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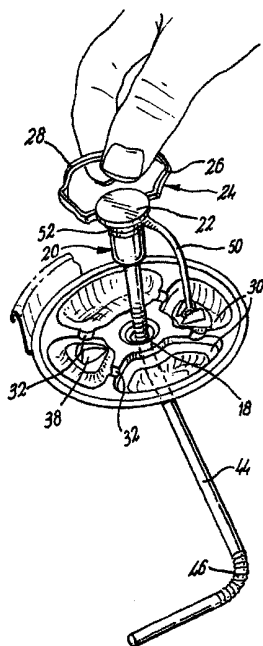
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(54) Title: OPENING ASSEMBLY



(57) Abstract: An opening assembly (10) for a beverage can (12). The assembly comprising a closure member (20) initially sealingly closing a port (18), and subsequently permitting reclosing thereof. Two engagement members (24) in the form of wire loops extend from the closure member (20) to permit handling thereof. Abutment members (34) are engageable with the engagement members (24) to initially, and if required subsequently, prevent opening of the assembly (10).



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Opening Assembly

This invention concerns improvements in or relating to opening assemblies for beverage containers, and particularly but not exclusively opening assemblies for containers usable with carbonated beverages; and also beverage containers including such an opening arrangement.

One type of container conventionally used for carbonated beverages is a can with a ring pull arrangement. Whilst these have proved very popular, a number of disadvantages can be encountered with them. For instance, it is not possible to close the can once opened, and the contents therefore have to be consumed at one time. This can be a particular problem with children or when travelling, in that a container could for instance be knocked over and therefore the contents spilt. Also there is a potential hygiene problem as the top of the cans can become dirty, and this part can come into contact with some of the can's contents and/or a person drinking from the can.

According to the present invention there is provided an opening assembly for a beverage container which container is sealed after filling, the assembly comprising a port and a closure member, the closure member being locatable in the port to sealingly close same, the assembly also comprising release means which are manually engageable to permit the seal to be broken and the closure member to be removed from the port, the assembly being arranged such that following initial opening the closure member can be selectively replaced in the port to temporarily close same.

The assembly may also comprise means for retaining the closure member in the port. The retaining means may comprise an engagement member connected to the closure member and an abutment member against which the engagement member can abut when the assembly is sealingly closed, the abutment member may require to be deformed to permit initial opening of the assembly.

One or more abutment members may be provided.

One or more engagement members may be provided.

The or each abutment member may comprise a first part upstanding from an outer surface of the assembly and a second part extending transversely from the first part spaced from said outer surface to define a gap between the second part and said outer surface. The second part may extend from opposite sides of the first part. The second part, or a connection between the first and second parts, may be deformable to permit initial opening of the assembly.

A part of the or each engagement member may be locatable in said gap or gaps when the assembly is sealingly closed.

The abutment member may be rotatably mountable on the container such that following initial opening of the container and replacement of the closure member in the port, the abutment member can be rotated to a position to be engageable with the engagement member to retain the closure member in the port.

Alternatively, the second part of the abutment member may be rotatably mounted on the first part such that following initial opening of the container and replacement of the closure member in the port, the second part can be rotated to a position to be engageable with the engagement member to retain the closure member in the port.

A formation may be provided on the abutment member to facilitate rotation thereof.

The engagement member may comprise one or more shaped elongate members extending from the closure member, and the engagement member or members may extend in a loop from the closure member.

In one embodiment, the engagement member may include extension means to provide leverage on the closure member on opening of the closure member. The extension means may be in the form of an elbow provided at one side, or preferably, at respective opposite sides, of the closure member. The, or each, elbow may comprise a looped portion of the elongate member.

One or more recesses may be provided in said outer surface of the assembly to receive said one or more engagement members when the assembly is sealingly closed.

In an alternative arrangement the engagement member is in the form of a flange at least partially surrounding the closure member.

The engagement member or members may also constitute the release means.

A drinking straw may be provided which is releasably mountable on the closure member so as to locate in a container when the assembly is sealingly closed, and to be usable to drink through the port when the container is open.

An open passage may be provided in the closure member which opens into a container. The assembly is preferably arranged such that an end of the straw is releasably locatable in said passage. A formation may be provided on the straw and/or in the passage to retain the straw therein in a friction fit. The formation on the straw may be integrally formed or may comprise a member through which the straw extends. A lower part of the straw may have a construction which facilitates bending to permit the whole of the straw to locate in a container when closed. A further such construction may be provided in an upper part of the straw to enable the straw to be moved to a required position for drinking. The straw may be formed so as to be wholly locatable in a closed container, and may have a flexible helical configuration.

A label may be provided locatable on the release means when the

container is sealingly closed to prevent operation thereof without the label being removed and/or torn. A part of the release means may extend through the label when sealingly closed.

The assembly may comprise a link member extending between the closure member and another point on the assembly to prevent the closure member from being separated from the remainder of the assembly. The link member may extend from said first part of the abutment member. Alternatively the link member may extend through the port and be provided with securing means to prevent at least inadvertent passing of the whole of the link member through the port. The securing means may be engageable with the drinking straw.

The closure member may be removable from the port so as to permit initial filling of the container.

The invention also provides an opening assembly for a drinks can, the assembly being according to any of the preceding seventeen paragraphs.

The invention further provides a beverage container including an opening assembly according to any of the preceding eighteen paragraphs.

The container may comprise a can. Alternatively, the container may be made of plastics material.

Embodiments of the present invention will now be described by way of example only and with reference to the accompanying drawings, in which:-

Fig. 1 is a diagrammatic plan view of a first opening assembly according to the invention;

Fig. 2 is a diagrammatic cross-sectional view through the assembly of Fig. 1 shown on a can;

Fig. 3 is a diagrammatic perspective view of the assembly of Fig. 1 in use;

Fig. 4 is a diagrammatic perspective view of part of the assembly of Fig.

1;

Figs. 5 and 6 are diagrammatic cross-sectional views of a further part of the assembly of Fig. 1, respectively in first and second conditions;

Fig. 7 is a diagrammatic perspective view of a second assembly according to the invention shown on a can;

Fig. 8 is a diagrammatic perspective view of an upper part of a can incorporating a third assembly according to the invention in a closed condition;

Fig. 9 is a diagrammatic perspective view of the can and assembly of Fig. 8 in an open condition;

Figs. 10 and 11 are diagrammatic views of components of the assembly of Fig. 8;

Fig. 12 is a diagrammatic perspective view of a can incorporating a fourth assembly according to the invention in an open condition;

Fig. 13 is a diagrammatic perspective view of a can incorporating a fifth assembly according to the invention in an open condition;

Fig. 14 is a plan view of the assembly of Fig. 13 in a closed condition;

Fig. 15 is a similar view to Fig. 14 but with a component removed;

Fig. 16 is a similar view to Fig. 14 but in a partially open condition;

Fig. 17 is a diagrammatic cross sectional view through part of the assembly of Fig. 13;

Fig. 18 is a similar view to Fig. 17 of an alternative arrangement of part of an assembly according to the invention; and

Fig. 19 is a diagrammatic perspective view of a further opening assembly according to the invention.

Figs. 1 to 6 of the drawings show an opening assembly 10 suitable for use on a can 12 for containing carbonated beverages. The assembly 10 forms the top part of the can 12 and is mounted to an upstanding flange 14 of the can and comprises a generally planar top surface 16.

A central through port 18 is provided in the surface 16. A shaped resilient material closure member 20 is locatable in the port 18 to close same. The member 20 has an upper portion 22 of greater diameter than the port 18.

Two engagement members 24 extend from the upper part 22. Each engagement member 24 comprises a shaped length of wire in a closed loop, with each member 24 locatable on an opposite side of the member 20 to the other. Each member 24 widens away from the closure member 20 to respective elbows 26 and then converges to a cross part 28.

Four recesses 30 are provided in the top surface 16 spaced around the port 18. When the closure member 20 is located in the port 18 and the engagement members 24 are lying flat against the surface 16, the respective cross parts 28 lie in opposite recesses 30A with the elbows 26 lying on a connecting web between the respective recesses 30. Grooves 32 are provided in the connecting webs between the recesses 30 where engagement members 24 lie so as to receive same. The recesses 30B which do not receive one of the cross parts 28 each mount an abutment member 34. Each abutment member 34 comprises an upstanding finger 36 with a shaped plate 38 extending normally thereto from an upper part of the finger 36 to define a gap between the plate 38 and the surface 16.

A lower part of the closure member 20 which is locatable in the can 12 includes an open downwardly facing passage 40 with a diverging opening 42. A drinking straw 44 is selectively locatable to extend from the passage 40 into the can 12. The straw 44 has a conventional flexing part 46. A collar 48 is provided around the straw 44 adjacent the end thereof locatable in the passage 40. The collar 48 provides a friction fit in the passage 40.

A link member 50 extends between the closure member 20 and the surface 16 to prevent the closure member 20 being lost. The link member 50 comprises a flexible plastic strip which is mounted at one end on the member 20 by a collar 52, and is mounted at its other end to the upper part of a one of the abutment members 34.

In use, the can 12 is filled in a conventional manner and the assembly 10 is fitted thereon in the form shown in Figs. 1 and 2. The closure member 20

provides a closed seal in the port 18, and the engagement members 24 are held down by the abutment members 34. To open the assembly 10 and hence can 12 the engagement members 24 are pulled upwardly which causes the plates 38 to deform to the condition shown in Fig. 6 to permit the members 24 to move further upwardly. Further pulling of the members 24 will cause the seal to break and the member 28 to be pulled out of the port 18. With the member 20 lifted out of the port 28, the straw 44 can be removed from the passage 40 and

used to drink from the can 12 through the port 18. If it is required to temporarily close the assembly 10, the straw 44 can be replaced in the passage 40 to extend into the can 12, or can simply be removed, and the closure member 20 can be pushed into the port 18. The link member 50 prevents the closure member 20 from being lost.

Fig. 7 shows a further opening assembly 60 in use on a can 12. The assembly 60 is similar to the assembly 10 except as follows. In this instance the port is towards one side of the can 12 and a single engagement member 62 is provided which extends over a substantial proportion of the top of the can 12, and locates in a suitably shaped recess 64 in the top surface of the assembly 60. Two abutments members 66 are provided located either side of the port and adjacent the edge of the can 12. The abutment members 66 again comprise an upstanding finger 68 and a shaped plate 70.

The assembly 60 operates in a generally similar manner with the engagement member 62 being pulled upwardly to deform the plates 70 and break the seal provided by the closure member in the port, and thereafter permit the closure member to be removed including the straw 44.

Figs. 8 - 11 show a third opening assembly 80 in use on a can 12. The assembly 80 is similar in many respects to the assembly 60 and again the port 82 is provided towards one side of the can 12. A recess 84 is provided in the top surface of the assembly 80 to receive the wire 86 of an engagement member 88 when the assembly 80 is closed. A central part 87 of the wire 86 is raised and a well 90 is provided in the recess 84 to facilitate a person placing a finger

beneath the wire 86 to open the assembly 80. The assembly 80 also comprises a resilient material closure member 92 which removably mounts a straw 94.

Two abutment members 96 are provided one on either side of the port 82 to be engageable with the wire 86. Each abutment member comprises an upstanding finger 98 with a shaped plate 100 extending normally thereto to define a gap to locate the wire 86. Each plate 100 comprises a portion 102 which can be deformed to permit initial opening of the assembly 80. The plates 100 are rotatably mounted on the respective finger 98, and an upstanding manually engageable formation 104 is provided on each plate 100.

Projections 106 are provided on the top surface of the assembly 80 a short distance from the fingers 98 for a purpose hereinafter to be described. An annular member 108 is provided around the straw 94 adjacent the top end thereof. The annular member 108 is engageable in an opening 110 provided in the underside of the closure member 92. As can be seen from Fig. 10, the opening 110 narrows in a number of steps towards the top of the closure member 92.

A concertina formation 112 is provided at the lower end of the straw 94 to permit this end to bend without collapsing when the straw 94 is wholly located within the can 12. A narrow web 114 extends from the closure member 92 to prevent loss thereof. The web 114 is provided at its other end with a formation 116 comprising a transverse member 118 and a loop 120. The transverse member 118 prevents inadvertent pulling through the port 82, whilst the loop 120 slidingly locates around the straw 94.

The assembly 80 can be opened in a similar manner as described above, with the wire 86 being pulled upwards to deform the portions 102 and hence permit removal of the closure member 92 from the port 82. The closure member 92 can be replaced in the port 82 to retain any unused beverage in the can 12. The assembly 80 provides a further feature in that when the closure member 92 is replaced in the port 12, this can be secured therein by pushing

the wire 86 into the recess 84, and rotating the plates 100 so as to overlie the wire 86. The plates 100 are engageable with the projections 106 in a friction fit to prevent inadvertent movement of the plates 100. The formations 104 facilitate rotation of the plates 100, and the plates 100 can of course readily be rotated outwardly to permit release of the wire 86 and hence re-opening of the port 82.

Fig. 12 shows a can 12 with a fourth opening assembly 122 which is very similar to the assembly 80 and only the differences will be highlighted. In this

instance the end of the web 114 spaced from the closure member 92 is provided with a loop (not shown) which locates around one of the fingers 98. The straw 94 is provided with an integral bulbous formation 124 which is locatable in the opening 110 in the closure member 92 in a friction fit. This integral arrangement removes any possibility of a separate component becoming detached and perhaps swallowed.

Figs. 13 - 17 show a fifth opening assembly 130 on a can 12. The assembly 130 again comprises a port 132 towards one side of the can 12. A closure member 134 of a resilient material is provided, and in this instance the closure member is provided with a flexible link 136 comprising a flange 138 and web 140 leading to a hinge mounting 142 on the top surface of the assembly 130.

A pair of pivotal generally L-shaped abutment members 144 are provided mounted on upstanding fingers 146 so as to define a gap between the abutment members and the top surface of the assembly 130. The abutment members 144 are arranged such that in a closed condition the base of the member 144, which is shorter than the stems, is engageable above the flange 138 on respective sides of the closure member 134.

A label 148 is removably locatable over the free ends of the stems of the abutment members 144 in a closed condition. Upstanding projections 150 are provided adjacent the free end of the stems and extend through the label 148 to

facilitate opening of the assembly 130. Upstanding formations 152 are provided on the top surface of the assembly 130 over which the stems of the abutment members 144 can move in a friction fit.

A straw 154 is again provided with the upper end thereof removably locatable in an opening 156 in the underside of the closure member 134. Two concertina formations 158 are provided in the straw, one near the upper end thereof to enable a user to position the top end of the straw as required, and a second formation 158 located towards the lower end of the straw to permit the straw to bend to locate fully in the can 12.

In use, when sealingly closed the label 148 will prevent opening of the assembly 130. To open the assembly 130 the label can be removed and/or torn by pushing the free ends of the abutment members 144 apart. The abutment members 144 can be moved until located in a friction fit on the formations 152, and with the bases of the abutment members 144 clear of the flange 138. The closure member 134 can now be opened by pulling on the flange 138, and the straw 154 removed from the closure member 134 for use. To reclose the assembly 130, the straw will be removed or its end located in the opening 156. The closure member will then be pivoted to locate in the port 132 and the closure members 134 pivoted such that the bases thereof overlie the flange 138. In this instance the assembly 130 may be provided on the can 12 prior to filling, and the closure member 134 removed to permit filling through the port 132. A tab 139 may be provided on the flange 138 (see Fig. 16) to aid pulling thereof.

Fig. 18 shows an alternative closure member arrangement comprising a closure member 160. The member 160 is larger than those described above and is oval to locate in a correspondingly oval opening 162. This arrangement is particularly suited for beverages such as beer, with the oval opening assisting drinking from a can. The opening has inwardly tapering side walls 164 upon which a resilient seal 166 is provided. The closure member 160 has a solid upper part 161 from which tapering side walls 168 extend engageable against the seal 166. A downwardly facing passage 170 permits a straw to be mounted therein if required. Openings (not shown) may be provided in the sides of the

passage to aid gripping of a straw. A wire pull 172 extends through an upper part of the member 160.

Fig. 19 shows a further embodiment of the invention, namely an opening assembly 180 which is similar to the assembly shown in Fig. 7 and in Figs. 8-11. In the assembly 180, a port 182 is provided towards one side, and a recess 184 is provided in the surface 181 of the assembly 180 towards the opposite side. The recess 184 receives a wire 186 of an engagement member 188 when the assembly 180 is in a closed condition.

A closure member 190 is provided to close the port 182. The wire 186 extends through the closure member 190. The wire 186 defines on opposite sides of the closure member 190 a pair of elbows 192 which extend towards the side of the surface 181 adjacent the closure member 190.

Portions 193 of the wire 186 extend on each side of the closure member 190 from the elbows 192 to the recess 184. A central part 194 of the wire 186 extends across the recess 184 between the portions 193.

A pair of abutment members 196 are provided on opposite sides of the closure member 192 and each consists of a finger 198 and a shaped plate 200, rotatable about the finger 198. Each abutment member 196 locates a respective one of the portions 193 in a gap between the plate 200 and the top surface 181 of the assembly 182.

In operation, a person places his finger into the recess 184 beneath the central part 194 of the wire 186. By lifting the wire, the plates 200 are deformed upwardly by the portions 193 and the elbows 192 engage the surface 181 of the assembly 180. This increases the leverage on the closure member 190 to allow it to be opened.

There are thus described opening assemblies which are readily usable in packaging carbonated beverages and the like, and it is to be realised that any

combination of the above described features can be provided. The assemblies can readily be opened and also permit the subsequent closing of the container to permit the drink to be drunk over a longer period. Accordingly, larger cans and other packaging become more attractive to a purchaser and hence also a drinks manufacturer. In this way cans and other similar containers can compete more equally with bottles and the like as containers.

The assemblies also permit a straw to be contained within the container and subsequently be available for use. The provision of this straw permits more hygienic consumption of the containers contents. The can and also assembly can readily be recycled, and the engagement members may be suitable for re-use. The assemblies are each of relatively straightforward construction and can thus be inexpensively and robustly manufactured.

Various other modifications may be made without departing the scope of the invention. For example, the engagement member or members and the abutment members may take a different form. It may be that the straw would be provided externally of the can. A different formation on the straw and/or in the passage could be provided, and such formation may be integrally formed or provided by a separate component. Alternatively the passage may be such that a straw will be held therein without needing any formations. The passage may include a plurality of longitudinal openings to permit deformation to accept a straw.

For beverages such as beer a straw may not be required, and/or a larger closure member may be provided. A further formation may be provided in an upper part of the straw to permit the straw to be moved to a required orientation for drinking. The straw may have an overall configuration to locate wholly within a can when closed, and may have a flexible helical shape.

Rather than the abutment members being in the form of deformable plates, plates may be provided with a part which snaps off when the assembly is opened. The plates may be made of a plastics material, with a line of weakness

to define the snap off part. Any of the described features may be used in any configuration. Whilst the embodiments are all shown in use on cans, such assemblies could be used on a wide range of different containers.

Whilst endeavouring in the foregoing specification to draw attention to those features of the invention believed to be of particular importance it should be understood that the Applicant claims protection in respect of any patentable feature or combination of features hereinbefore referred to and/or shown in the drawings whether or not particular emphasis has been placed thereon.

Claims

1. An opening assembly (10, 60, 80, 122, 130, 180) for a beverage container (12) which container (12) is sealed after filling, the assembly (10, 60, 80, 122, 130, 180) comprising a port (18, 82, 132, 162, 182) and a closure member (20, 92, 134, 160, 190), the closure member (20, 92, 134, 160, 190) being locatable in the port (18, 82, 132, 162, 182) to sealingly close same, the assembly (10, 60, 80, 122, 130, 180) also comprising release means (24, 62, 88, 138, 172, 188) which are manually engageable to permit the seal to be broken and the closure member (20, 92, 134, 160, 190) to be removed from the port (18, 82, 132, 162, 182), the assembly (10, 60, 80, 122, 130, 180) being arranged such that following initial opening the closure member (20, 92, 134, 160, 190) can be selectively replaced in the port (18, 82, 132, 162, 182) to temporarily close same.
2. An assembly according to claim 1, characterised in that the assembly (10, 60, 80, 122, 130, 180) also comprises means for retaining the closure member (20, 92, 134, 160, 190) in the port (18, 82, 132, 162, 182).
3. An assembly according to claim 2, characterised in that the retaining means comprises an engagement member (24, 62, 88, 138, 172, 188) connected to the closure member (20, 92, 134, 160, 190) and an abutment member (34, 66, 96, 144, 196) against which the engagement member (24, 62, 88, 138, 172, 188) can abut when the assembly (10, 60, 80, 122, 130, 180) is sealingly closed.
4. An assembly according to claim 3, characterised in that the abutment member (34, 66, 96, 196) requires to be deformed to permit initial opening of the assembly (10, 60, 80, 122, 130, 180).
5. An assembly according to claims 3 or 4, characterised in that one or more abutment members (34, 66, 96, 144, 196) is provided.
6. An assembly according to any of claims 3 to 5, characterised in that one

or more engagement members (24, 62, 88, 138, 172, 188) is provided.

7. An assembly according to any of claims 3 to 6, characterised in that the or each abutment member (34, 66, 96, 144, 196) comprises a first part (36, 68, 98, 146, 198) upstanding from an outer surface (16, 181) of the assembly (10, 60, 80, 122, 130, 180) and a second part (38, 70, 100, 200) extending transversely from the first part (36, 68, 98, 146, 198) spaced from said outer surface (16, 181) to define a gap between the second part (38, 70, 100, 200) and said outer surface (16, 181).

8. An assembly according to claim 7, characterised in that the second part (38, 70, 100, 200) extends from opposite sides of the first part (36, 68, 98, 146, 198).

9. An assembly according to claims 7 or 8 when dependent on claim 4, characterised in that the second part (38, 70, 100, 200), or a connection between the first (36, 68, 98, 198) and second parts (38, 70, 100, 200), is deformable to permit initial opening of the assembly (10, 60, 80, 122, 180).

10. An assembly according to any of claims 7 to 9, characterised in that a part of the or each engagement member (24, 62, 88, 138, 172, 188) is locatable in said gap or gaps when the assembly (10, 60, 80, 122, 130, 180) is sealingly closed.

11. An assembly according to any of claims 3 to 10, characterised in that the abutment member (34, 66, 96, 144, 196) is rotatably mountable on the container (12) such that following initial opening of the container (12) and replacement of the closure member (20, 92, 134, 160, 190) in the port (18, 82, 132, 162, 182), the abutment member (34, 66, 96, 144, 196) can be rotated to a position to be engageable with the engagement member (24, 62, 88, 138, 172, 188) to retain the closure member (20, 92, 134, 160, 190) in the port (18, 82, 132, 162, 182).

12. An assembly according to claim 7 to 10, characterised in that the second part (38, 70, 100, 200) of the abutment member (34, 66, 96, 144, 196) is rotatably mounted on the first part (36, 68, 98, 146, 198) such that following initial opening of the container (12) and replacement of the closure member (20, 92, 134, 160, 190) in the port (18, 82, 132, 162, 182), the second part (38, 70, 100, 200) can be rotated to a position to be engageable with the engagement member (24, 62, 88, 138, 172, 188) to retain the closure member (20, 92, 134, 160, 190) in the port (18, 82, 132, 162, 182).

13. An assembly according to claims 11 or 12, characterised in that a formation (104) is provided on the abutment member (96) to facilitate rotation thereof.

14. An assembly according to any of claims 3 to 13, characterised in that the engagement member (24, 62, 88, 138, 172, 188) comprises one or more shaped elongate members extending from the closure member (20, 92, 134, 160, 190).

15. An assembly according to claim 14, characterised in that the engagement member (24, 62, 88, 138, 172, 188) or members extend in a loop from the closure member (20, 92, 134, 160, 190).

16. An assembly according to claims 14 or 15, characterised in that the engagement member (188) includes extension means (192, 193, 194) to provide leverage on the closure member (190) on opening of the closure member (190).

17. An assembly according to claim 16, characterised in that the extension means (192, 193, 194) is in the form of an elbow (192) provided at one side, or preferably, at respective opposite sides, of the closure member (190).

18. An assembly according to claim 17, characterised in that the, or each, elbow (192) comprises a looped portion of the engagement member (188).

19. An assembly according to any of claims 3 to 18, characterised in that one

or more recesses is provided in said outer surface (16, 181) of the assembly (10, 60, 80, 122, 180) to receive said one or more engagement members (24, 62, 88, 172, 188) when the assembly (10, 60, 80, 122, 180) is sealingly closed.

20. An assembly according to any of claims 3 to 13, characterised in that the engagement member is in the form of a flange (138) at least particularly surrounding the closure member (134).

21. An assembly according to any of claims 3 to 20, characterised in that the engagement member or members (24, 62, 88, 138, 172, 188) also constitute the release means.

22. An assembly according to any of the preceding claims, characterised in that a drinking straw (44, 94, 154) is provided which is releasably mountable on the closure member (20, 92, 134, 160, 190) so as to locate in a container (12) when the assembly (10, 60, 80, 122, 130, 180) is sealingly closed, and to be usable to drink through the port (18, 82, 132, 162, 182) when the container (12) is open.

23. An assembly according to claim 22, characterised in that an open passage (40, 170) is provided in the closure member (20, 92, 134, 160, 190) which opens into a container (12), and in which an end of the straw (44, 94, 154) is releasably locatable.

24. An assembly according to claim 23, characterised in that a formation (48, 108, 124) is provided on the straw (44, 94, 154) and/or in the passage (40, 170) to retain the straw (44, 94, 154) there in a friction fit.

25. An assembly according to claim 24, characterised in that the formation (124) on the straw is integrally formed.

26. An assembly according to claim 24, characterised in that the formation (48, 108) on the straw (44, 94) comprises a member through which the straw

(44, 94) extends.

27. An assembly according to any of claims 22 to 26, characterised in that the straw (44, 94, 154) is formed so as to be wholly locatable in a closed container (12).

28. An assembly according to claim 27, characterised in that the straw (44, 94, 154) has a flexible helical configuration.

29. An assembly according to claim 27, characterised in that a lower part of the straw (44, 94, 154) has a construction (46, 112, 158) which facilitates bending to permit the whole of the straw (44, 94, 154) to locate in a container (12) when closed.

30. An assembly according to any of claims 22 to 29, characterised in that a construction (158) which facilitates bending is provided in an upper part of the straw (154) to enable the straw (154) to be moved to a required position for drinking.

31. An assembly according to any of the preceding claims, characterised in that a label (148) is provided locatable on the release means (144, 140) when the container (12) is sealingly closed to prevent operation thereof without the label (148) being removed and/or torn.

32. An assembly according to claim 31, characterised in that a part of the release means (150) extends through the label (148) when sealingly closed.

33. An assembly according to any of the preceding claims, characterised in that the assembly (10, 60, 80, 122, 130, 180) comprises a link member (50, 114, 140) extending between the closure member (20, 92, 134, 160, 190) and another point on the assembly (10, 60, 80, 122, 130, 280) to prevent the closure member (20, 92, 134, 160, 190) from being separated from the remainder of the assembly (10, 60, 80, 122, 130, 180).

34. An assembly according to claim 33 when dependent on claim 7, characterised in that the link member (40, 144) extends from said first part (68, 98, 198) of the abutment member.

35. An assembly according to claim 33, characterised in that the link member (114) extends through the part (82) and is provided with securing

means (116) to prevent at least inadvertent passing of the whole of the link member (114) through the port 82).

36. An assembly according to claim 35, characterised in that the securing means (116) is engageable with the drinking straw (94).

37. An assembly according to any of the preceding claims, characterised in that the closure member (20, 92, 134, 160, 190) is removable from the port (18, 82, 132, 162, 182) so as to permit initial filling of the container (12).

38. An opening assembly (10, 60, 80, 122, 130, 180) for a drinks can (12), characterised in that the assembly (10, 60, 80, 122, 130, 180) according to any of the preceding claims.

39. A beverage container (12), characterised in that the container (12) includes an opening assembly (10, 60, 80, 122, 130, 180) according to any of the preceding claims.

40. A container according to claim 39, characterised in that the container (12) comprises a can.

41. A container according to claim 39, characterised in that container (12) is made of plastics material.

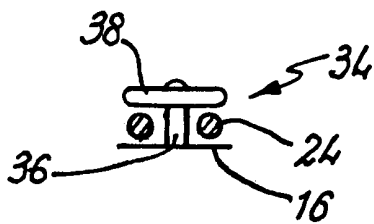
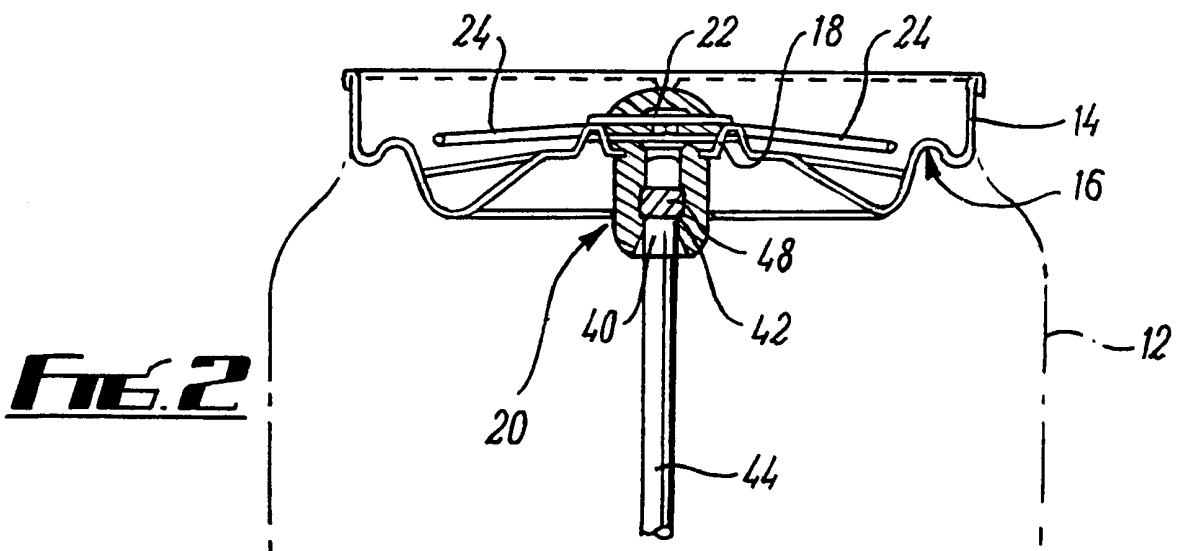
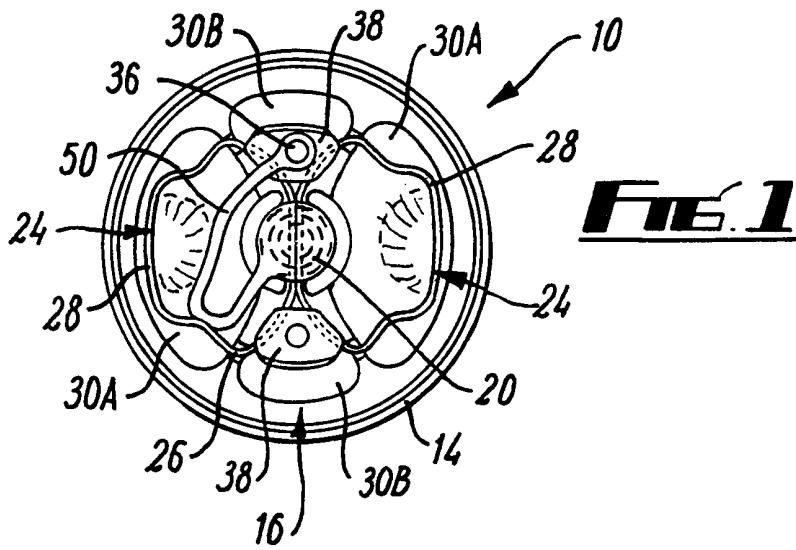


FIG. 5

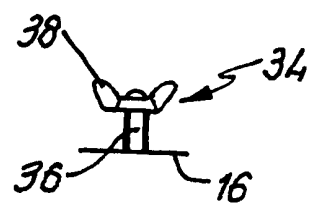


FIG. 6

FIG. 3

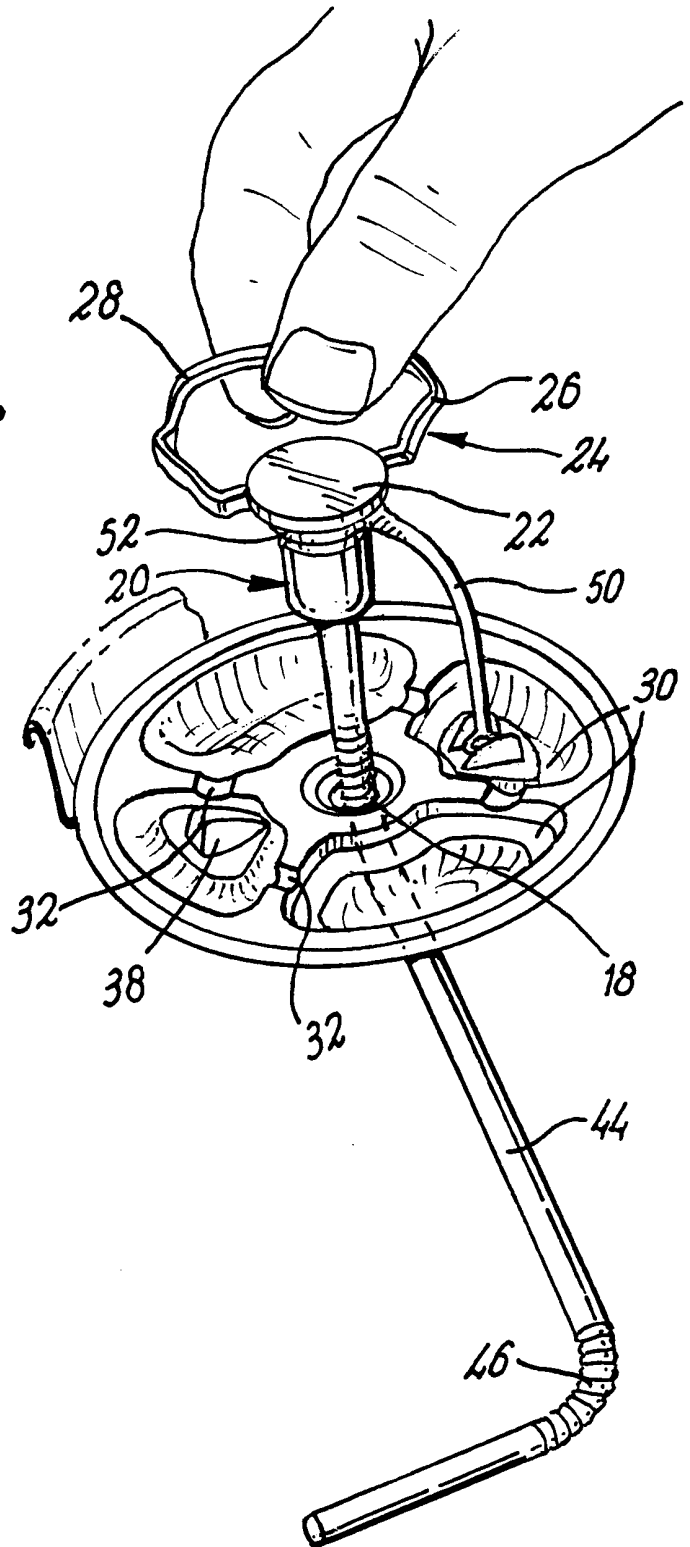
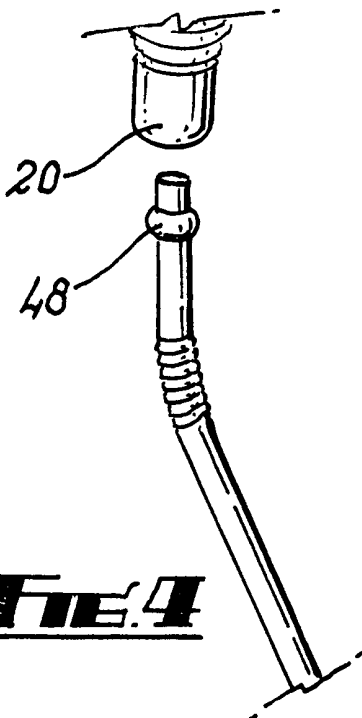


FIG. 4



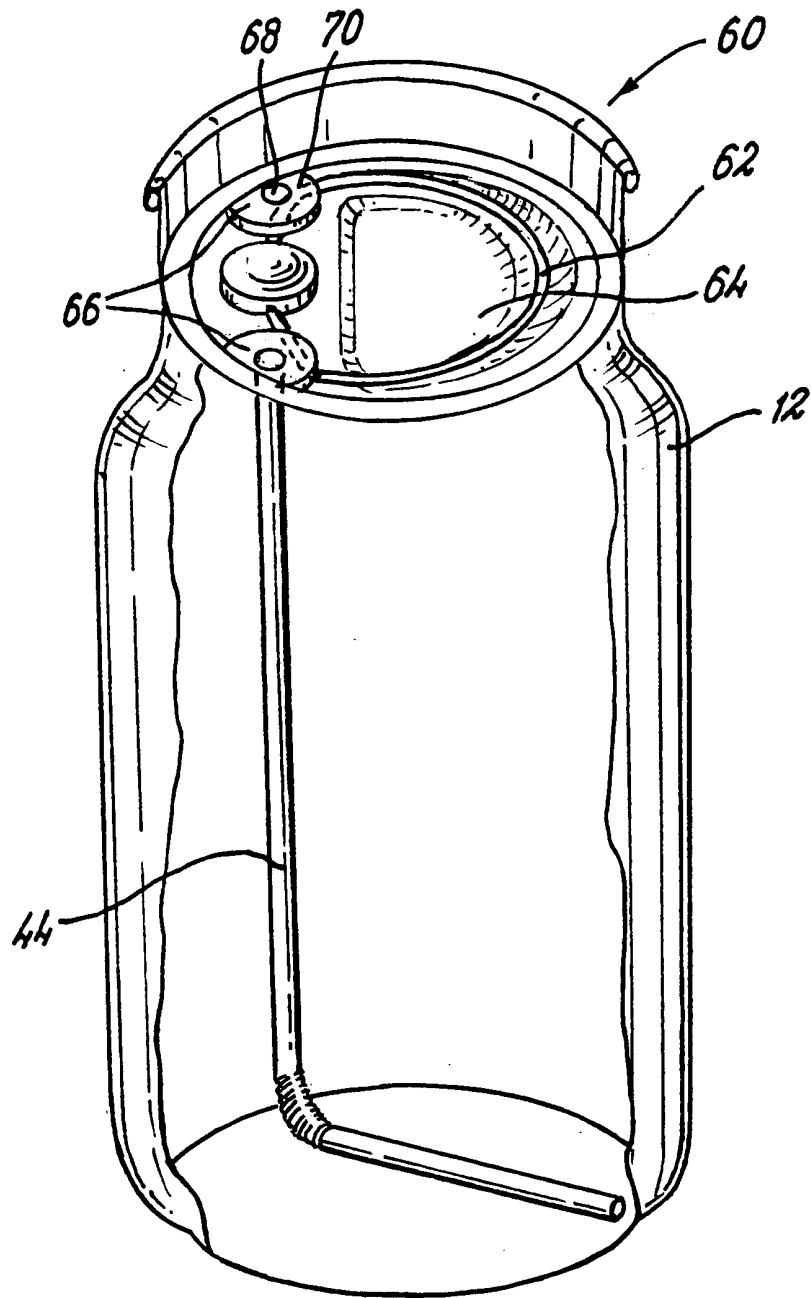


FIG. 7

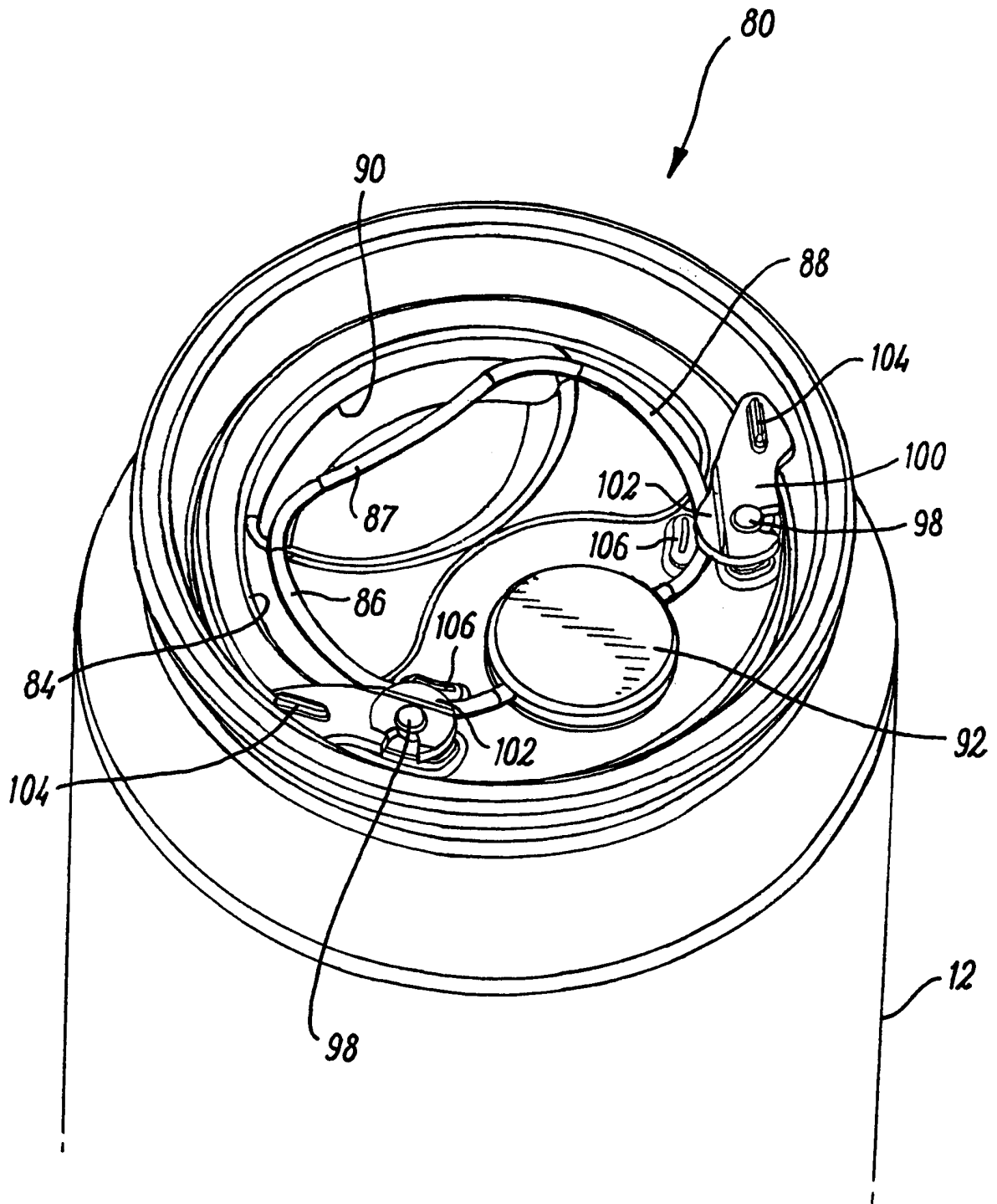
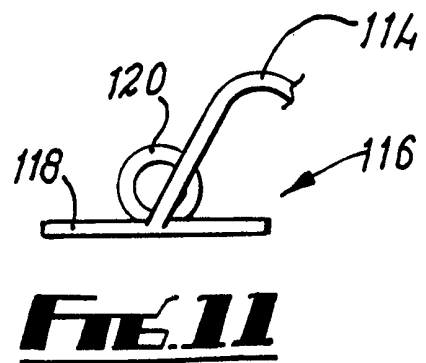
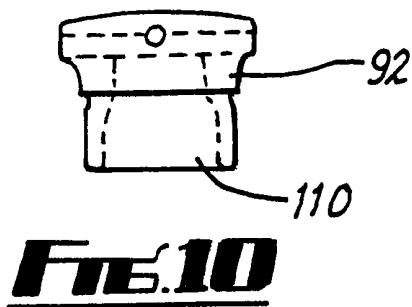
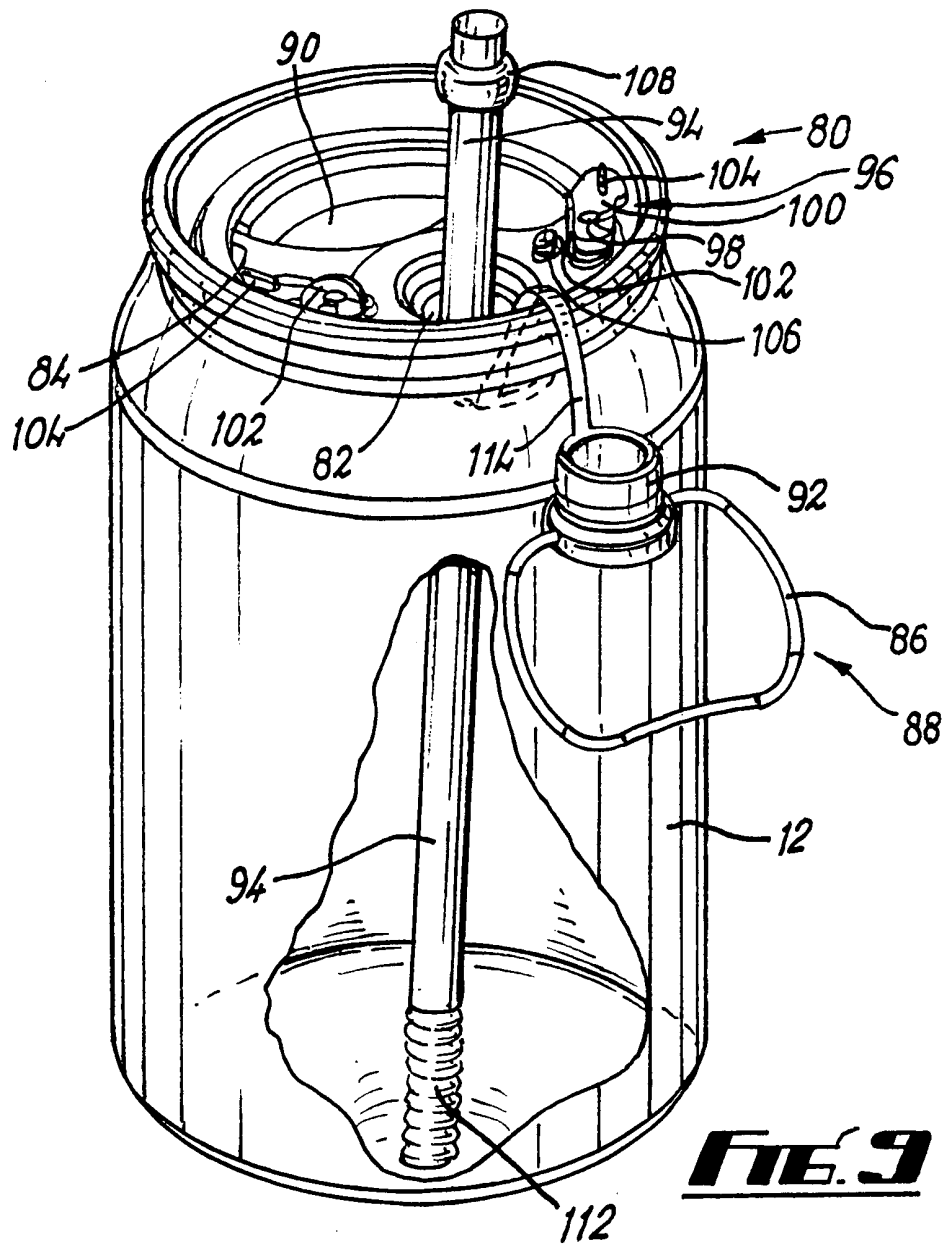


FIG. 8



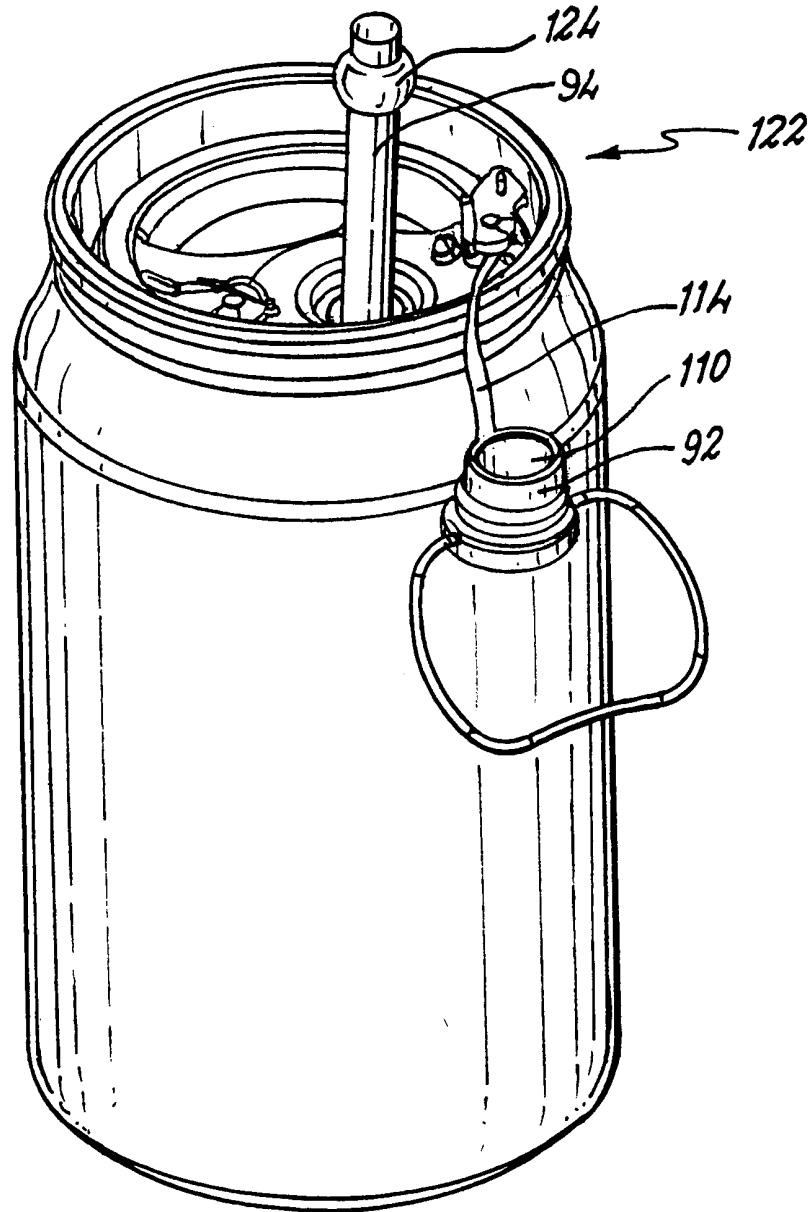


FIG. 12

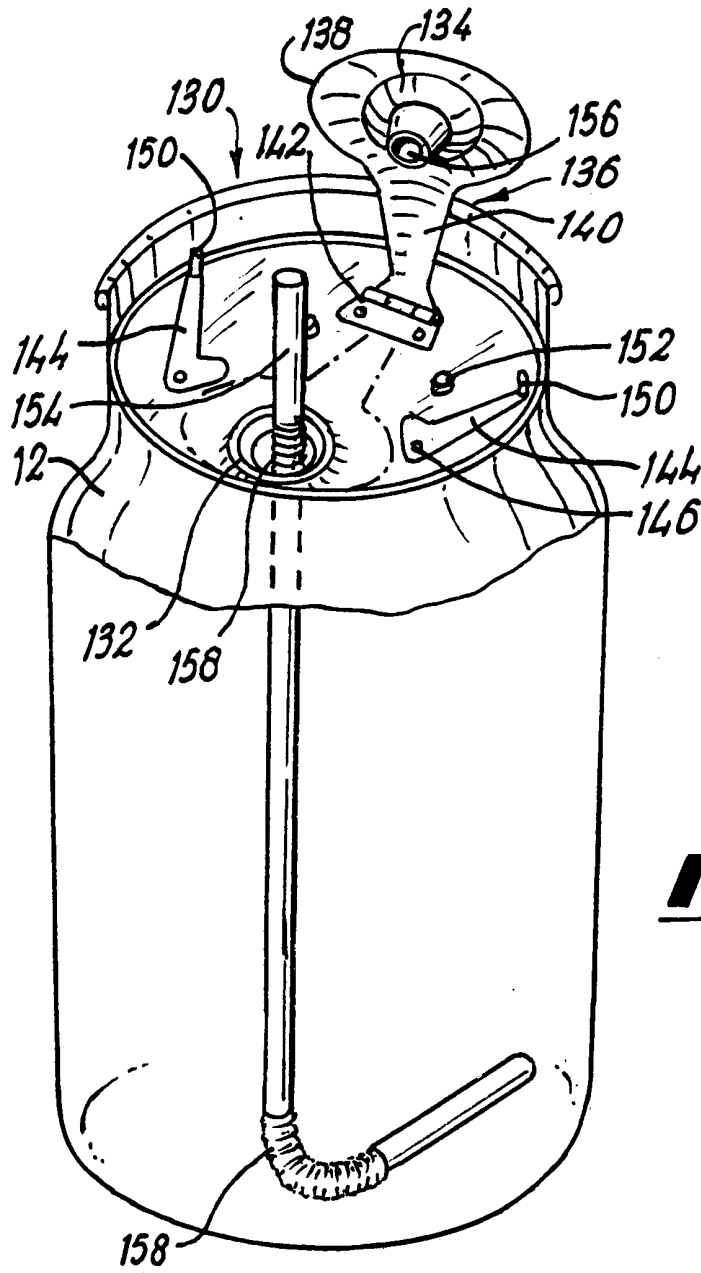


FIG. 13

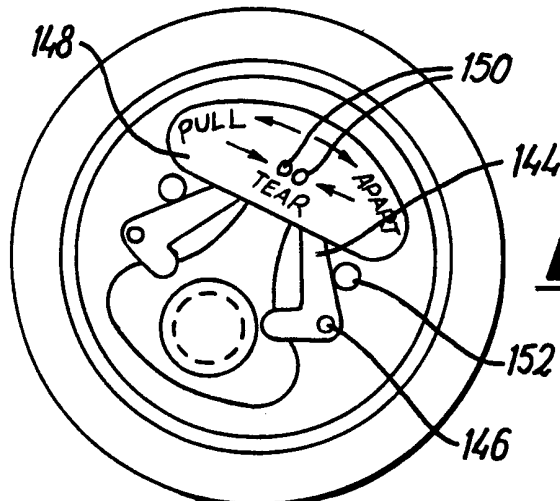


FIG. 14

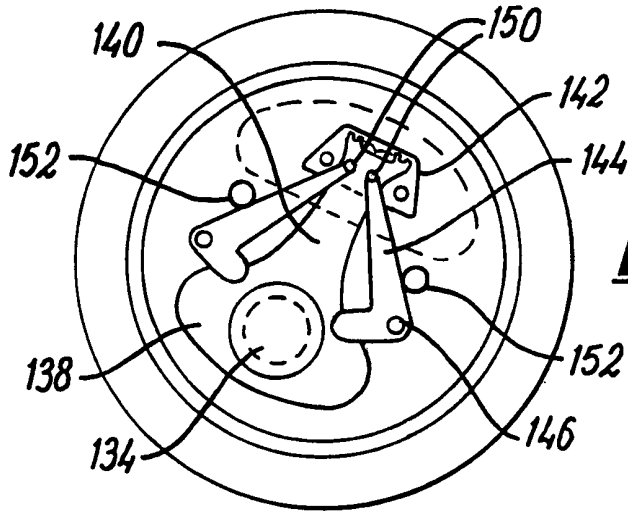


FIG. 15

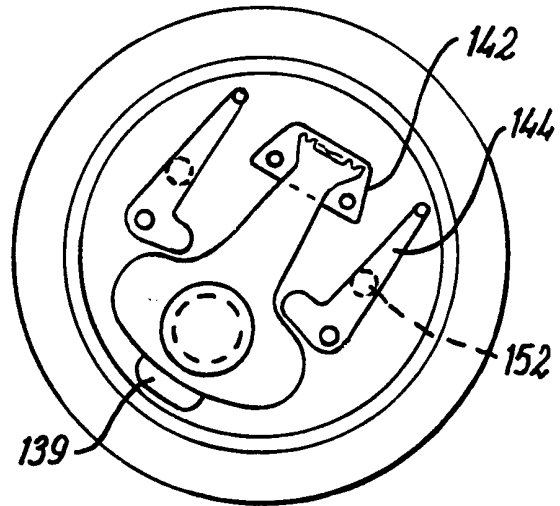


FIG. 16

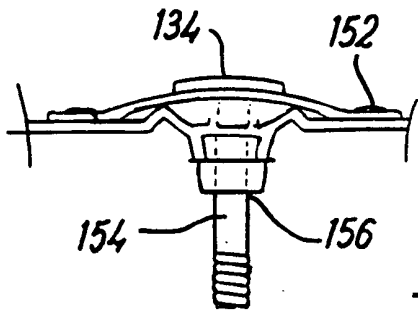


FIG. 17

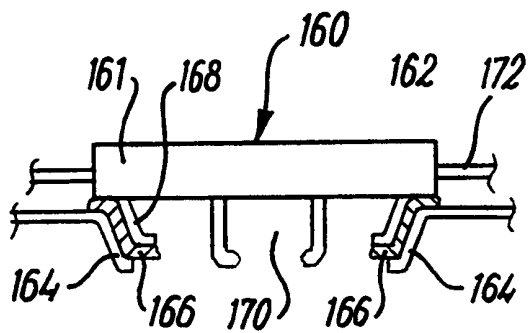


FIG. 18

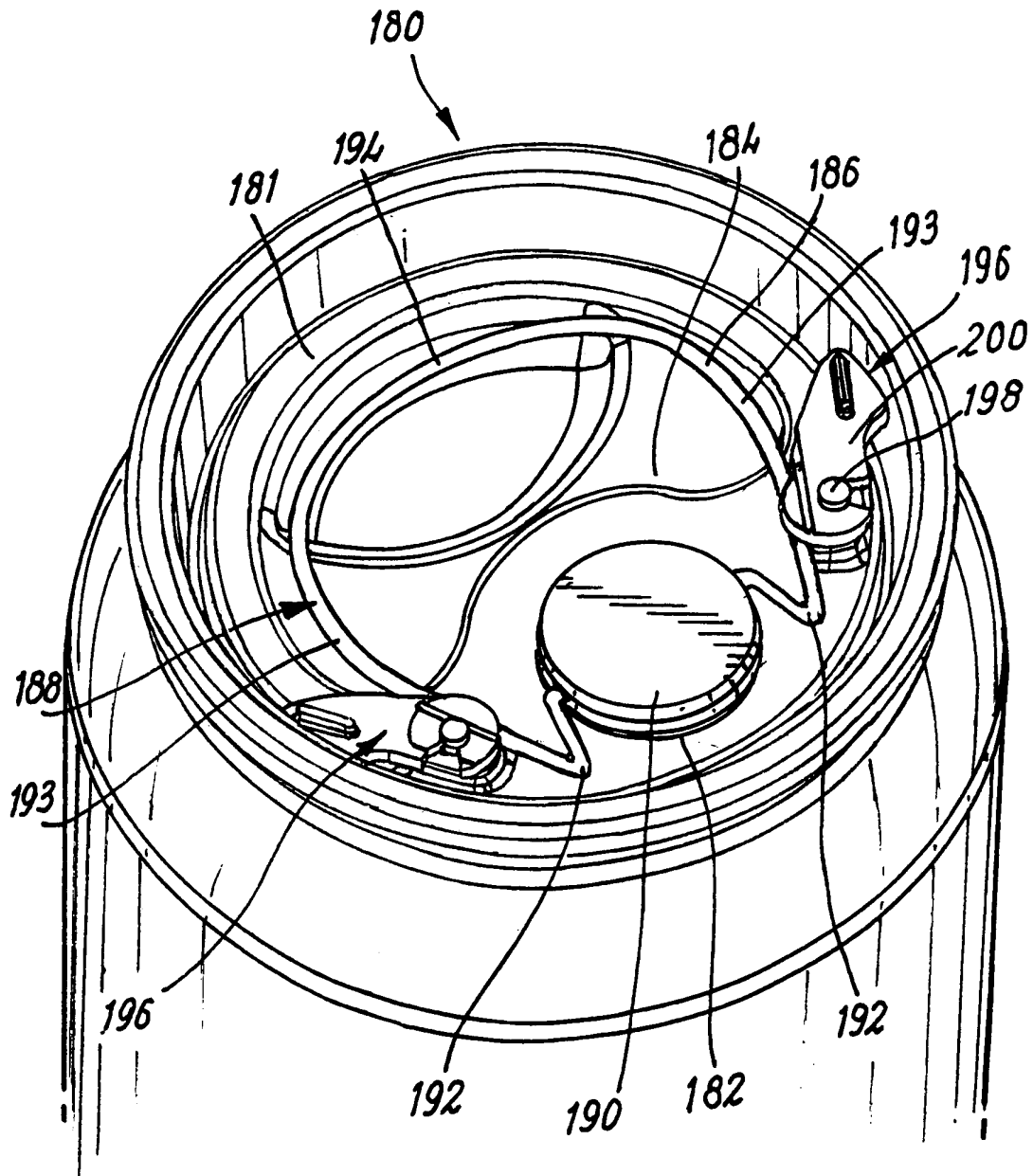


FIG. 19