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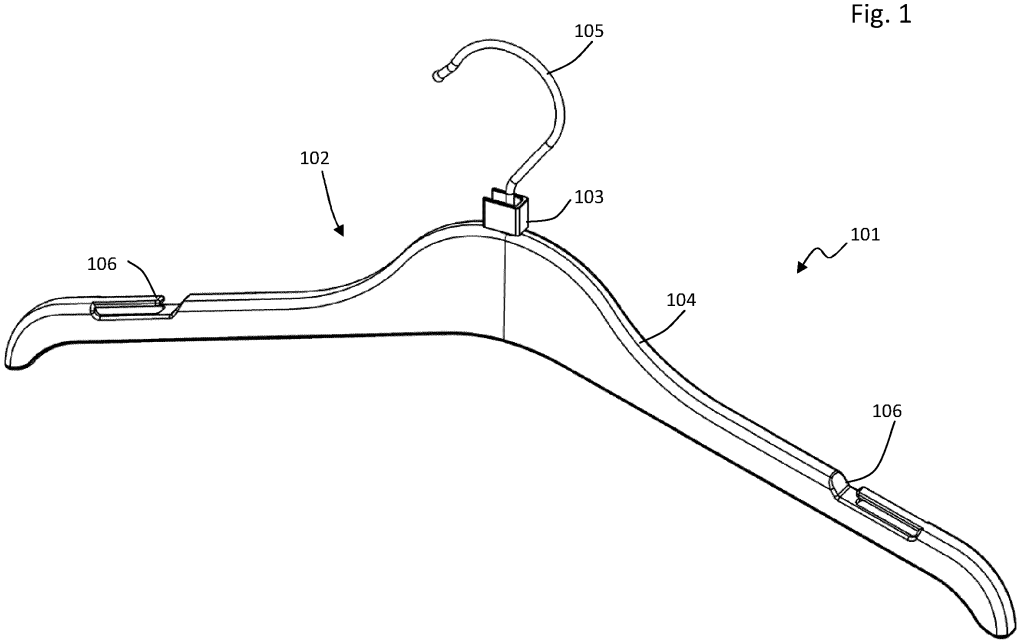
(54) Garment support apparatus

(57) Embodiments of the present invention relate to a garment support apparatus (101) comprising a garment hanger (102) and a marker (103). The garment hanger (102) comprises a hook (105) and a support member (104), the support member (104) comprising a boss (301), and the hook (105) being joined to the support member (104) through the boss (301). The marker (103) is generally U shaped and comprises a body (206), a first arm (204) and a second arm (205), each arm being joined to the body (206) at a proximal end, the marker further comprising a first retaining member (207) at the distal end of the first arm (204). The boss (301) comprises at least a first indentation (302) suitable for receiving the first retaining member (207) such that, in use, the marker (103) can be fitted to the garment hanger (102) with the first arm (204) on a first side of the boss (301) and the second arm (205) on a second side of the boss (301) opposite to the first side, so that portions of the first and second arms (204, 205) extend beyond the boss (301) and the first retaining member (207) is at least partially contained within the first indentation (302).

Fig. 1



EP 2 514 344 A1

Description

Field of the Invention

[0001] This invention relates to a garment support apparatus.

Background to the Invention

[0002] In order to aid the distribution and sale of garments, garment hangers are often provided with markers or tabs which indicate the size of the garments they support. The markers may also indicate branding information such as the name of the garment manufacturer or the retailer.

[0003] Such markers are typically removable, so that the garment hangers can be reused for different sizes and brands of clothing by removing and replacing the markers as required. Recycling the garment hangers, and indeed the markers, in this way reduces both manufacturing and environmental costs.

[0004] Currently, size markers for garment hangers with wire hooks either attach to the hook of the garment hanger, typically a metal wire, or attach to a specially moulded receiving portion on the hanger. Both of these approaches have drawbacks.

[0005] Where the size marker is attached to the hook, it can be side loaded, i.e. attached to the hook by pushing the marker onto the hook from one side, or it can be top loaded, i.e. attached to the hook by sliding the marker over the top of the hook. Both designs are prone to failure when the marker slides along the hook, moving out of its intended position. Moreover, where the wire hook is round in section, the size marker is therefore free to spin. This makes it very difficult to automate the removal of size markers, as any machinery used must be able to cope with the unpredictable angle of the marker. Therefore markers must be removed by hand, which is a time-consuming and expensive process.

[0006] A known alternative solution is to provide a moulded receiving portion on the garment hanger. The marker is then attached to the receiving portion. However, current designs of receiving portion are typically large and unwieldy. Therefore, if the garment hanger is not fitted with a marker, the garment hanger is unattractive because of the obviously uncovered receiving portion. Therefore, if a manufacturer does not require a size marker, they must make use of a different design of garment hanger. This means that two separate designs of garment hanger must be manufactured and distributed, which reduces economies of scale. Since the number of garment hangers in use fluctuates with time, manufacturers must maintain a stockpile of garment hangers in storage that can be called upon in periods of greater demand. Having to maintain these stockpiles for two different designs of hanger will typically increase the total of number of hangers in storage, again because of economies of scale. This in turn increases the number of hangers which must be manufactured, and so increases the environmental and monetary cost in raw materials, storage space and so on.

[0007] Therefore a more flexible design of garment hanger and marker would be very useful.

Summary of the Invention

[0008] In pursuit of this aim, a presently preferred embodiment of the present invention provides a garment support apparatus comprising a garment hanger and a marker, wherein:

the garment hanger comprises a hook and a support member, the support member comprising a boss, and the hook being joined to the support member through the boss; and
the marker is generally U shaped and comprises a body, a first arm and a second arm, each arm being joined to the body at a proximal end, the marker further comprising a first retaining member at the distal end of the first arm,
the boss comprising at least a first indentation suitable for receiving the first retaining member such that, in use, the marker can be fitted to the garment hanger with the first arm on a first side of the boss and the second arm on a second side of the boss opposite to the first side, so that portions of the first and second arms extend beyond the boss and the first retaining member is at least partially contained within the first indentation.

[0009] In this way, the invention provides a marker which can be removably attached to the garment hanger. Since the boss is contained within the marker, in use, any locking features on the boss can be discrete. Therefore the garment hanger can be used without a marker if required. This means that a manufacturer of garment support apparatuses according to the invention need provide only one type of garment hanger. Therefore the manufacturer only needs to make mould tools for one type of garment hanger, decreasing the cost of manufacture. In addition, the process of recycling garment support apparatuses is simplified where only one type of garment hanger is used as the manufacturer does not need to manage two re-use streams, further decreasing costs.

[0010] Moreover, as the first retaining member is at least partially contained within the first indentation, this will work to prevent the marker from rotating with respect to the boss, or up the hook, away from the boss, in use. Depending upon the shape of the boss and the first indentation, the first indentation can also be used to ensure that the size marker can only be fitted in one orientation with respect to the boss.

[0011] Controlling the orientation of the marker with respect to the boss ensures that there is uniform presentation of the garment support apparatuses in a garment store, with the end print face facing outwards. It also al-

lows automation of the removal of the markers, as the "open" end of the marker (between the two arms) will always be facing the same way with respect to the boss. This allows machinery to more easily and reliably remove the markers when required.

[0012] Typically, the boss and the support member are manufactured as a single piece. However the boss can be manufactured separately and fitted to the support member using mechanical or adhesive means.

[0013] Typically, the boss and the support member are made of a plastics material, and the hook is made of a metal. However a boss according to the invention can be used with any type of garment hanger, and the boss, support member and the hook can be made from plastics, metals, wood or any other suitable material or combination of materials. Similarly, the marker is typically made from a plastics material, but can also be made from metal, wood or any other suitable material or combination of materials. Where the hook, the boss and the body of the hanger are made from the same material, they can be made as a single piece, for example a single piece of moulded plastic, or any of the components can be made as a separate piece and joined to the others using mechanical or adhesive means.

[0014] Where the hook is joined to the support member through the boss, the hook may extend through the boss and so into the support member, or the hook may be connected to the boss which is in turn connected to the remainder of the support member.

[0015] The boss is typically substantially prismatic or cylindrical in shape. It may have a circular or elliptical cross section, or a cross section comprising a polygon with rounded corners. These shapes can be advantageous because they may present rounded surfaces to the marker when the marker is fitted, Which can aid in the smooth placement of the marker.

[0016] Often, the marker further comprises a second retaining member at the distal end of the second arm and the boss further comprises a second indentation suitable for receiving the second retaining member, in use. When the marker is fitted to the garment hanger, a second retaining member would usually be at least partially contained within the second indentation.

[0017] Similarly, often the marker further comprises a third retaining member on the body and the boss further comprises a third indentation suitable for receiving the third retaining member, in use. When the marker is fitted to the garment hanger, a third retaining member would usually be at least partially contained within the third indentation.

[0018] Typically the first retaining member comprises a surface which is inclined with respect to the first arm, and which is oriented such that the boss impacts upon the inclined surface as the marker is fitted to the garment hanger. Upon impact, the boss can then cause a smooth, preferably elastic deformation of the marker so that the boss can fit between the arms of the marker.

[0019] Where a second retaining member is used, the second retaining member preferably also comprises a surface which is inclined with respect to the second arm, and which is oriented such that the boss impacts upon the inclined surface as the marker is fitted to the garment hanger.

[0020] Typically, the marker comprises a first surface and the boss comprises a second surface, the first and second surfaces being complimentary in shape such that the first and second surfaces mate during use. Where this is the case, the first and second surfaces may be substantially planar. This is desirable as such surfaces can act to prevent the rotation of the marker with respect to the boss. The first and second surfaces may also usefully be barbed, spiked, waved or any other shape provided that they mate in such a way as to prevent the rotation of the marker with respect to the boss. These surfaces can also be used to ensure that the size marker can only be fitted in one orientation with respect to the boss.

[0021] In some embodiments in which a first surface and a second surface are used in this way, a retaining member comprises the first surface and an indentation comprises the complimentary second surface.

[0022] The invention also extends to a garment hanger suitable for use in the garment support apparatus described above, as well as a marker suitable for use in the garment support apparatus described above.

[0023] Advantages of these embodiments are set out hereafter, and further details and features of each of these embodiments are defined in the accompanying dependent claims and elsewhere in the following detailed description.

Brief Description of the Drawings

[0024] Various aspects of the teachings of the present invention, and arrangements embodying those teachings, will hereafter be described by way of illustrative example with reference to the accompanying drawings, in which:

Figure 1 shows a garment support apparatus according to the invention;

Figures 2a to 2g show a marker for use in a garment support apparatus;

Figures 3, 4 and 5 all show a section of a garment hanger, also for use in a garment support apparatus;

Figure 6 illustrates the assembly of a garment support apparatus according to the invention;

Figure 7 is a cross section of the garment support apparatus;

Figure 8 is a section of the garment support apparatus; and

Figure 9 is a cross section of the garment support apparatus.

Detailed Description of Preferred Embodiments

[0025] Preferred embodiments of the present invention will now be described with particular reference to a garment support apparatus.

[0026] Figure 1 show a garment support apparatus 101 according to the invention. The garment support apparatus 101 comprises a garment hanger 102 and a marker 103. The garment hanger comprises a support member 104 and a hook 105. The hook 105 has a circular cross section. In use, the garment support apparatus 101 can be suspended by the hook 105 and used to store or display clothing which is hung on the support member 104. To assist in this, the support member 104 is provided with two slots 106 into which the straps of a garment can be inserted and retained securely.

[0027] Figures 2a to 2g all show the marker 103. Figures 2a to 2d show the marker from various different isometric perspectives, and figures 2e to 2g show the marker from the point of view of arrows 201, 202, and 203 in Figure 2a respectively.

[0028] The marker 103 is generally U-shaped in horizontal cross section, as can be seen in Figures 2e and 2f. The marker 103 comprises a first arm 204, a second arm 205 and a body 206. The first arm 204 comprises a first retaining member 207, and the second arm 205 comprises a second retaining member 208. The body 206 comprises a third retaining member 209.

[0029] Each retaining member is formed by a protuberance from a respective inner face of the marker 103. The third retaining member 209 comprises a cuboid. The first and second retaining members 207, 208 both comprise an outward facing ramp section 210 and an inner cuboid section 211.

[0030] Figures 3, 4 and 5 all show a cut away section of the garment hanger 102, at a location where the support member 104 and the hook 105 meet. The support member 104 comprises a boss 301, and the hook 105 is joined to the support member 104 through the boss 301. The boss 301 is substantially the same width as a space between the arms of the marker 103; that is the distance y indicated in Figure 4 is substantially the same as the distance x indicated in figure 2f.

[0031] The boss 301 comprises a first indentation 302, a second indentation 303 and a third indentation 304. As can be seen in Figure 5 the boss 301 is substantially rectangular in shape, but has rounded corners. The first and second indentations 302, 303 are located on the corners of the boss 301 such that the first and second retaining members 207, 208 can sit partially within the first and second indentations 302, 303 respectively, in use, as illustrated in Figure 5.

[0032] From the perspective shown in Figure 5, the retaining members 207, 208, 209 are partially covered by the boss 301, as they are partially contained within the indentations 302, 303, 304. Hence the marker is unable to move away from the support member 104. This prevents the marker moving out of position by sliding along the hook 105.

[0033] In use, the marker 103 is slid onto the boss 301 as shown in Figure 6. As the arms 204, 205 slide on opposed sides of the boss 301, the boss 301 impacts on the ramp sections 210 of the first retaining member 207 and of the second retaining member 208. This causes the arms 204, 205 and the body 206 of the marker 103 to elastically deform, the arms 204, 205 flexing outwards and so permitting the first and second retaining member 207, 208 to pass on opposed sides of the boss 301 respectively.

[0034] When the first and second retaining members 207, 208 reach the first and second indentations 302, 303, the arms 204, 205 can return to their usual shape, such that the cuboid section 211 of the first retaining member 207 is pushed into the first indentation 302 and the cuboid section 211 of the second retaining member 208 is pushed into the second indentation 303, as illustrated in Figure 5. Hence the first and second retaining members 207, 208 help to retain the marker 103 in place over the boss 301.

[0035] Figure 7 is a cross section of a part of the garment support apparatus 101, showing the marker 103 in place over the boss 301. The ramp section 210 of the second retaining member 208 is visible, but the cuboid section 211 is not, that section being retained in the second indentation 303 of the boss 301. As can be seen in Figure 6, when the marker 103 is in place over the boss 301, the third retaining member 209 sits within the third indentation 304.

[0036] During assembly, the hook 105 is inserted into the vertical bore in boss 301 in a known manner. Alternatively, the support member 104 can be moulded around the shank of the hook 105 during manufacture. Figure 6 shows that hook 105 is provided with barbs 601 which help to maintain its position inside boss 301 in use.

[0037] Figure 8 shows a detail of the garment hanging apparatus 101, again where the hook 105 meets the support member 104. Figure 9 is a cross sectional view of the garment hanging apparatus 101 taken through line A as indicated in Figure 8.

[0038] As can also be seen in Figure 9, a surface on the first arm 204 abuts against a surface on a first side the boss 301. Similarly, a surface on the second arm 205 abuts against a surface on a second side of the boss 301 and a surface on the body 206 abuts against a surface on the third side of the boss 301. Since these surfaces are substantially planar, they act to prevent rotation of the marker 103 with respect to the boss 301.

[0039] The shape of the cuboid section 211 of the first retaining member 207 and the second retaining member 208, and the shape of the third retaining member 209 also help to prevent rotation of the marker 103 with respect to the boss 301. Each of the retaining members 207, 208, 209 present at least one substantially planar surface which abuts against the similarly planar interior surfaces of the indentations 302, 303, 304.

[0040] The marker 103 can be removed from the gar-

ment hanger 102 by driving a shaped pin against the open end of the marker 103. This forces the arms 204, 205 apart, moving the first and second retaining members 207, 208 out of the first and second indentations 302, 303 and so releasing the locking mechanism of the marker 103. The marker 103 can then fall away from the garment hanger 102.

Claims

1. A garment support apparatus comprising a garment hanger and a marker, wherein:

   the garment hanger comprises a hook and a support member, the support member comprising a boss, and the hook being joined to the support member through the boss; and
   the marker is generally U shaped and comprises a body, a first arm and a second arm, each arm being joined to the body at a proximal end, the marker further comprising a first retaining member at the distal end of the first arm,
   the boss comprising at least a first indentation suitable for receiving the first retaining member such that, in use, the marker can be fitted to the garment hanger with the first arm on a first side of the boss and the second arm on a second side of the boss opposite to the first side, so that portions of the first and second arms extend beyond the boss and the first retaining member is at least partially contained within the first indentation.

2. A garment support apparatus as claimed in claim 1, wherein the marker further comprises a second retaining member at the distal end of the second arm and the boss further comprises a second indentation suitable for receiving the second retaining member, in use.

3. A garment support apparatus as claimed in claim 1 or claim 2, wherein the marker further comprises a third retaining member on the body and the boss further comprises a third indentation suitable for receiving the third retaining member, in use.

4. A garment support apparatus as claimed in any preceding claim wherein the first retaining member comprises a surface which is inclined with respect to the first arm, and which is oriented such that the boss impacts upon the inclined surface as the marker is fitted to the garment hanger.

5. A garment support apparatus as claimed in any preceding claim, wherein the marker comprises a first surface and the boss comprises a second surface, the first and second surfaces being complimentary in shape such that the first and second surfaces mate during use.

6. A garment support apparatus as claimed in claim 5, wherein a first surface and a complimentary second surface are substantially planar.

7. A garment support apparatus as claimed in claim 5 or claim 6, wherein a retaining member comprises a first surface and an indentation comprises the complimentary second surface.

8. A garment hanger suitable for use in the garment support apparatus described in any preceding claim.

9. A marker suitable for use in the garment support apparatus described in any of claims 1 to 7.

Fig. 1

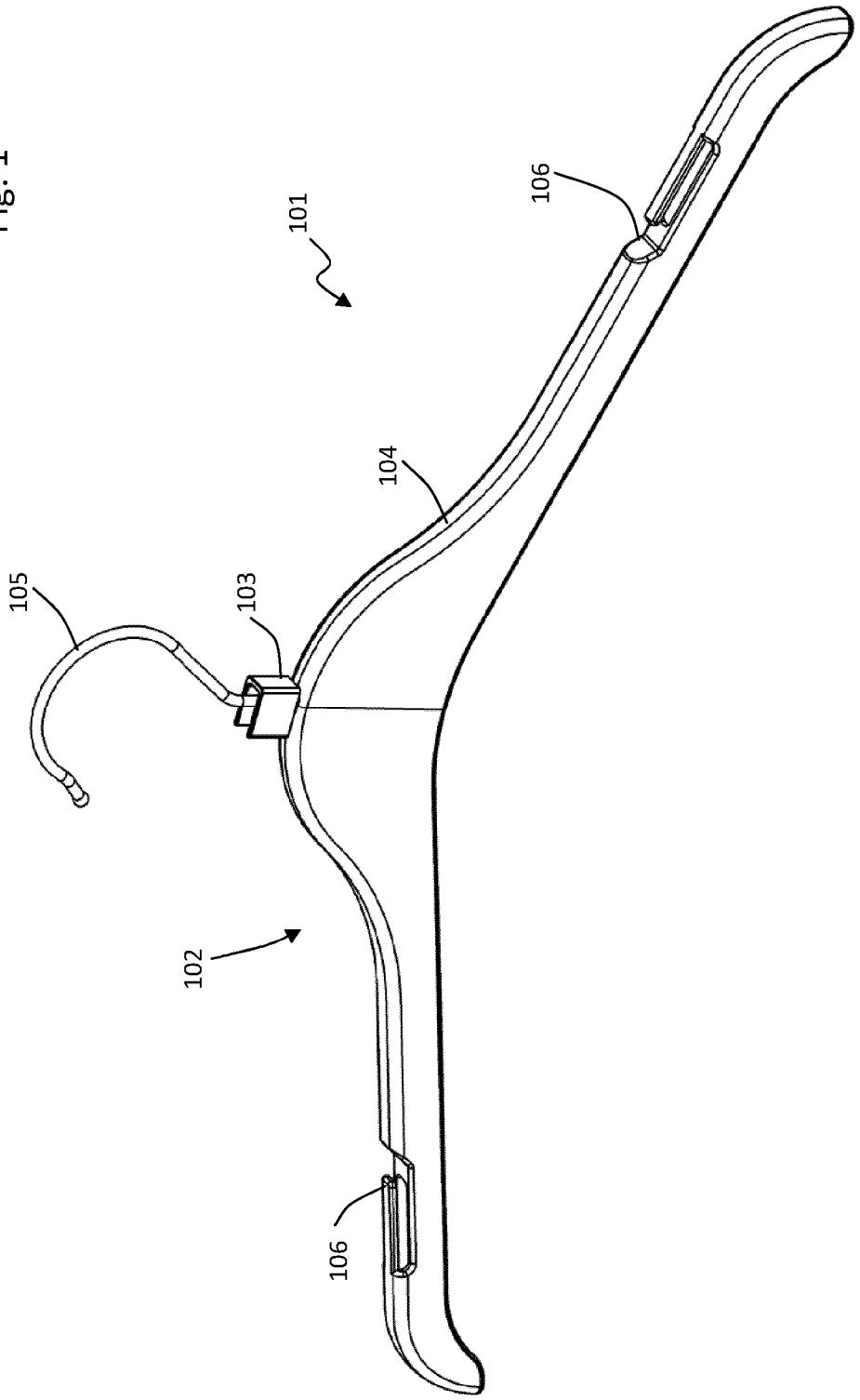


Fig. 2a

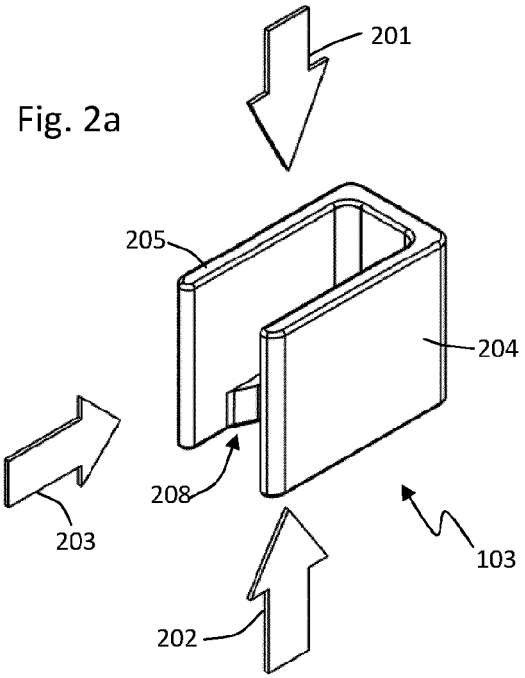


Fig. 2b

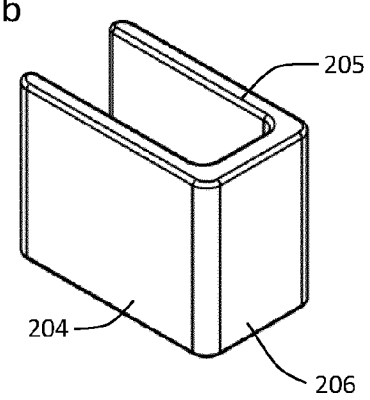


Fig. 2c

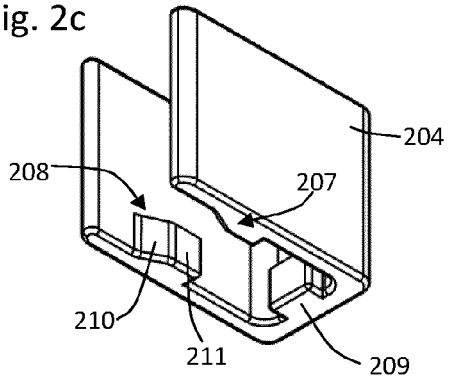


Fig. 2d

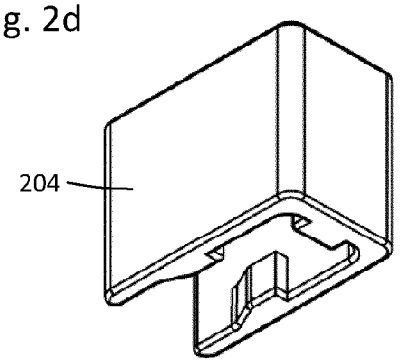


Fig. 2e

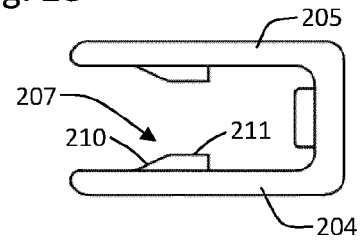


Fig. 2f

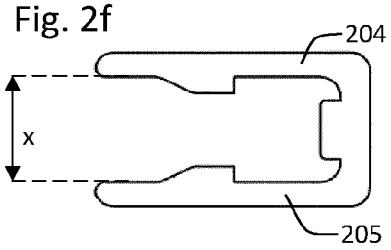


Fig. 2g

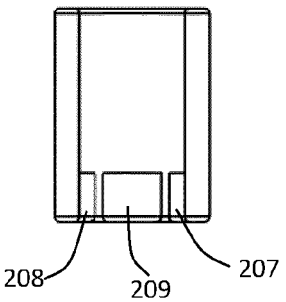


Fig. 3

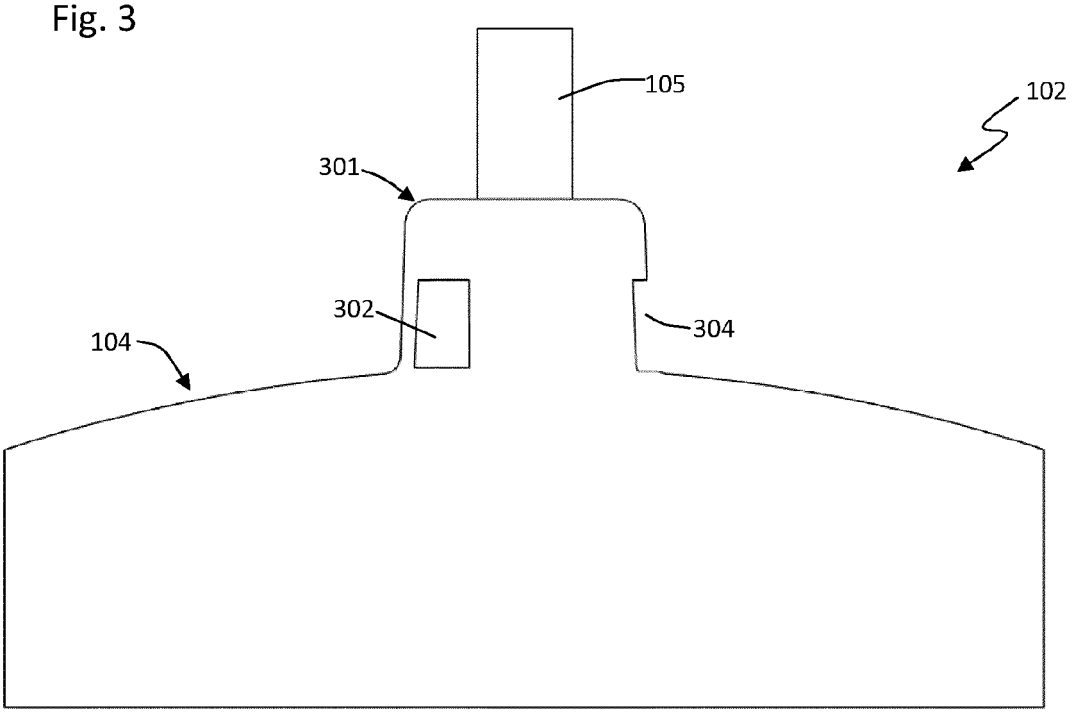


Fig. 4

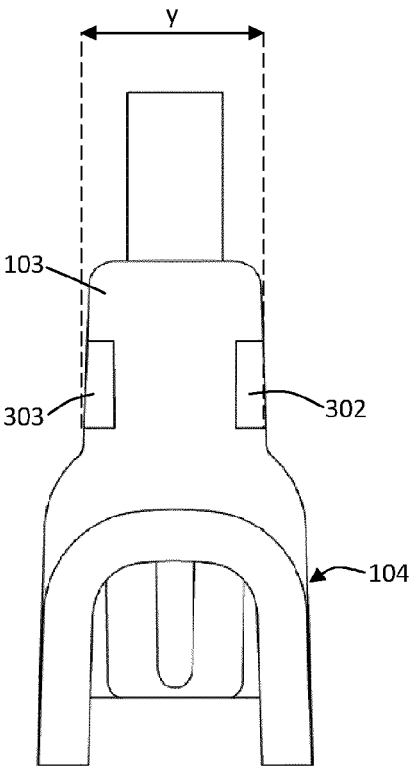


Fig. 5

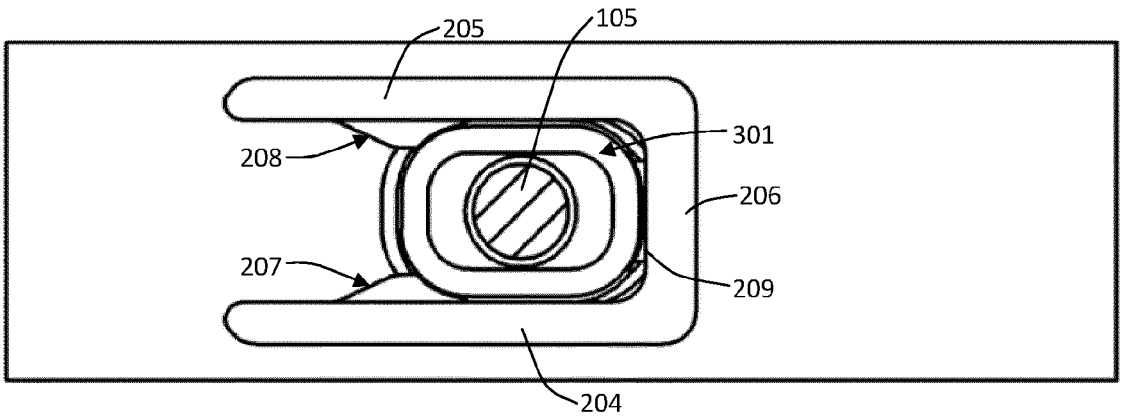


Fig. 6

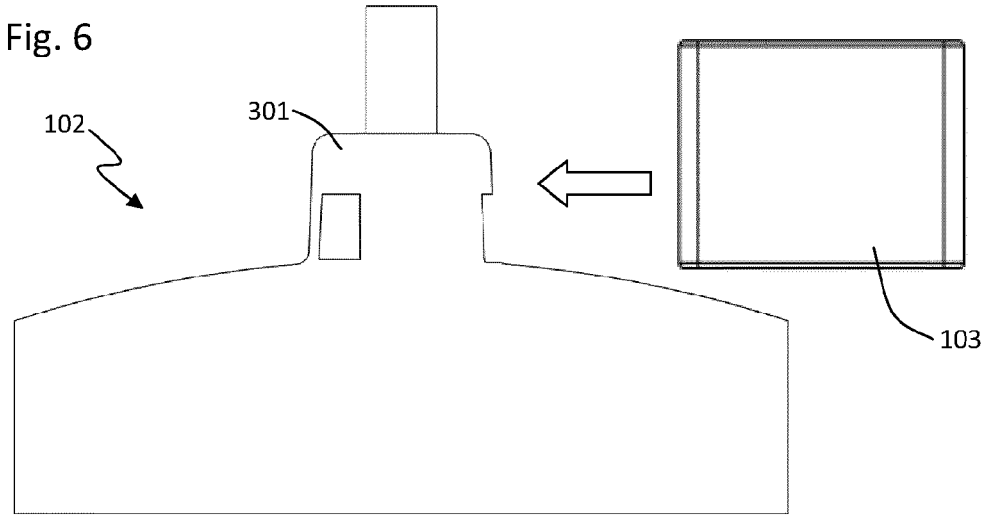


Fig. 7

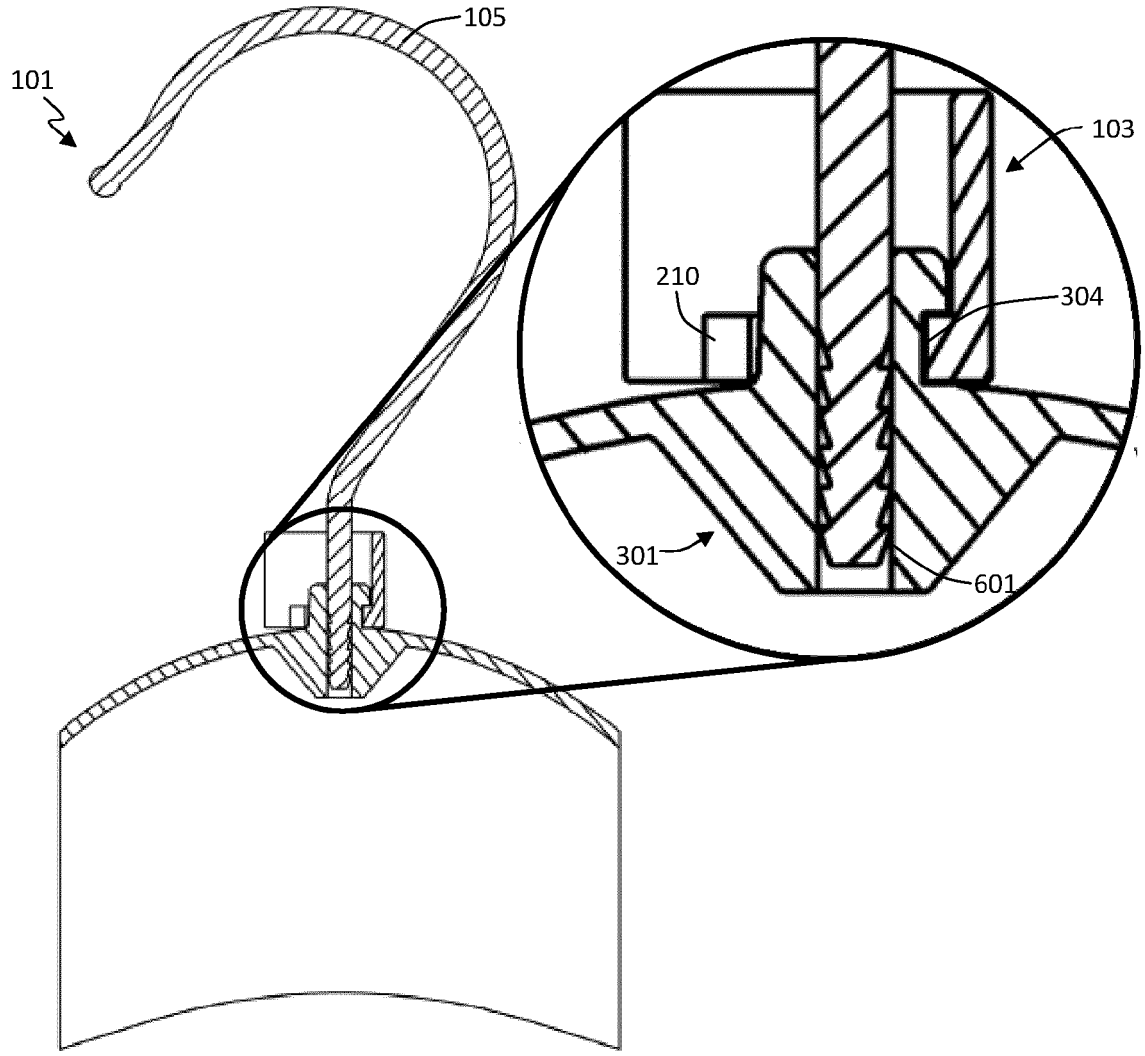


Fig. 8

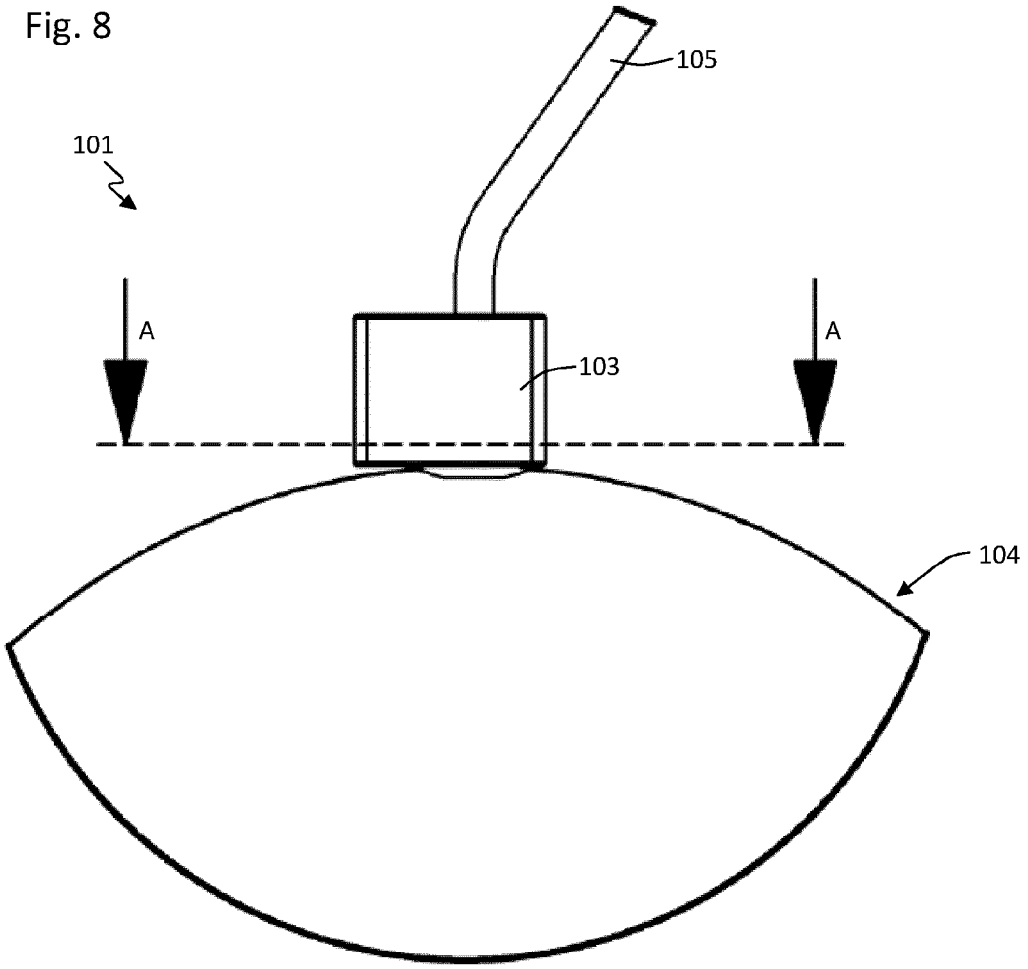
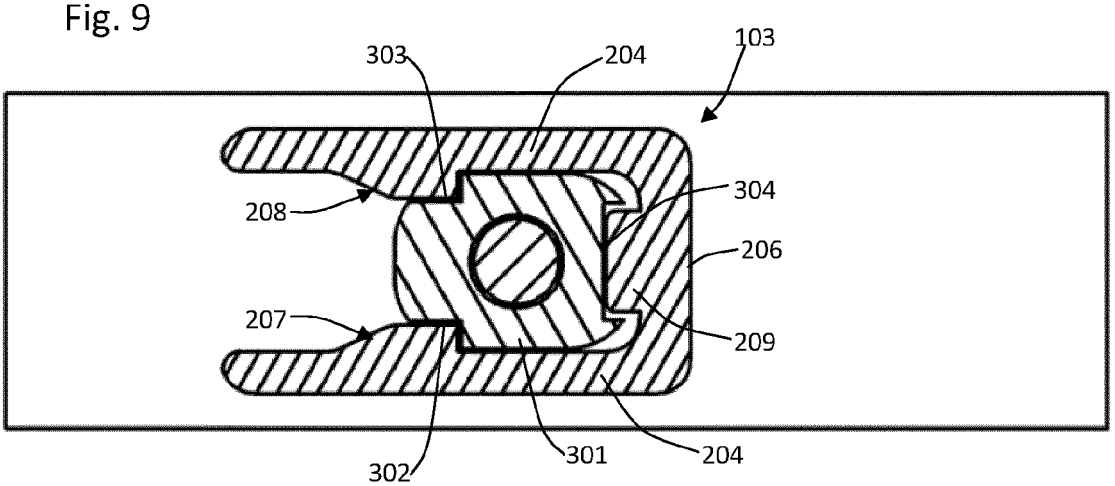


Fig. 9



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EUROPEAN SEARCH REPORT

Application Number
EP 12 16 4479

DOCUMENTS CONSIDERED TO BE RELEVANT

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TECHNICAL FIELDS SEARCHED (IPC)

A47G

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	5 July 2012	Longo dit Operti, T

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 12 16 4479

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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