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(54) **BAG HOLDER**

BEUTELHALTER

PORTE-SAC

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Description

[0001] The present invention relates to bag holders.

[0002] Bags have many applications, such as the carrying, storing and packing of goods. Bags suitable for such applications may be provided in a range of sizes and may be made from any suitable material, such as polyethylene, paper or biodegradable materials.

[0003] Polyethylene bags are often used for packing goods for mailing. In environments such as warehouses or dispatch centres, where large numbers of goods are prepared for mailing, bags for packing goods are generally provided in a flat, unexpanded configuration. Stacks of such bags may be placed on a surface ready for use by a packing operator, with a range of different sizes being made available on the same surface in order to accommodate the varying sizes of goods to be packed. In such conditions, a packing operator must select a bag of the correct size into which to insert the goods, and either move the bag and the goods to a separate packing area to complete the packing process, or pack the goods in the area used to store and support the various bags. The former can be inefficient, and the latter can lead to a disorganised workspace as the nature of polyethylene bags means that they easily slide over each other and off the surface being used to support the bags, which again can be inefficient.

[0004] In order to overcome the above issues, it is known to hang packing bags to aid the packing process. Such packing bags may comprise a header which is attached to the main body of the bag by a perforated tear line, the header further comprising holding holes through which a hook or other suitable holding means may be threaded. Each bag may be provided separately, or the headers may be connected to form a discrete stack of bags, each bag being removed from the stack by breaking the perforated tear line between the header and the body of the bag. To ensure that the bags (in particular, the headers) are not inadvertently removed from the hook or holding means, a suitable securing means may be used. However, removing and replacing the securing means in order to replenish the bag holder with a new supply of bags and secure them in place can be unnecessarily fiddly and time consuming. US5419437 discloses plastic film bags carried on a support structure and the process by which the bags may be opened and severed from the structure so that the bags may be filled with a given product. US2012118839A1 discloses another known bag holder.

[0005] Accordingly, it is an object of the present invention to provide an improved holder for holding bags.

Summary of invention

[0006] In accordance with the invention, there is provided a bag holder comprising: a back plate comprising at least one aperture, wherein the at least one aperture comprises a substantially elongate slot extending along

the back plate; a front plate; and at least one holding pin coupled at a proximal end thereof to the back plate, the at least one pin extending forwardly from the back plate to enable a bag to be supported thereon wherein the at least one holding pin comprises a holding pin extending through the slot and being slidably retained therein; wherein the front plate is moveably coupled to the back plate such that the bag holder is reconfigurable between a closed configuration in which the front plate extends adjacent a distal end of the at least one pin to retain at least one bag upon the pin, and an open configuration for loading bags upon and/or unloading bags from the at least one pin, wherein at least two locating notches extending from the elongate slot, within which the at least one holding pin extending through the slot is arranged to locate.

[0007] The at least one holding pin may extend from the back plate in a direction which is substantially perpendicular to a plane of the back plate. The front plate may abut the distal end of the at least one pin when the bag holder is arranged in the closed configuration. The bag holder may comprise a plurality of holding pins.

[0008] The moveable coupling may comprise a pivotable coupling, in which case the front plate may be arranged to pivot about a horizontal axis. The pivotable coupling may comprise at least one hinge.

[0009] The front plate may be coupled to the back plate via a spacing member, wherein the spacing member spaces the front plate from the back plate. The spacing member may be rigidly coupled to the front plate.

[0010] The bag holder may comprise at least two holding pins, wherein at least one holding pin is fixedly mounted on the back plate and at least one holding pin is slidably mounted on the back plate.

[0011] The front plate may comprise at least one magnetic region with which the at least one holding pin engages to hold the bag holder in the closed configuration.

[0012] The at least one holding pin may comprise a magnetic region with which the front plate engages to hold the bag holder in the closed configuration.

[0013] The back plate may form part of a mounting means for mounting the bag holder on a structure. The mounting means may comprise, in use, a top plate and/or a bottom plate. The back plate, the top plate and the bottom plate may form an elongate member with a substantially C-shaped cross section, and the mounting means may comprise a fixing means.

[0014] The mounting means may comprise a spacing portion for spacing the back plate from a structure to which the mounting means is mounted.

[0015] The bag holder may be combined with at least one bag.

Brief description of drawings

[0016]

Figure 1 is a perspective view of a bag holder ac-

cording to an embodiment of the present invention, arranged in a closed configuration.

Figure 2 is a perspective view of the bag holder according to an embodiment of the present invention, arranged in an open configuration.

Figure 2A is a perspective view of the bag holder illustrated in Figure 2 in combination with a bag.

Figure 3 is a side, cutaway view of the bag holder illustrated in Figure 2.

Figure 4 is a side, cutaway view of the bag holder illustrated in Figure 1.

Detailed description

[0017] Referring to Figures 1 to 4 of the drawings, there is illustrated a bag holder 100 according to an embodiment of the present invention. The bag holder 100 is reconfigurable between a closed configuration (as illustrated in Figure 1 and Figure 4) and an open configuration (as illustrated in Figure 2, Figure 2A and Figure 3).

[0018] The bag holder 100 comprises a back plate 110a and a front plate 120, both of which may be formed from any suitable material such as metal or plastics material. The front plate 120 is moveably coupled to the back plate 110a. The bag holder 100 further comprises two holding pins 111, 112 which extend from the back plate 110a and towards the front plate 120 when the bag holder is in the closed configuration (as illustrated in Figure 4). However, it is envisaged that the bag holder 100 may comprise a single holding pin or more than two holding pins. In the illustrated embodiment, the holding pins 111, 112 extend from the back plate 110a in a direction which is substantially perpendicular to the plane of the back plate 110a, with the first holding pin 111 extending through the first aperture 113 in the back plate 110a and the second holding pin 112 extending through the second aperture 114 in the back plate 110a. However, any orientation of the holding pins 111, 112 suitable for holding packing bags may be used. It is also envisaged that the holding pins 111, 112 may be affixed to the back plate 110a in a manner that does not require them to extend through the back plate 110a. In the illustrated embodiment, each of the back plate 110a and the front plate 120 comprises a substantially planar elongate member comprising a major axis and a minor axis.

[0019] As shown in Figure 2, for example, the first aperture 113 comprises a circular aperture through which the first holding pin 111 extends, while the second aperture 114 comprises an elongate slot extending substantially horizontally in use, through which the second holding pin 112 extends.

[0020] The holding pins 111, 112 may be secured within the respective apertures 113, 114 in the backplate using any suitable means. As illustrated in Figure 4, the first

holding pin 111 may comprise an enlarged section 111a which has a diameter larger than the first aperture 113 and which abuts the front face 110a' of the back plate 110a, while a connecting section 111b (partially shown in Figures 3 and 4) with a diameter smaller than that of the first aperture 113 is passed through the first aperture 113. A fastener 111c is connected to the connecting section 111b of the holding pin 111 proximal to the rear face 110a" of the back plate 110a to prevent the holding pin 111 from being removed from the first aperture 113 when the holding pin 111 has been fastened in place within the first aperture 113.

[0021] The second holding pin 112 is secured in the second aperture 114 in a similar manner. However, the second holding pin 112 can be moved within the elongate slot of the second aperture 114 so that it may be moved along the length of the second aperture 114. This allows the relative distance between the holding pins 111 and 112 to be adjusted which, in turn, allows packing bags 200 of varying widths or with varying distances between their holding holes 230 (shown in Figure 2A) to be accommodated by the same bag holder 100. The second aperture 114 comprises a plurality of locating notches, 114a, 114b, 114c and 114d, which extend substantially perpendicularly to the length of the elongate slot and which, in use, extend in a substantially downward direction from the elongate slot. The second holding pin 112 may be located in any of notches 114a-114d in order to alter its distance from the first holding pin 111; in the illustrated embodiment, the second holding pin 112 is located in a first notch 114a, which limits the movement of the second holding pin 112 along the elongate slot of second aperture 114. When it is desired to move the position of the second holding pin 112 to a different notch, the user ensures that the front plate 120 is in the open configuration, and then may simply push the second holding pin 112 from the notch 114a and into the elongate slot to move the second holding pin 112 to one of the other notches 114b-114d.

[0022] The back plate 110a may form part of a mounting means or assembly 110, which may comprise a fixing means. The mounting means may further comprise a top plate and/or a bottom plate. In the illustrated embodiment, the mounting means comprises both a top plate 110b and a bottom plate 110c, and the fixing means comprises a fixing member which is a clamp screw 116. The clamp screw 116 may engage with an internally-threaded hole 117 in the bottom plate 110c. Alternatively, the fixing means may comprise fixing holes 119 in the top plate 110b (as shown in Figure 1), through which fixing members (not shown) may be inserted in order to attach the bag holder 100 to a surface. A combination of fixing means may be used.

[0023] In the illustrated embodiment, the back plate 110a, the top plate 110b and the bottom plate 110c may form an elongate member with a substantially C-shaped cross section. As illustrated in Figure 3 and Figure 4, for example, the mounting means 110 may be used to mount

the bag holder 100 on a support structure 300 such as a table. The mounting means 110 may also comprise a spacing portion or means 115 to space the back plate 110a from the support structure 300 to prevent the holding pin fastener 111c of the first holding pin 111 and the holding pin fastener (not illustrated) of the second holding pin 112 from abutting the support structure 300 to which the bag holder 100 is attached. However, it is envisaged that the back plate 110a could be attached to a support structure using any suitable means.

[0024] The front plate 120 may be moveably coupled to the back plate 110a using any suitable means. In the illustrated embodiment, the front plate 120 is hingebly connected to the back plate 110a via a spacing member 120a which is integral with and rigidly attached to the front plate 120, although other arrangements are envisaged. The hingeable connection of the spacing member 120a (and, consequently the front plate 120) to the back plate 110a comprises a hinge 122, which may comprise a piano hinge.

[0025] As illustrated in Figure 3, the arrangement of the front plate 120, the spacing member 120a and the top plate 110b of the mounting means 110 allows the front plate 120 to be maintained in the open configuration without support from the user and until the user chooses to move the front plate 120 into the closed configuration.

[0026] The bag holder 100 may comprise securing means, which may comprise magnetic means, for securing the front plate 120 in a closed configuration. For example, the front plate 120 may comprise a magnetic strip 121, which may be used to secure the front plate 120 in the closed configuration when the magnetic strip 121 abuts the holding pins 111, 112, which may comprise ferromagnetic material. Alternatively, the holding pins may comprise magnetic means at their ends distal from the back plate 110a and the front plate 120 may comprise ferromagnetic material or regions of ferromagnetic material. In addition, in the illustrated embodiment, the bag holder 100 comprises magnetic means in the form of magnets 118 on the back plate 110a. The magnets 118 engage with the front plate 120 when the front plate is in the closed configuration. In the illustrated embodiment, this engagement is via projections 123 on the front plate 120. In an alternative embodiment, the bag holder 100 may comprise only the magnetic means associated with the pins 111, 112 and the front plate 120, or may comprise only the magnetic means associated with the magnets 118 and the projections 123 on the front plate 120. The magnetic means provide an attractive force suitable for holding the front plate 120 in the closed configuration, but which can be overcome manually by a user without requiring undue force.

[0027] In order to attach the bag holder 100 to the support structure 300, the user places the mounting means 110 over the support surface 300 so that the top plate 110b rests on the upper surface of the support structure 300 in use. The bottom plate 110c is located below the support structure 300 in use, and the clamp screw 116

is adjusted to clamp the support structure 300 between the top plate 100c and the clamp screw 116.

[0028] In order to use the bag holder 100 to hold packing bags 200, the user ensures that the front plate 120 is in the open configuration. As illustrated in Figure 2A, the holding holes 230 of the header 220 of the packing bags 200 (which may be provided singly or in a stack of bags connected together by their headers) may then be placed over the holding pins 111, 112 of the bag holder 100. The front plate 120 may then be moved into the closed configuration so that the magnetic strip 121 contacts the ends of the holding pins 111, 112 distal from the back plate 110a to secure the front plate 120 in place and prevent the headers 220 of the packing bags 200 from being removed from the holding pins 111, 112 when the front plate 120 is in the closed configuration. A bag may be removed from the bag holder 100 by pulling the bag body 210 so that the perforated tear line 240 breaks and the bag body 210 is detached from the bag header 220. In order to remove used headers 220 (from which the bag body 210 has been detached) from the bag holder 100, the user moves the front plate 120 from the closed configuration to the open configuration so that the used headers 220 can be removed from the holding pins 111, 112.

Claims

1. A bag holder (100) comprising:

a back plate (110a) comprising at least one aperture (113, 114), wherein the at least one aperture comprises a substantially elongate slot (114) extending along the back plate;
a front plate (120); and
at least one holding pin (111, 112) coupled at a proximal end thereof to the back plate (110a), the at least one pin (111, 112) extending forwardly from the back plate (110a) to enable a bag to be supported thereon, wherein the at least one holding pin (111, 112) comprises a holding pin (112) extending through the slot (114) and being slidably retained therein;
wherein the front plate (120) is moveably coupled to the back plate such that the bag holder is reconfigurable between a closed configuration in which the front plate extends adjacent a distal end of the at least one pin (111, 112) to retain at least one bag upon the pin, and an open configuration for loading bags upon and/or unloading bags from the at least one pin, wherein at least two locating notches (114a, 114b, 114c, 114d) extending from the elongate slot (114), within which the at least one holding pin (112) extending through the slot (114) is arranged to locate.

2. A bag holder (100) as claimed in claim 1 wherein the at least one holding pin (111, 112) extends from the back plate (110a) in a direction which is substantially perpendicular to a plane of the back plate. 5
3. A bag holder (100) as claimed in any of the preceding claims wherein the front plate (120) abuts the distal end of the at least one pin (111, 112) when the bag holder (100) is arranged in the closed configuration. 10
4. A bag holder (100) as claimed in any of the preceding claims comprising a plurality of holding pins (111, 112). 15
5. A bag holder (100) as claimed in any preceding claim wherein the moveable coupling comprises a pivotable coupling (122). 20
6. A bag holder (100) as claimed in claim 5 wherein, in use, the front plate (120) is arranged to pivot about a horizontal axis. 25
7. A bag holder (100) as claimed in any of claims 5 or 6 wherein the front plate (120) is coupled to the back plate (110a) via a spacing member (120a), wherein the spacing member spaces the front plate from the back plate. 30
8. A bag holder (100) as claimed in claim 7 wherein the spacing member (120a) is rigidly coupled to the front plate (120). 35
9. A bag holder (100) as claimed in any preceding claim comprising at least two holding pins (111, 112), wherein at least one holding pin is fixedly mounted on the back plate (110a) and at least one holding pin is slidably mounted on the back plate. 40
10. A bag holder (100) as claimed in any of the preceding claims wherein the front plate (120) comprises at least one magnetic region (121) with which the at least one holding pin engages (111, 112), to hold the bag holder in the closed configuration. 45
11. A bag holder (100) as claimed in any of the preceding claims wherein the at least one holding pin comprises a magnetic region with which the front plate engages, to hold the bag holder in the closed configuration. 50
12. A bag holder as claimed in any of the preceding claims wherein the back plate forms part of a mounting means for mounting the bag holder on a structure. 55

Patentansprüche

1. Beutelhalter (100), umfassend:

eine Rückplatte (110a), die mindestens eine Öffnung (113, 114) umfasst, wobei die mindestens eine Öffnung einen im Wesentlichen länglichen Schlitz (114) umfasst, der sich entlang der Rückplatte erstreckt;
 eine Frontplatte (120); und
 mindestens einen Haltestift (111, 112), der an einem proximalen Ende davon mit der Rückplatte (110a) verbunden ist, wobei der mindestens eine Stift (111, 112) von der Rückplatte (110a) nach vorne ragt, um die Auflage einer Tasche darauf zu ermöglichen, wobei der mindestens eine Haltestift (111, 112) einen Haltestift (112) umfasst, der durch den Schlitz (114) ragt und darin verschiebbar gehalten wird;
 wobei die Frontplatte (120) beweglich mit der Rückplatte verbunden ist, so dass der Beutelhalter zwischen einer geschlossenen Konfiguration, in der sich die Frontplatte neben einem distalen Ende des mindestens einen Stifts (111, 112) erstreckt, um mindestens einen Beutel auf dem Stift zu halten, und einer offenen Konfiguration zum Laden von Beuteln auf und/oder Entladen von Beuteln von dem mindestens einen Stift umkonfigurierbar ist,
 wobei sich von dem länglichen Schlitz (114) mindestens zwei Positionierungskerben (114a, 114b, 114c, 114d) erstrecken, innerhalb derer der mindestens eine Haltestift (112), der sich durch den Schlitz (114) erstreckt, positioniert werden kann.

2. Beutelhalter (100) nach Anspruch 1, wobei der mindestens eine Haltestift (111, 112) sich von der Rückplatte (110a) in eine Richtung erstreckt, die im Wesentlichen senkrecht zu einer Ebene der Rückplatte ist.
3. Beutelhalter (100) nach einem der vorstehenden Ansprüche, wobei die Frontplatte (120) an das distale Ende des mindestens einen Stifts (111, 112) anstößt, wenn der Beutelhalter (100) in der geschlossenen Konfiguration angeordnet ist.
4. Beutelhalter (100) nach einem der vorstehenden Ansprüche, der eine Vielzahl von Haltestiften (111, 112) umfasst.
5. Beutelhalter (100) nach einem der vorstehenden Ansprüche, wobei die bewegliche Kupplung eine schwenkbare Kupplung (122) umfasst.
6. Beutelhalter (100) nach Anspruch 5, wobei die Frontplatte (120) im Gebrauch so angeordnet ist, dass sie um eine horizontale Achse schwenkt.
7. Beutelhalter (100) nach einem der Ansprüche 5 oder 6, wobei die Frontplatte (120) über ein Abstandse-

lement (120a) mit der Rückplatte (110a) verbunden ist, wobei das Abstandselement die Frontplatte von der Rückplatte beabstandet.

8. Beutelhalter (100) nach Anspruch 7, wobei das Abstandselement (120a) starr mit der Frontplatte (120) verbunden ist. 5
9. Beutelhalter (100) nach einem der vorstehenden Ansprüche, der mindestens zwei Haltestifte (111, 112) umfasst, wobei mindestens ein Haltestift fest an der Rückplatte (110a) montiert ist und mindestens ein Haltestift verschiebbar an der Rückplatte montiert ist. 10
10. Beutelhalter (100) nach einem der vorstehenden Ansprüche, wobei die Frontplatte (120) mindestens einen magnetischen Bereich (121) aufweist, in den der mindestens eine Haltestift eingreift (111, 112), um den Beutelhalter in der geschlossenen Konfiguration zu halten. 15
11. Beutelhalter (100) nach einem der vorstehenden Ansprüche, wobei der mindestens eine Haltestift einen magnetischen Bereich umfasst, in den die Frontplatte eingreift, um den Beutelhalter in der geschlossenen Konfiguration zu halten. 20
12. Beutelhalter nach einem der vorstehenden Ansprüche, wobei die Rückplatte einen Teil einer Befestigungsvorrichtung zum Befestigen des Beutelhalters an einer Struktur bildet. 25

Revendications

1. Porte-sac (100) comprenant :

une plaque arrière (110a) comprenant au moins une ouverture (113, 114), dans lequel l'au moins une ouverture comprend une fente sensiblement allongée (114) s'étendant le long de la plaque arrière ; 40

une plaque avant (120) ; et 45

au moins une goupille de maintien (111, 112) couplée à son extrémité proximale à la plaque arrière (110a), l'au moins une goupille (111, 112) s'étendant vers l'avant de la plaque arrière (110a) pour permettre à un sac d'être supporté sur celle-ci, dans lequel au moins une goupille de maintien (111, 112) comprend une goupille de maintien (112) s'étendant à travers la fente (114) et y étant retenue de manière coulissante ; 50

dans lequel la plaque avant (120) est couplée de manière mobile à la plaque arrière de sorte que le porte-sac est reconfigurable entre une configuration fermée dans laquelle la plaque avant s'étend à côté d'une extrémité distale de 55

l'au moins une broche (111, 112) pour retenir au moins un sac sur la broche, et une configuration ouverte pour charger des sacs sur et/ou décharger des sacs de l'au moins une broche, dans lequel au moins deux encoches de positionnement (114a, 114b, 114c, 114d) s'étendant à partir de la fente allongée (114), à l'intérieur desquelles l'au moins une broche de maintien (112) s'étendant à travers la fente (114) est agencée pour se loger.

2. Porte-sac (100) selon la revendication 1, dans lequel l'au moins une goupille de maintien (111, 112) s'étend de la plaque arrière (110a) dans une direction sensiblement perpendiculaire à un plan de la plaque arrière. 15
3. Porte-sac (100) selon l'une quelconque des revendications précédentes, dans lequel la plaque avant (120) vient en butée contre l'extrémité distale de l'au moins une goupille (111, 112) lorsque le porte-sac (100) est agencé dans la configuration fermée. 20
4. Porte-sac (100) selon l'une quelconque des revendications précédentes, comprenant une pluralité de goupilles de maintien (111, 112). 25
5. Porte-sac (100) selon l'une des revendications précédentes, dans lequel l'accouplement mobile comprend un accouplement pivotant (122). 30
6. Porte-sac (100) selon la revendication 5, dans lequel, en cours d'utilisation, la plaque avant (120) est agencée pour pivoter autour d'un axe horizontal. 35
7. Porte-sac (100) selon l'une quelconque des revendications 5 ou 6, dans lequel la plaque avant (120) est couplée à la plaque arrière (110a) par l'intermédiaire d'un élément d'espacement (120a), dans lequel l'élément d'espacement sépare la plaque avant de la plaque arrière. 40
8. Porte-sac (100) selon la revendication 7, dans lequel l'élément d'espacement (120a) est rigidement couplé à la plaque avant (120). 45
9. Porte-sac (100) selon l'une quelconque des revendications précédentes, comprenant au moins deux goupilles de maintien (111, 112), dans lequel au moins une goupille de maintien est montée de manière fixe sur la plaque arrière (110a) et au moins une goupille de maintien est montée de manière coulissante sur la plaque arrière. 50
10. Porte-sac (100) selon l'une quelconque des revendications précédentes, dans lequel la plaque avant (120) comprend au moins une zone magnétique (121) avec laquelle s'engage l'au moins une broche 55

de maintien (111, 112), afin de maintenir le porte-sac dans la configuration fermée.

11. Porte-sac (100) selon l'une des revendications précédentes, dans lequel l'au moins une broche de maintien comprend une zone magnétique avec laquelle la plaque avant s'engage, pour maintenir le porte-sac dans la configuration fermée. 5
12. Porte-sac selon l'une quelconque des revendications précédentes, dans lequel la plaque arrière fait partie d'un moyen de montage pour monter le porte-sac sur une structure. 10

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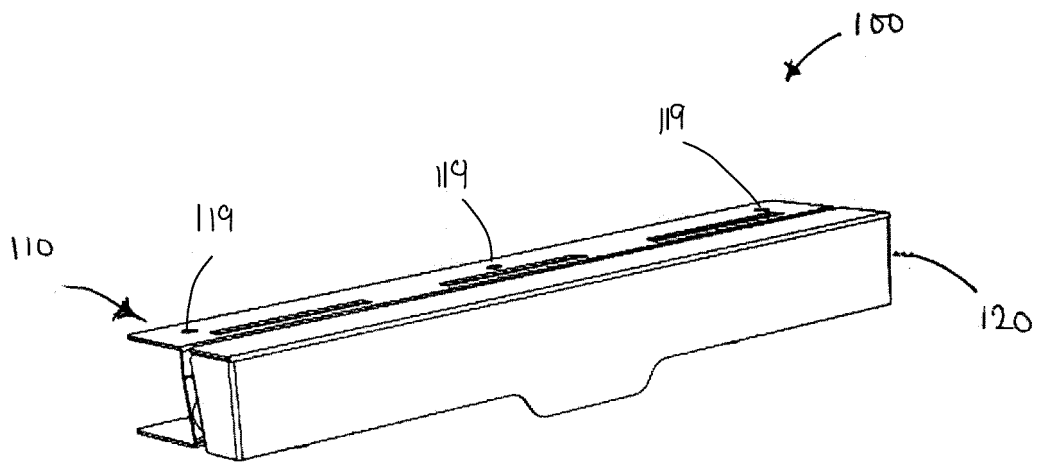
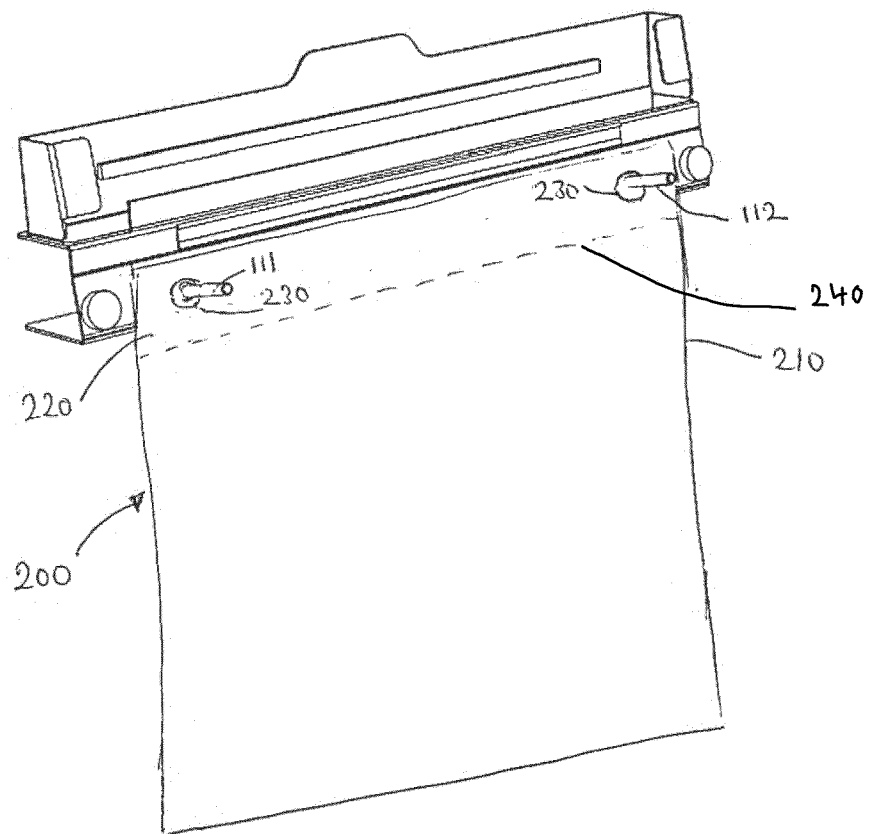
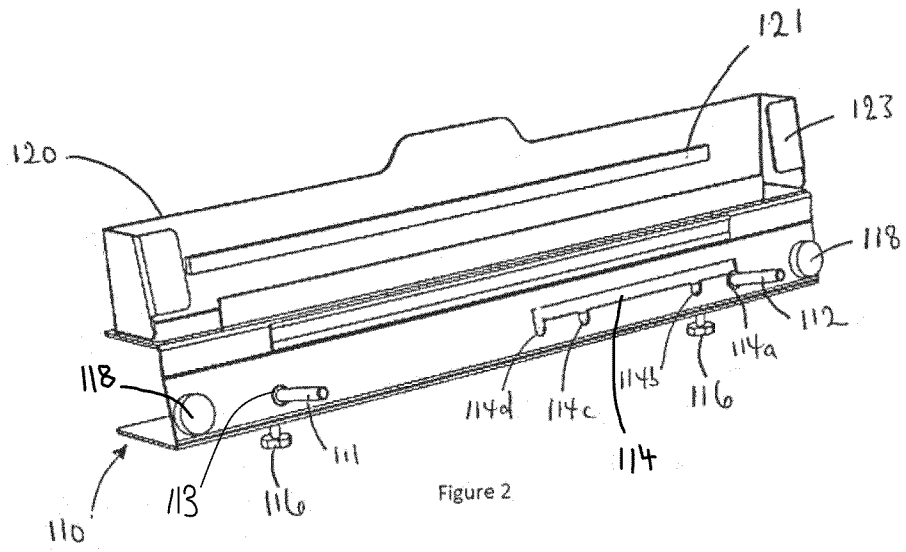
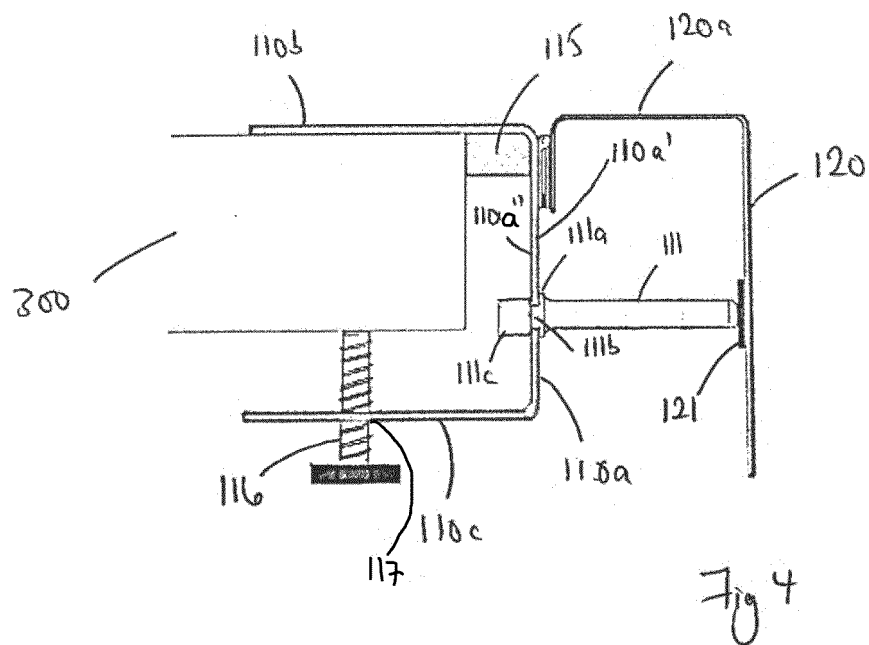
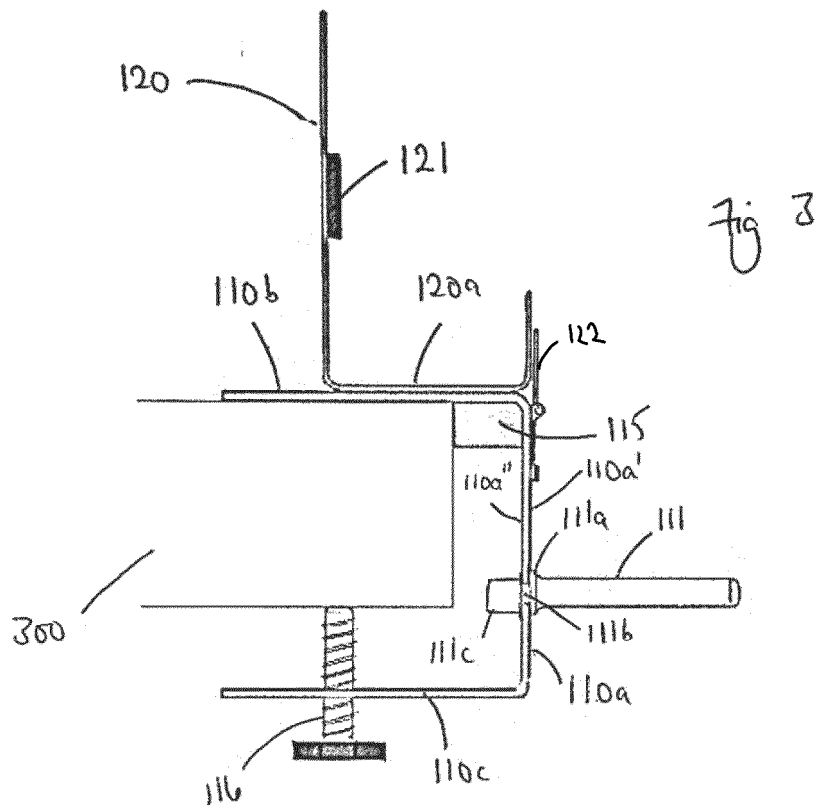


Figure 1





REFERENCES CITED IN THE DESCRIPTION

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