path between the first and second portion.
15. The container of claim 13 or 14, wherein the plurality of layers of waterproof material comprises a top layer nearest the opening of the receptacle and a bottom layer farthest from the opening of the receptacle, the bottom layer being thicker than the top layer.

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16. The container of claim 15, further comprising one or more middle layers between the top and bottom layers, the thickness of the middle layers increasing in the direction from the top layer to the bottom layer.
 17. The container of any of claims 13 to 16, further comprising a layer of glue around the edges of the layers of waterproof material
 18. The container of claim 12, further comprising a one-way valve arranged in the opening of the separator, the one-way valve arranged to prevent water flowing from the second portion into the first portion.
 19. The container of claim 18, wherein the one-way valve is offset from a central longitudinal axis extending from the centre of the opening to the centre of the second portion.
 20. The container of claim 18 or 19, comprising a reinforcement for securing the one-way valve, preferably a layer of reinforcing material.
 21. The container of any of claims 1 to 9, wherein the restriction portion comprises a water-permeable membrane extending across the receptacle.
 22. The container of any preceding claim, wherein the diameter of the first portion decreases from the opening towards the second portion.
 23. The container of any preceding claim, further comprising a sealable opening in the second portion for selectively draining water from the second portion
 24. The container of any preceding claim, wherein at least a portion of the second portion is translucent or transparent for viewing the amount of water in the second portion.
 25. The container of any preceding claim, wherein the receptacle is formed of a non-flexible material.
- *NB I know am going over 25 claims/hence fees. Claims 3 & 4 could be 'preferable' features in claim 2, but timing to renumber is too tight.
26. The container of claim 25, comprising longitudinal ridges extending on an inner surface of the first portion from the opening to the second portion for spacing an umbrella from the inner surface.

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27. The container of claim 25 or 26, wherein the container is expandable, wherein the receptacle comprises first and second telescopic portions sealed in a watertight manner.
28. The container of any preceding claim, comprising a carry handle extending on an outer surface of the receptacle from the opening towards the second portion.
29. A method of manufacturing a container for an umbrella according to any preceding claim comprising the steps of:
- providing a receptacle having an opening at a first end;
- forming a restriction portion in the receptacle to separate the receptacle into a first portion for retaining an umbrella and a second portion for retaining water.

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Abstract

Title: A Container for an Umbrella and Method of Manufacturing thereof.

The present invention relates to containers for umbrellas which act to prevent water dripping from the umbrella, and method of manufacture thereof. A container 200 for an umbrella 100 comprises a waterproof receptacle 26 which is separated into a first portion 50 and a second portion 40 by a restriction portion 30. The restriction portion 30 inhibits water from flowing from the second portion 40 to the first portion 50. Thus, water dripping from the umbrella 100 into the second portion 40 remains there and the umbrella 100 may dry.

(Figure 4)

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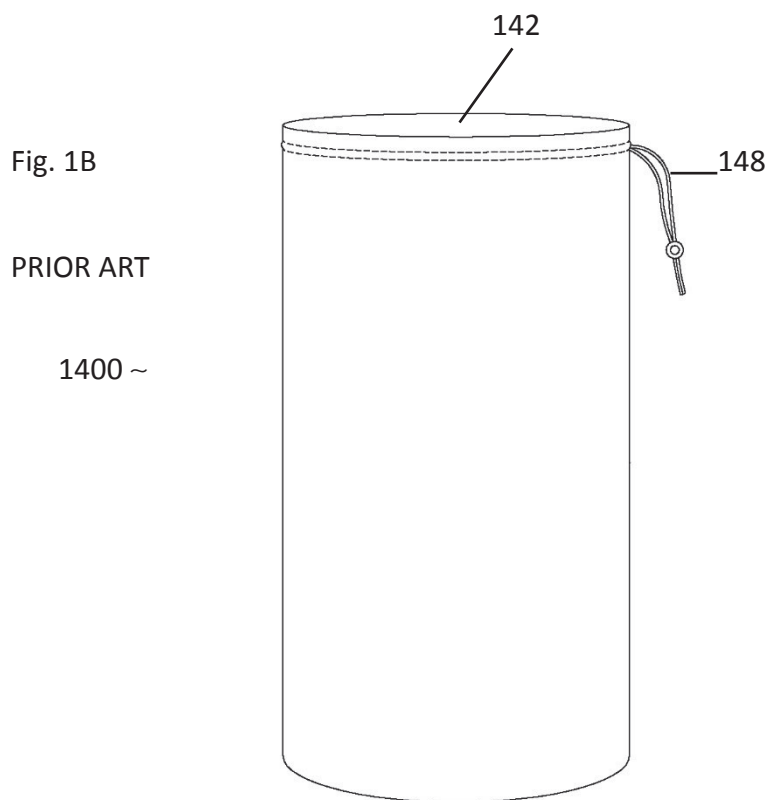
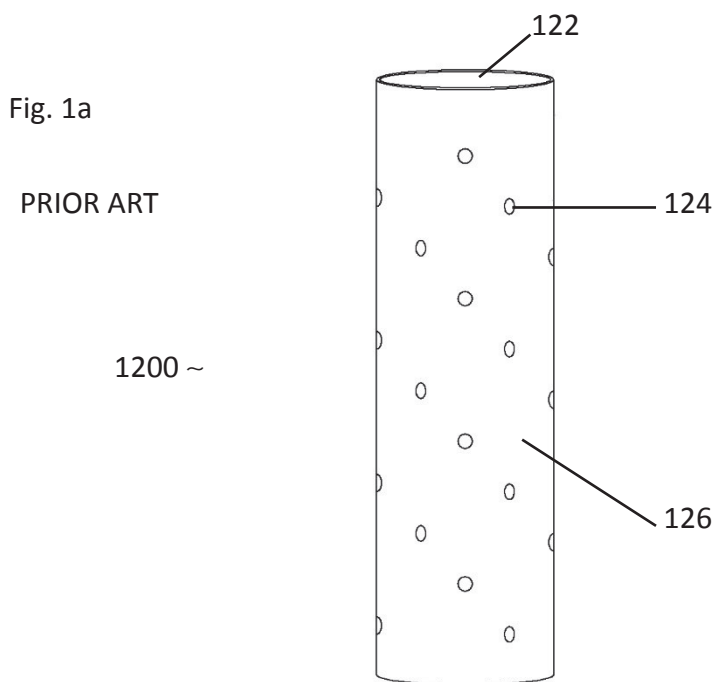
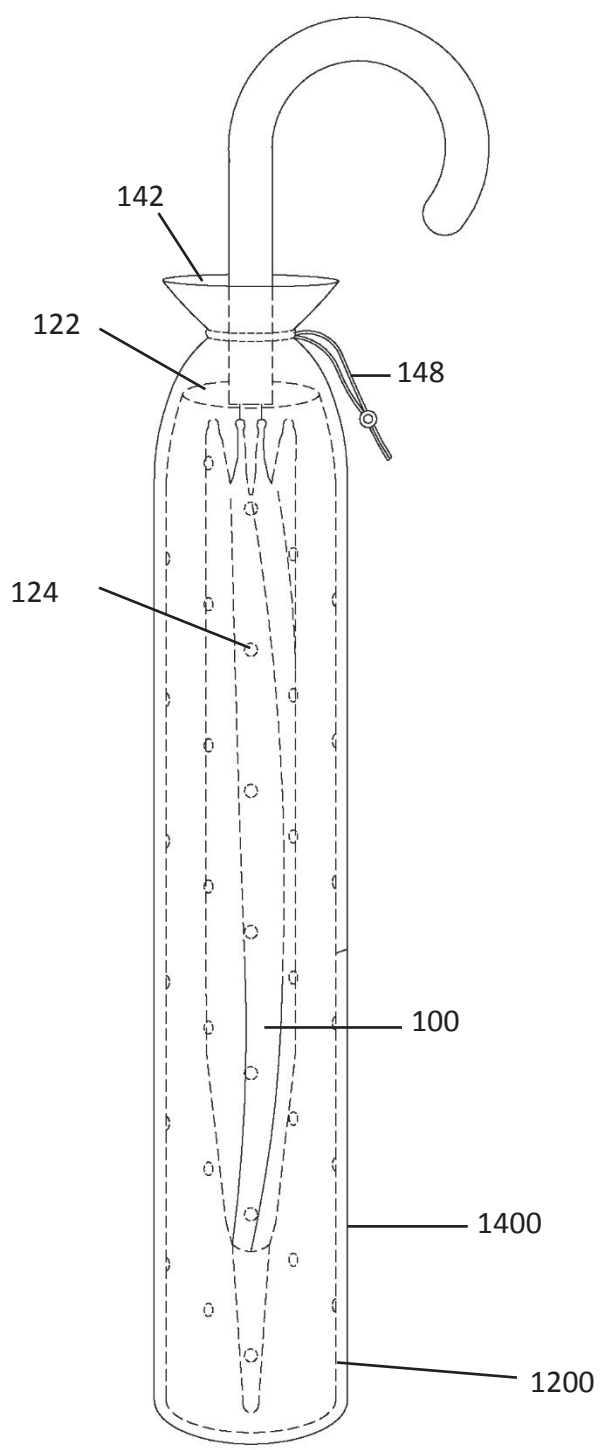


Fig. 2
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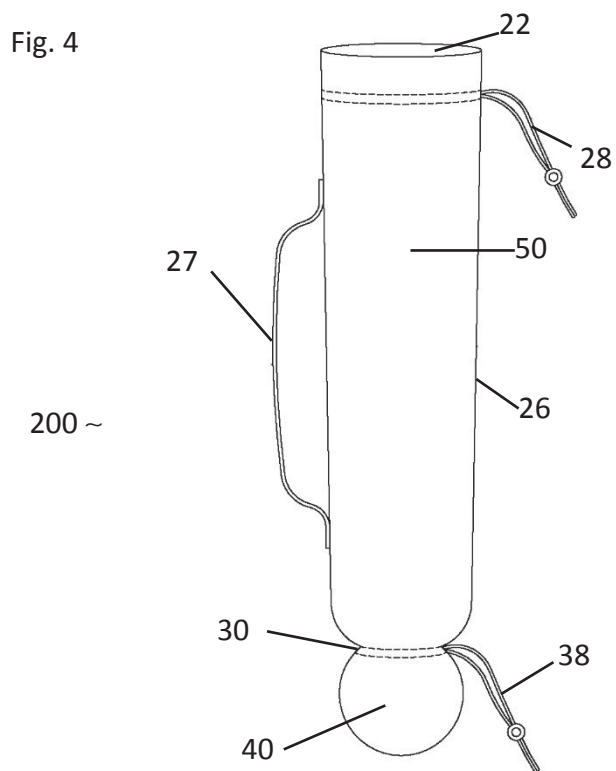
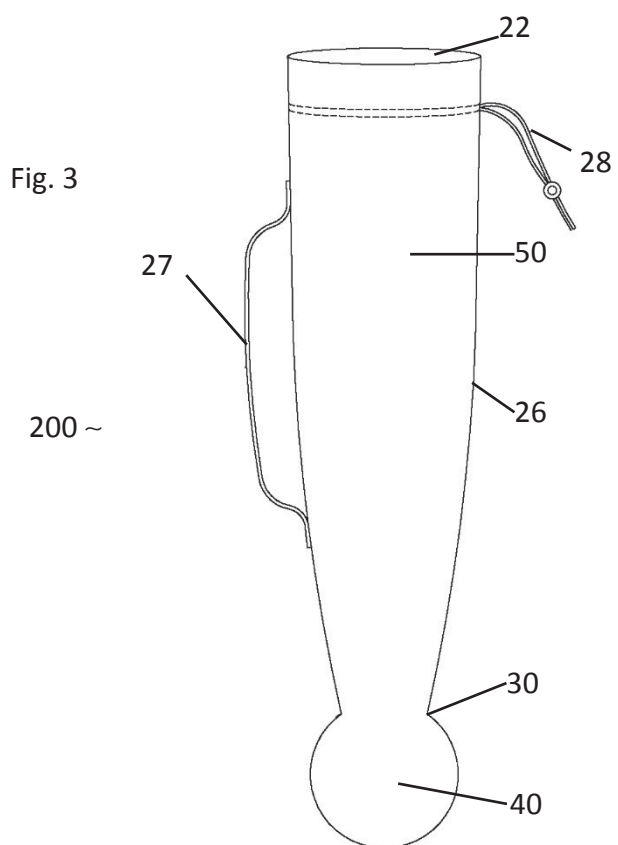


Fig 5

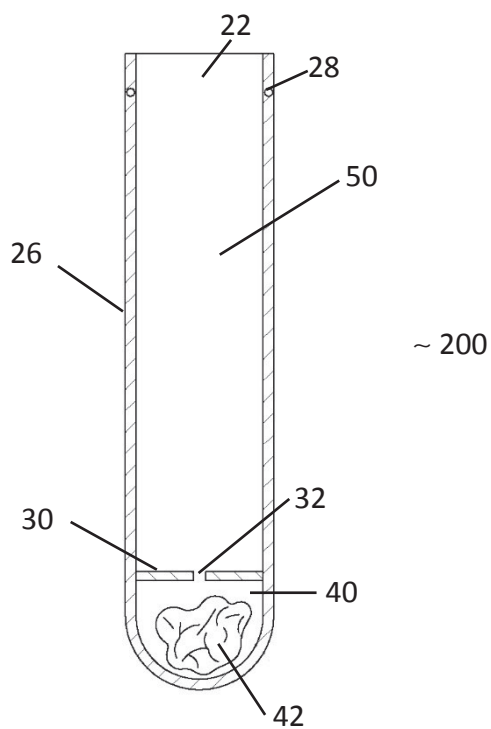
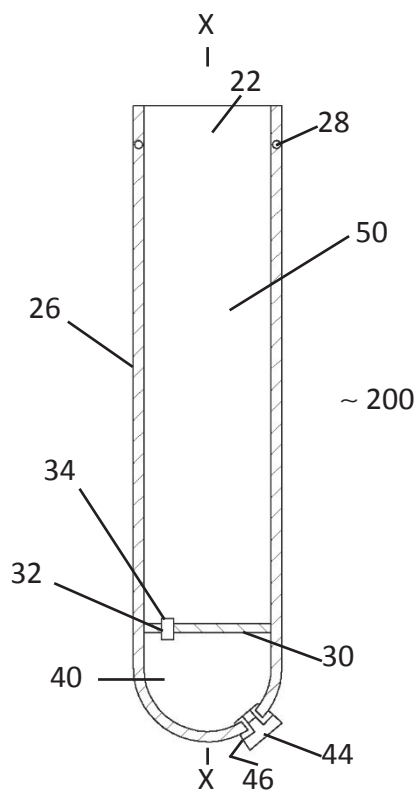


Fig 6



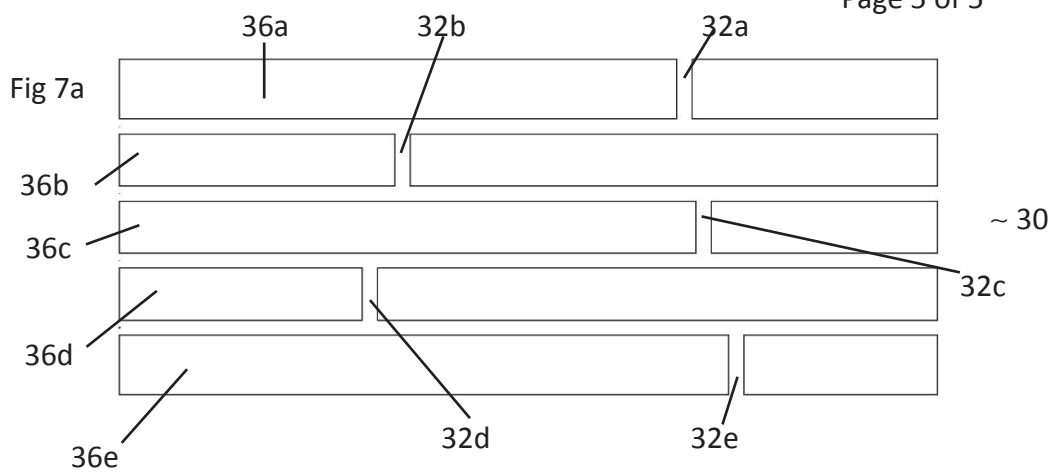


Fig 7b

