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(54) Bottle carrier

(57) A bottle carrier (1; 1') having a frame (3, 32 - 34) with at least two carrying units (21 - 26). Each of the carrying units (21 - 26) has a subframe (211) with at least one recess (212) for receiving, during use, at least an upper part of a bottle (4), which recess (212) has an insertion opening (214) for inserting the bottle into the recess (212) and which recess (212) also has engagement parts (215) for engaging a bottle (4) inserted into the recess.

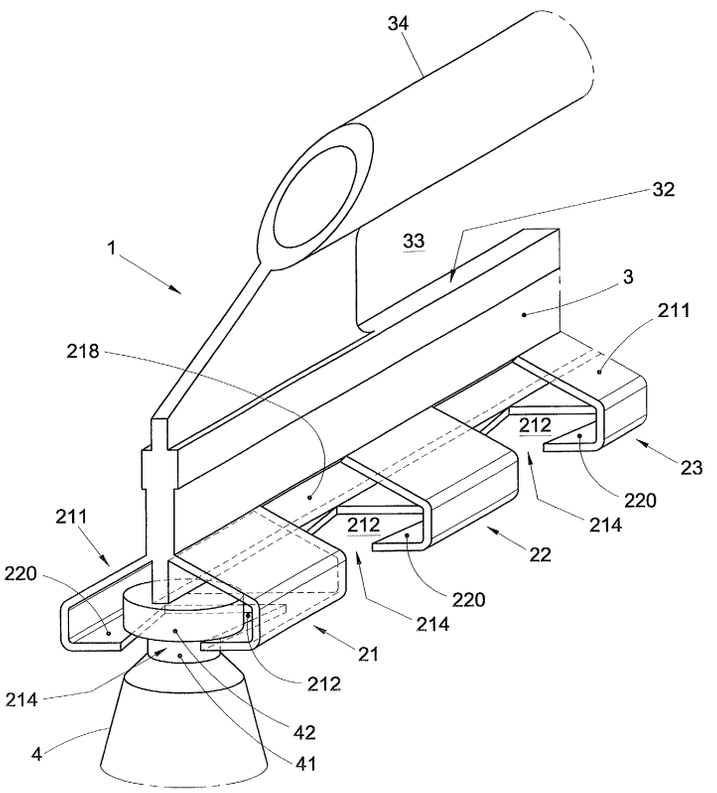

Fig. 1

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Description

[0001] The invention relates to a bottle carrier. Bottle carriers are known from practice. The known bottle carriers are typically used in supermarkets. In the known bottle carrier, mostly, maximally six beer bottles can be held. The bottle carriers are made of cardboard and consist of a (paper or) cardboard sheet, folded over at the edges so that a frame with a sufficient rigidity is obtained. The cardboard sheet is provided with a number of recesses, formed by star-shaped radial incisions in the cardboard sheet, which form radial projections in the recess. In the carrying condition, an upper part of a beer bottle projects into the recess. The projections engage the bottle at a locally narrow portion under a locally wide portion of the bottle which is formed by a crown cork. The crown cork of the bottle then rests on free extremities of the radial projections, so that the bottle is held in the bottle carrier.

[0002] A drawback of the known bottle carrier is that it can only be used once and that it is not possible to use the bottle carrier several times. If a bottle has been brought into the recess and is then taken out of the recess again, the risk is great that the cardboard sheet tears adjacent the fixed extremities of the projections. Moreover, the projections which carry the bottle are very vulnerable and the bottle can no longer be held in the recess when the projections are damaged.

[0003] The invention intends to obviate this drawback. To that end, the invention aims to provide an improved bottle carrier and, in particular, a bottle carrier suitable to be used several times. According to the invention, this object is achieved by the provision of a bottle carrier according to claim 1.

[0004] A bottle can be inserted into the opening and taken from the opening via the insertion opening. Then, the carrying unit will not become damaged easily as no vulnerable projections are present in the recess. As a result, the carrying unit can be used several times.

[0005] Specific embodiments of the invention have been laid down in the dependent claims.

[0006] Further details, aspects and embodiments of the invention will be discussed hereinafter with reference to the figures represented in the drawing.

Fig. 1 shows a perspective view of a part of a first example of a bottle carrier according to the invention;
Fig. 2 shows a side view of an example of the example shown in Fig. 1;
Fig. 3 shows a front view of a first example of an embodiment of a carrying unit of the bottle carrier;
Fig. 4 shows a front view of a second example of an embodiment of a carrying unit of the bottle carrier;
Fig. 5 shows a front view of a third example of an embodiment of a carrying unit of the bottle carrier;
Fig. 6 shows a front view of a fourth example of an embodiment of a carrying unit of the bottle carrier;
Fig. 7 shows a cross section of the carrying unit of the bottle carrier shown in Fig. 3 taken along the line II-II;
Fig. 8 shows a cross section of the example shown in Fig. 6 taken along the line I-I;
Fig. 9 shows a variant of the example shown in Fig. 8 in cross section;
Fig. 10 shows a perspective view of a part of a second example of a bottle carrier according to the invention; and
Fig. 11 shows a side view of the example shown in Fig. 10.

[0007] In Fig. 1, a part of an example of a bottle carrier 1 according to the invention is shown. The bottle carrier 1 shown in Fig. 1 comprises a frame with a handle. The frame comprises a bar 3 with, on the upper side 32 of the frame, a recess 33 closed off at a side opposite the bar by a hollow tube 34, so that a handle is formed. At the underside, the frame has six carrying units, three carrying units 21 - 23 of which are shown in Fig. 1. As the bottle carrier 1 has several carrying units, in this manner, several bottles can be carried at one time. The carrying units are arranged in one row. The bottle carrier can comprise more or fewer carrying units than the structure shown in Fig. 1, arranged in one or more rows. Other arrangements are also possible; an arrangement of, for instance, two rows of three units is a customary arrangement for so-called "six-packs" of beer bottles and an arrangement of four rows of six carrying units is customary for beer crates.

[0008] Each of the carrying units 21 - 23, 21 - 26, respectively, in the bottle carriers shown in Figs 1-2 consists of a subframe 211. The subframe 211 has a bottom surface 220 with a recess 212. The recess 212 has an insertion opening 214. Through the insertion opening 214 a bottle 4 can be inserted into the recess 212.

[0009] In Fig. 1, through the insertion opening 214, a bottle 4 has been inserted into the recess 212 of the carrying unit 21. The bottle 4 has a locally wide portion 42 situated, in the bottle 4 shown, at the free top end of the bottle. Below the locally wide portion 42, a locally narrow portion 41 is situated. The bottle has been inserted laterally through the insertion opening 214 into the recess. The insertion opening 214 is slightly narrower than the cross section of the locally narrow portion 41. Once having been inserted into the recess 212, the bottle 4 is thus confined in the recess 212 so that a force is required to take the bottle 4 from the carrying unit 21 through the insertion opening 214.

[0010] The bottle carrier has no projecting parts so that the risk of damage during use is considerably reduced.

[0011] Viewed from the insertion opening 214, the recess 212 widens and viewed from above, the recess 212 is narrower than the locally wide portion 42 of the bottle. As a result, the bottle 4 comes to hang by the bottom

side of the locally wide portion 42 from the subframe 211 when the bottle carrier 1 is lifted. In this manner, the bottle 4 is carried by the bottle carrier 1.

[0012] The bottle carrier 1 shown is manufactured from plastic, for instance a hard plastic, polypropylene (PP) or polyethylene (PE). As a result, the bottle carrier can be used several times, because the structure has been manufactured from a durable material which does is not easily damaged when bottles are inserted and removed. Additionally, the carrying unit is light and solid. Furthermore, a bottle carrier from plastic can be manufactured inexpensively. The example shown in Fig. 1, for instance, can be manufactured virtually completely by injection molding. It is also possible to manufacture the bottle carrier (partly) from another sufficiently rigid and durable material, such as aluminum, wood or any other suitable material.

[0013] The recess 212 can be provided with a snap connection 215, as shown in Figs. 3 and 4. The connection 215 consists of at least one projecting part 216 located at the bottom side 217 of the subframe 211 adjacent the recess 212. The projecting part 216 is elastically bendable and has an elastically bent position and an elastically unbent position. Upon insertion of the bottle in the recess, the projecting part is brought in the elastically bent position. When the bottle has been arranged in the recess, a free extremity 2161 of the projecting part 216 engages the locally narrow portion 41 of the bottle. Thus, the bottle is carried.

[0014] As shown in Fig. 4, at the free extremity 2161, the projecting part 216 can have a part staggered towards the recess. The staggered part then engages the bottle in the locally narrow part and the locally wide part rests on the staggered part.

[0015] When a snap-connection is used, the recess, viewed from above, can be of rectangular design in the manner shown in Fig. 7, the insertion opening 214 being formed by the bottom side of the recess 212. The distance between two parallel sides of the rectangle is then smaller than the cross section of the bottle at the locally wide part, but larger than the cross section of the bottle at the locally narrow part.

[0016] In the examples shown in Figs. 5 and 6, the locally wide part 42 of the bottle is a crown cork 43 closing off the bottle. As a result, it is possible to take the bottle from the carrying unit 21 and, at the same time, open it, as is shown in the dotted line in Fig. 3. The bottle is then pulled down with some force and, optionally, simultaneously rotated in lateral direction. As a result, the crown cork 43 comes off the bottle and remains behind in the carrying unit 21.

[0017] In Figs. 1 and 2, the carrying units 21-23 are designed as the fourth example shown in Fig. 6. Here, a clamping part which is formed by clamping projection 218 wedges the bottle 4 in vertical direction. The clamping projection 218 is connected by a fixed extremity 2181 to the upper side 219 of the subframe and, with a free extremity 2182, comes into contact with the top end of the bottle 4. In Figs. 1 and 2, the clamping projection 218 is a clamping bar at the bottom side of the bar 3. As a result, the manufacture of the bottle carrier is simplified. However, it will be clear that the clamping projection can also be designed per separate carrying unit. It is also possible to design the clamping part as a cross bar connecting the walls of the subframe to each other and, hence, clamping the bottle in vertical direction. The clamping projection shown in Fig. 6 is, like the rest of the bottle carrier, of hard plastic so that it is virtually undeformable. However, it is also possible to manufacture the clamping projection from a flexible material, such as rubber, or to give it a resilient action in a different manner, so that the top side of the bottle is damaged less easily when the bottle is brought against the clamping projection with some force, for instance when it is put down firmly.

[0018] The bottle can also be clamped in a different manner. In Figs. 3 and 5, the function of the clamping part is performed by the bottom side 217 of the subframe 211. The bottle 4 brought into the recess is wedged, in that side walls of the recess engage the bottle 4 and a top side of the bottle makes contact with the bottom side 217 of the subframe 211.

[0019] The insertion opening 214 can be designed as a narrowing of the recess 212, as shown in Fig. 9. However, it is also possible to design the insertion opening as a wide part, which is wider in cross section than the part of the bottle to be inserted. Then, the bottle can be brought into the insertion opening from below and be brought into the recess substantially in horizontal direction. The bottle can be clamped in the recess if a transition between the recess and the insertion opening is narrower than the widest part of the recess. With the snap connections shown in Figs. 3 - 5, the insertion opening is narrower than the bottle, but the insertion opening for inserting the bottle can be widened by bringing the projecting parts 216 into the elastically bent position.

[0020] In Fig. 10, a second example of a bottle carrier according to the invention is shown. The bottle carrier 1' shown comprises, like the carrier shown in Fig. 1, a frame consisting of a bar 3 with a recess 33 at the top end which is closed off by a bar 34, so that a handle is formed. The bars 3, 34 are formed from one integral part. The bar 34 is provided with ribs 35, as a result of which the handle provides good grip and is rigid. At a bottom side, the bar 3 is provided with a hinge 5, which, in the example shown, is obtained by a local weakening of the bar 3. For reinforcement, the bar 3 is curved adjacent the hinge 5, as is shown in Fig. 11.

[0021] To the hinge 5, carrying units 21-24 are connected which also form one integral part and which consist of subframes 211. The subframes 211 each have a recess 212 with an insertion opening 214. At an edge 214 of the insertion opening, the subframes 211 are bent, as is shown in Fig. 11. The part of the recesses 212 enclosed by the bent part of the subframes 211, car-

ries, in use, a bottle 4. In Fig. 10, this is shown with carrying unit 23.

[0022] The example shown in Figs. 10 and 11 is particularly suitable for lifting bottles from a beer crate. An arrangement of four by six bottles is customary for such crates. In use, the bottle carrier is then brought above a row of four bottles in the crate, such that the bottles are in line with the insertion openings 214. Then, the bottle carrier is brought down, so that the bottles end up in the insertion openings 214. Then, the bottle carrier 1 is lifted, so that the bottle 4 by the bottom side of the locally wide part 42 comes to hang from the subframe 211. As shown in Fig. 10, the bottle 4 is then suspended more or less parallel to the bottle carrier 1'. In this manner, the bottle 4 is carrier by the bottle carrier 1.

Claims

1. A bottle carrier (1; 1') comprising:

a frame (3, 32 - 34) with at least two carrying units (21 - 26) each comprising:

a subframe (211) with
at least one recess (212) for receiving, in use, at least an upper part of a bottle (4), which recess (212)
has an insertion opening (214) for inserting the bottle into the recess (212) and which recess (212) also
has engagement parts (215) for engaging a bottle (4) inserted into the recess.

2. A bottle carrier (1; 1') according to claim 1, wherein the bottle carrier (1, 1') comprises at least two rows, each of at least two carrying units (21 - 26).

3. A bottle carrier (1; 1') according to claim 1 or 2, wherein the subframe (211) comprises:

a bottom surface (220) in which the recess (212) is provided;
at least two walls situated opposite each other and on both sides of the recess and upright relative to the bottom surface, which are connected by a subframe upper side (219) to the frame (3, 32- 34).

4. A bottle carrier (1; 1') according to any one of claims 1 - 3, further comprising a clamping part (218) connected to the subframe (211) for clamping on the engagement parts a bottle inserted into the recess (212).

5. A bottle carrier (1; 1') according to claim 4, wherein the clamping part (218) is elastically deformable.

6. A bottle carrier (1; 1') according to any one of claims 4 or 5, wherein the clamping part (218) is connected to the subframe upper side (219) by means of a fixed extremity (2181), and, viewed from the subframe upper side (219) towards the recess, extends with a free extremity (2182) to a point at a distance from the recess (212), such that, in use, a top side of the bottle (4) is situated against the free extremity (2182).

7. A bottle carrier (1; 1') according to any one of the preceding claims, wherein the subframe (211) adjacent the recess (212) is provided with a clamp (215) for clamping the bottle in the recess (212).

8. A bottle carrier (1; 1') according to claim 7, wherein the clamp (215) comprises at least one elastically bendable projecting part (216) pointing away from the subframe (211), which is displaceable from an elastically bent position to an unbent position and which at least one projecting part (216), upon insertion of the bottle (4) into the recess, enters in the elastically bent position and which at least one projecting part (216), in use, wedges a bottle (4) inserted into the recess (212).

9. A bottle carrier (1; 1') according to claim 5, wherein the at least one elastically bendable part (216) forms a snap connection (215).

10. A bottle carrier (1; 1') according to claim 9, wherein the elastically bendable part (216), at a side proximal to the recess, is provided with a part staggered towards the recess, which in use engages the bottle (4) at a locally narrow part of the bottle (4) such, that a locally wide part (42) of the bottle (4) located above the locally narrow part (41) rests on the staggered part.

11. A bottle carrier (1; 1') according to any one of the preceding claims, wherein the subframe (211) is arranged for removing a closure (43) from the bottle (4) when taking from the recess (212) a bottle which has been inserted into the recess (212).

12. A bottle carrier (1; 1') according to claim 11, wherein the subframe (211) is suitable for removing a crown cork (43) from the bottle (4).

13. A bottle carrier (1; 1') according to claim 12, wherein the engagement parts (215) engage the bottle (4) directly under the crown cork (43).

14. A bottle carrier (1; 1') according to any one of the preceding claims, wherein the bottle carrier (1; 1') is manufactured from plastic.

15. A bottle carrier (1; 1') according to any one of the

preceding claims, further comprising at least one handle (34) connected to the frame (3, 32 - 34).

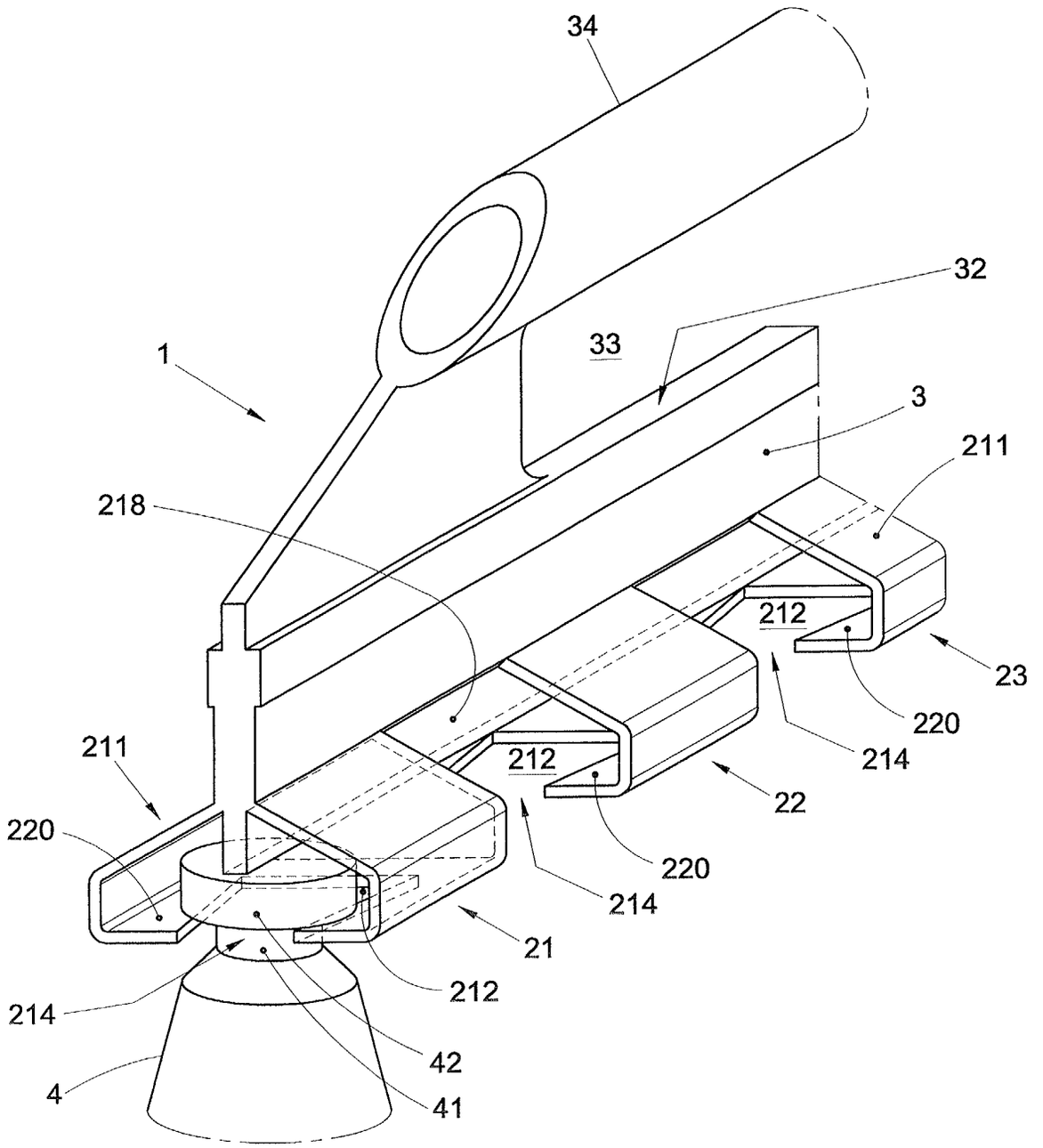

Fig. 1

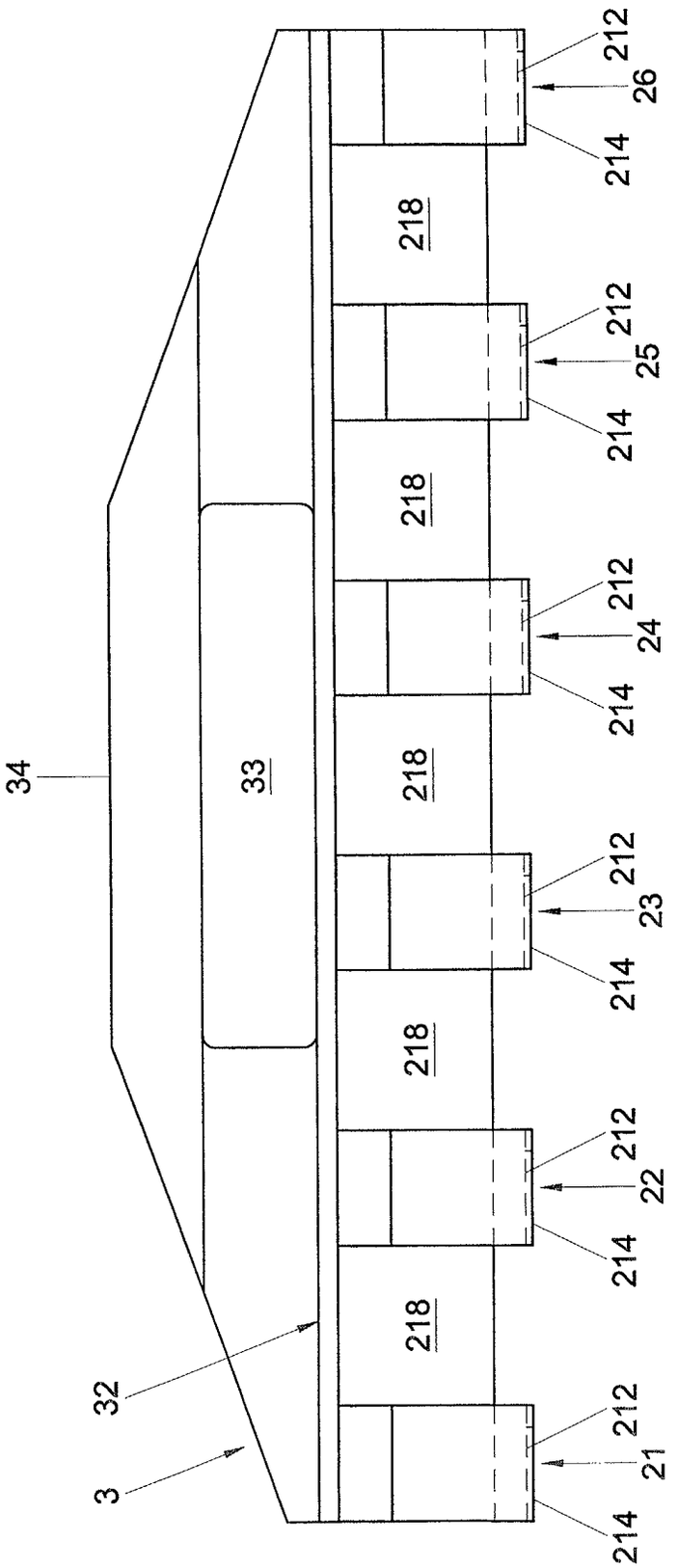

Fig. 2

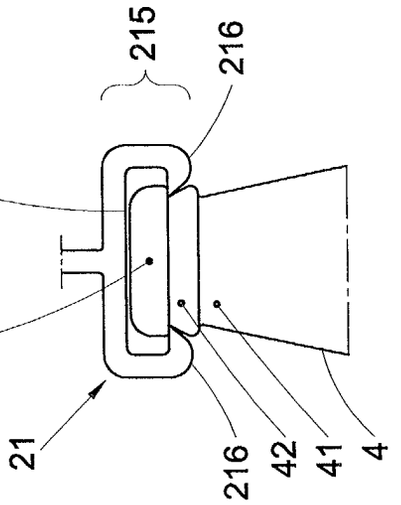

Fig. 5

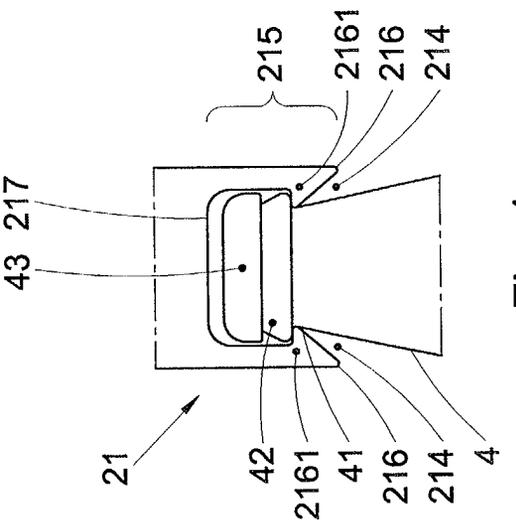

Fig. 4

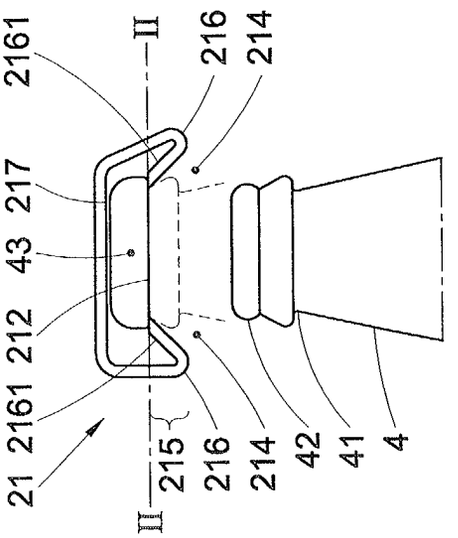

Fig. 3

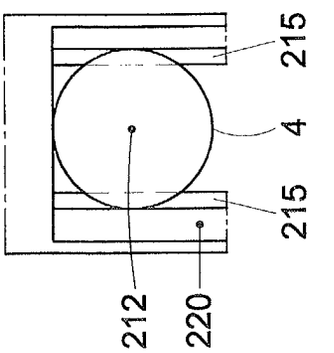

Fig. 7

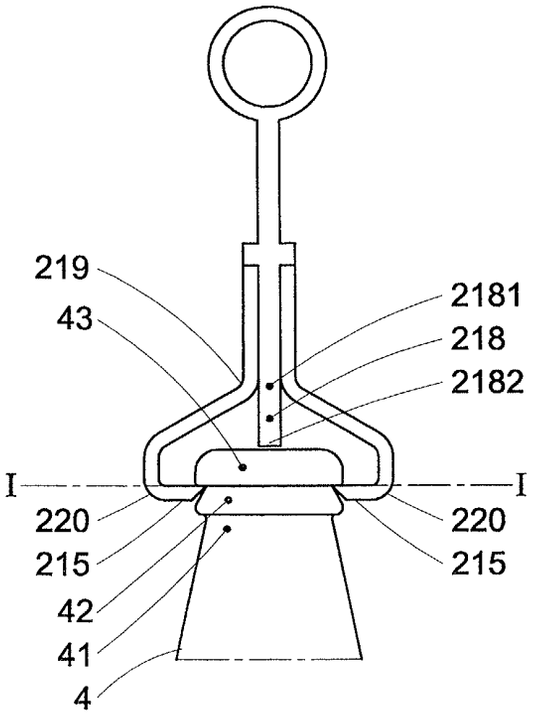

Fig. 6

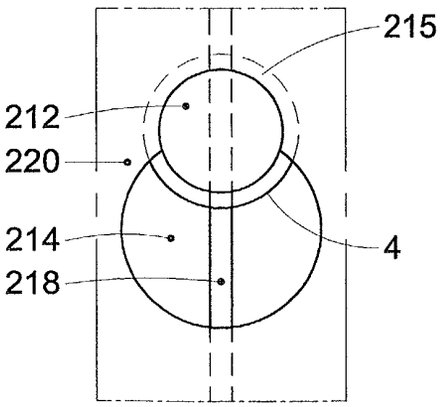

Fig. 8

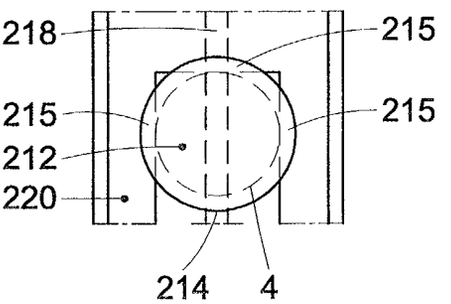

Fig. 9

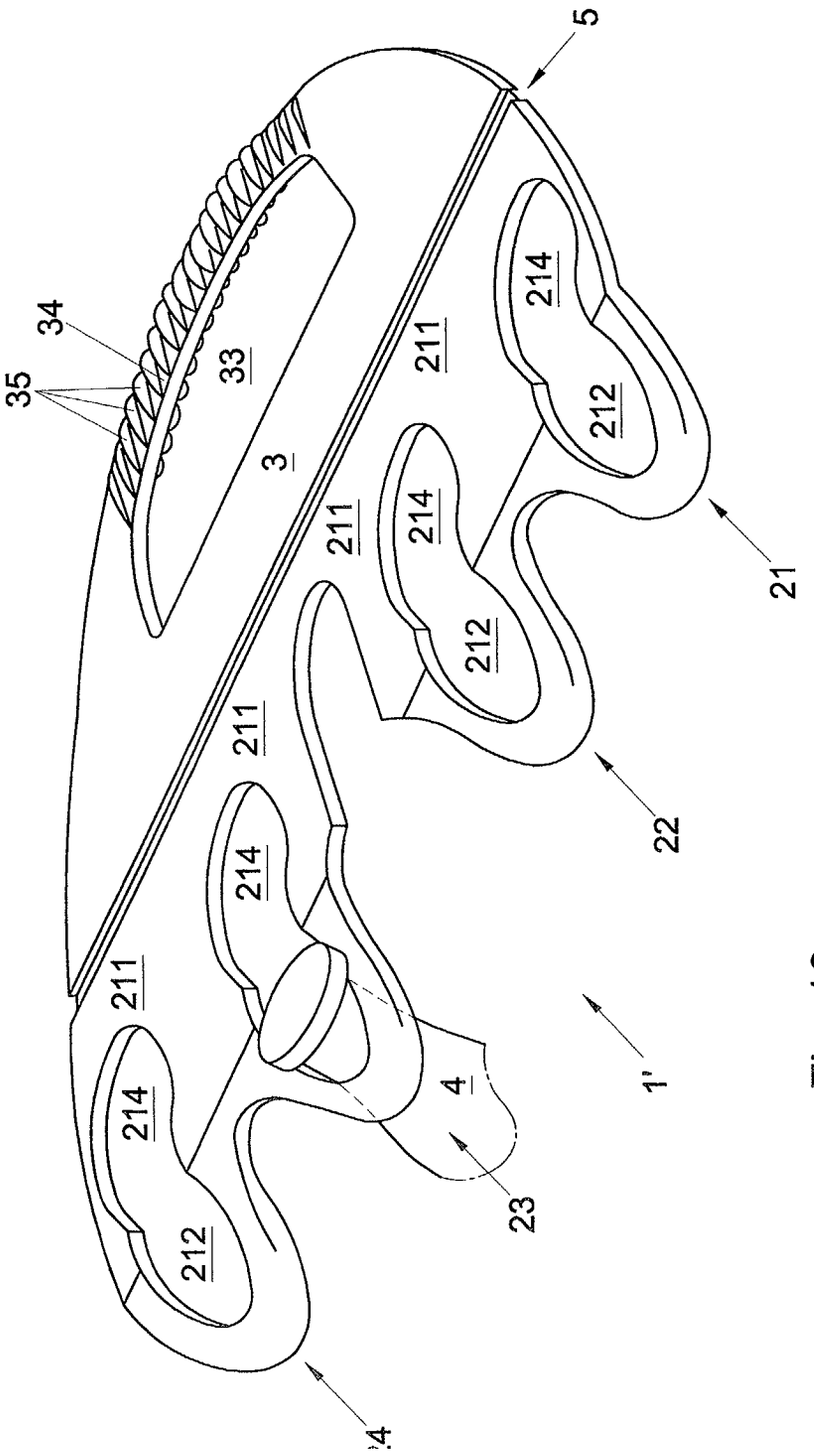

Fig. 10

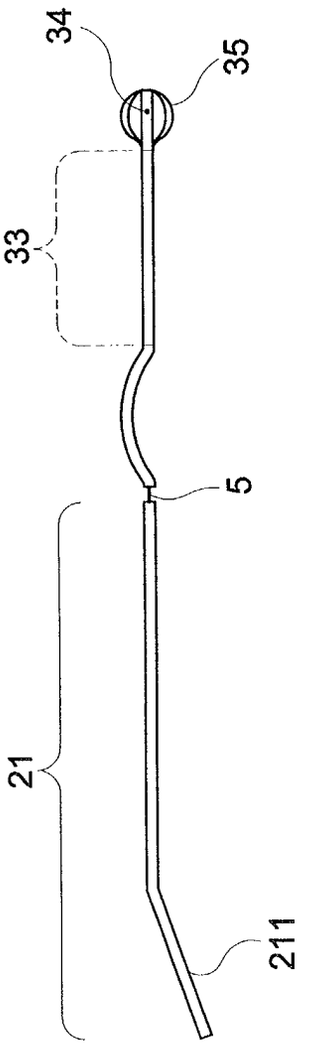

Fig. 11