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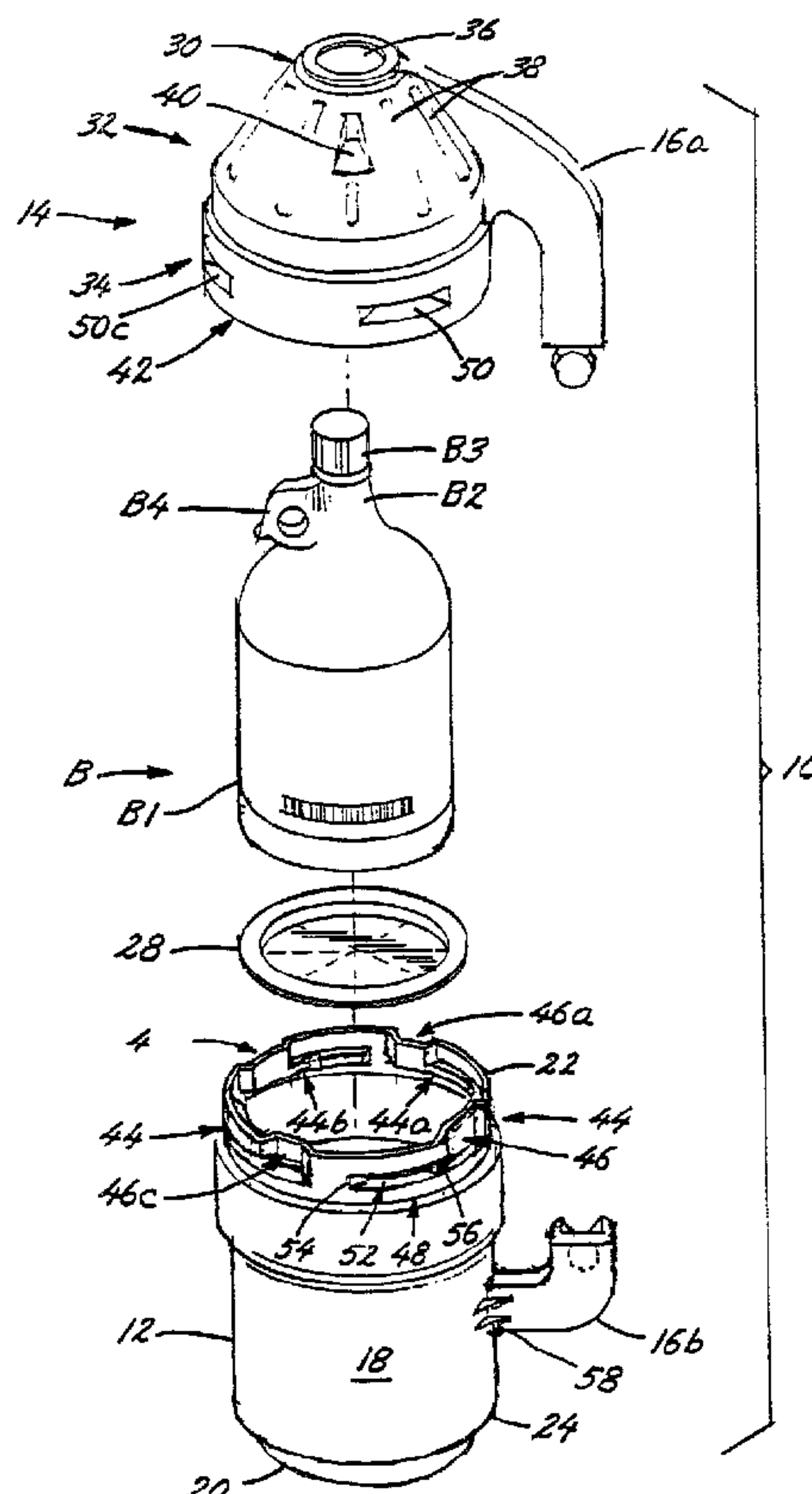
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(54) Titre : ETUI DE PROTECTION DE BOUTEILLE

(54) Title: PROTECTIVE BOTTLE JACKET



(57) Abrégé/Abstract:

A protective bottle jacket (10) for transporting a container, bottle or the like is provided. The protective jacket (10) has a bottom portion (12) having a base (20) and walls (18) projecting upwardly from the base for receiving and protecting the bottom portion of the container (B) and a top portion (14) having walls for covering the top portion of the container (B). The protective jacket (10) has means for selectively and releasably interlocking the bottom (12) and top portions (14) together. The interlocking means comprises a male member (50) disposed on one of the bottom (12) and top portions (14) and a passage (46) disposed on the



(57) Abrégé(suite)/Abstract(continued):

other of the bottom (12) and top portions (14) for slidably receiving the male member (50) between an unlocked and locked position in response to rotation of the top and bottom jacket portions, wherein the passage (46) lockably receives the male member (50) and attaches the top (14) and bottom portions (12) together in the locked position and wherein the male member (50) does not lockably engage the passage (46) in the unlocked position. The protective jacket (10) also has a handle assembly (16) for transporting the jacket (10) and bottle (B). The handle assembly (16) has top (16a) and bottom handle portions (16b) attached to the top (14) and bottom portions (12) of the jacket (10) respectively, such that the top (16a) and bottom handle portions (16b) operatively engage each other only when the interlocking means is in the locked position.



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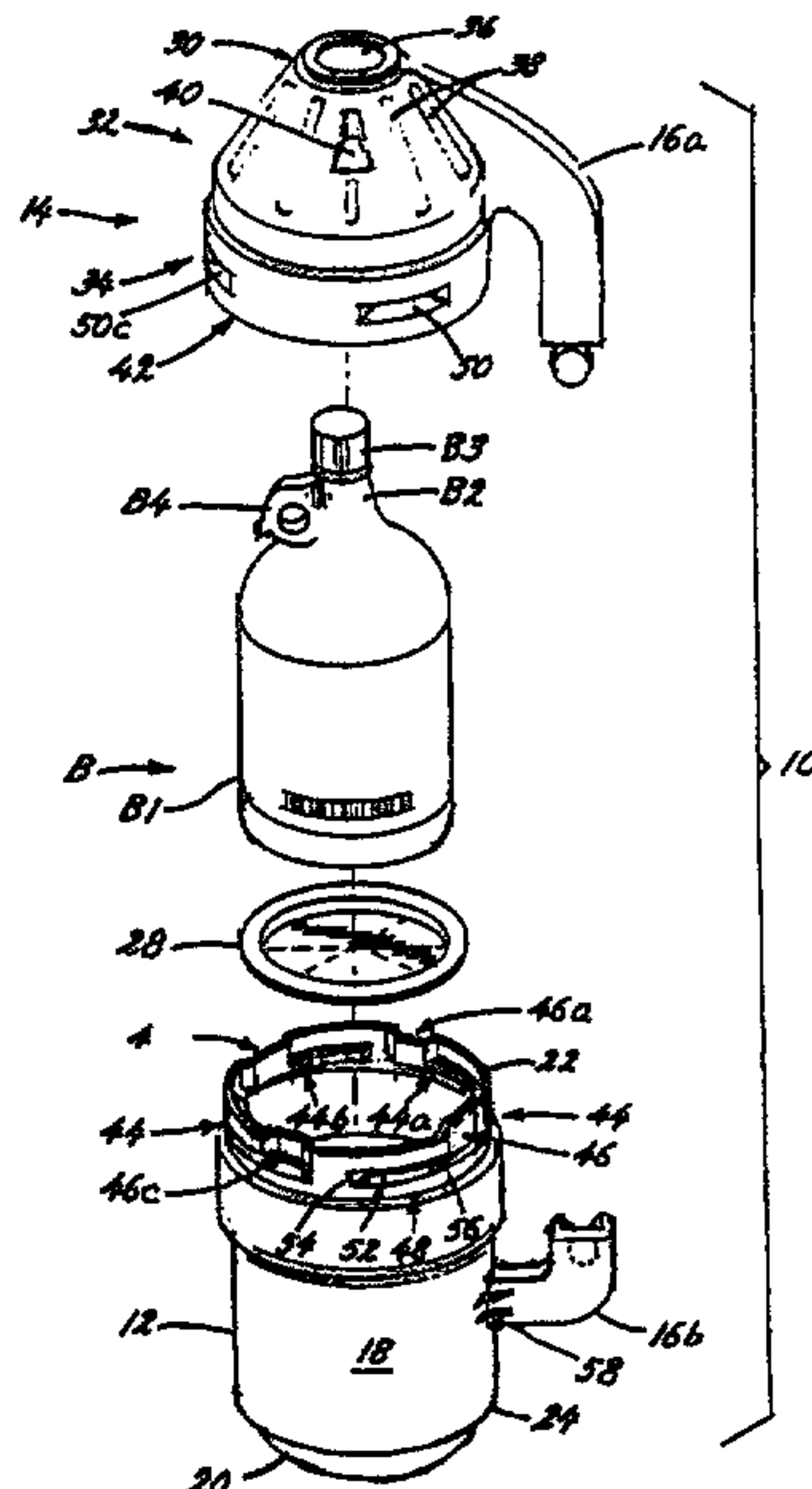
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(54) Title: PROTECTIVE BOTTLE JACKET

(57) Abstract

A protective bottle jacket (10) for transporting a container, bottle or the like is provided. The protective jacket (10) has a bottom portion (12) having a base (20) and walls (18) projecting upwardly from the base for receiving and protecting the bottom portion of the container (B) and a top portion (14) having walls for covering the top portion of the container (B). The protective jacket (10) has means for selectively and releasably interlocking the bottom (12) and top portions (14) together. The interlocking means comprises a male member (50) disposed on one of the bottom (12) and top portions (14) and a passage (46) disposed on the other of the bottom (12) and top portions (14) for slidably receiving the male member (50) between an unlocked and locked position in response to rotation of the top and bottom jacket portions, wherein the passage (46) lockably receives the male member (50) and attaches the top (14) and bottom portions (12) together in the locked position and wherein the male member (50) does not lockably engage the passage (46) in the unlocked position. The protective jacket (10) also has a handle assembly (16) for transporting the jacket (10) and bottle (B). The handle assembly (16) has top (16a) and bottom handle portions (16b) attached to the top (14) and bottom portions (12) of the jacket (10) respectively, such that the top (16a) and bottom handle portions (16b) operatively engage each other only when the interlocking means is in the locked position.



PROTECTIVE BOTTLE JACKET

FIELD OF THE INVENTION

5 The present invention relates generally to a shatter-resistant safety enclosure for fragile bottles made from glass, ceramic and the like, which typically contain hazardous materials such as toxic, caustic or flammable liquids.

10

BACKGROUND OF THE INVENTION

Containers made from glass, ceramic and the like are typically used to store and transport hazardous chemical materials including toxic, caustic or flammable liquids and the like. Since large volumes are commonly necessary, a common container is the four liter glass bottle. Although the glass container is essential to preserve the integrity of the contents, the fragility and potential hazard from accidental breakage is of great concern to most users since breakage of a container of hazardous material can lead to exposure of workers to toxic or caustic fumes or liquids as well as create a substantial possibility of fire in the case of flammable materials.

25

One means used for the protection of glass bottles utilizes an integral coating applied to the exterior of the bottle. In one type of integral coating process, a solvent-soluble material, such as polyvinyl chloride, is applied to the bottle by a dipping process. Unfortunately, use of the material can subsequently lead to contamination of the bottle interior or destruction of the coating material by dripping of the bottle's contents during use.

30

5 In another integral coating process, a solvent-resistant material is applied to the bottle in a heating process. Since many types of flammable liquids cannot be heated, this process requires an empty bottle and, thus, eliminates the advantage of
10 applying the coating protection to a filled container. This heat-coating process can also lead to internal contamination of the bottle itself during the coating process. The heat-coating process is also inapplicable to some types of
15 bottles, for example, those that cannot stand the shock of the rapid heating and cooling demanded by the process.

 Another means for protecting the bottle utilizes a pre-molded plastic pail-type cover or
20 container. One type of container uses a heavy, pre-molded plastic container with a snap down lid. U.S. Patent No. 4,300,612 (Schroeder, Jr., et al.) discloses another pail-type container which utilizes a top and bottom portion which are threadedly
25 attached to each other. These protective containers are only effective when they are properly assembled to enclose the exterior of the bottle.

 Unfortunately, previous pail-type containers have many disadvantages and problems. The shape and
30 configuration of many containers are such that they are heavy, ungainly, and require significant storage space. Similarly, they are not designed for use during the shipment of hazardous materials. The configuration of the containers causes the assembly
35 and disassembly of the protective containers to be relatively difficult and time-consuming, thus discouraging the proper use of the containers. Many

bottle containers are also opaque, requiring removal of the container for identification or inspection of the bottle, or examination of the liquid level, again,
5 defeating the purpose of the container.

The configuration of the handles on previous protective containers is another source of problems. In protective containers which use non-integral handles, attaching the handles to the containers has been
10 relatively difficult, again discouraging the proper use of the container. Protective containers which use handles integrally attached to the bottom portion of the container permit the bottle and the hazardous material to be stored, transported and dispensed without use of the
15 top cover, thus defeating the purpose of the safety containers.

OBJECTS AND SUMMARY OF THE INVENTION

20 It is an object of an aspect of the present invention to provide a novel and improved protective safety jacket for use with fragile bottles, containers and the like made from fragile materials such as glass, ceramic or the like.

25 It is another object of an aspect of the present invention to provide a protective safety jacket which is easily assembled and disassembled, thus promoting use of the bottle jacket.

A related object is to provide a safety jacket
30 having a simple and easily assembled interlocking mechanism which insures positive engagement between the top and bottom portions of the safety jacket.

It is also an object of an aspect of the present invention to provide a safety jacket having a handle

which can only be utilized when the safety jacket is properly assembled.

A related object is to provide a handle which
5 insures positive engagement of the top and bottom portions of the bottle cover.

Yet another object of an aspect of the present invention is to provide a transparent or translucent safety jacket permitting the bottle label and liquid
10 level to be viewed through the jacket walls.

According to one aspect of the invention, there is provided a protective jacket for transporting a container, the container having upper and lower portions and an opening for filling and emptying the container,
15 the protective jacket comprising:

a bottom jacket portion having a base and walls projecting upwardly from the base for receiving and protecting the lower portion of the container,

a top jacket portion having walls for covering the
20 upper portion of the container,

means for selectively and releasably interlocking the bottom and top jacket portions together, the interlocking means comprising a male member disposed on one of the bottom and top jacket portions, a passage
25 disposed on the other of the bottom and top jacket portions for slidably receiving the male member between an unlocked and locked position in response to rotation of the top and bottom jacket portions, wherein the passage lockably receives the male member and attaches
30 the top and bottom jacket portions together in the locked position and wherein the male member does not lockably engage the passage in the unlocked position, and

a handle for transporting the jacket and container, the handle having a top handle portion attached to the

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top jacket portion and a bottom handle portion attached to the bottom jacket portion such that the top and bottom handle portions operatively engage each other when the interlocking means is in the locked position.

According to another aspect of the invention, there is provided a protective jacket for transporting a bottle, the bottle having upper and lower portions and an opening for filling and emptying the bottle, the protective jacket comprising:

a bottom jacket portion having a base, walls projecting upwardly from the base for receiving and protecting the lower portion of the bottle, and a top circumferential edge,

a top jacket portion having walls for covering the upper portion of the bottle, and a bottom circumferential edge adapted for rotatably engaging the top circumferential edge of the bottom jacket portion.

a handle having top and bottom handle portions attached to the top and bottom jacket portions respectively,

means for selectively and releasably interlocking the bottom and top jacket portions together in response to rotation of the top and bottom jacket portions between locked and unlocked positions, the interlocking means comprising a male connector disposed on one of the bottom and top handle portions, a female connector disposed on the other of the bottom and top handle portions for slidably receiving the male connector in response to rotation of the top and bottom jacket portions, wherein the female connector lockably receives the male connector and attaches the top and bottom jacket portions together in the locked position and wherein the female and male connectors do not lockably engage in the unlocked

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position such that the top and bottom jacket portions may be removed.

These and other features and advantages of the invention will be more readily apparent upon reading the following description of a preferred exemplified embodiment of the invention and upon reference to the accompanying drawings wherein:

10

BRIEF DESCRIPTION OF THE DRAWINGS

FIGURE 1 is an exploded view of one embodiment of a protective safety jacket in accordance with the present invention and a common four liter bottle container;

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FIG. 2 is an elevational view of the assembled protective bottle jacket containing the bottle;

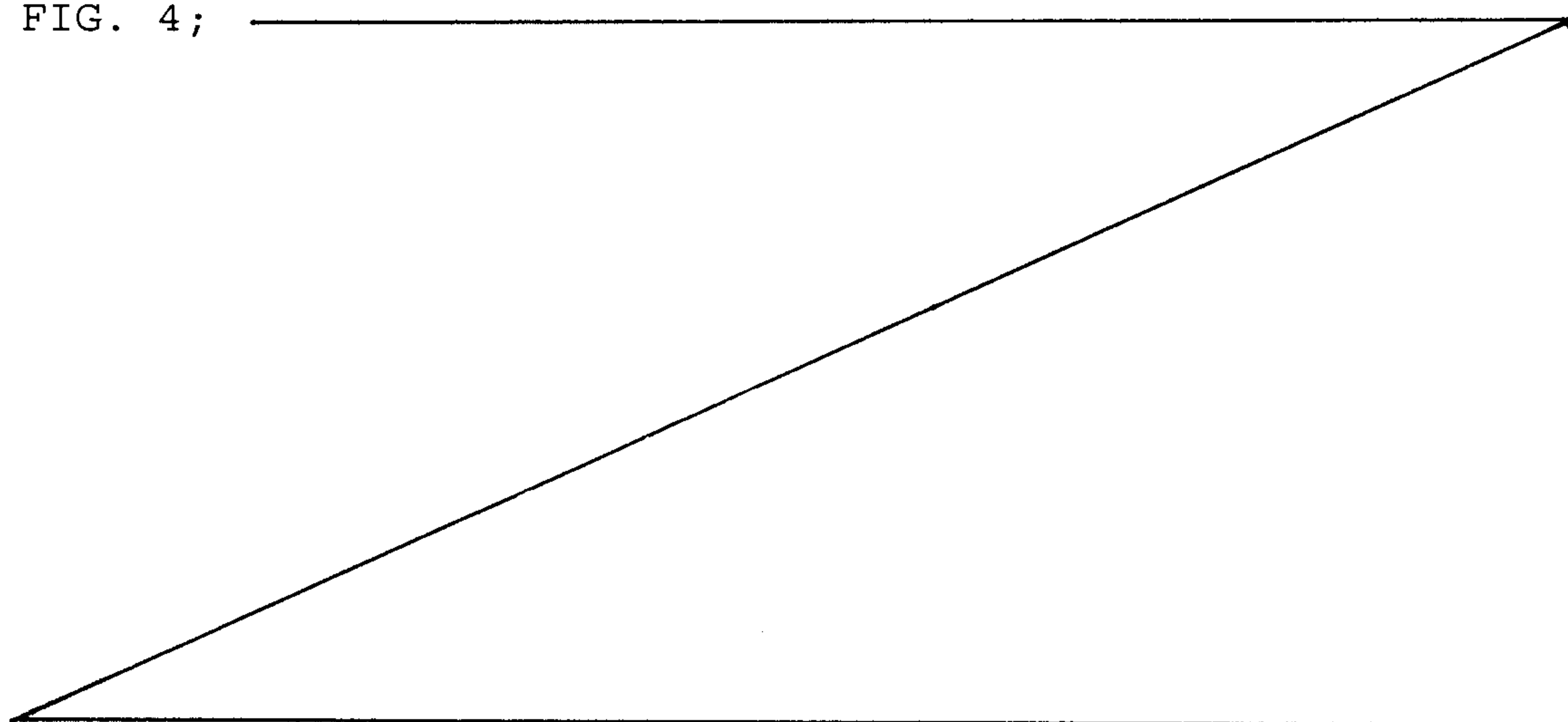
FIG. 3 is an elevational view of the top portion of the protective jacket;

FIG. 4 is an elevational view of the bottom portion of the protective jacket;

FIG. 5 is a cross sectional view of the top portion of the protective jacket taken along line 5-5 in FIG. 3;

FIG. 6 is a cross sectional view of the bottom portion of the protective jacket taken along line 6-6 in FIG. 4;

25



5 FIG. 7 is a partial exploded view illustrating the handle of the protective jacket;

 FIG. 8 is a partial elevational view illustrating the assembled handle of the protective jacket;

10 FIG. 9 is a cross sectional view of the handle of the protective jacket taken along line 9-9 in FIG. 8; and

 FIG. 10 is a partial perspective view of the protective jacket illustrating engagement between
15 the top and bottom portions of the protective jacket.

 While the invention will be described and disclosed in connection with certain preferred
embodiments and procedures, it is not intended to
20 limit the invention to those specific embodiments. Rather it is intended to cover all such alternative embodiments and modifications as fall within the spirit and scope of the invention.

25 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

 Referring to the figures and particularly to FIGS. 1-2, one embodiment of a protective safety jacket 10 in accordance with the present invention is illustrated for receiving a conventional bottle B typically used for storing and transporting liquid
30 chemicals and the like. The illustrated bottle B is a common four liter bottle which typically has a cylindrical body B1 which narrows to a neck B2 and a bottle cap B3 covering an opening (not shown). Some
35 types of bottle B will have a finger handle B4. It will be understood that the safety jacket may be sized to accommodate any size or shape bottle.

5 The protective bottle jacket 10 comprises a
bottom portion 12, a top portion 14, an interlocking
mechanism for providing secure engagement between
the bottom and top portions 12, 14, generally
depicted as 17, and a handle 16 defined by top and
10 bottom handle portions 16a, 16b.

 The bottom portion 12 of the protective jacket
10 has a wall 18 projecting upwardly from a base 20,
which generally define a cylindrical body adapted to
receive the cylindrical body B1 of the bottle B. An
15 upper circumferential edge, generally designated as
22 is adapted to lockably engage the top portion 14
of the jacket 10. It is preferable that the
internal configuration of the bottom portion 12
closely conform to the exterior shape and dimensions
20 of the bottle B for providing secure containment of
the bottle within the bottom portion 12. Thus,
movement of the bottle B within the protective
jacket 10 is minimized or eliminated during
transport or when the jacket 10 and the bottle B are
25 tilted to dispense the contents of the bottle B. In
addition, little space is needed over that required
for the protected bottle B itself, and therefore,
there would be no need for change in carton size, an
advantage to users having storage facilities
30 designed for cartons currently in use.

 In the illustrated embodiment, the base 20 has
a broad, substantially flat surface which is
slightly spaced inboard of the wall 18 as best shown
in FIGS. 2 and 4. The periphery of the base 20 is
35 generally defined by channeled edges 24, 26 which
provide reinforcement for accommodating the forces

5 and loads exerted on the bottom portion 12 of the protective jacket 10.

The base 20 may be adapted to receive an insert, generally depicted as 28, which is adapted to be interposed between the bottle B and the base
10 20 of the bottom portion 12. The presence of the insert 28, the inboard configuration of the base 20, and the presence of the channeled edges 24, 26 of the base 20 act to space the bottle B from direct contact with the base 20, minimizing or eliminating
15 the effect of sharp forces exerted on the exterior of the protective jacket 10 when the protective jacket 10 (and the bottle B contained therein) is transported or rested upon a surface. In addition, the insert 28 acts to disperse the load of the
20 bottle B along the entire surface of the base 20, minimizing stress points to the protective jacket 10 and preventing damage thereto.

The configuration of the top portion 14 of the protective jacket 10 is adapted to conform to the
25 shape of the upper part of the bottle B. In the illustrated embodiment, the top portion 14 has a generally conical shape which, for ease of reference, generally defines top, middle and bottom sections 30, 32, 34, respectively. The top section
30 30, which is adapted to cover and protect the neck B2 and top of the protected bottle B, has an opening 36 for receiving the bottle neck B2, opening and cap B3, providing access to the contents of the bottle B without having to disassemble the protective jacket
35 10. Similarly, the bottle B may be filled or emptied without removing the protective jacket 10. The top section 30 of the top portion 14 may also be

5 adapted to threadably receive an enclosure cap (not shown) to cover the opening 36.

In the illustrated embodiment, the middle section 32 of the top portion 14 generally tapers outwardly from the top section 30 to the bottom
10 section 34. The middle section 32 has a plurality of longitudinal ribs 38 or corrugations for reinforcement. The middle section 32 also has at least one (only one is shown), and preferably a pair of opposing members 40 which protrude inwardly for
15 engaging the finger handle B4 and thereby limiting rotation of the bottle B within the protective jacket 10.

The bottom section 34 of the top portion 14 is adapted for rotatably engaging the bottom portion
20 12. The bottom section 34 has a circumferential edge 42 adapted to rotatably engage the circumferential edge 22 of the bottom portion 12.

The protective jacket 10 has means for selectively and releasably interlocking the bottom
25 and top portions 12, 14 of the protective jacket 10 together. In the illustrated embodiment, the interlocking means 17 comprises a jacket interlocking mechanism, generally depicted as 17a, for releasably interlocking the bottom and top
30 portions 12, 14 together and a handle interlocking mechanism 17b for releasably interlocking the top and bottom handle portions 16a, 16b.

Turning first to the jacket interlocking mechanism 17a, the bottom portion 12 of the
35 protective jacket 10 comprises at least one locking passage 44 defined by a passage opening 46 which leads into a circumferential path 48 as best shown

5 in FIGS. 1 and 4. In the embodiment illustrated in
FIGS. 1 and 4, the circumferential path 48 has a
small cavity 52 defined by the end 54 of the path 48
and a raised ramp-like ridge 56 disposed in the path
48. Referring to the passage 44 in FIG. 6, it will
10 be seen that the ramp-like ridge 56 tapers outwardly
from the passage opening 46 to form the cavity 52.
The top portion 14 of the protective jacket
comprises a male member projecting into the interior
side of the top portion 14 as best shown in FIG. 5.
15 The illustrated embodiment of the male member 50 is
generally depicted as a lug, but other shapes will
be known to those skilled in the art. The male
member 50 is adapted to cooperatively engage the
passage opening 46, and to slidably engage the path
20 40 in response to rotation of the top portion 14
relative to the bottom portion 12. Rotation of the
top portion 14 relative to the bottom portion 12
causes the male member 50 to slide from the passage
opening 46, toward the passage end 54, past the
25 ridge 56, and into the cavity 52 which acts to
resiliently and releasably lock the male member 50
in the passage 44. In order to insert the male
member 50 into the cavity 52, the male member 50
and/or the ridge 56 must resiliently bend enough to
30 permit the respective members to slide past each
other. The male member 50 can be released from the
passage 44 by rotating the male member 50 toward the
passage opening 46. The engagement between the male
member 50 and the passage 44 acts as a first means
35 for releasably locking the top and bottom portions
14, 12 of the protective jacket 10 together. It
will be appreciated that other embodiments may not

5 have the raised projection or cavity. Similarly, other embodiments may have the passage and the male member disposed on the top and bottom portions of the jacket, respectively.

Referring to the embodiment illustrated in
10 FIGS. 1 and 4-5, it will be seen that the jacket interlocking mechanism 17a comprises four passages 44, 44a, 44b, 44c disposed on the bottom portion 12 which cooperate with four lugs 50, 50a, 50b, 50c respectively, disposed on the top portion 14. As
15 best shown in FIG. 6, the four passages 44, 44a, 44b, 44c are generally disposed equidistantly around the circumference of the protective jacket 10.

It is desirable, but not required, that means be provided for properly aligning and orientating
20 the bottom and top portions 12, 14 of the jacket 10 prior to rotation. In order to insure that the top and bottom portions 14, 12 are properly orientated during assembly, it is desirable that at least one of the passage openings, i.e., 46c (and its
25 cooperating lug, i.e. 50c) be sized differently than the other three passage openings 46, 46a, 46b so that the bottom and top portions 12, 14 will only fit together when the opening 46c and its corresponding lug 50c are properly aligned. Thus,
30 it will be seen in FIGS. 5-6 that three of the passage openings 46, 46a, 46b (and their corresponding lugs 50, 50a, 50b) are generally the same size while the fourth passage opening 46c and lug 50c are smaller. Another alignment and
35 orientation means is to position one or all of the passages (and their corresponding lugs) eccentrically around the circumference of the jacket

5 so that the lugs can only engage their corresponding passage openings when the bottom and top jacket portions are properly aligned. Other alignment methods will be known to those skilled in the art.

10 In accordance with certain objects of the invention, the protective jacket 10 is provided with a handle assembly 16 which can only be utilized if the bottom and top portions 12, 14 of the protective jacket 10 are properly locked together. The handle assembly 16, which is generally configured for
15 strength and durability, comprises top and bottom handle portions 16a, 16b attached to the top and bottom portions 14, 12 of the protective jacket 10, respectively.

The top handle portion 16a is generally
20 attached to the middle section 32 of the top jacket portion 14 and provides an added measure of protection to the vulnerable neck area B2 of the protected glass bottle B. The bottom handle portion 16b is generally attached to the body of the bottom
25 portion 12. Either portion of the handle 16a, 16b may have reinforcement ribs including, for example, those generally depicted as 58 in connection with the bottom handle portion 16b.

The top and bottom handle portions 16a, 16b
30 have the handle interlocking mechanism 17b which may act as another part of the interlocking means. The handle interlocking mechanism 17b can be actuated in response to rotation between the bottom and top jacket portions 12, 14. Referring to FIGS. 7-9, it
35 will be seen that the bottom handle portion 16b has a female connector 60 adapted to lockably receive a male connector 62 of the top handle portion 16a.

5 The female connector 60 has a circular cavity 66 defined by cavity walls 68. At least a portion of the cavity walls 68 have opposing flanges 70 tapering inwardly toward the center of the cavity 66. The male connector 62 has a circular member 72 adapted to engage the cavity 66. The diameter of the male member 72 is slightly larger than the smallest distance between the flanges 70. In order to insert the male member 72 into the cavity 66, the flanges 70 must resiliently bend enough for the male member 72 to slide past the flanges 70. Thus, when the male connector 62 is slidably inserted into the female connector 60, the cavity 66 acts to resiliently receive the male member 72, providing "press fit" securement of the top and bottom handle portions 16a, 16b. Conversely, the operator can release and disengage the handle 16 by rotating the male connector 62 out of the female connector 60.

It should now be appreciated that the operator cannot use the handle 16 until and unless the interlocking means 17 is properly positioned to the locked position, thereby preventing the operator from using only the bottom portion 12 of the jacket for transporting the bottle B. In addition, although the illustrated embodiment of the interlocking means 17 comprises both the jacket and handle interlocking mechanisms 17a, 17b, it will be appreciated that other embodiments may utilize either jacket or the handle interlocking mechanism 17a, 17b.

35 The protective jacket 10 lends itself to either blow molding or injection molding or other acceptable manufacturing processes which will be

5 known to those skilled in the art. The protective
jacket 10 should be manufactured from shatter-
resistant materials capable of withstanding the
forces and loads exerted on the protective jacket
10. It is generally desirable that the protective
10 jacket 10 be made of a generally translucent or
transparent material so that the bottle B, the
liquid level, and any labels may be viewed through
the protective jacket 10. Examples of acceptable
materials include plastic materials such as
15 polyethylene, polypropylene, a combination of
polyethylene and polypropylene, polyethylene
terephthalate (PET), polycarbonate or other materials
which will be known to those in the art. A
particular preferred material is a low density
20 polyethylene. It is also preferable that the jacket
be manufactured from a solvent-resistant material.

In order to assemble and operate the protective
jacket 10, the circular insert 28 is placed into the
bottom portion 12 of the jacket 10 so that it rests
25 upon the base 20. The bottle B is slidably inserted
into the bottom portion 12. Thereafter, the top
portion 14 is slidably inserted onto the top of the
bottle B so that the bottom neck B2 and opening
protrude through the top portion's opening 36 and
30 the top portion's circumferential edge 42 generally
engages the bottom portion's circumferential edge
22. The bottom and top portions 12, 14 are rotated
relative to each other so that the male members 50
disposed on the top portion 14 slidably engage the
35 corresponding passage openings 46. Specifically, in
the illustrated embodiment, the three large lugs 50,
50a, 50b engage the corresponding passages 46, 46a,

5 46b and the small lug 50c engages the small passage
46c to properly align the top and bottom portions
12, 14.

In order to assist the operator in properly
aligning the jacket portions 12, 14, the bottom and
10 top portions 12, 14 may have graphic symbols 80
which indicate the proper orientation of the jacket
portions as generally indicated in FIG. 10. FIG. 10
generally illustrates that the top and bottom
portions 14, 12 may be rotated between an unlocked
15 position 80a wherein the top and bottom portions 14,
12 are not securely attached to each other and a
locked position 80b wherein the top and bottom
portions 14, 12 securely engage each other.

Once the male members 50 properly engage the
20 passage openings 46, the top and bottom portions 14,
12 may be rotated relative to each other toward the
locked position. In response to the rotation, it
will be appreciated that the male member 50 disposed
within the path 48, will slide past the ridge 56,
25 and into the cavity 52. Simultaneously, the top
handle portion 16a will rotate into engagement with
the bottom handle portion 16b such that the male
connector 62 securely and lockably engages the
female connector 60.

30 It should be appreciated that the protective
jacket 10 in accordance with the present invention
can be easily and quickly assembled or disassembled.
Since the interior configuration and dimensions of
the protective jacket 10 closely engage the exterior
35 of the bottle B, it will also be appreciated that
the bottle B is snugly carried by the safety jacket
10 so that the operator can transport the safety

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5 jacket 10 and bottle B. In addition, the operator
can use the safety jacket 10 to tilt the bottle B to
pour and dispense the bottle's contents with little
relative slippage between the bottle B and the
safety jacket 10.

10 Thus, it will be seen that a novel and improved
protective jacket has been provided which attains
the aforementioned objects. Various additional
modifications of the embodiments specifically
illustrated and described herein will be apparent to
15 those skilled in the art, particularly in light of
the teachings of this invention.

5 We claim as our invention:

1. A protective jacket for transporting a container, the container having upper and lower portions and an opening for filling and emptying the container, the protective jacket comprising:

10 a bottom jacket portion having a base and walls projecting upwardly from the base for receiving and protecting the lower portion of the container,

15 a top jacket portion having walls for covering the upper portion of the container,

means for selectively and releasably interlocking the bottom and top jacket portions together, the interlocking means comprising a male member disposed on one of the bottom and top jacket portions, a passage disposed on the other of the bottom and top jacket portions for slidably receiving the male member between an unlocked and locked position in response to rotation of the top and bottom jacket portions, wherein the passage lockably receives the male member and attaches the top and bottom jacket portions together in the locked position and wherein the male member does not lockably engage the passage in the unlocked position, and

30 a handle for transporting the jacket and container, the handle having a top handle portion attached to the top jacket portion and a bottom handle portion attached to the bottom jacket portion such that the top and bottom handle portions operatively engage each other when the interlocking means is in the locked position.

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5 2. The protective jacket as set forth in
claim 1 wherein one end of the passage has a passage
opening for receiving the male member when the top
and bottom jacket portions engage each other and
another end of the passage has a cavity for securely
10 receiving the male member in response to rotation of
the bottom and top jacket portions.

 3. The protective jacket as set forth in
claim 2 wherein the passage has a ridge disposed
15 between the cavity and the passage opening for
releasably securing the male member in the cavity.

 4. The protective jacket as set forth in
claim 1 wherein the protective jacket is composed of
20 solvent and shatter-resistant polymeric composition.

 5. The protective jacket as set forth in
claim 1 wherein the protective jacket is composed of
a polymeric material permitting the container to be
25 viewed therethrough.

 6. The protective jacket as set forth in
claim 1 wherein the bottom and top portions are
configured to conform closely to the shape of the
30 container to be protected.

 7. The protective jacket as set forth in
claim 1 wherein the top portion comprises an opening
for providing access to the contents of the
35 container without requiring separation of the bottom
and top portions.

8. The protective jacket as set forth in claim 1 wherein the base comprises a substantially flat surface disposed inboard of the walls.

5

9. The protective jacket as set forth in claim 8 wherein a peripheral edge of the base is defined by reinforcement channels enabling the base to safely withstand shocks exerted on the jacket.

10

10. The protective jacket as set forth in claim 1 comprising an insert adapted for engaging the base and for spacing the container from direct contact with the base to minimize transmission of shocks exerted on the base to the container.

15

11. A protective jacket for transporting a bottle, the bottle having upper and lower portions and an opening for filling and emptying the bottle, the protective jacket comprising:

20

a bottom jacket portion having a base, walls projecting upwardly from the base for receiving and protecting the lower portion of the bottle, and a top circumferential edge,

25

a top jacket portion having walls for covering the upper portion of the bottle, and a bottom circumferential edge adapted for rotatably engaging the top circumferential edge of the bottom jacket portion,

a handle having top and bottom handle portions attached to the top and bottom jacket portions respectively,

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means for selectively and releasably interlocking the bottom and top jacket portions together in response to rotation of the top and

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5 bottom jacket portions between locked and unlocked
positions, the interlocking means comprising a male
connector disposed on one of the bottom and top
handle portions, a female connector disposed on the
10 other of the bottom and top handle portions for
slidably receiving the male connector in response to
rotation of the top and bottom jacket portions,
wherein the female connector lockably receives the
male connector and attaches the top and bottom
jacket portions together in the locked position and
15 wherein the female and male connectors do not
lockably engage in the unlocked position such that
the top and bottom jacket portions may be removed.

12. The protective jacket as set forth in
20 claim 11 wherein at least one of the male and female
connectors is resilient to permit the male and
female connectors to slide past each other when the
top and bottom handle portions are rotated into
engagement with each other.

25 13. The protective jacket as set forth in
claim 11 wherein the female connector has a cavity
defined by cavity walls and a flange projecting
outwardly from the walls and the male connector has
30 a latch member configured to lockably engage the
cavity.

14. The protective jacket as set forth in
claim 13
35 wherein at least one of the flange and the latch
member is resilient to permit the latch member and
flange connectors to slide past each other when the

5 top and bottom handle portions are rotated into
engagement with each other.

15. The protective jacket as set forth in
claim 11 wherein the interlocking means comprises a
10 male member disposed on one of the bottom and top
jacket portions, a passage disposed on the other of
the bottom and top jacket portions for slidably
receiving the male member between an unlocked and
locked position in response to rotation of the top
15 and bottom portions, wherein the passage lockably
receives the male member and attaches the top and
bottom jacket portions together in the locked
position and wherein the male member does not
lockably engage the passage in the unlocked
20 position.

16. The protective jacket as set forth in
claim 15 wherein one end of the passage has a
passage opening for receiving the male member when
25 the top and bottom jacket portions engage each other
and another end of the passage has a cavity for
securely receiving the male member in response to
rotation of the bottom and top jacket portions.

30 17. The protective jacket as set forth in
claim 16 wherein the passage has a ridge disposed
between the cavity and the passage opening for
releasably securing the male member in the cavity.

35 18. The protective jacket as set forth in
claim 11 wherein the protective jacket is composed

5 of solvent and shatter-resistant polymeric composition.

19. The protective jacket as set forth in claim 11 wherein the protective jacket is composed
10 of a polymeric material permitting the container to be viewed therethrough.

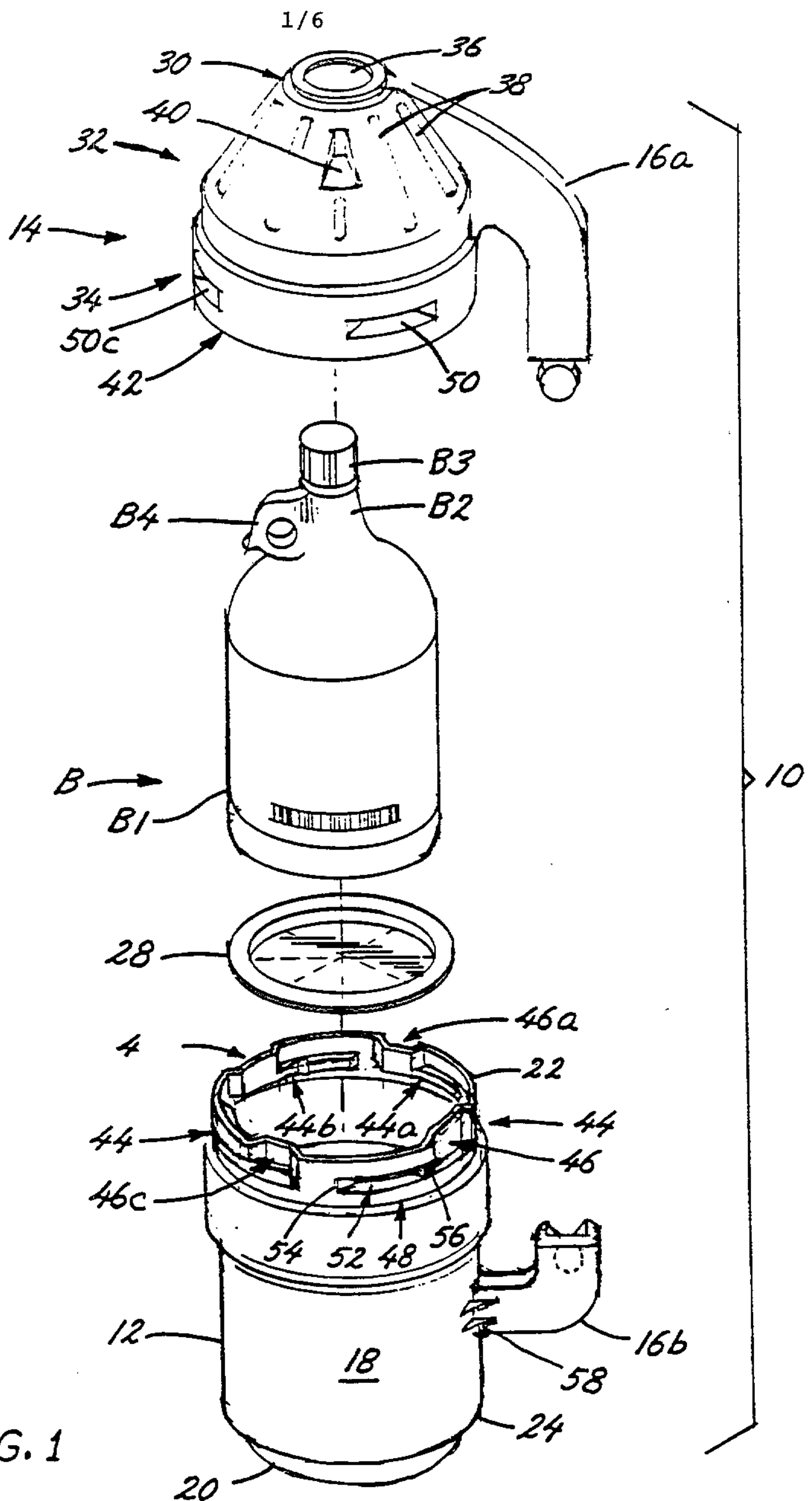
20. The protective jacket as set forth in claim 11 wherein the bottom and top jacket portions
15 are configured to conform closely to the shape of the bottle to be protected.

21. The protective jacket as set forth in claim 11 wherein the top jacket portion comprises an
20 opening for providing access to the contents of the bottle without requiring separation of the bottom and top jacket portions.

22. The protective jacket as set forth in claim 11 wherein the base comprises a substantially
25 flat surface disposed inboard of the walls.

23. The protective jacket as set forth in claim 22 wherein a peripheral edge of the base is
30 defined by reinforcement channels enabling the base to safely withstand shocks exerted on the jacket.

24. The protective jacket as set forth in claim 11 comprising an insert adapted for engaging
35 the base and for spacing the bottle from direct contact with the base to minimize transmission of shocks exerted on the base to the bottle.



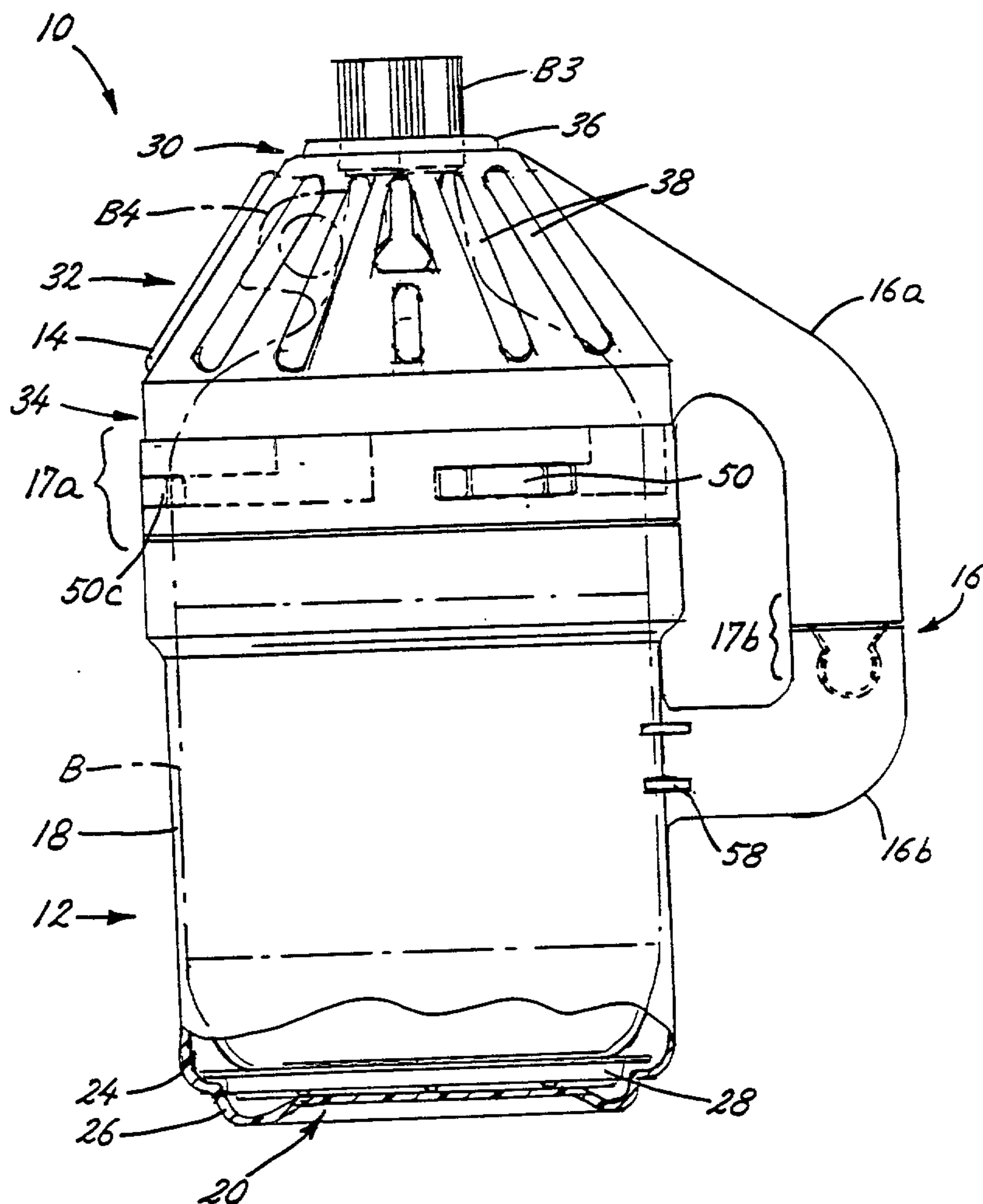


FIG. 2

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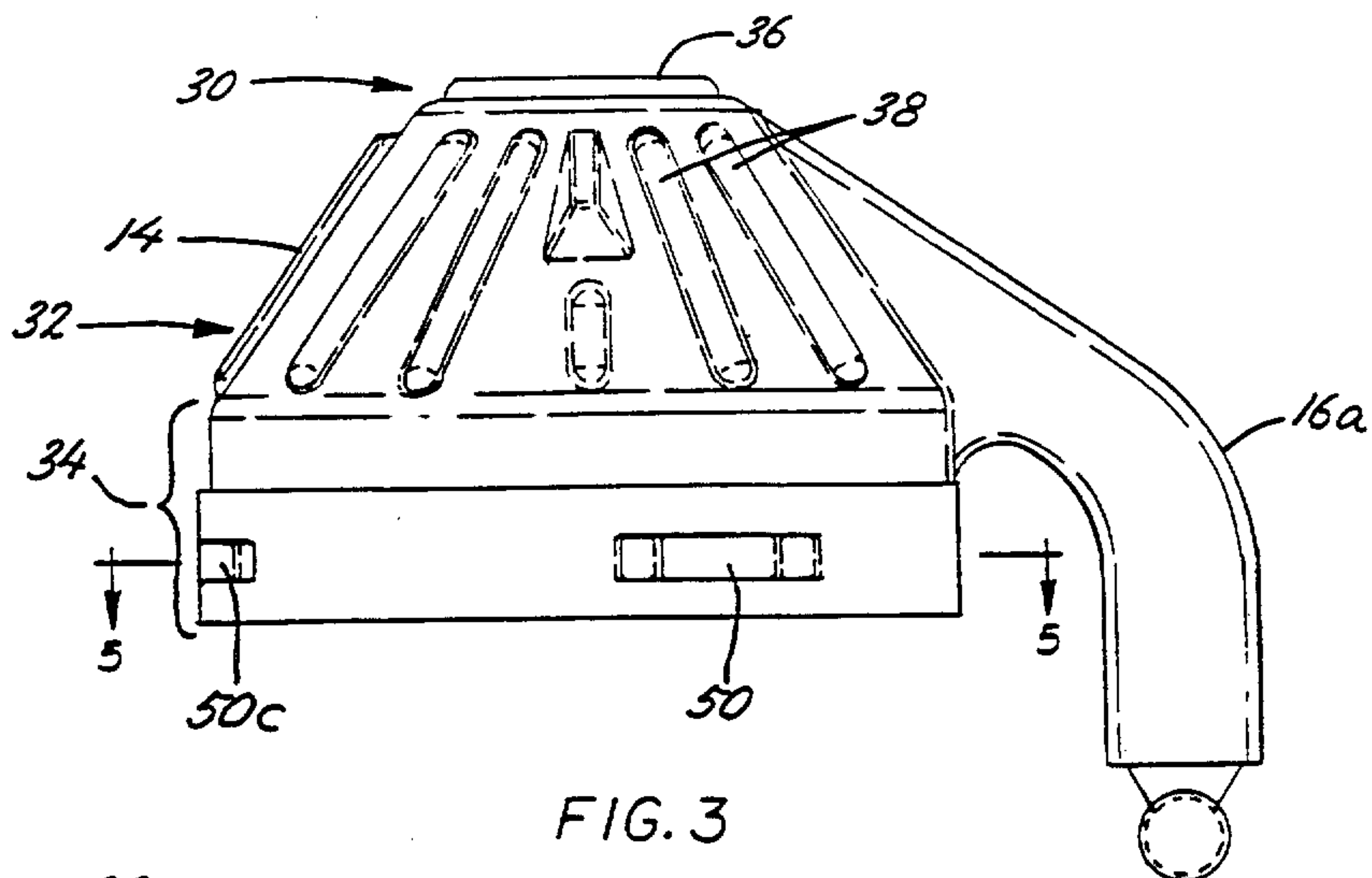


FIG. 3

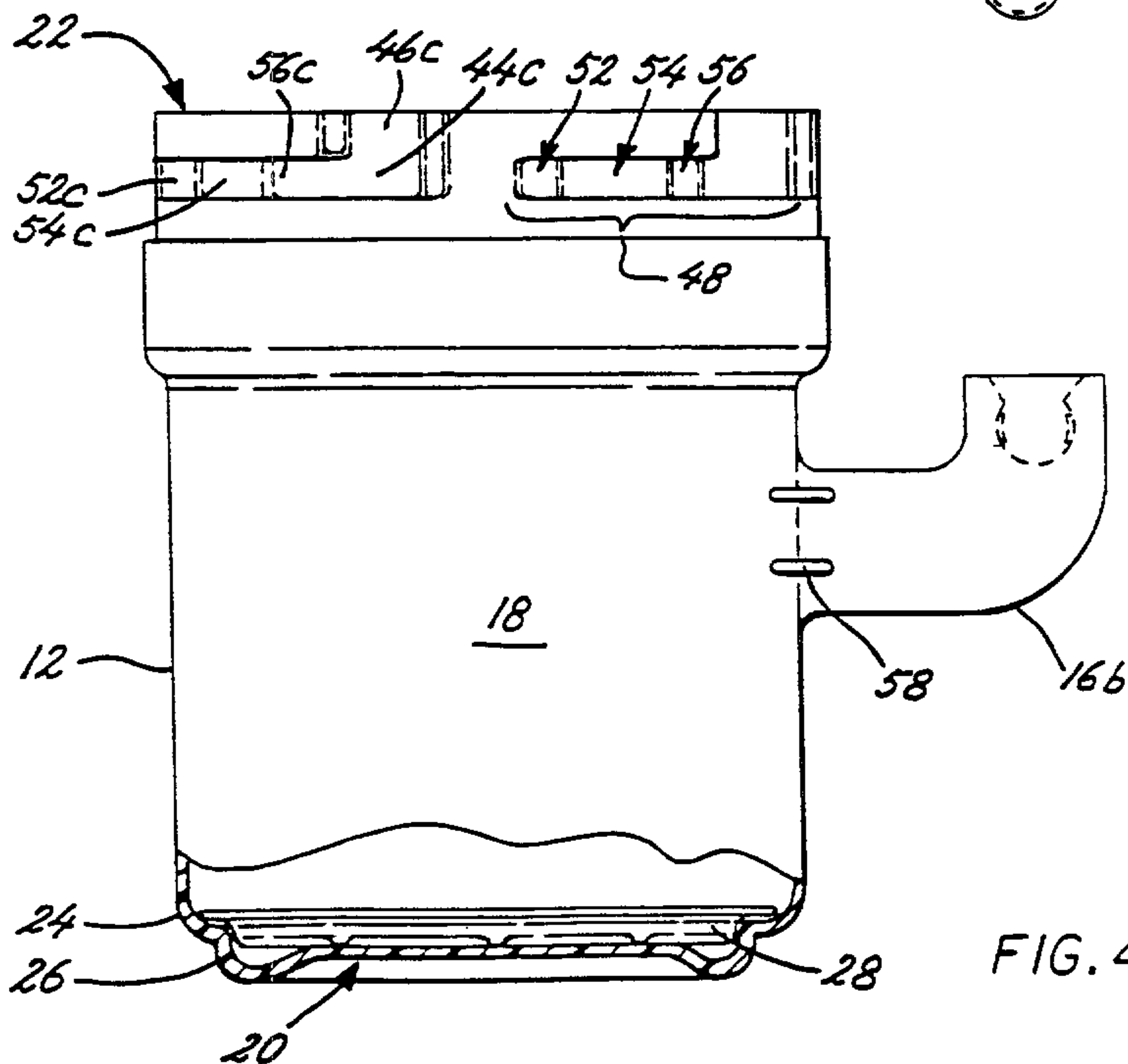


FIG. 4

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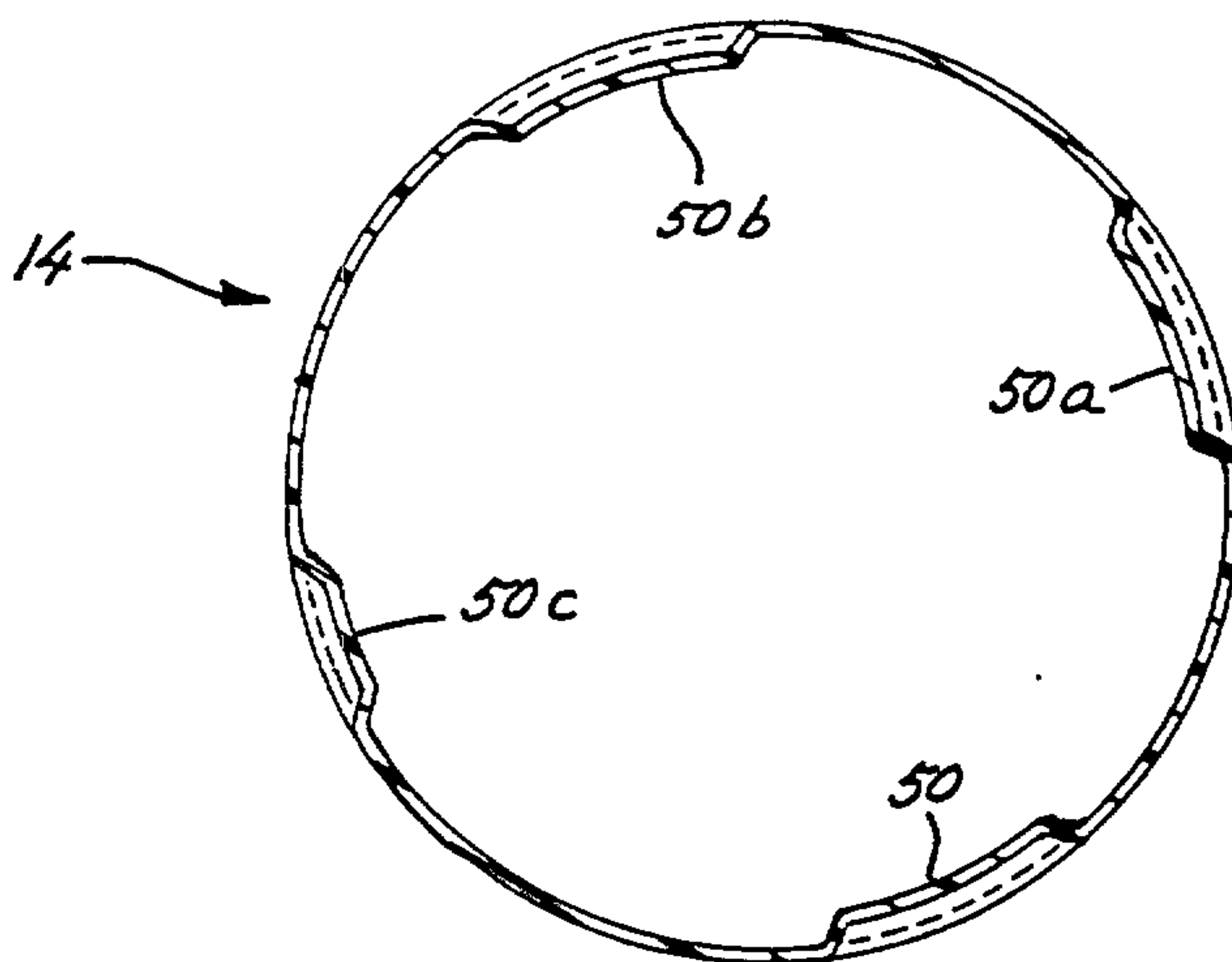


FIG. 5

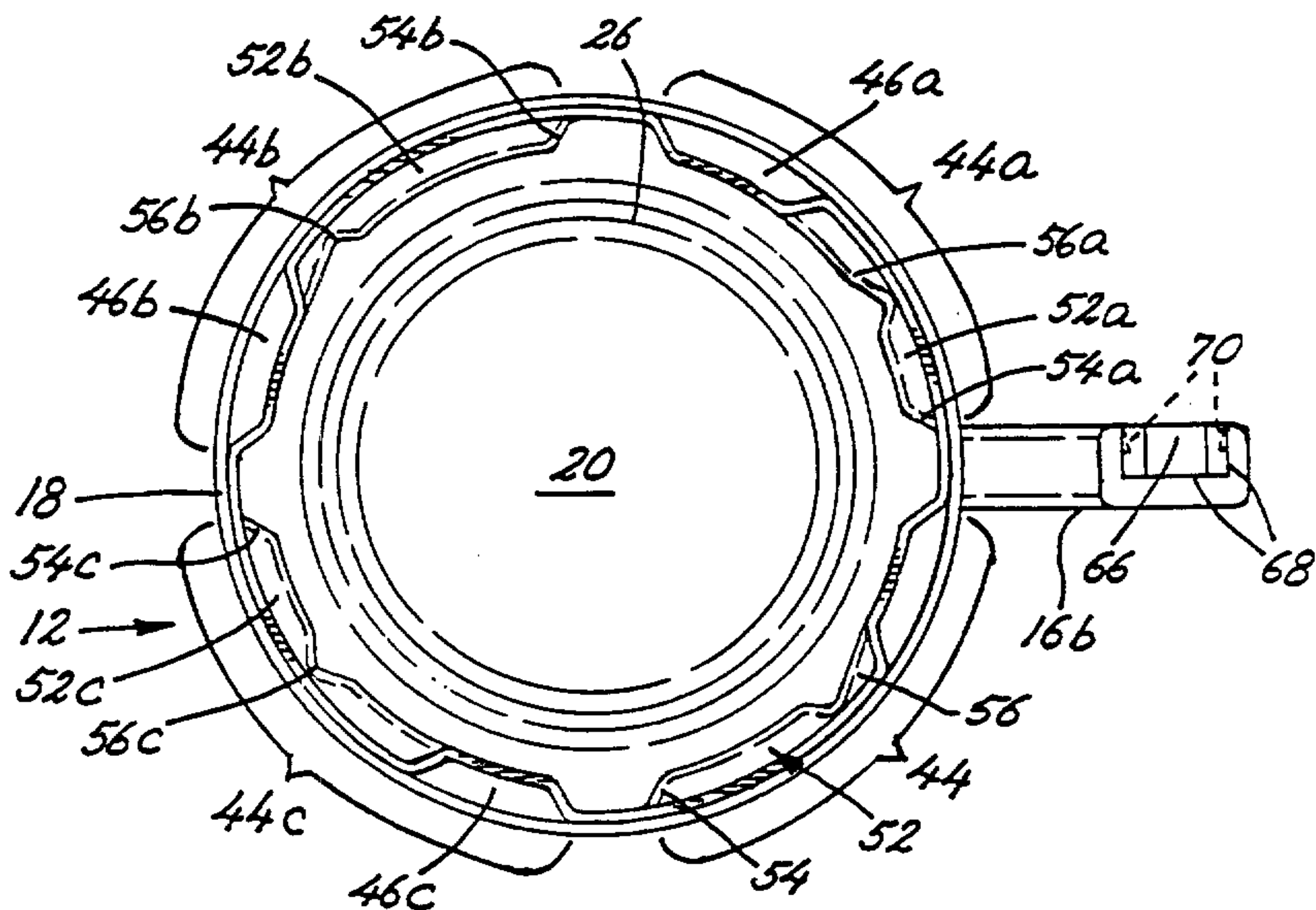
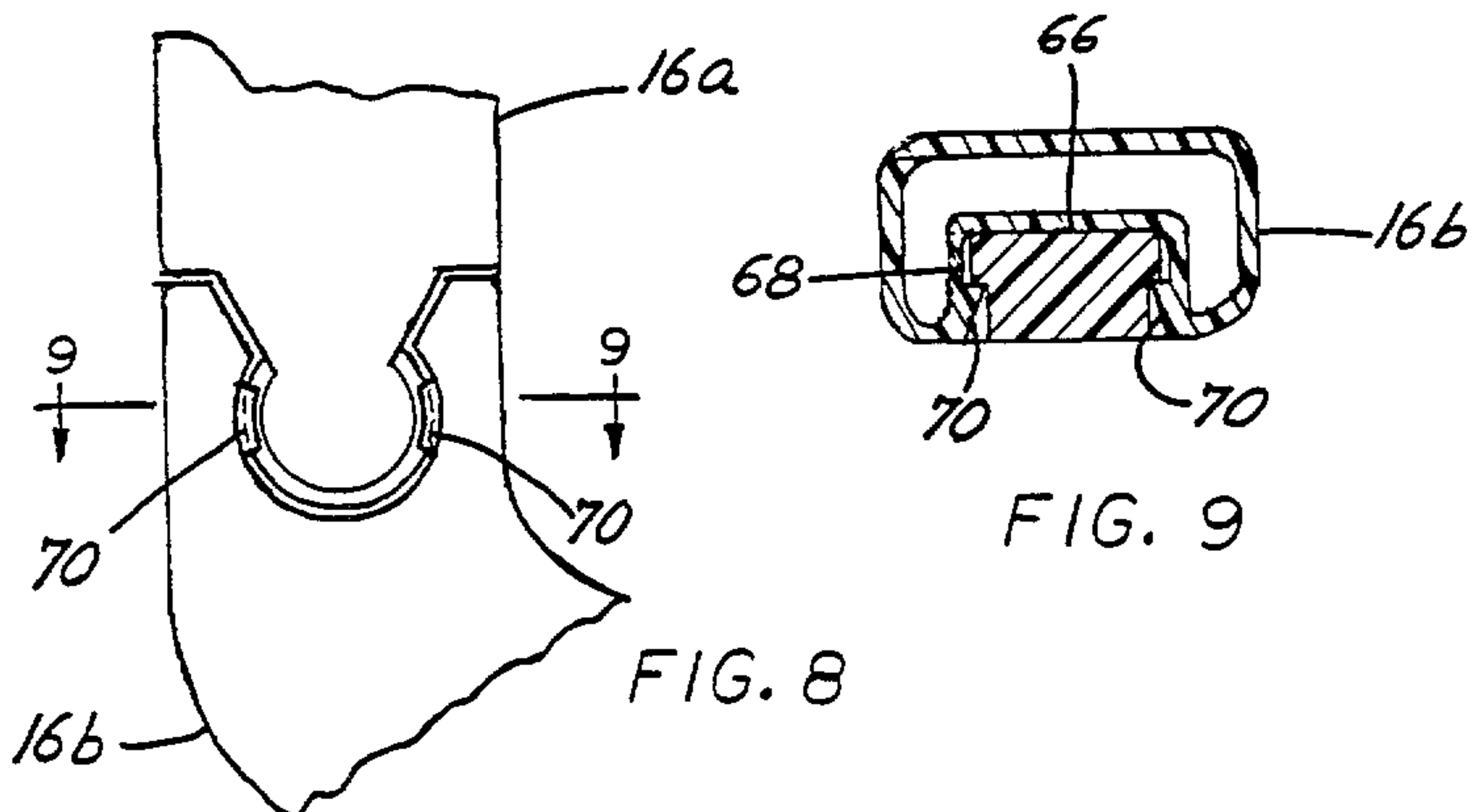
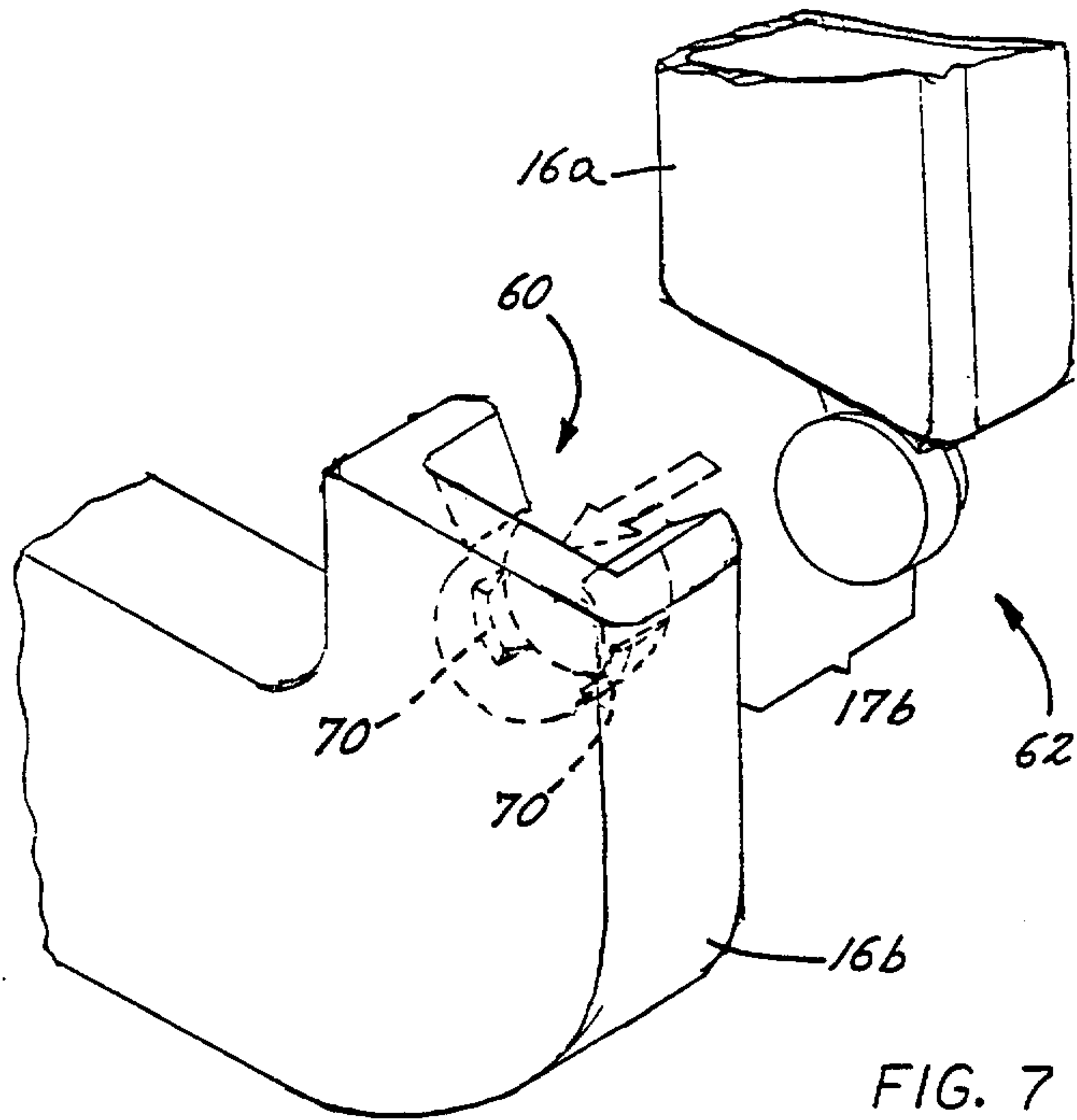


FIG. 6



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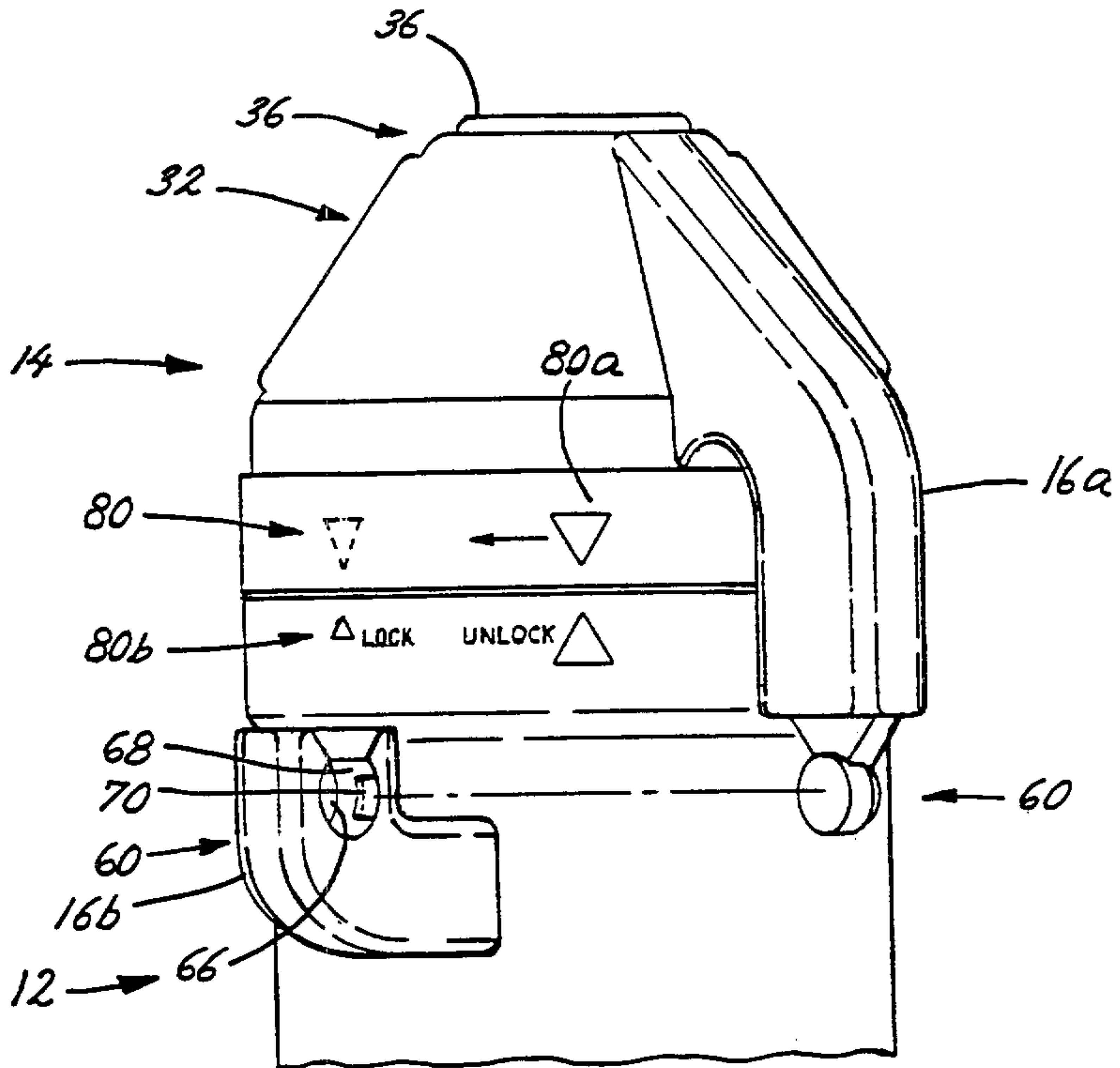


FIG. 10

