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(54) **A holder for detachably connecting a bottle to a support**

(57) A holder for detachably connecting a bottle comprising a cap and a reduced diameter portion located below said cap to a support comprises a means of attachment (2,3) for attaching the holder to the support, as well as two openings (5,6) which are interconnected via

a passage (7). The holder is made of an elastically deformable material. The first opening (5), which is spaced from the means of attachment, is larger than the second opening (6), which is located near the means of attachment.

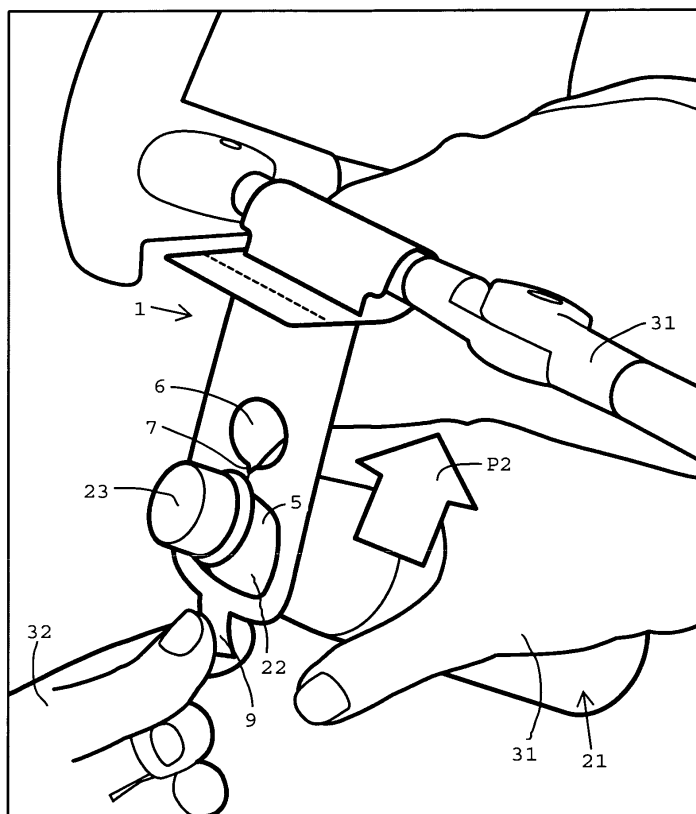


Fig. 5

## Description

**[0001]** The invention relates to a holder for detachably connecting a bottle comprising a cap and a reduced diameter portion located below said cap to a support, which holder comprises a means of attachment for attaching the holder to the support, as well as two openings which are interconnected via a passage.

**[0002]** With such a holder, which is known from US patent US-B1-6,394,329, a first opening, which is located near the means of attachment, is larger than a second opening, which is spaced from the means of attachment. Moreover, after the means of attachment has been attached to the support, the first, larger opening is positioned higher than the second, smaller opening. To connect a bottle to the holder, the cap of the bottle is passed through the first, larger opening in upward direction, after which the bottle is moved in a direction away from the support, so that the reduced diameter portion below the cap will be positioned in the second, smaller opening. In this position, the bottle is only supported by the walls of the holder that bound the second, smaller opening.

**[0003]** The object of the invention is to provide a holder by means of which an improved support of the bottle is obtained.

**[0004]** This object is accomplished with the holder according to the invention in that the holder is made of an elastically deformable material, whilst the first opening, which is spaced from the means of attachment, is larger than the second opening, which is located near the means of attachment.

**[0005]** To connect the bottle to the holder, the cap is inserted through the first opening, which is spaced from the means of attachment, after which the cap is moved in the direction of the means of attachment and the reduced diameter portion is inserted into the second opening. The bottle is suspended from the walls of the second opening by the cap under the influence of the force of gravity in that position. Since the walls of the holder are elastically deformable, said walls will firmly engage the bottle.

**[0006]** One embodiment of the holder according to the invention is characterised in that, in use, the second opening surrounds the reduced diameter portion located below the cap, whilst a wall of the holder bounding the first opening abuts against the bottle at a point spaced from the cap.

**[0007]** Since a wall bounding the first opening abuts against the bottle as well, a solid support of the bottle is obtained, so that the bottle is prevented from becoming undesirably detached from the holder in a simple manner. Since the material of the wall is elastically deformable, the wall will conform to the shape of the bottle, as it were, so that an adequate support is obtained.

**[0008]** Another embodiment of the holder according to the invention is characterised in that the holder is made of a flat strip.

**[0009]** Such a holder is easy to produce, for example

by punching it from an elastically deformable plastic. In addition, such holders are comparatively easy to store.

**[0010]** Yet another embodiment of the holder according to the invention is characterised in that the passage interconnecting the openings comprises a relatively narrow gap, whilst the walls of the holder that bound said gap are elastically deformable in use and the gap can be widened to allow the passage of at least the reduced diameter portion of the bottle from the first opening to the second opening.

**[0011]** Since the gap is widened when the bottle is being connected to the holder, the walls of the holder that bound the gap will abut against the bottle as well, thus providing additional support for the bottle.

**[0012]** In addition, the bottle is thus retained in the second opening in a simple manner, so that the bottle is prevented from moving out of the opening undesirably.

**[0013]** Yet another embodiment of the holder according to the invention is characterised in that the holder comprises a wide portion and a narrow portion, whilst the means of attachment comprises a slot present in the wide portion, through which the narrow portion comprising the openings can be passed.

**[0014]** When such a holder is being attached to a support, the holder is passed around the support, after which the narrow portion is passed through the slot present in the wide portion, with the holder extending round the support in a loop-shaped manner.

**[0015]** Yet another embodiment of the holder according to the invention is characterised in that the narrow portion is provided with hook-shaped elements, which engage the walls of the holder that bound the slot when the holder is attached to the support in use.

**[0016]** Because of the presence of the hook-shaped elements, a solid attachment of the holder to the support is obtained in a simple manner.

**[0017]** Yet another embodiment of the holder according to the invention is characterised in that the holder is provided with a lip on a side of the first opening remote from the second opening.

**[0018]** Such a lip enables a user to grasp the holder firmly both upon connecting the bottle to the holder and upon removing the bottle from the holder.

**[0019]** Yet another embodiment of the holder according to the invention is characterised in that the holder comprises a detachable part, which is provided with instructions for use.

**[0020]** In this way the instructions for use of the holder are integrated with the holder, and the user can remove said instructions after having read them, if desired. In this way there is no need to add separate instructions for use to the holder. Since the instructions for use are provided on a detachable part, the instructions for use can be removed by a user, so that they will not adversely affect or interfere with the appearance of the holder.

**[0021]** The invention will now be explained in more detail with reference to the drawing, in which:

Figure 1 is a top plan view of a holder according to the invention;

Figure 2 is a perspective view of a bottle;

Figures 3 and 4 are perspective views of the attachment of the holder shown in figure 1 to a support;

Figures 5 and 6 are perspective views showing the way in which a bottle is connected to the holder according to the invention.

**[0022]** Like parts are indicated by the same numerals in the figures.

**[0023]** Figure 1 shows a top plan view of a holder 1 according to the invention, which is made of a relatively thin, flat strip of an elastically deformable material, such as a plastic. The holder 1 comprises a relatively wide portion 2, which is provided with a slot 3 that extends transversely to the longitudinal direction of the holder 1. The holder 1 further comprises a relatively narrow portion 4 that connects to said wide portion, which has a width smaller than the length of the slot 3. The narrow portion 4 is provided with two openings 5, 6, which are interconnected via a slot 7. The first opening 5 has a squarish shape with a dimension D1. The second opening 6 is substantially circular in shape, with a pointed projection 8 extending in the direction of the gap 7. The opening 6 has a dimension D2. The dimension D2 of the second opening 6 is smaller than the dimension D1 of the first opening 5. The second opening 6 is located closer to the slot 3 than the first opening 5.

**[0024]** On a side of the first opening 5 remote from the second opening 6, the holder 1 is provided with a lip 9. Near the wide portion 2, the narrow portion 4 is provided with two hook-shaped elements 10. The wide portion 2 comprises a removable part 11, which is connected to the rest of the wide portion 2 via a tear line 12. The removable part 11 is provided with instructions for attaching the holder 1 to a support and connecting a bottle to the holder 1, which instructions can be removed after attachment of the holder, if desired.

**[0025]** Figure 2 shows a bottle 21 having a capacity of, for example, 500 ml. Such a bottle 21 is usually provided with a reduced diameter portion 22 forming a neck of the bottle 21, which joins a flange 24 connected to the bottle 21 or which is provided with a cap 23 comprising such a flange 24. The flange 24 has a diameter D3, which is smaller than the dimension D1 of the first opening 5, but which is larger than the dimension D2 of the second opening 6.

**[0026]** Figures 3 and 4 are perspective views, showing the manner in which the holder 1 is attached to a support 31. The support 31 is for example a horizontally extending rod of a stroller. The circumferential dimension of the rod is smaller than the spacing between the two hook-shaped elements 10 and the slot 3 of the holder 1.

**[0027]** To attach the holder 1 to the support 31, the holder 1 is passed around the support 31, after which the lip 9 is passed through the slot 3. Then the narrow portion 4 is moved through the slot 3 in the direction indicated

by the arrow P1 until the hook-shaped elements 10 are in engagement with the walls 13 of the holder 1 located on either side of the slot 3. The holder 1 is firmly connected to the support 31 at that point. As figure 4 clearly shows, the second opening 6 is located closer to the point of attachment of the holder 1 to the support 31. Moreover, the second opening 6 is positioned above the first opening 5, seen in vertical direction.

**[0028]** Figures 5 and 6 are perspective views, showing the manner in which the bottle 21 is connected to the holder 1. To connect a bottle 21 to the holder 1, a user will grasp the bottle 21 with a hand 31. The user will then grasp the lip 9 with a second hand 32. Following that, the user will insert the cap 23 through the first, larger opening 5 from the bottom side, after which the user will move the bottle 21 in the direction indicated by the arrow P2 towards the second, smaller opening 6 against the spring force of the elastically deformable material of the holder 1. This causes the walls 14 of the holder 1 bounding the gap 7 to deform, as a result of which the gap 9 is widened in such a manner that the reduced diameter portion 22 of the bottle 21 can pass through the gap 7 so as to be positioned in the second, smaller opening 6. The user will now release the bottle 21, after which the bottle 21 will be suspended from the holder 1 under the influence of the force of gravity. In this position, the flange 24 bears against the wall 15 of the holder 1 that surrounds the second, smaller opening 6. Furthermore, the walls 14 bounding the gap 7 bear against the reduced diameter portion 22 of the bottle 21, and the walls 16 bounding the first, larger opening 5 bear against the bottle 21. As a result of the abutment of the walls 14, 15, 16 against the bottle 21, a solid connection between the bottle 21 and the holder 1 is obtained.

**[0029]** When a user wishes to remove the bottle 21 from the holder 1, the user will grasp the lip 1 and move the bottle 21 against the spring force of the elastically deformable material in the opposite direction of the arrow P2 until the reduced diameter portion 21 is positioned in the first, larger opening 5. The cap 23 can then be moved out of the opening 5.

**[0030]** The holder 1 made of the elastically deformable material can simply be attached to any support, providing the spacing between the hook-shaped elements 10 and the slot 3 is larger than the circumferential dimension of the support 31.

**[0031]** It is also possible to leave out the hook-shaped elements, in which case the weight of the narrow portion 4 and the elastic deformation of the material of the holder 1 ensure that the attachment between the holder 1 and the support 31 is retained.

**[0032]** The opening 5 may also be circular in shape. After the holder 1 has been attached to the support 31, the part 11 of the holder 1 that is provided with instructions may be removed, if desired.

## Claims

1. A holder for detachably connecting a bottle comprising a cap and a reduced diameter portion located below said cap to a support, which holder comprises a means of attachment for attaching the holder to the support, as well as two openings which are interconnected via a passage, **characterised in that** the holder is made of an elastically deformable material, whilst the first opening, which is spaced from the means of attachment, is larger than the second opening, which is located near the means of attachment. 5  
10
2. A holder according to claim 1, **characterised in that**, in use, the second opening surrounds the reduced diameter portion located below the cap, whilst a wall of the holder bounding the first opening abuts against the bottle at a point spaced from the cap. 15  
20
3. A holder according to claim 1 or 2, **characterised in that** the holder is made of a flat strip.
4. A holder according to any one of the preceding claims, **characterised in that** the passage interconnecting the openings comprises a relatively narrow gap, whilst the walls of the holder that bound said gap are elastically deformable in use and the gap can be widened to allow the passage of at least the reduced diameter portion of the bottle from the first opening to the second opening. 25  
30
5. A holder according to any one of the preceding claims, **characterised in that** the holder comprises a wide portion and a narrow portion, whilst the means of attachment comprises a slot present in the wide portion, through which the narrow portion comprising the openings can be passed. 35
6. A holder according to claim 5, **characterised in that** the narrow portion is provided with hook-shaped elements, which engage the walls of the holder that bound the slot when the holder is attached to the support in use. 40  
45
7. A holder according to any one of the preceding claims, **characterised in that** the holder is provided with a lip on a side of the first opening remote from the second opening. 50
8. A holder according to any one of the preceding claims, **characterised in that** the holder comprises a detachable part, which is provided with instructions for use. 55

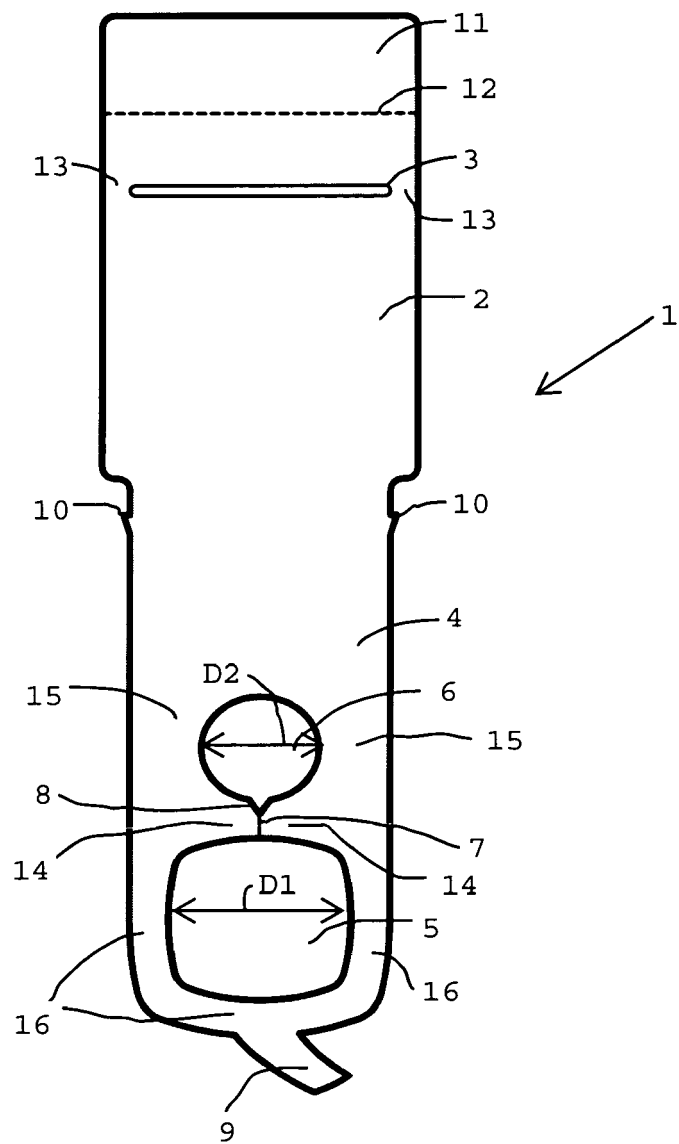


Fig. 1

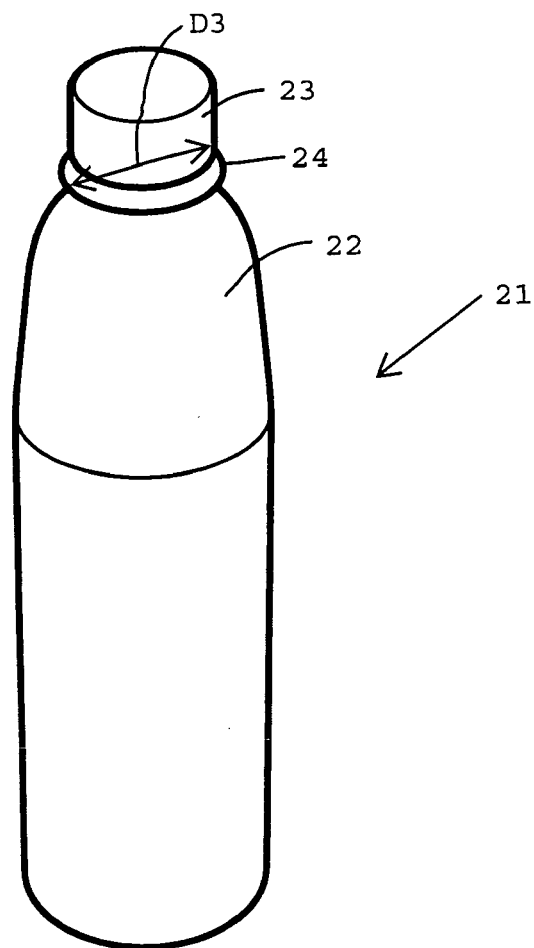


Fig. 2

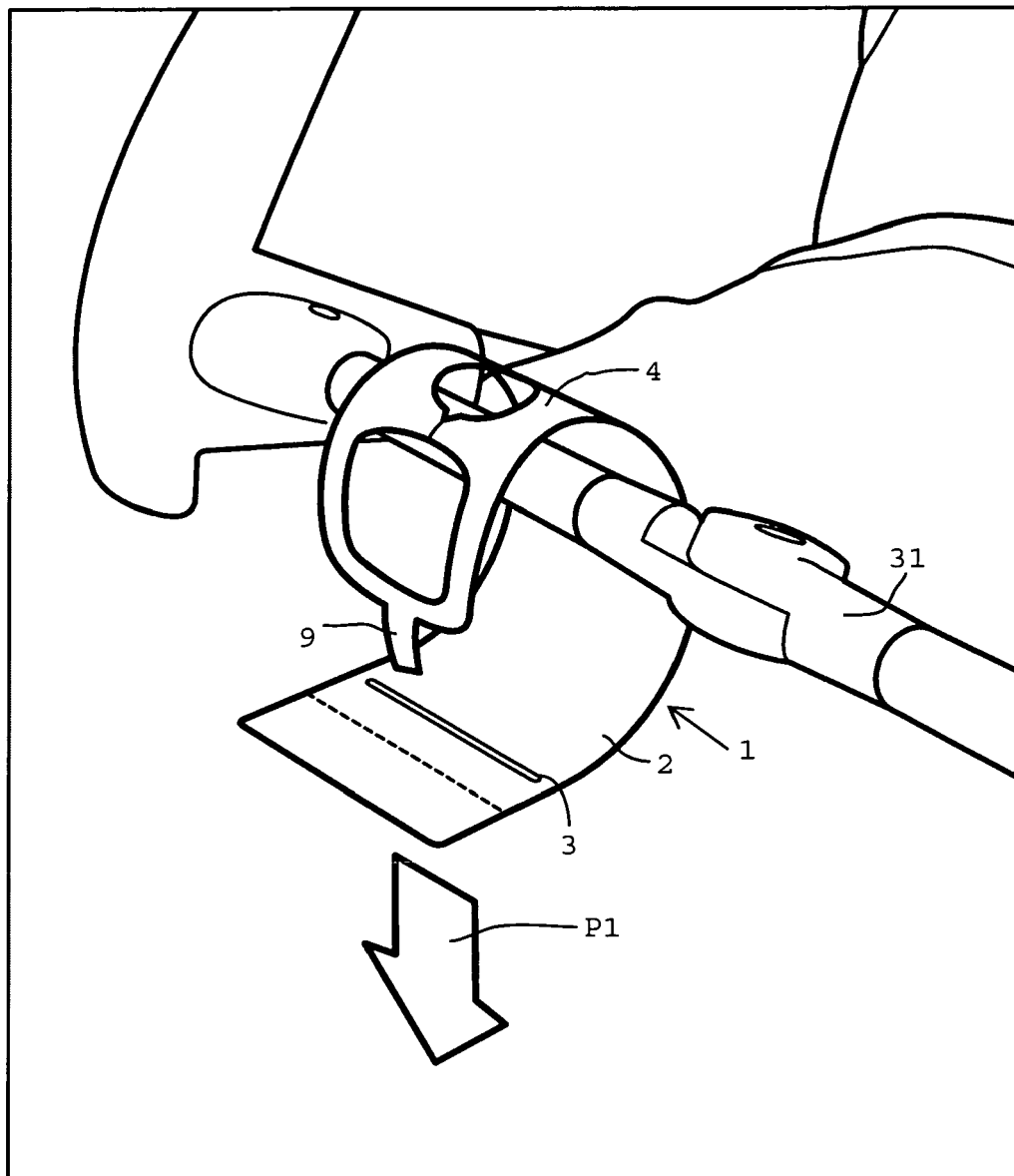


Fig. 3

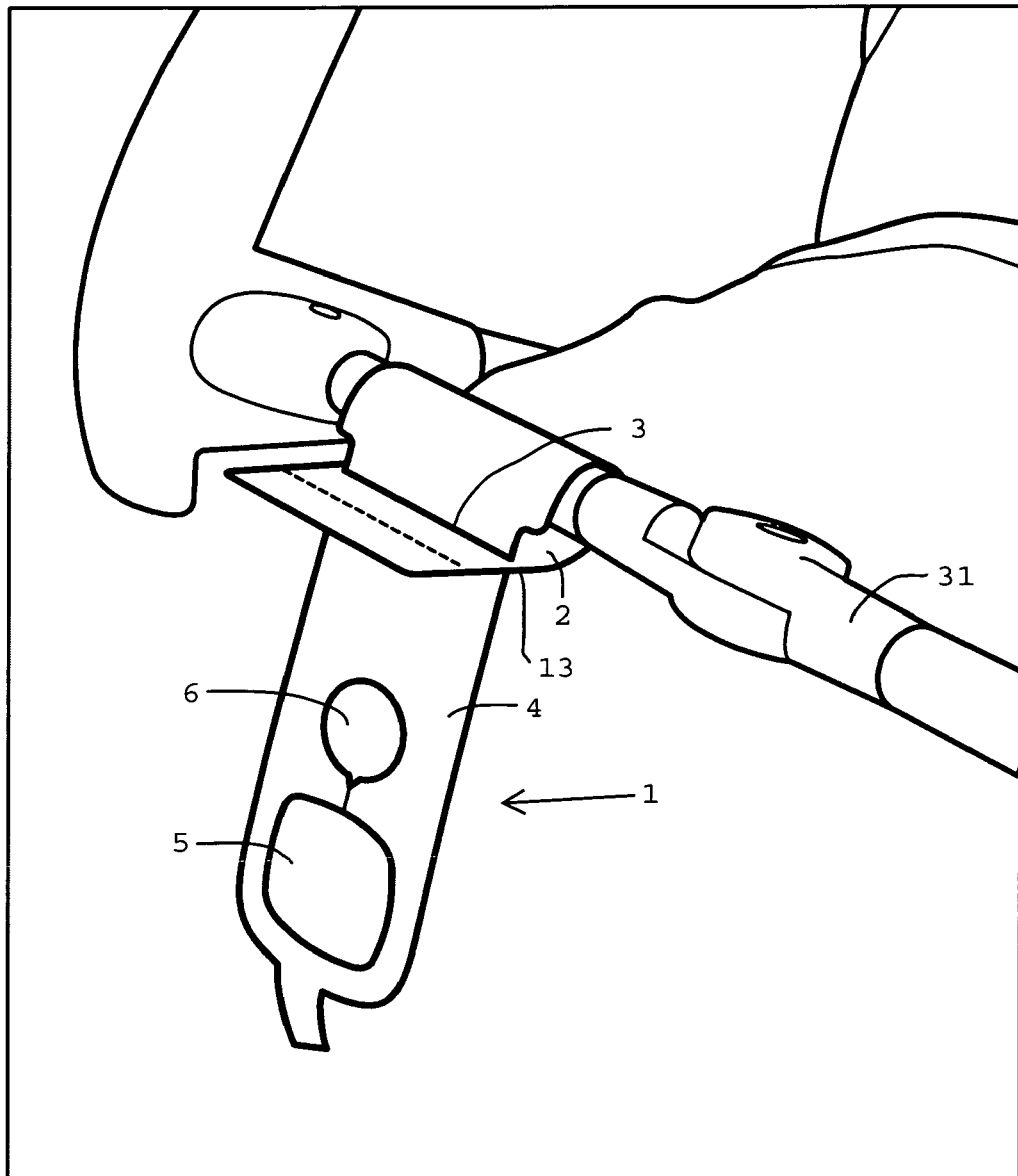


Fig. 4

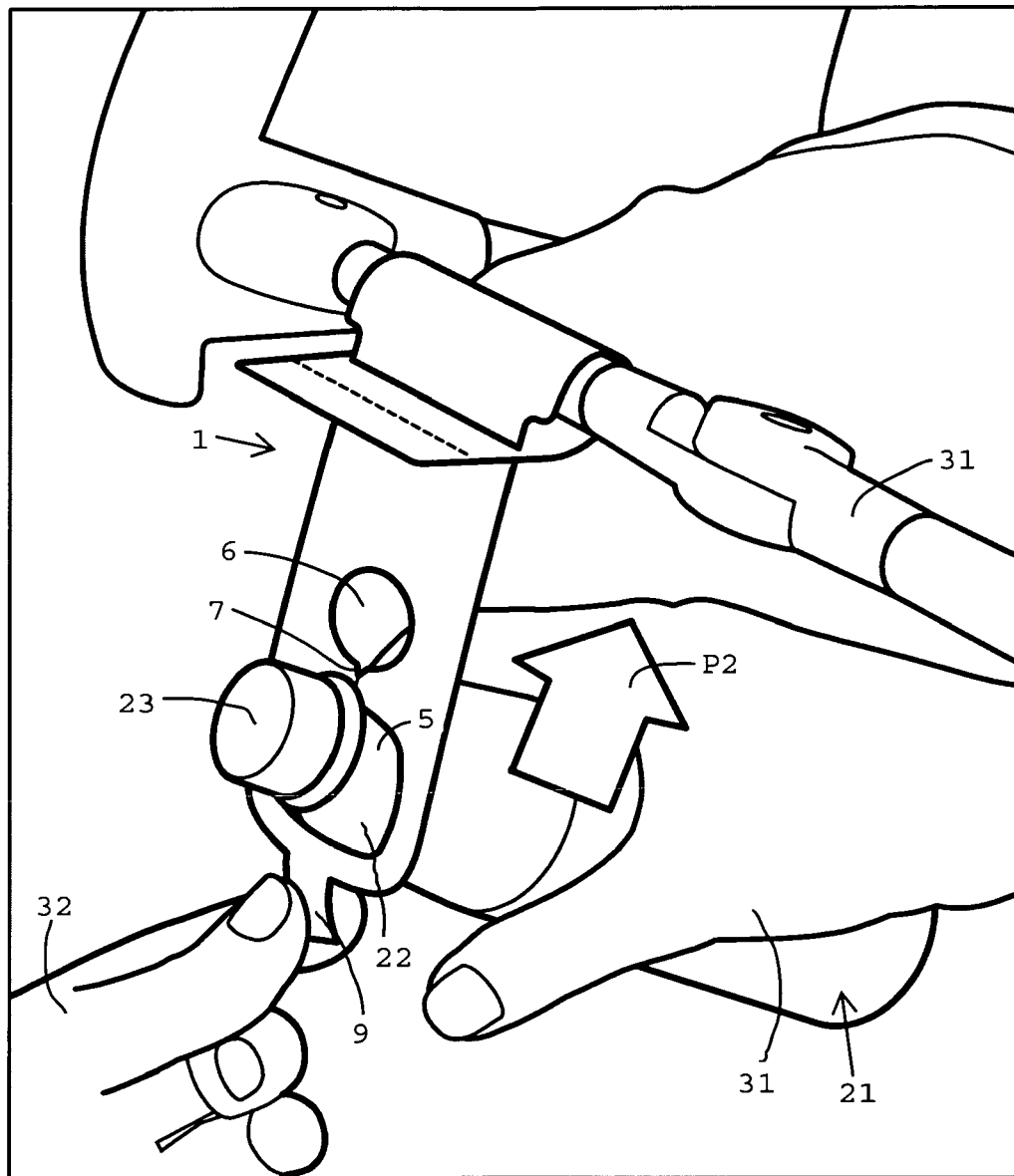


Fig. 5

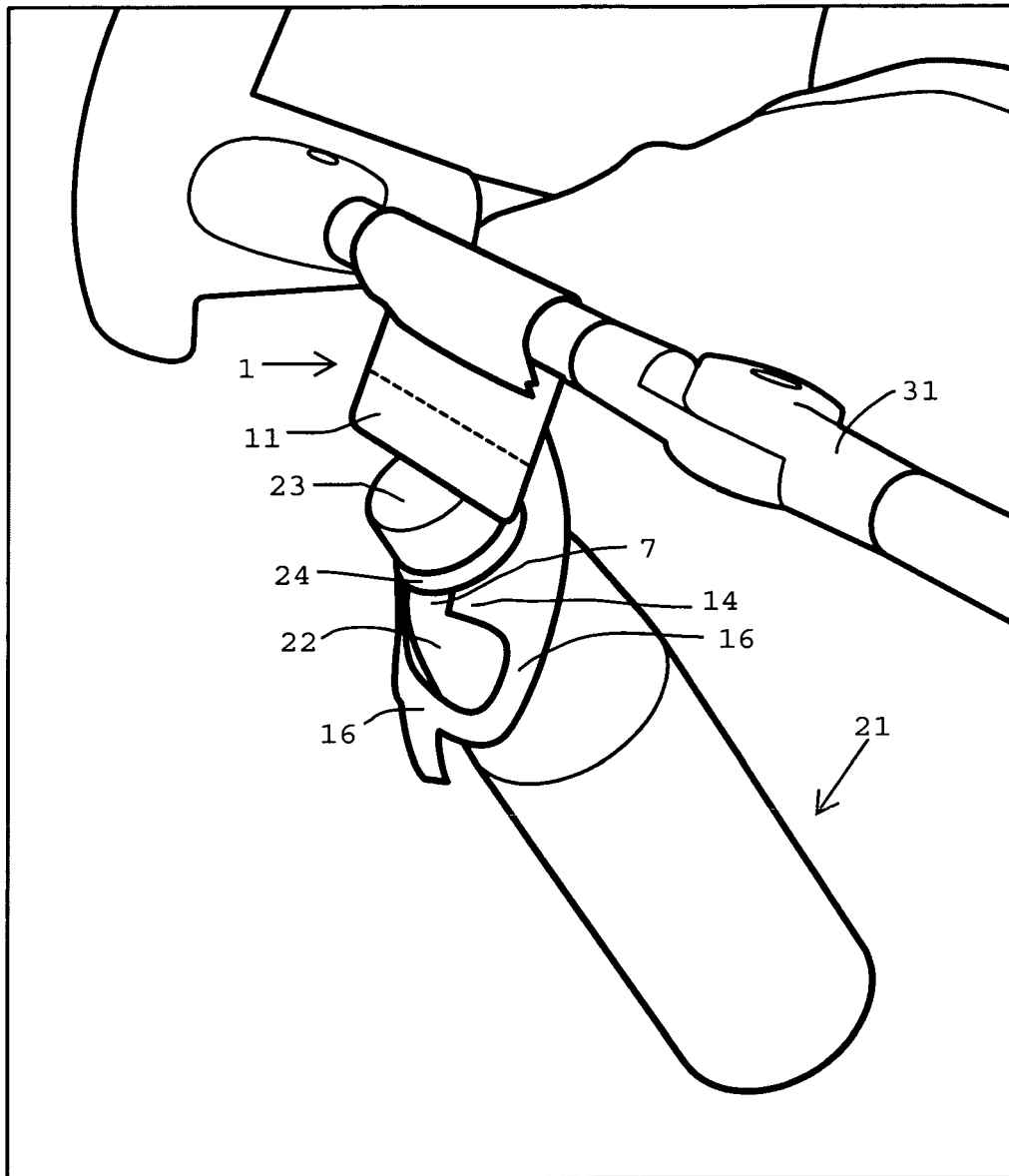


Fig. 6



## EUROPEAN SEARCH REPORT

Application Number  
EP 08 07 5603

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	US 2006/145041 A1 (WAGENKNECHT CHARLES M [US] ET AL) 6 July 2006 (2006-07-06) * figure 18a *	1	INV. B65D23/00
A	US 2004/238578 A1 (WAGENKNECHT SAMUEL JAMES [US] ET AL) 2 December 2004 (2004-12-02) * figures 1,4 *	1	
			TECHNICAL FIELDS SEARCHED (IPC)
			B65D A45F
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 29 December 2008	Examiner Bridault, Alain
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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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 08 07 5603

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29-12-2008

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2006145041 A1	06-07-2006	NONE	
US 2004238578 A1	02-12-2004	NONE	

**REFERENCES CITED IN THE DESCRIPTION**

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