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(54) **DISPENSING APPARATUS AND HOLDER**

(57) The present invention provides an apparatus comprising a bag (e.g. a flexible container) for storing dispensable products (e.g. dispensable cleaning products, such as disposable wipes, which may be configured as a roll or in layers) and a holder for the bag. The bag comprises a reinforcing member (preferably made of plastics material) adjacent to and/or defining an aperture

of the bag (an opening to allow the removal of the dispensable products from the bag), wherein the reinforcing member comprises at least one lid retaining portion and one or more retaining formations (such as rings, channels, tunnels). The holder (preferably made from metal) comprises a bag hanging portion configured to demountably engage with the reinforcing member.

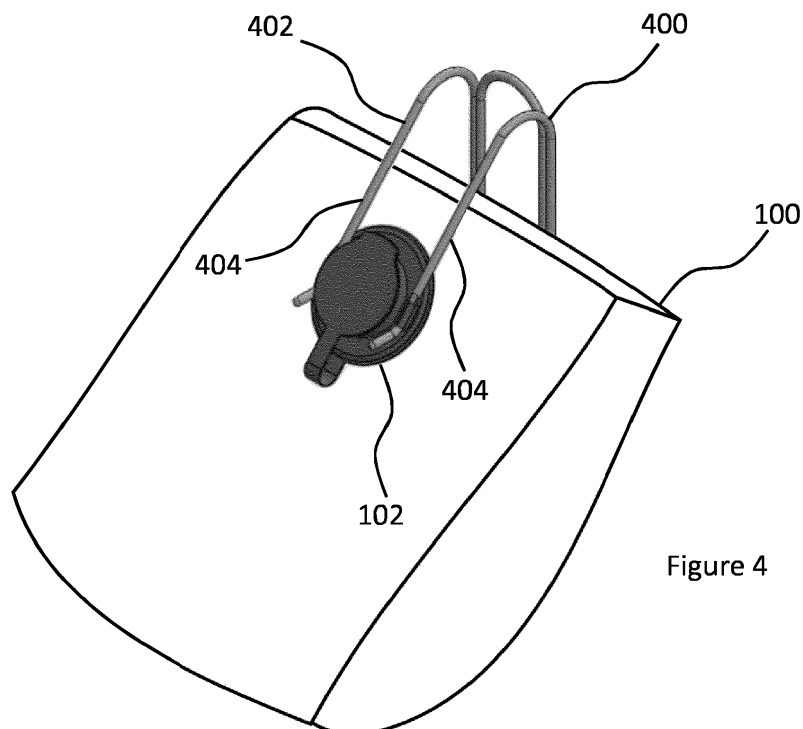


Figure 4

Description

Field of the invention

[0001] The invention relates to the field of disposable product dispensers and holders for such dispensers.

Background to the invention

[0002] Dispensable cleaning products, such as disposable cleaning wipes, are regularly used in environments which require surfaces to be cleaned quickly. For example, health care institutes such as hospitals require surfaces to be cleaned on a regular basis to maintain cleanliness as surfaces may be subjected to substances or objects requiring to be cleaned.

[0003] Typically, disposable cleaning wipes are stored in buckets which allow a user to quickly access a wipe to clean a surface. These buckets allow a large quantity of dispensable cleaning products to be readily available and do not need to be refilled often. A bucket is filled by placing the dispensable products inside. The dispensable products are typically stored in bags beforehand, which are opened and either placed in the bucket, or the dispensable products are removed from the bag and then placed in the bucket. This process subjects the dispensable cleaning products to outside conditions, which may affect the quality and/or introduce contaminants.

[0004] Before empty buckets are filled, it is necessary to clean and sterilize the bucket before it is refilled to minimise possible contamination. This requires time and use of sterilization agents, both of which introduce costs in the upkeep of the environment. It would therefore be desirable to restock disposable cleaning products in a quick and easy manner once the container is empty and needs to be refilled.

[0005] Disposable bags containing dispensable cleaning products are already known in the art. However, these disposable bags are floppy and typically require the use of two hands to remove a cleaning product. These bags do not provide the same quantity of dispensable products as buckets and therefore need to be replaced regularly. This can be problematic as it may result in occasions during which no dispensable product is readily available, e.g. when such products are securely stored in a store cupboard. This is particularly the case in environments which require and use a large amount of dispensable cleaning products, such as hospitals.

[0006] In some circumstances, removing a disposable cleaning product from a container such as a bucket or a floppy bag require the use of two hands, particularly as the container becomes less full and can be easily lifted with one hand. This can become problematic as it requires the user to have two clean hands when removing a single cleaning product to prevent any possible contamination. However, in some circumstances this may not be easily achieved and may introduce a delay in cleaning a surface. For example, the user may be de-

layed in cleaning a surface as they have to first clean both hands before getting a dispensable cleaning product. Alternatively, the user may introduce contaminants to the container due to the need to quickly use a dispensable cleaning product and foregoing cleaning of both hands.

[0007] The present invention aims to overcome these issues.

Summary of the invention

[0008] A first aspect of the present invention provides an apparatus comprising a bag (e.g. a flexible container) for storing dispensable products (e.g. dispensable cleaning products, such as disposable wipes, which may be configured as a roll or in layers) and a holder for the bag. The bag comprises a reinforcing member (preferably made of plastics material) adjacent to and/or defining an aperture of the bag (an opening to allow the removal of the dispensable products from the bag), wherein the reinforcing member comprises one or more retaining formations (such as rings, channels, tunnels). The holder (preferably made from metal) comprises a bag hanging portion configured to demountably engage with the reinforcing member. That is, the bag may be mounted (engaged) on the holder via the bag hanging portion, and may be demounted (disengaged) from the holder. The bag hanging portion demountably engages with the one or more reinforcing formations, thereby engaging with the reinforcing member.

[0009] That is, the bag may be held by the holder in a sturdy manner (e.g. fixedly held) such that a user may remove a dispensable product from the bag. The bag hanging portion not only enables the bag to be held in place, but also allows the dispensable product to be removed with ease. The user will be able to remove a dispensable product using only one hand as the holder engages with the bag. This therefore allows users to remove a dispensable product without first having to clean both hands and thus reduces the risk of contaminating the bag and/or the holder.

[0010] Further, this allows the apparatus to be easily made as it requires a rigid component to be attached to an otherwise flexible bag.

[0011] Typically, when the one or more retaining formations are engaged with the bag hanging portion, the bag is angled such that the plane of the aperture of the bag faces upwards. This allows the bag to be tilted upwards to make it easier for a user to remove a dispensable product. The bag may be tilted such that the place of the aperture of the bag is tilted upwards when the bag is engaged with the holder. That is, the aperture is tilted between facing vertically (where the user is required to apply a horizontal force towards them to remove a dispensable product) and horizontally (where the user is required to apply an upward, i.e. skyward, force to remove a dispensable product). In other words, the bag holding portion is configured such that the bag is held at

an angle. That is, the normal of the plane of the aperture is between 0 and 90 degrees from horizontal, typically between 15 and 75 degrees or between 30 and 60 degrees.

[0012] Typically, the reinforcing member of the bag is resilient, preferably made of plastics material. This allows the engagement with the holder to be firm/strong as the reinforcing member is resilient to deformation, particularly when a force is applied to it. In addition, it maintains a sturdy aperture to the contents inside the bag (e.g. disposable cleaning wipes) thus making it easy for a user to remove product. The reinforcing member may extend around the aperture. The reinforcing member may comprise a first component and a second component. The first component may comprise a ring. The first component may comprise a tube, from which the dispensable product is to be removed through. The first component may be fitted to the inside of the bag. The tube of the first component may extend from the aperture of the bag. The second component may comprise the one or more retaining formations. The second component may comprise a lid. The lid may be attached by a flexible hinge. The second component may be fitted to the outside of the bag. The second component may be fitted over and around the tube of the first component. The first and second components may fit together to sandwich the bag and form the reinforcing member.

[0013] Typically, the bag is replaceable. That is, the bag may be replaced when empty by a full bag. The bag is typically disposable. This removes the need to sterilize the container storing the dispensable product, i.e. the bag, before it is refilled. Disposing of the bag once empty, and therefore replacing it with a full bag, reduces the time required to have a replacement available for users as there is no need to sterilize before having more dispensable products available to users. It also therefore reduces the amount of sterilizing agents required as only the holder may require sterilization, albeit at a greatly reduced number of occasions.

[0014] Typically, the apparatus comprises a lid to cover the aperture. The lid may be placed to cover the aperture, or removed to expose the aperture. It may be that the lid is placed on at least one lid retaining portion. It may be that the lid is attachedly connected to the apparatus, such as by a hinge. Preferably, the lid is made of the same material (e.g. plastics material) as the reinforcing member.

[0015] A lid advantageously allows the dispensable product to maintain its condition inside the bag. For example, if the dispensable product is a plurality of cleaning wipes (which are typically wet), it allows the wipes stored in the container to maintain their wetness. This is particularly important as the last wipes taken from the container are required to be of the same condition as those at the start.

[0016] It may be that the apparatus comprises a seal configured to cover the aperture. The seal is preferably removable, such as a (e.g. metallic) film or a ring cap.

The seal is used to ensure that the contents of the bag maintain their condition. This is of especial importance when, for example, the bag is stored for a long period of time before first use, therefore allowing the quality of the stored dispensable product to not degrade in quality over time, enhancing the shelf-life of the bag. In other words, the condition of the dispensable products is maintained by the seal separating the environment inside the bag from the environment outside the bag. For example, the seal allows wet wipes to maintain their wetness by sealing off the contents of the bag.

[0017] It may be that the seal is used in conjunction with a lid which is configured to cover the seal. The combination of the seal and the lid therefore providing complementary protection to ensure the quality of the dispensable product is not affected.

[0018] Typically, the bag hanging portion of the holder comprises one or more rigid arms configured to engage with the reinforcing member. Preferably, the one or more rigid arms are integral with the holder. The one or more rigid arms may be made from the same material as the holder, such as metal. The rigid arms enforce a sturdy engagement with the bag therefore restricting movement of the apparatus when a user removes a dispensable product.

[0019] Typically, the one or more rigid arms are configured to engage with the one or more retaining formations of the reinforcing member. That is, the rigid arms engage with retaining formations on the bag, which may for example be rings, channels or tunnels.

[0020] Typically, the one or more rigid arms comprise a distal end and one or more bends. That is, the distal ends are at the opposite end of the rigid arms from where the rigid arms are attached to the body of the holder. The one or more bends are proximate to the distal end. The bend may for example be at least 15 degrees or at least 30 degrees. In other words, the rigid arms have a portion which is at a different orientation from the rest of the rigid arm. The bends are such a portion of the rigid arm extend through the retaining formation of the reinforcing member and another portion of the rigid arm extends out of the retaining formation. This ensures that when the bag is engaged with the holder, it is not accidentally disengaged when a dispensable product is removed from the bag.

[0021] Typically, the bag hanging portion of the holder comprises at least one recess, and wherein said demountable engagement is by the one or more retaining formations cooperating with the at least one recess. The at least one recess on the bag hanging portion enhances the engagement with the bag, making it more difficult for a user to accidentally or inadvertently remove the bag from the holder when removing a dispensable product. That is, the retaining formations cooperate with the at least one recess by slotting into the recess.

[0022] It may be that the length of the recess is similar or longer than the length of the retaining formation. The recesses help to ensure the bag is secured correctly on the holder when engaged and may be used to additionally

dictate the position of the bag when engaged with the holder. That is, the recesses enable a good fit between the bag hanging portion and the reinforcing member of the bag, enhancing the engagement. For example, the recess will have a different length if the retaining formation of the bag is a ring or a tunnel. The length of the retaining formation will affect how secure the bag will be when engaged with the holder; longer retaining formations, and therefore recesses, will provide for a more secure fit than shorter retaining formations.

[0023] Preferably, the bag hanging portion will comprise one or more rigid arms, each arm having at least one recess configured to cooperate with the retaining formation of the bag. The at least one recess may have a similar length as the retaining formations. The one or more rigid arm may have a length which is angled (the length ending at the end of the rigid arm) and that the recess is positioned along the rigid arm further along than the angled length. That is, the retaining formations are required to pass the angle in the rigid arm before they reach the recesses. In other words, engaging the bag with the holder requires the retaining formations to pass around the angle of the rigid arms to be slotted into the recess. The length of the retaining formations, and therefore the recess, may be determined by the angle of the rigid arms to ensure that the retaining formations can pass around the angle.

[0024] Typically, the at least one recess is thinner than the remainder of the one or more rigid arms. That is, the recess may be a groove or indentation in the rigid arm. This allows the retaining formation to slot into the recess.

[0025] Typically, the holder comprises a bag supporting portion configured to support the bottom of the bag when the reinforcing member of the bag is engaged with the bag hanging portion of the holder. In other words, the bag supporting portion cradles the bag. This provides an additional means of securing the bag in the holder, allowing a user to apply a greater force when removing a dispensable product from the bag and reducing the risk of demounting the bag from the holder.

[0026] It may be that the holder comprises a back portion and that the bag supporting portion extends outwardly from the back portion.

[0027] Typically, the bag supporting portion comprises an angled distal end configured to restrict movement of the bag when engaged in the holder. That is, the distal end is at the opposite end from where the bag supporting portion is attached to the body of the holder. The angled distal end is configured to provide an additional means of securing the bag when engaged. This allows a user to apply a greater force when removing a dispensable product from the bag without the risk of demounting the bag from the holder.

[0028] It may be that the holder comprises a base portion configured to be underneath the bag supporting portion. It may be that the distal end is angled away from the base portion.

[0029] Typically, the holder further comprises one or

more securing components configured to engage the holder with a surface. This advantageously allows the holder to be secured to a surface such as a wall or to a tabletop, thus reducing movement of the holder when a user applies a force to remove a dispensable product from the bag. It may be that the holder comprises three securing components, thus ensuring the holder is firmly secured to the surface.

[0030] Where the bag is held at an angle, it may be that the plane of the reinforcing member when engaged is angled between 30 and 60 degrees from the plane of the securing components.

[0031] Typically, the holder comprises a base. That is, the base allows the holder to be freestanding when placed on top of a horizontal surface, such as a tabletop. It may be that the one or more securing components are configured to attach to the base, therefore allowing a securing configuration of securing the holder to a horizontal surface, such as a tabletop.

[0032] Typically, the holder comprises a back portion. It may be that the bag hanging portion of the holder extends outwardly from the back portion. It may be that the one or more securing components are configured to attach to the back portion. That is, the securing components attached to the back portion may allow a securing configuration of securing the holder to a vertical surface, such as a wall.

[0033] It may be that the holder comprises both a base and a back portion. It may be that the base and back portion are perpendicular to each other. It may be that the one or more securing components are interchangeable between a securing configuration of attaching the securing components to the base and attaching the securing components to the back portion. That is, the interchangeable securing configurations allow the same holder to be secured to either a horizontal or a vertical surface.

[0034] In some embodiments, the one or more securing components are suction components. That is, the securing components are configured to secure the holder to a smooth surface, such as a smooth tabletop or a smooth wall. This allows the holder to be secured to the surface without causing structural damage to the surface. It also allows the holder to be easily disengaged from the surface and be repositioned.

[0035] It may be that the suction components are secured to a smooth surface by twisting the suction component to engage with the smooth surface. In other words, twisting the suction component results in a partial vacuum between the suction component and the surface allowing the holder to be secured to the smooth surface, and twisting the suction component in the opposite direction causing the partial vacuum to be removed.

[0036] In some embodiments, the one or more securing components are screws. That is, the securing components are configured to secure the holder to non-smooth (rough) surfaces, such as a rough wall. This allows the holder to be securely placed on a rough surface in which structural damage is not a concern.

[0037] In some embodiments, it may be that the securing components comprise any combination of suction components and screws. In other words, a part of the surface may be smooth enough for the use of a suction component, whereas another part of the surface requires a screw to secure the holder to the surface.

[0038] It may be that the one or more securing components are detachable from the holder. This allows the holder to be used without the one or more securing component. It also allows the same holder to have a variety of securing configurations, in that the one or more securing components may be placed at different positions on the holder. Typically, the reinforcing member comprises one or more segments covering the aperture of the bag. The one or more segments may be configured to apply a force on the dispensable product when being removed from the bag. This allows a dispensable product to be removed without accidentally removing all of the dispensable products stored within the bag. Preferably, the dispensable products are configured such that each dispensable product stored within the bag is detachable from the next dispensable product stored therein.

[0039] In some embodiments, the segments may be flexible, such as made of plastics material. In other embodiments, the segments may be rigid. Alternatively, when there is a plurality of segments, there may be any combination of flexible or rigid segments.

[0040] The flexible segments also act as an additional protective layer to maintain the quality of the stored dispensable products and to prevent anything from entering the bag, such as insects or large contaminants as well as to lessen the amount of liquid contaminants entering the bag. Preferably, the flexible segments are made from the same material as the lid retaining portion.

[0041] In some embodiments, the lid retaining portion comprises the flexible segments. In some embodiments, the flexible segments are a separate portion configured to fit between the lid retaining portion and the aperture of the bag.

[0042] It may be that there are four flexible segments arranged in a formation such that the flexible segments may flex away from each other at the centre of the formation. That is, the dispensable product is removable from the bag at the centre of the formation of the flexible segments.

[0043] A second aspect of the present invention provides a disposable product dispenser comprising a bag (e.g. a flexible container) for storing disposable products (e.g. dispensable cleaning products such as disposable wipes), and a reinforcing member (preferably made of plastics material). The bag comprises an aperture (e.g. an opening) and the reinforcing member is configured to be adjacent to and/or define the aperture of the bag. The reinforcing member comprises one or more retaining formations (and typically at least one lid retaining portion). That is, the one or more retaining formations are configured to enable the dispensable product dispenser to be retained, for example by a holder.

[0044] A third aspect of the present invention provides a kit of parts comprising a bag for storing dispensable products comprising a reinforcing member adjacent to and/or defining an aperture of the bag, wherein the reinforcing member comprises one or more retaining formations (and typically at least one lid retaining portion); and a holder comprising a bag hanging portion configured to demountably engage with the reinforcing member.

[0045] Typically, the kit of parts of the third aspect of the present invention can be assembled to form the apparatus of the first aspect.

[0046] A fourth aspect of the present invention provides a method comprising the steps of providing a bag for storing dispensable products comprising a reinforcing member adjacent to and/or defining an aperture of the bag, wherein the reinforcing member comprises one or more retaining formations (and typically at least one lid retaining portion), and a holder comprising a bag hanging portion configured to demountably engage with the reinforcing member; the method comprising attaching the bag to the holder; and subsequently detaching the bag from the holder.

[0047] In some embodiments, the reinforcing member comprises a lid retaining portion and a lid configured to cover the lid retaining portion and the method further comprises the steps of removing the lid from the lid retaining portion; taking a dispensable product from the bag through the aperture; and placing the lid back on the lid retaining portion with one hand.

[0048] That is, the aperture remains fixed in position at all times when a dispensable product is removed from the bag.

[0049] Typically, the method comprises the step of removing dispensable products from the bag with one hand while the bag is attached to the holder. In other words, the arrangement of the bag and the holder is such that a user may remove the dispensable products contained within the bag by using one hand. That is, the bag is secured by the holder such that a user does not need to use a second hand to stabilise the bag when removing a dispensable product.

[0050] Typically, the method comprises the step of removing dispensable products from the bag one at a time while the bag is attached to the holder. In other words, the dispensable products are contained within the bag such that only one product may be removed at a time. That is, the dispensable products may be separable, e.g. by being perforated, or layered.

[0051] Optional and preferred features of any one aspect of the invention may be features of any other aspect of the invention.

Description of the Drawings

[0052] An example embodiment of the present invention will now be illustrated with reference to the following Figures in which:

Figure 1A is a front facing view of a bag with a closed lid, and Figure 1B is a front facing view of a bag with an open lid;

Figure 2 is a close up view of a reinforcing member of the bag of Figure 1;

Figure 3 is a close up view of a portion of the reinforcing member with segments;

Figure 4 is a front facing view of the bag engaged with a holder;

Figure 5A is a close up view of the bag hanging portion of the holder of Figure 4, and

Figure 5B is a close up view of the reinforcing member of Figure 2 engaged with the bag hanging portion;

Figure 6A is a view of a holder in a horizontal configuration, and Figure 6B is a view of a holder in a vertical configuration; and

Figure 7 is a side view of a screw securing component of the holder of Figure 6.

Detailed Description of an Example Embodiment

[0053] Figure 1 illustrates an example of a bag 100 for storing dispensable products, such as disposable cleaning products like wipes or similar. The bag 100 is made from a material that is flexible, allowing it to be easily manipulated, and also protects the contents, such as from light degradation and restricts the contents from being heated when in direct sunlight.

[0054] The bag 100 comprises a reinforcing member 102 which is adjacent to and/or defines an aperture 110 of the bag 100. The dispensable products stored in the bag may be removed via the aperture 110. The reinforcing member 102 comprises a lid 104, which is used to cover the aperture 110 and protect the dispensable products, and comprises two retaining formations 106.

[0055] The reinforcing member 102 is configured to be made of a resilient material, such as a rigid plastic material. That is, the reinforcing member is less flexible than the bag. The lid 104 and the two retaining formations 106 are made of the same material as the reinforcing member 102.

[0056] Figure 1A illustrates the bag 100 in a closed lid configuration, and Figure 1B illustrates the same bag 100 in an open lid configuration. Figure 1B further illustrates a single dispensable product 108, e.g. a wipe, readily available to be removed from the bag 100 via the reinforcing member 102. The reinforcing member 102 defines the opening from which the dispensable products may be removed. The lid 104 is used to keep contaminants out of the bag 100 as well as to maintain the quality of the dispensable products, such as the wetness of wet wipes stored therein.

[0057] Preferably, the bag 100 will be hermetically sealed to maximise protection of the dispensable products, with exception only to the aperture 110 defined by the reinforcing member 102. This ensures that the quality of the dispensable products stored within the bag 100 is maintained, allowing the quality of the last few dispensa-

ble products to be of the same quality as those removed at the start of use. At the least, the quality of the last few dispensable products should only be slightly affected over long stretches of time. Maintaining the quality allows the contents inside the bag 100 to be protected from outside influences and ensures a long shelf life. That is, the contents inside the bag is protected from sources which introduce light degradation, large temperature fluctuations, humidity, and contaminants, among other possible sources of quality degradation.

[0058] The bag 100 may further comprise a protective removable seal, such as a foil film or ring cap, over the aperture 110 of the bag 100 (under the lid 104) which needs to be removed before first use (not illustrated). This protective seal aids in extending the shelf life of the dispensable product inside an unopened bag, particularly if the bag 100 is stored for a long length of time since it was manufactured. The bag 100 may, for example, be stored for a long time before use at a warehouse, or at the end users environment as a result of a bulk buy of bags.

[0059] Figure 2 illustrates a close up view of the reinforcing member 102 disassembled in an open lid configuration. The reinforcing member 102 comprises a reinforced ring 200 which has a tube 202 (functioning as a lid retaining portion) extending therefrom and a foil cap 204. The reinforced ring may be sealed to the insider or the outside of the bag. A separate ring 206, which comprises the lid 104 and the two retaining formations 106, may be fitted on the reinforced ring 200 to form the reinforcing member 102. That is, when fitted, the tube 202 and the foil cap 204 fit within the opening of the separate ring 206. The lid 104 is configured to cover the tube 202 of the reinforced ring. For example, the lid 104 may seal the tube 202 by an interference fit. The lid 104 is illustrated as being attached to the separate ring 206 by a hinge made of the same material. In some embodiments the lid 104 may be detachable from the separate ring 206, for example the lid 104 may be a screw cap.

[0060] The two retaining formations 106 are configured to be on either side of the tube 202. The two retaining formations 106 are illustrated as tunnels, or channels, but are envisaged to also be a different shape and/or size. The shape or size of the retaining formations is constrained by shapes capable of engaging with a holder, as illustrated and described below with reference to Figures 4 to 6.

[0061] In some embodiments, the reinforced ring 200 may further comprise segments 300, as illustrated in Figure 3. The reinforced ring 200 may be configured to fit inside the bag 100. That is, the tube 202 of the reinforced ring 200 extends out of the bag through the aperture 110. The segments 300 may be used as an extra form of protection to prevent contaminants entering the bag 100. The segments 300 may also aid in ensuring that only a single dispensable product is removed from the bag 100 at a time. For example, the dispensable products stored in the bag 100 are separable from one another, for ex-

ample, by having a perforation between each product or the products being layered. The segments 300 exerts a force on the dispensable product as it is removed from the bag 100 allowing the user to separate along a perforation or to restrict the next product from accidentally being removed from the bag 100.

[0062] In the embodiment illustrated in Figure 3, the reinforced ring 200 is a part of the reinforcing member 102 and is configured to fit underneath the separate ring 206 - i.e. such that the tube 202 of the reinforced ring 200 extends from the opening of the separate ring 206. In other embodiments, it is recognised that the reinforced ring 200 may be formed as part of the separate ring 206, i.e. that the reinforcing member 102 is a single entity.

[0063] The reinforced ring 200 may be made from the same material as the separate ring 206. It may be that the segments 300 are made of a different material, e.g. a material which is either more or less flexible. The segments 300 may alternatively be of a different material from one another, e.g. half being rigid while the other half are flexible.

[0064] Figure 4 illustrates an example of the bag 100 (in a closed lid configuration) engaged with a holder 400. It can be seen that the reinforcing member 102 of the bag 100 engages with the holder 400 by a bag hanging portion 402 of the holder 400. The bag hanging portion 402 comprises two rigid arms 404 which engage with the two retaining formations 106 on the reinforcing member 102 of the bag 100.

[0065] The bag 100 is securely held by the holder 400 allowing a user to remove a dispensable product stored in the bag 100, preferably requiring the use of one hand. When the bag 100 becomes empty, the bag 100 can be easily removed from the holder 400. That is, the bag 100 can be demountably engaged from the holder 400. This allows a separate bag which is full of dispensable products to be engaged with the holder 400.

[0066] The holder 400 is configured such that the bag 100 is held at an angle when engaged. That is, the reinforcing member 102 is angled upwards between horizontal and vertical, i.e. the plane of the reinforcing member 102 is angled between 0 and 90 degrees from horizontal. Angling the reinforcing member 102 makes it easier for a user to remove a dispensable product from the bag 100.

[0067] A reinforcing member 102 made of a resilient material ensures that any force applied when removing a dispensable product from the bag 100 (when engaged with the holder 400) will not cause the bag 100 to disengage from the holder 400. In other words, the reinforcing member 102 (and therefore the aperture 110) will maintain its shape when a user removes a dispensable product. This is because the force required to remove a dispensable product from the bag 100 is less than the force required to flex the reinforcing member 102. This therefore allows the user to easily remove a dispensable product from the bag 100.

[0068] Further, the holder 400 is also required to be made from a material strong enough to support the bag

100 when it is full of dispensable products and to withstand the force required to remove a dispensable product. That is, the holder 400 is required to restrict distortion of its shape during normal use. The holder 400 may, for example, be made from metal or another rigid material.

[0069] The bags containing the dispensable products are disposable and replaced by a separate bag once empty. There is therefore no requirement to clean any part when replacing the empty bag, thus ensuring that dispensable products are readily available for users. This reduces the requirement and cost of sterilizing agents without compromising on cleanliness.

[0070] Figure 5A illustrates a close up of the rigid arms 404 of the bag holding portion 402 of the holder 400. The rigid arms 404 comprise a recess 500 and an angled distal end 502. That is, the rigid arms 404 have a length which is thinner than the rest of the bag holding portion 402, and have a length which are angled from the rest of the rigid arm 404. The length of the recesses 500 is configured to be similar or longer than the retaining formations 106 so that the retaining formations 106 may be slotted into the recesses 500.

[0071] Figure 5B illustrates a close up of the reinforcing member 102 of the bag 100 engaged with the rigid arms 404. In particular, the two retaining formations 106 of the reinforcing member 102 engage with the recesses 500 of the rigid arms 404. The recesses 500 of the rigid arms 404 encourage the retaining formations 106 of the reinforcing member 102 of the bag 100 to be engaged in a particular manner. That is, the recesses 500 are used to dictate how the bag 100 is held by the holder 400. As the recesses 500 are placed on the rigid arms 404 prior to the angled distal end 502, it forces the reinforcing member 102 of the bag 100 to point upwards when the bag 100 is engaged with the holder 400. The recesses 500 have a similar length as the retaining formations 106 which aids in preventing the bag 100 from inadvertently being disengaged during normal use.

[0072] The angled distal ends 502 of the rigid arms 404 aid in preventing the bag 100 from falling off the holder 400 when engaged. That is, to disengage the bag 100 from the holder 400 a user is required to manipulate the bag 100 when engaged in a specific manner, i.e. to unhook the reinforcing member 102 from the rigid arms 404. This therefore results in the engagement of the bag 100 to be secure when in normal use as the force required to remove a dispensable product from the bag 100 is different than the force required to disengage the bag 100 from the holder 400.

[0073] Accordingly, the invention is a rigid aperture on a bag which is held at a particular angle, in this example about 45 degrees, enabling wipes to be removed from the bag by one hand, one at a time. This makes removing wipes from the bag easy as the aperture is maintained and allows a bag to be used to store the wipes despite the bag being flexible.

[0074] It is recognised that several variants are possible. Figure 6 illustrates two possible alternatives of hold-

ers in a horizontal configuration and in a vertical configuration - both include an engaged reinforcing member 102 for reference. Figure 6A illustrates a holder 600 in the horizontal configuration which comprises a base portion 602. Holder 600 is configured to be placed on a horizontal surface, such as a tabletop. The holder 600 comprises a vertical back portion 604 which is used to provide a strong support for the holder 600.

[0075] The holder 600 further comprises a bag supporting portion 606 used to cradle the bottom of the bag 100 when engaged. This provides an additional support to bags engaged with the holder 600 and prevents the bag holding portion 402 from being subjected to all the weight of the bag 100. The bag supporting portion 606 is angled downwards in a similar way as the bag holding portion 402 which further encourages the bag 100 to be held at a particular angle when engaged with the holder 600 (i.e. the reinforcing member 102 points upwards). The bag supporting portion 606 therefore acts to secure the bag 100 when in the holder 600, and alleviates the full burden of the bag 100 from the bag holding portion 402 thus reducing the risk of the bag holding portion 402 breaking overtime.

[0076] The bag supporting portion 606 comprises a distal end which is angled upwards 608 (i.e. the distal end of the bag supporting portion points upwards). This angled distal end 608 of the bag supporting portion 606 further prevents the bag 100 from accidentally being disengaged from the holder 600 during normal use. That is, the combination of the bag holding portion 402 and the bag supporting portion 606 results in any force applied to remove a dispensable product does not cause the bag 100 to be disengaged from the holder 60. In other words, any angle used to remove a dispensable product will not result in the bag being disengaged. The forces required to demount the bag 100 from the holder 600 is different from the forces used to remove a dispensable product from the bag 100.

[0077] Figure 6B illustrates a holder 610 in a vertical configuration which is configured to be placed on a vertical surface, such as a wall. That is, the holder 610 is wall mountable. The holder 610 does not require a base portion as it is to be mounted on a vertical surface. The holder comprises a mountable back portion 612 used to secure the holder 610 to a surface. The holder 610 comprises a bag supporting portion 606 (similar to holder 600) to cradle the bottom of the bag 100 when engaged. The holder 610 also comprises a horizontal top portion 614 configured to provide support to the bag holding portion 402 to prevent it from deformation due to stress induced from engaged bags.

[0078] When a bag 100 is engaged with the holder 600,610 of Figure 6 either in a horizontal or a vertical configuration, a user is capable of removing a dispensable product one at a time. That is, the dispensable products stored in the bag 100 are separable, such as perforated or layered such that the user is able to remove one product at a time. This is aided by the bag being fixedly

held in the holder. It may also be aided by the reinforcing member 102 of the bag 100, e.g. through the use of a segments 300 as illustrated in Figure 3 above.

[0079] Further, the user is capable of removing a dispensable product using only one hand. That is, a user does not require the use of their second hand to stabilise the bag 100 when removing a dispensable product because the holder acts to stabilise the bag when engaged. This therefore reduces the risk of contamination when a dispensable product is required, for example, to clean a surface as there is no need to clean both hands prior to removing a dispensable product from the bag 100.

[0080] When the bag 100 engaged in holder 600,610 is empty and is to be replaced, a user can remove the empty bag from the holder 600,610 by disengaging the reinforcing member 102 from the bag holding portion 402 - i.e. by angling the bag such that the retaining formations 106 are removed from the recess 500 and follow the angled distal ends of the rigid arms 404. A separate, full bag can be engaged in the holder 600,610 by placing the bag into the bag supporting portion 606 and engaging the reinforcing member 102 with the rigid arms 404 such that the retaining formations 106 fit into the recess 500 of the rigid arms 404. There is no requirement to clean or sterilize the holder 600,610 or the bag 100 (which is preferably disposable). This makes the refilling (replacing) process quick and simple.

[0081] In addition to the above, Figures 6A and 6B illustrate holders 600,610 comprising three securing components 616 used to secure the holder 600,610 to a surface. Figure 6A illustrates the securing components 616 attached at the base portion 602 of the holder 600, and Figure 6B illustrates the securing components 616 attached at the mountable back portion 612. These securing components 616 may be suction components used to secure the holder 600,610 to a smooth surface, such as a smooth tabletop or a smooth wall. The suction components provide a non-destructive means of securing the holder 600,610 to the smooth surface by creating a partial vacuum. It also allows the holder 600,610 to be easily repositioned and secured elsewhere or to a different surface. This is preferable for the holder 600 in the horizontal configuration. Suction components may cooperate with a smooth surface by a user applying a twisting motion to the suction component to achieve a partial vacuum between the suction component and the surface. The twisting motion causes the middle section of the suction component to be pulled away from the surface while the edge of the suction component maintains contact with the surface.

[0082] Alternatively, the securing components 616 may be screws used to secure the holder 600,610 in place (illustrated in Figure 7) in a more destructive manner than the suction components. This enables the holder 600,610 to be secured to surfaces which are not smooth enough to maintain a strong partial vacuum from suction components. Preferably, the securing components 616 for the vertical configuration, i.e. holder 610, will be

screws because walls are typically not smooth enough for suction components.

[0083] The securing components 616 may be detachable. This also allows the securing components 616 to be arranged in a different arrangement as those shown in Figures 6A and 6B. For example, a holder 600 in the horizontal configuration (Figure 6A) may not require the use of securing components 616, instead placing the base portion 602 or back portion 604 on a surface. Alternatively, it is recognised that the holder 600 in the horizontal configuration may be also configured to be attached to a vertical surface by attaching securing components to the vertical back portion.

[0084] Figure 7 illustrates a screw securing component 700. A holder 600,610 is secured to a surface by a user providing a twisting motion to the securing component. The screw securing component 700 is configured to engage with the surface by the screw becoming embedded into the surface. This is preferable for holders which are to be secured to a non-smooth surface, such as holder 610 in a vertical configuration.

Claims

1. An apparatus comprising:

a bag for storing dispensable products comprising a reinforcing member adjacent to an aperture of the bag, wherein the reinforcing member comprises one or more retaining formations; and
a holder comprising a bag hanging portion configured to demountably engage with the reinforcing member.

2. The apparatus of claim 1, wherein the reinforcing member defines the aperture of the bag.

3. The apparatus of claim 1 or 2, wherein, when the one or more retaining formations are engaged with the bag hanging portion, the bag is angled such that the plane of the aperture of the bag faces upwards.

4. The apparatus of any preceding claim, wherein the reinforcing member is resilient and comprises a lid to cover the aperture.

5. The apparatus of any preceding claim, wherein the bag hanging portion of the holder comprises one or more rigid arms configured to engage with the reinforcing member, wherein the one or more rigid arms are configured to engage with the one or more retaining formations of the reinforcing member, and wherein the one or more rigid arms comprise a distal end and one or more bends.

6. The apparatus of any preceding claim, wherein the bag hanging portion comprises at least one recess,

and wherein said demountable engagement is by the one or more retaining formations cooperating with the at least one recess.

7. The apparatus of any preceding claim, wherein the holder further comprises a bag supporting portion configured to support the bottom of the bag when the reinforcing member of the bag is engaged with the bag hanging portion of the holder, wherein the bag supporting portion comprises an angled distal end configured to restrict movement of the bag when engaged in the holder.

8. The apparatus of any preceding claim, wherein the holder further comprises one or more securing components configured to engage the holder with a surface, wherein the one or more securing components are suction components or screws and wherein the one or more securing components are detachable.

9. The apparatus of claim 8, wherein the holder comprises a base and the one or more securing components are configured to attach to the base, and/or wherein the holder comprises a back portion and the one or more securing components are configured to attach to the back portion.

10. The apparatus of any preceding claim, wherein the reinforcing member comprises one or more segments covering the aperture of the bag, the one or more segments configured to apply a force on the dispensable product when being removed from the bag.

11. A disposable product dispenser comprising:

a bag for storing dispensable products comprising an aperture; and
a reinforcing member configured to be adjacent to the aperture of the bag, wherein the reinforcing member comprises one or more retaining formations.

12. A kit of parts comprising:

a bag for storing dispensable products comprising a reinforcing member adjacent to an aperture of the bag, wherein the reinforcing member comprises one or more retaining formations; and
a holder comprising a bag hanging portion configured to demountably engage with the reinforcing member.

13. The kit of parts of claim 12 which can be assembled to form the apparatus of any of claims 1 to 10.

14. A method comprising the steps of:

providing a bag for storing dispensable products comprising a reinforcing member adjacent to an aperture of the bag, wherein the reinforcing member comprises one or more retaining formations, and a holder comprising a bag hanging portion configured to demountably engage with the reinforcing member; the method comprising:

attaching the bag to the holder; and
subsequently detaching the bag from the holder.

15. The method of claim 14 further comprising the step of removing dispensable products from the bag with one hand while the bag is attached to the holder, and the step of removing dispensable product from the bag one at a time while the bag is attached to the holder

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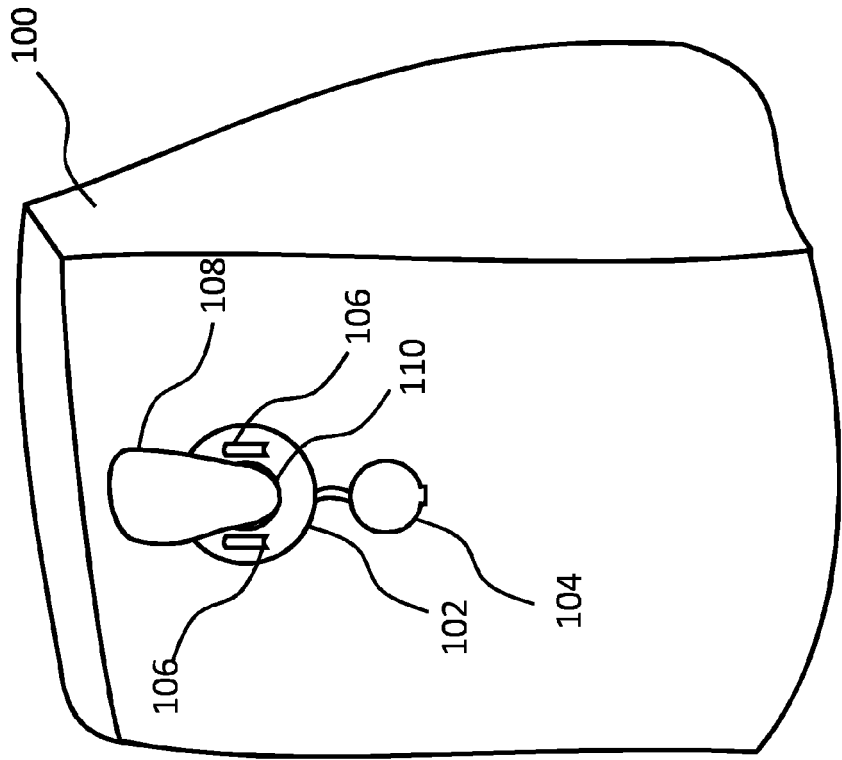


Figure 1B

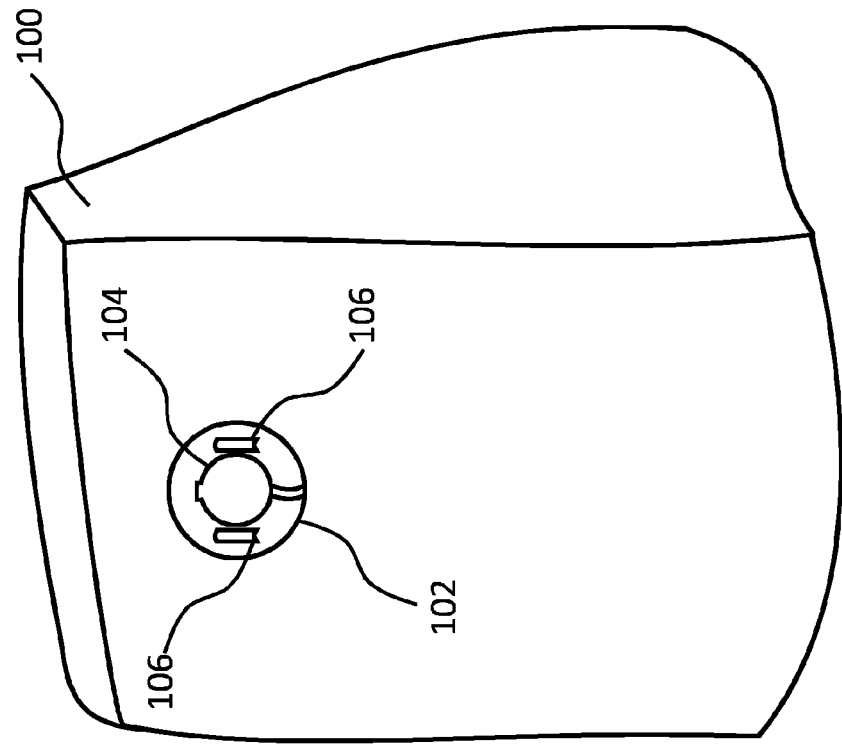


Figure 1A

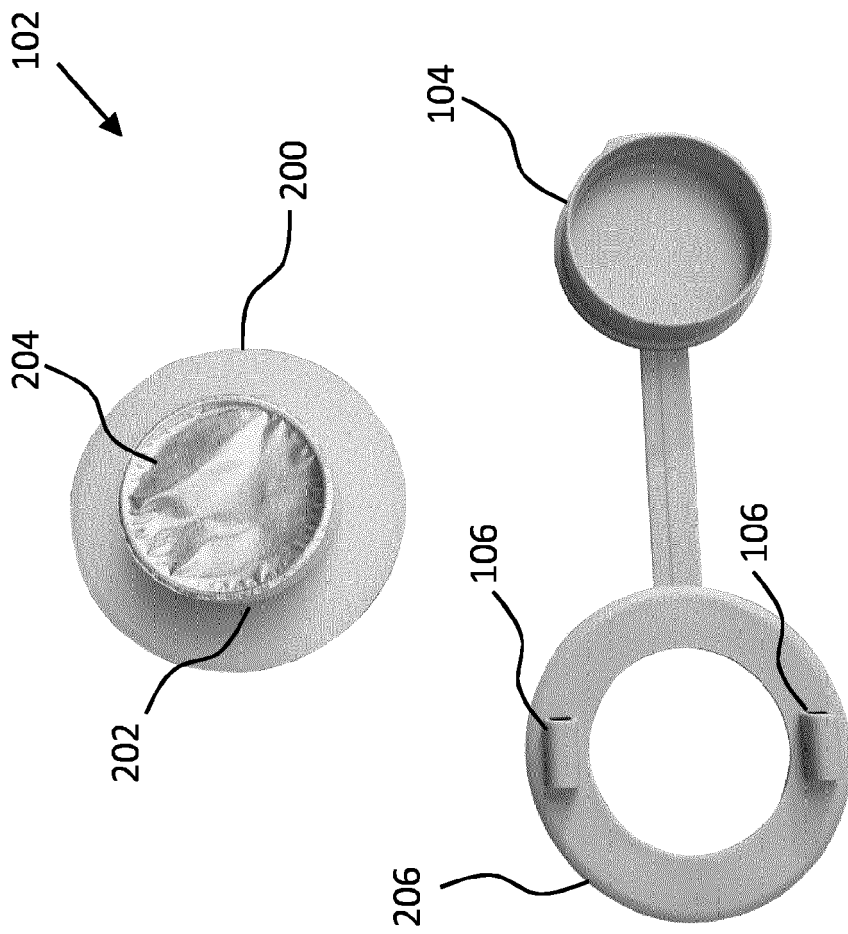


Figure 2

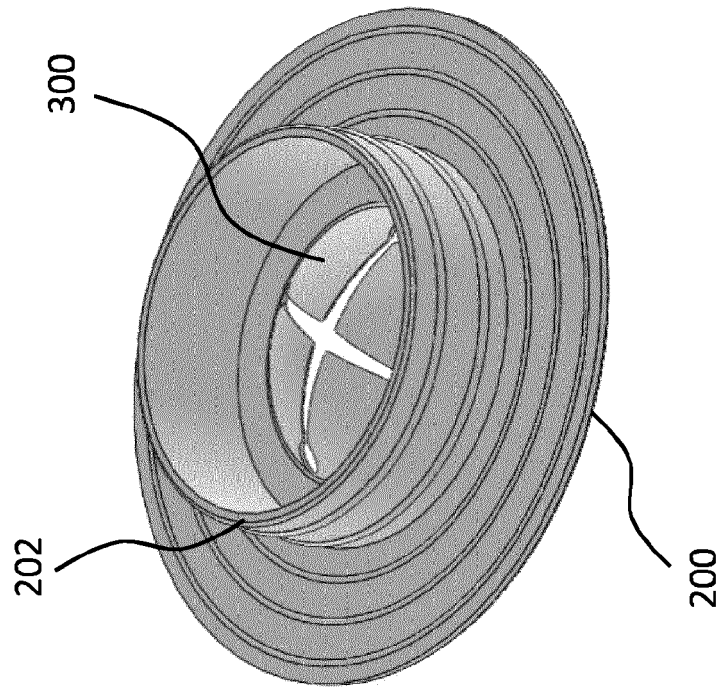


Figure 3

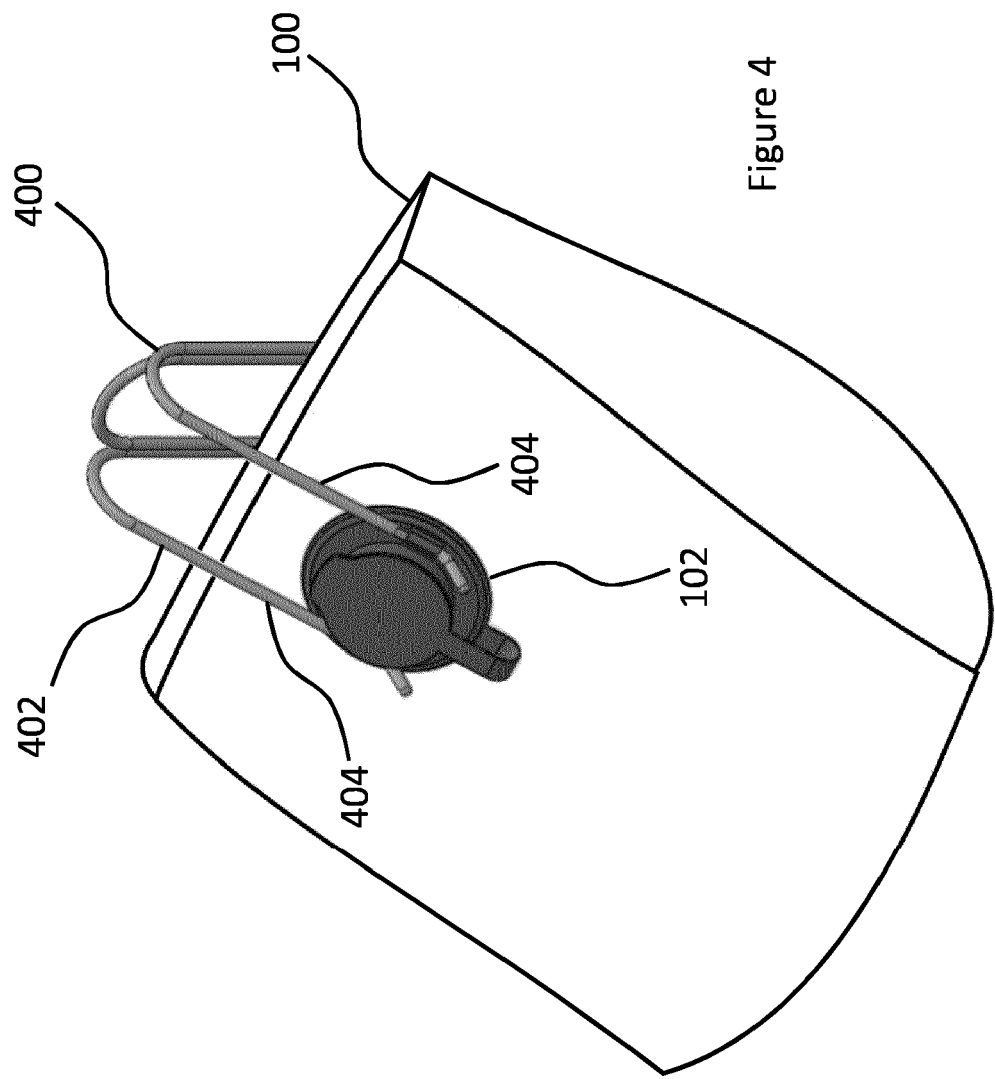


Figure 4

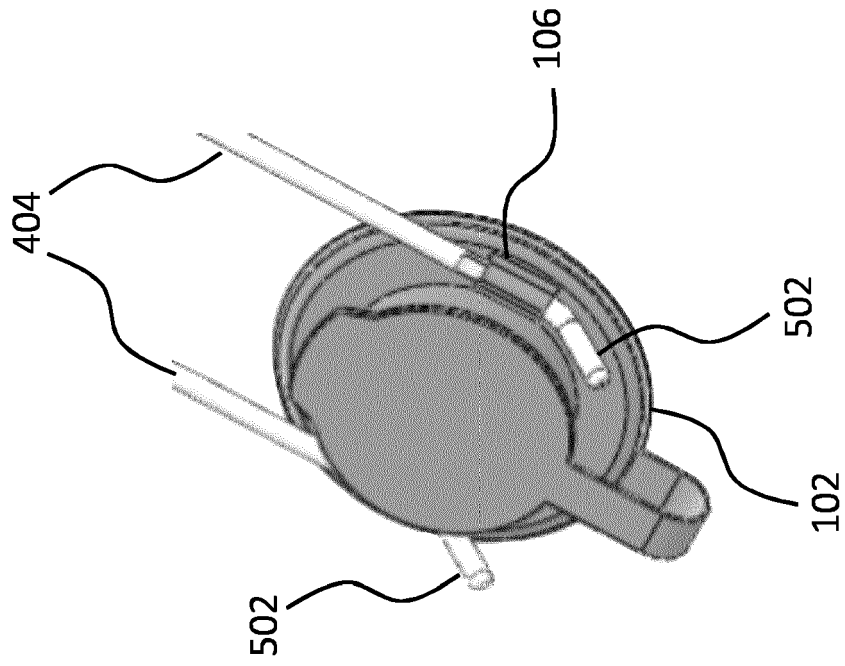


Figure 5B

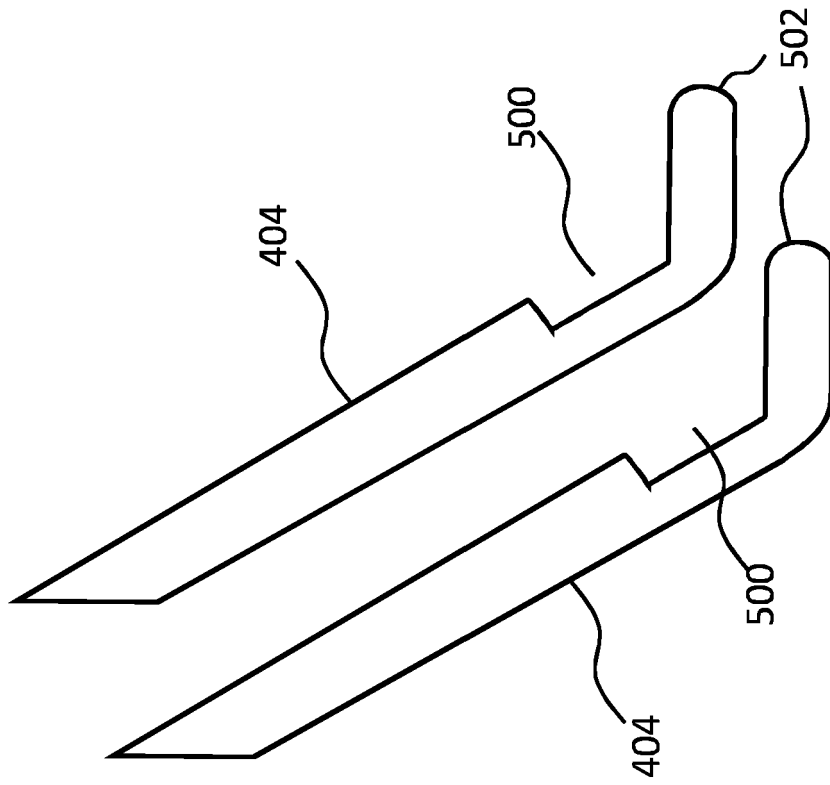


Figure 5A

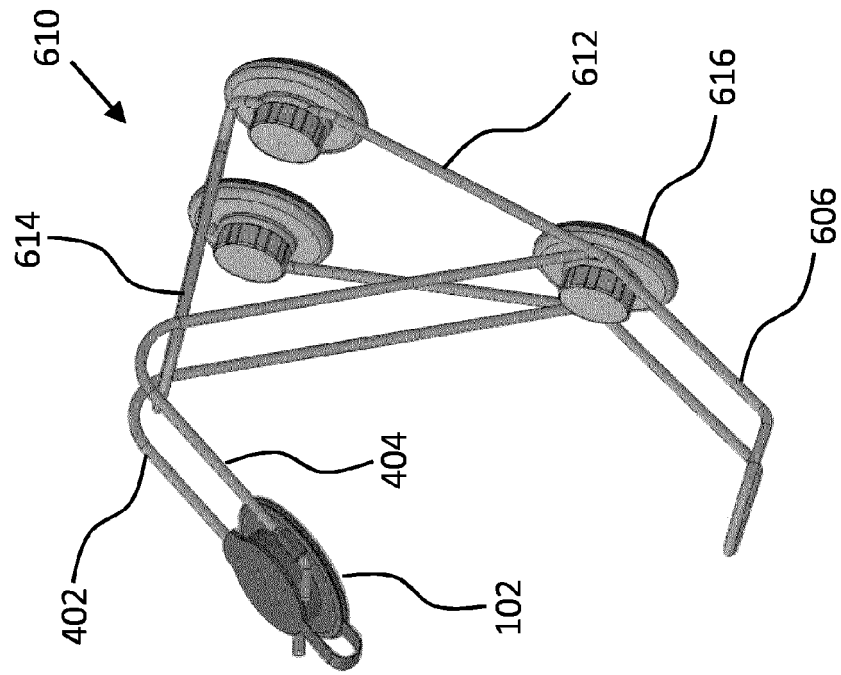


Figure 6B

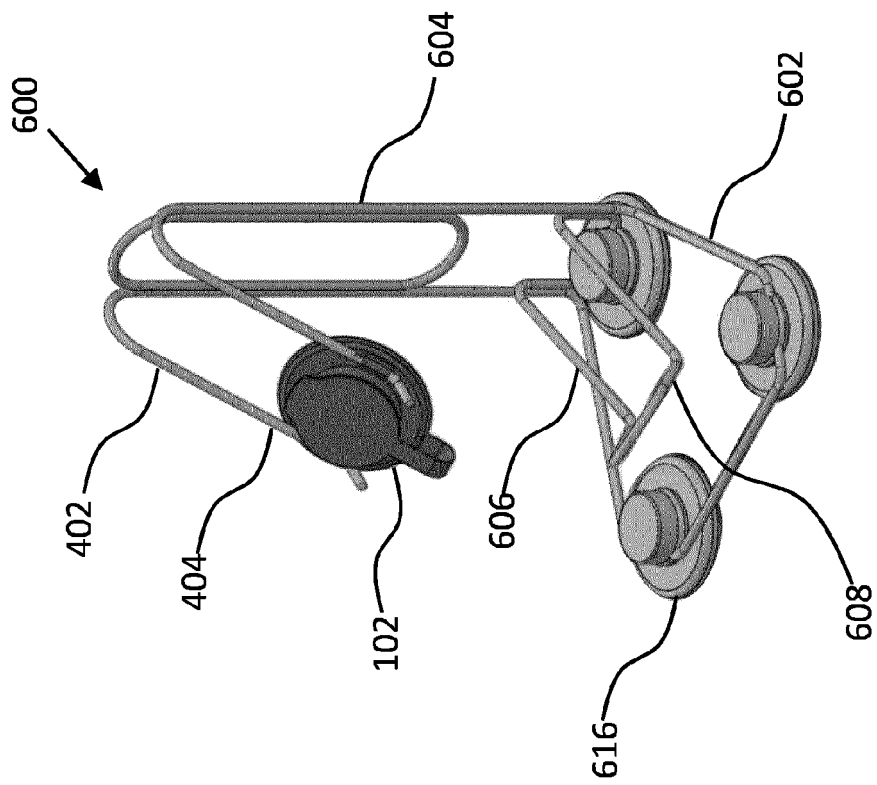


Figure 6A

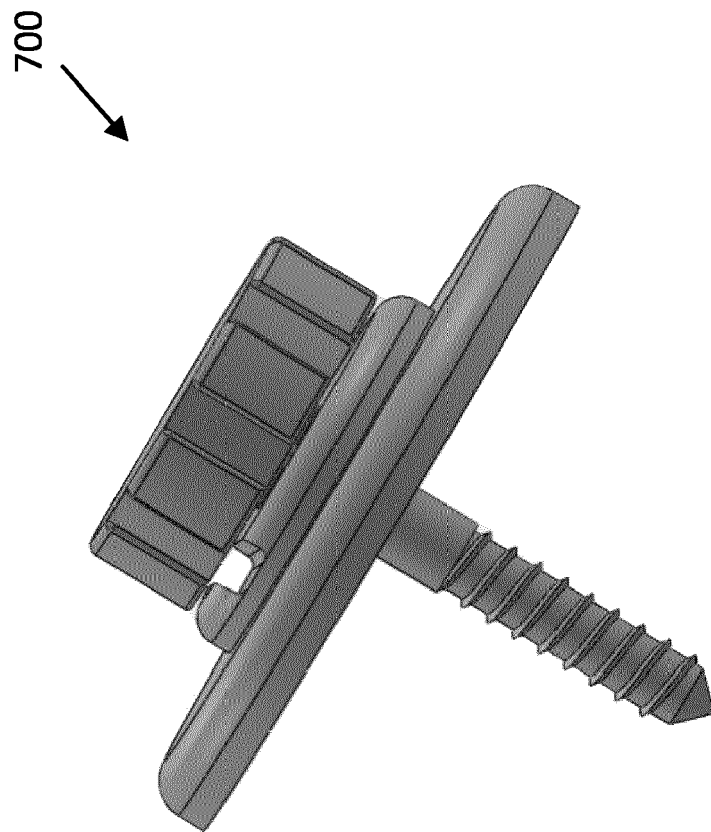


Figure 7



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Application Number
EP 18 19 7804

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			TECHNICAL FIELDS SEARCHED (IPC)
			A47K B65D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 18 March 2019	Examiner Zuurveld, Gerben
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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ON EUROPEAN PATENT APPLICATION NO.**

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5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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