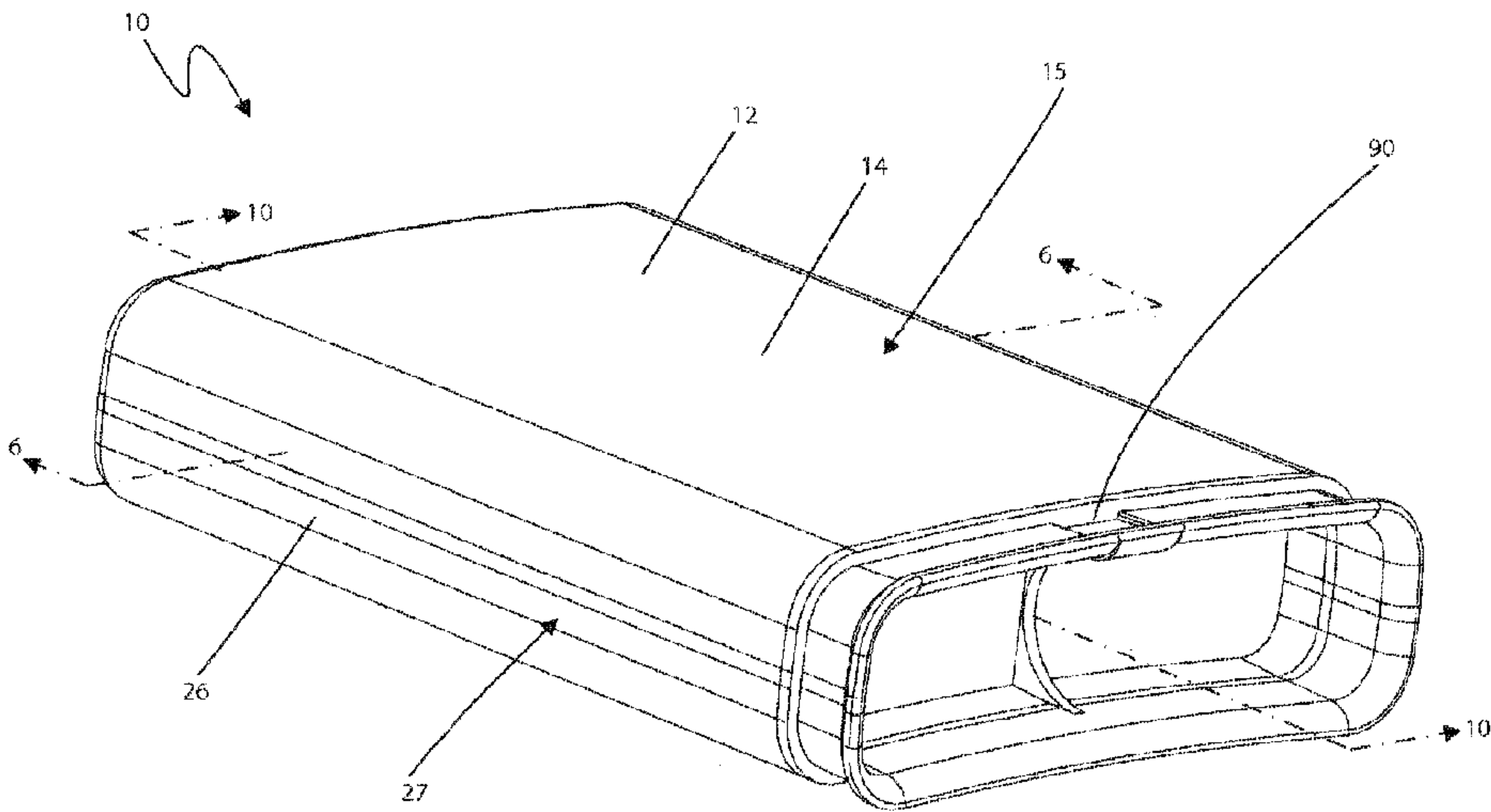




(86) Date de dépôt PCT/PCT Filing Date: 2015/03/07
(87) Date publication PCT/PCT Publication Date: 2015/09/11
(45) Date de délivrance/Issue Date: 2019/10/29
(85) Entrée phase nationale/National Entry: 2016/09/06
(86) N° demande PCT/PCT Application No.: US 2015/019331
(87) N° publication PCT/PCT Publication No.: 2015/134955
(30) Priorité/Priority: 2014/03/07 (US61/949,776)

(51) Cl.Int./Int.Cl. *B65D 83/04* (2006.01),
B65D 77/02 (2006.01)
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(54) Titre : RECIPIENT PERSONNEL POUR LE STOCKAGE ET LA DISTRIBUTION D'ARTICLES ALIMENTAIRES
(54) Title: PERSONAL CONTAINER FOR FOOD ITEM STORAGE AND DISTRIBUTION



(57) **Abrégé/Abstract:**

A container (10) is provided for storing and distributing items. The container (10) includes a cover (12) and a tray (50) which are complimentary in shape and configured so that the tray (50) can be retained within the cover (12). The container (10) has a fully closed position in which a tray top opening (44) is fully contained within an internal volume of the cover (12) and a fully open position in which at least one cover retention element engages the tray (50) to resist further outward movement of the tray (50) from the internal volume. The cover (12) and tray (50) both preferably have curved shape that allows the container (10) to be more comfortably transported in a clothing pocket. The tray (50) and cover (12) preferably cooperate to form a moisture barrier to preserve items contained within the tray (50).

Abstract

A container (10) is provided for storing and distributing items. The container (10) includes a cover (12) and a tray (50) which are complimentary in shape and configured so that the tray (50) can be retained within the cover (12). The container (10) has a fully closed position in which a tray top opening (44) is fully contained within an internal volume of the cover (12) and a fully open position in which at least one cover retention element engages the tray (50) to resist further outward movement of the tray (50) from the internal volume. The cover (12) and tray (50) both preferably have curved shape that allows the container (10) to be more comfortably transported in a clothing pocket. The tray (50) and cover (12) preferably cooperate to form a moisture barrier to preserve items contained within the tray (50).

PERSONAL CONTAINER FOR FOOD ITEM STORAGE AND DISTRIBUTION

FIELD OF THE INVENTION

5 **[0001]** The present invention relates to containers for storing and distributing food items, for example confectionaries and chewing gum.

BACKGROUND

10 **[0002]** A multitude of containers have been developed in the past for the storage and dispensing of gum, confectionary, pills, vitamins, and other similarly sized and shaped objects such as consumable food, confectionaries, medical products, or small items such as matches or toothpicks. Such dispensing containers have used various means to remove candy from the container for consumption. For example, handheld candy dispensers, such as for PEZ® or TIC-TACS® are well known. Such dispensers might be a container with a lid that can be opened to dispense the candy. Other such dispensers might include a chamber to hold the candy and a spring biased mechanism to push the candy out of the dispenser. Other containers might include a container with a sliding tray, for example a matchbox. However, in the case of a matchbox, there is generally nothing preventing the entire tray from being removed from the container and possibly spilling the contents. Thus, there is a need for improved compact, secure personal containers for carrying small items, for example gum, candy, pills, vitamins, and other similarly sized and shaped objects such as consumable food, confectionaries, medical products, or small items such as matches or toothpicks.

SUMMARY OF THE INVENTION

25 **[0003]** In one respect, the present invention comprise a container having a cover and tray having retaining structures that retain the tray in a fully closed position with respect to the cover, as well as a fully open position, in which the tray is restrained from being fully removed from the cover, a first portion of a top opening of the tray is contained within the cover and a second portion of the top opening of the tray is exposed. In some embodiments it is desirable to have no more than 75% of top opening exposed (no more than 50% in other embodiments) when the tray is in a fully open position. The invention further comprises novel structures that enable these features and facilitate opening and closing of the container.

30 **[0004]** In another respect, the present invention comprises a container that, when closed, provides a moisture barrier that restricts, but does not fully inhibit the flow of water vapor in and out of the container.

35 **[0005]** In yet another respect, the invention comprises a container comprising a cove and tray having a concave shape that more closely follows the contours of the human body when the container is placed in a clothing pocket.

BRIEF DESCRIPTION OF THE DRAWING FIGURES

- [0006] Other aspects, features, and advantages of described embodiments will become more fully apparent from the following detailed description, the appended claims, and the accompanying drawings in which like reference numerals identify similar or identical elements.
- [0007] FIG. 1 is a top front perspective view of a container according to exemplary embodiments of the present invention, with a tray of the container in its fully-closed position;
- [0008] FIG. 2 is a lower front perspective view thereof, with the tray in its fully-opened position;
- [0009] FIG. 3 is a left side view thereof;
- 10 [0010] FIG. 4 is a front view thereof;
- [0011] FIG. 5 is a front perspective view of a cover of the container of FIG. 1;
- [0012] FIG. 6 is a sectional view taken along line 6-6 of FIG. 1;
- [0013] FIG. 7 is a top front perspective view of the tray of the container of FIG. 1;
- [0014] FIG. 8 is a left side view thereof;
- 15 [0015] FIG. 9 is a bottom view thereof;
- [0016] FIG. 10 is a sectional view taken along line 10-10 of FIG. 1;
- [0017] FIG. 11 is a sectional view taken along line 11-11 of FIG. 3;
- [0018] FIG. 12 is an enlarged partial view of the front end of an exemplary commercial embodiment according to the present invention showing features of the product packaging;
- 20 [0019] FIG. 13 is a sectional view of the bottom half of the interior of an alternate embodiment of the cover shown in FIG. 5; and
- [0020] FIG. 14 is a sectional view of the bottom half of the interior of another alternate embodiment of the cover shown in FIG. 5.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

- 25 [0021] The ensuing detailed description provides preferred exemplary embodiments only, and is not intended to limit the scope, applicability, or configuration of the herein disclosed inventions. Rather, the ensuing detailed description of the preferred exemplary embodiments will provide those skilled in the art with an enabling description for implementing the preferred exemplary embodiments
- 30 in accordance with the herein disclosed invention. It is understood that various changes may be made in the function and arrangement of elements without departing from the spirit and scope of the invention, as set forth in the appended claims.
- [0022] To aid in describing the invention, directional terms may be used in the specification and claims to describe portions of the present invention (*e.g.*, upper, lower, left, right, etc.). These
- 35 directional definitions are merely intended to assist in describing and claiming the invention and are not intended to limit the invention in any way. In addition, reference numerals that are introduced in

the specification in association with a drawing figure may be repeated in one or more subsequent figures without additional description in the specification, in order to provide context for other features.

[0023] In the figures, elements that are similar to those of other embodiments of the present invention are represented by reference numerals increased by a value of 100. Such elements should be regarded as having the same function and structure unless otherwise stated or depicted herein, and the discussion of such elements may therefore not be repeated for later-described embodiments.

[0024] It is desirable to have a compact, portable container for storing and distributing small food items, for example candies and chewing gum, having the following features: sized and shaped so as to fit comfortably in a user's pocket; protective of the food items contained therein; easy to open; and securely closeable such that the container does not open accidentally. The inventors of the present application have addressed these and other drawbacks of the prior art.

[0025] FIGS. 1-12 generally show one embodiment of a container 10 for storing and distributing food items. It should be understood that the container 10 could be used to store and distribute non-food items, for example toothpicks and other small objects that it may be desirable for a user to carry around on his or her person. The container 10 is comprised of two primary parts, a cover 12 and a tray 50. The tray 50 is inserted within the cover 12 through a cover front opening 44.

[0026] The cover 12 comprises a cover top side 14 having a cover top side exterior surface 15 and a cover top side interior surface 16, a cover bottom side 20 having a cover bottom side exterior surface 21 and a cover bottom side interior surface 22, a cover left side 26 having a cover left side exterior surface 27 and a cover left side interior surface 28, a cover right side 32 having a cover right side exterior surface 33 and a cover right side interior surface 34, a cover rear side 40 having a cover rear side exterior surface 41 and a cover rear side interior surface 42, and the cover front opening 44. In this embodiment, the cover bottom side 20 is slightly concave so that it approximately corresponds with the curvature of various parts of a user's body (e.g., leg, chest), so that the container 10 rests more comfortably against the user's body when placed in a pocket. As discussed below, the tray 50 is also shaped to accommodate the concavity of the cover bottom side 20. In this embodiment, the cover top side 14 is also preferably curved (slightly convex). In exemplary embodiments, the cover bottom side 20 and the tray 50 might have a concavity having a radius in the range of 8 inches (20.3cm) to 14 inches (35.6cm), more preferably 11 inches (27.9cm) to 12 inches (30.5cm) and, most preferably, in the range of 11.5 inches (29.2cm) to 11.6 inches (29.6cm).

[0027] Detent ridge 18 is located on cover top side interior surface 16, detent ridge 24 is located on cover bottom side interior surface 22, detent ridge 30 is located on cover left side interior surface 28, and detent ridge 36 is located on cover right side interior surface 34. Each of the detent ridges 18,24,30,36 is located at approximately half the depth of the cover 12, i.e., approximately halfway between the cover front opening 44 and the cover rear side 40. Each of the detent ridges 18,24,30,36

is slightly ramped on its respective front side (*i.e.*, on its side closer to the cover front opening 44) to support relatively easy insertion of the tray 50 into the cover 12, but flat on its respective back side (*i.e.*, on its side closer to the cover rear side 40) to prevent the tray 50 from falling out of the cover 12. The interaction of these detent ridges 18,24,30,36 with parts of the tray 50 will be described in further detail below. The detent ridges 18, 24, 30, 36 shown in this embodiment are one example of cover retention elements that are used to cooperate with tray retention elements to prevent the tray 50 from being fully removed from the cover 12. Other examples of cover and tray retention elements are provided in other exemplary embodiments of the invention described herein.

[0028] The tray 50 comprises a tray top opening 51, a tray bottom side 52 having a tray bottom side exterior surface 53 and a tray bottom side interior surface 60, a tray left side 62 having a notch 64, a tray left side exterior surface 65 having a detent bead 66, and a tray left side interior surface 67, a tray right side 69 having a notch 71, a tray right side exterior surface 72 having a detent bead 73, and a tray right side interior surface 74, a tray rear side 76 having a tray rear side exterior surface 76 and a tray rear side interior surface 78, and a tray front portion 86. The notches 64,71 provide access for a user to insert a finger into the interior of the tray 50 and lift out a piece of candy or gum, without the need to turn the container 10 upside-down, thus avoiding the risk that multiple pieces of candy or gum will fall out of the container 10. In this embodiment, the depth of the notches 64,71 is preferably at least 30%, and more preferably 50%, of the thickness of each piece of the food item (*e.g.*, piece of candy or gum) that is stored in the tray 50. In this embodiment, the tray bottom side 52 also has a slightly concave shape, in order to compliment the shape of the cover bottom side 20, which provides for a better fit between the tray 50 and the cover 12.

[0029] The rear end of the tray 50 includes a plurality of lips, namely, upper rear lip 80, lower rear lip 81, left side rear lip 82, and right side rear lip 83. When the tray 50 is pulled outwardly to its fully-opened position, it is retained in that position by the interaction of the lips 80-83 with the flat portions of the detent ridges 18,24,30,36 that are located on the interior sides of the cover 12. Specifically, upper rear lip 80 engages the flat portion of detent ridge 18, lower rear lip 81 engages the flat portion of the detent ridge 24, left side rear lip 82 engages the flat portion of the detent ridge 30, and right side rear lip 83 engages the flat portion of the detent ridge 36. In this way, the tray 50 is prevented—under normal use—from being withdrawn from inside the cover 12 any further than approximately 50% of its depth. In other words, when in its fully-opened position, as shown in FIG. 2, only approximately 50% of the tray top opening 51 is located exterior to the cover front opening 44. The detent beads 66,73, along with the lips 80-83, help to keep the tray 50 evenly spaced within the interior of the cover 12.

[0030] Located on the tray bottom side exterior surface 53 is a detent 55 and a pair of anti-compression ridges 59a,59b, which will be discussed below. The detent 55 has a flat portion 57 located on its anterior side (*i.e.*, closer to the tray front portion 86) and a ramped portion 56 located on

its posterior side (*i.e.*, closer to the tray rear side 76). When the tray 50 is put in its fully-closed position, as shown in FIG. 1 and the sectional view of FIG. 10, the ramped portion 56 of the detent 55 slides over the detent ridge 24 located on the cover bottom side interior surface 22 until the detent 55 is located behind the detent ridge 24, such that the detent ridge 24 is engaged with the flat portion 57 of the detent 55. The interaction of the detent 55 and the detent ridge 24 helps to keep the tray 50 in its fully-closed position until it is pulled outwardly (*i.e.*, in a direction substantially towards the cover front opening 44) with sufficient force to overcome this interaction and the frictional interaction of the tray front portion 86 with the interior surfaces of the cover 12, which is described in detail below.

[0031] Applicant has discovered that customers have different preferences concerning the locations at which they hold the container 10 when attempting to open it. Some users will hold the container by the cover left side 26 and cover right side 32, and pull out the tray 50. Other users will hold the container by the cover top side 14 and cover bottom side 20 while attempting to pull out the tray 50. For this latter group of users, Applicant found that the force applied to the cover top side 14 and cover bottom side 20 made it difficult for the users to pull out the tray. In this embodiment, therefore, the anti-compression ridges 59a,59b were included along the depth of the tray bottom side exterior surface 53. The anti-compression ridges 59a,59b act to reduce the overall area of friction between the tray 50 and the interior surfaces of the cover 12, thereby permitting easier removal of the tray 50 from within the cover 12. In this embodiment, the anti-compression ridges 59a, 59b are linear, and are oriented parallel to tray left and right sides 62, 69.

[0032] As shown in FIGS. 3, 4, and 8, the tray front portion 86 comprises a lip 88, a finger slot 89 including an indent 90, a tray insertion stop 92, a chamfered portion 94, and a tray front opening 96 including a reinforcement ridge 98. The finger slot 89 extends around the entire outer perimeter of the tray front portion 86 and provides a comfortable place for the user to rest his or her fingers when opening or closing the tray 50. The finger slot 89 terminates at a lip 88 that also extends around the entire outer perimeter of the tray front portion 86. Located within the finger slot 89, corresponding with the upper side of the tray 50, is the indent 90. The indent 90 serves as a tactile indicator to the user that they have the container 10 held such that, when opened, the food items contained within the tray 50 do not fall to the floor. The tray insertion stop 92 extends around the entire outer perimeter of the tray front portion 86, divides the chamfered portion 94 from the finger slot 89, and acts to completely cover the cover front opening when the tray 50 is in its fully-closed position.

[0033] The perimeter of the lip 88 is preferably located in substantially the same plane so that the container 10 can be stood on end.

[0034] As best seen in FIGS. 3 and 8, the chamfered portion 94 tapers in thickness such that it is thickest where it makes contact with the tray insertion stop 92. The respective interior surfaces 16,22,28,34 of the cover sides 14,20,26,32 frictionally engage the chamfered portion 94 as the tray 50 is inserted into the cover front opening 44. This frictional fit is primarily responsible for holding the

tray 50 in its fully-closed position.

[0035] In order for many food items to remain fresh, it is desirable for the container 10 to be air-permeable but to restrict the flow of moisture to and from the container 10 when it is in a fully closed position. The interaction of the chamfered portion 94 with the respective interior surfaces 16,22,28,34 of the cover sides 14,20,26,32 of the present embodiment acts as a moisture barrier that restricts, but does not fully inhibit moisture from flowing into the container 10.

[0036] For purposes of this application, moisture permeability of the container is measured by the following method: (1) weighing a quantity anhydrous desiccant, (2) placing the desiccant inside the tray, (3) fully inserting the tray into the cover, (4) placing the container (with the desiccant contained therein) in a temperature and atmospherically-controlled chamber at 103 degrees F (39.4 degrees C) and 80% relative humidity for twenty four hours, and (5) measuring the weight of the desiccant after step (4). Under this procedure, the degree of moisture permeability is expressed as a percentage weight gain by the desiccant. As used in the specification and claims, the term “moisture barrier” means a barrier that provides a moisture permeability corresponding to a weight gain is in the range of 0.25% to 5.0% and, preferably in the range of 0.5% to 3.0%, using the test described above.

[0037] The tray front opening 96 is hollow to comfortably accommodate the insertion of a user's fingers therein, and includes a reinforcement ridge 98 that spans across the tray front opening 96 between its top and bottom edges. The reinforcement ridge has an arcuate cutout therein (see FIGS. 1 and 2) so that it does not interfere with a user's fingers, while being flexible and providing added rigidity. The reinforcement ridge 98 will flex when squeezed, but prevents the user from collapsing the finger slot 89 when gripping the tray front portion 86. Additionally, the tray front portion 86 might be arranged in a planar layout that is substantially perpendicular to the length of the cover 12, such that container 10 can be stood vertically on the tray front portion 86. This position might also beneficially allow items within the container 10 to be shifted to the front end of tray 50, to be disposed within the exposed region of the tray top opening 51 when the tray 50 is in the fully open position.

[0038] As shown in FIG. 12, when the container 10 is packaged for sale, it is typically shrink-wrapped in a packaging sleeve 99 that is tightly sealed around the perimeter of the entire finger slot 89, which is recessed. This will make it more evident when someone has attempted to tamper with the packaging of the container 10. The packaging sleeve 99 is preferably perforated near the front edge of the cover 12 and to the rear of the tray insertion stop 92 so that the perforation 100 is torn when the tray 50 is first opened, thereby providing a method of initially opening the container 10 and providing a tamper-evident seal. The packaging sleeve 99 has heat-activated adhesive for fixing the packaging sleeve 99 in place, such that the packaging sleeve 99 stays in place around the exterior of the container 10 (*i.e.*, the exterior of the cover 12) after the container 10 has been initially opened.

[0039] FIG. 13 shows a sectional view of the interior of an alternate embodiment of the cover

112. In particular, FIG. 13 shows a view cover bottom side interior surface 122 and cover left side interior surface 128. Although not shown in FIG. 13, cover top side interior surface 116 and tray right side interior surface 134 might be similarly constructed as cover bottom side interior surface 122 and cover left side interior surface 128 as shown in FIG. 13. As described herein, detent ridge 118 is
5 located on cover top side interior surface 116, detent ridge 124 is located on cover bottom side interior surface 122, detent ridge 130 is located on cover left side interior surface 128, and detent ridge 136 is located on cover right side interior surface 134. As shown in FIG. 13, the detent ridge 124 might be split into segments, for example a first detent ridge segment 124a and a second detent ridge segment 124b, separated by area 19 in which there is no detent ridge. Each of the detent ridge segments 124a
10 and 124b is located at approximately half the depth of the cover 112, with a similar design and function as described herein in regard to the detent ridges 18,24,30 and 36.

[0040] Also as shown in FIG. 13, the cover 112 might include rear retention detent 25. The rear retention detent 25 might have flat portion located on its anterior side (i.e., closer to the tray front portion 86) and a ramped portion located on its posterior side (i.e., closer to the tray rear side 76) such
15 that when the tray 50 is in its fully-closed position, as shown in FIG. 1 and the sectional view of FIG. 10, the lower rear lip 81 of tray 50 slides over the ramped portion of the rear retention detent 25 until the lower rear lip 81 of tray 50 is located behind the rear retention detent 25, such that the lower rear lip 81 of tray 50 is engaged with the flat portion of the rear retention detent 25, thus helping to keep the tray 50 in its fully-closed position until it is pulled outwardly (i.e., in a direction substantially
20 towards the cover front opening 44) with sufficient force to overcome this interaction. Although shown in FIG. 13 as a single detent located on cover bottom side interior surface 122, the rear retention detent 25 might be implemented as multiple detents located on the cover bottom side interior surface 122, or might be implemented in conjunction with one or more rear retention detents located on one or both of the cover left side interior surface 128 and the cover right side interior surface 134,
25 such as shown in FIG. 14.

[0041] FIG. 14 shows a sectional view of the interior of another alternate embodiment of the cover 212. In particular, FIG. 14 shows a view cover bottom side interior surface 222 and cover left side interior surface 228. As shown in FIG. 14, the rear retention detent 25 might instead be located on one or both interior side surfaces 228 and 234 of the cover 212, shown in FIG. 14 as the left side
30 rear retention detent 125a. The left side rear retention detent 125a might have flat portion located on its anterior side (i.e., closer to the tray front portion 86) and a ramped portion located on its posterior side (i.e., closer to the tray rear side 76) such that when the tray 50 is in its fully-closed position, as shown in FIG. 1 and the sectional view of FIG. 10, the left side rear lip 82 of tray 50 slides over the ramped portion of the left rear retention detent 125a until the left side rear lip 82 of tray 50 is located
35 behind the left side rear retention detent 125a, such that the left side rear lip 82 of tray 50 is engaged with the flat portion of the left side rear retention detent 125a, thus helping to keep the tray 50 in its

fully-closed position until it is pulled outwardly (i.e., in a direction substantially towards the cover front opening 44) with sufficient force to overcome this interaction. Although shown in FIG. 14 as a single detent located on cover left side interior surface 228, the rear retention detent might additionally or alternatively be located on the cover right side interior surface 234 (e.g., right side rear retention detent 125b, not shown).

[0042] Also shown in FIG. 14, detent ridge 224, located on cover bottom side interior surface 222, might include the detent tab 23. Detent tab 23 might be configured to engage a recess on the tray bottom side exterior surface 53. In particular, detent tab 23 might be located within a recess on the tray bottom side exterior surface 53. However, the recess might not extend for the entire length of the tray bottom side exterior surface 53, thus preventing the tray 50—under normal use—from being withdrawn from inside the cover 12 any further than approximately 50% of its depth. In other words, when in its fully-opened position, as shown in FIG. 2, only approximately 50% of the tray top opening 51 is located exterior to the cover front opening 44.

[0043] Further, although described herein as being a detent (e.g., a protrusion), as would be understood by one of skill in the art, any detent could be reversed to be a recess, and vice versa.

[0044] Thus, described embodiments provide a container for storing and distributing items. The container has a cover that has a cover top side, a cover bottom side, a cover left side, a cover right side, and a cover rear side, which collectively define a cover internal volume. Each of the cover top side, the cover bottom side, the cover left side, and the cover right side have a front edge that defines a cover front opening. The cover also includes at least one cover retention element. A tray includes a tray front side, a tray bottom side, a tray left side, a tray right side, and a tray rear side, wherein the tray front side, the tray left side, the tray right side, and the tray rear side collectively define a tray top opening. The tray top opening has a length extending from the tray front side to the tray rear side and a width extending from the tray left side to the tray right side. The tray and cover are complementarily shaped, such that the tray can be inserted within the cover internal volume through the cover front opening. The container has a fully closed position in which the tray top opening is fully contained within the internal volume and the tray front side fully covers the cover front opening. The cover also has a fully open position in which the at least one cover retention element engages the tray to resist further outward movement of the tray from the internal volume. Also, in the fully open position, the tray top opening includes a covered portion that is contained within the internal volume, and an exposed portion comprising preferably no more than 75% of the length of the tray top opening and, more preferably, no more than 50% of the length of the tray top opening.

[0045] Although exemplary embodiments of the herein described device has been described in detail above, those skilled in the art will readily appreciate that many additional modifications are possible in the exemplary embodiment without materially departing from the novel teachings and advantages of the herein described device. Accordingly, these and all such modifications are intended

to be included within the scope of the herein described device.

[0046] Reference herein to “one embodiment” or “an embodiment” means that a particular feature, structure, or characteristic described in connection with the embodiment can be included in at least one embodiment. The appearances of the phrase “in one embodiment” in various places in the specification are not necessarily all referring to the same embodiment, nor are separate or alternative embodiments necessarily mutually exclusive of other embodiments. The same applies to the term “implementation.”

[0047] As used in this application, the word “exemplary” is used herein to mean serving as an example, instance, or illustration. Any aspect or design described herein as “exemplary” is not necessarily to be construed as preferred or advantageous over other aspects or designs. Rather, use of the word exemplary is intended to present concepts in a concrete fashion. Unless explicitly stated otherwise, each numerical value and range should be interpreted as being approximate as if the word “about” or “approximately” preceded the value of the value or range.

[0048] It will be further understood that various changes in the details, materials, and arrangements of the parts that have been described and illustrated in order to explain the nature of the described embodiments might be made by those skilled in the art without departing from the scope expressed in the following claims.

WHAT IS CLAIMED IS:

1. An apparatus comprising:

a cover comprising a cover top side, a cover bottom side, a cover left side, a cover right side, and a cover rear side, which collectively define a cover internal volume, each of the cover top side, the cover bottom side, the cover left side, and the cover right side have a front edge that collectively define a cover front opening, the cover further comprising at least one cover retention element and a cover width extending from the cover left side to the cover right side;

a tray comprising a tray front side, a tray bottom side, a tray left side, a tray right side, and a tray rear side, wherein the tray front side, the tray left side, the tray right side, and the tray rear side collectively define a tray top opening having a tray length extending from the tray front side to the tray rear side and a tray width extending from the tray left side to the tray right side;

wherein the tray and cover are complementarily shaped and the tray is configured to be inserted within the cover internal volume through the cover front opening;

wherein the tray has a fully closed position in which the tray top opening is fully contained within the cover internal volume and the tray front side fully covers the cover front opening, and a fully open position in which the at least one cover retention element is configured to engage the tray to resist further outward movement of the tray from the cover internal volume, wherein, in the fully open position, the tray top opening comprises a covered portion that is contained within the cover internal volume, and an exposed portion comprising up to 75% or less of the tray length;

wherein the tray front side comprises a tray insertion stop lip, the tray insertion stop lip configured to form a lid covering the cover front opening when the tray is in the fully closed position within the cover; and

wherein the tray front side further comprises a chamfered portion extending from an inner surface of the tray insertion stop lip to the tray top opening, the chamfered portion tapering in thickness from the tray insertion stop lip to the tray top opening, the chamfered portion being shaped and sized to frictionally engage at least one inner surface of the cover when the tray is in the fully closed position.

2. The apparatus of claim 1, wherein the exposed portion comprises up to 50% or less of the tray length.

3. The apparatus of claim 1 or 2, wherein the tray further comprises at least one tray retention element, the at least one tray retention element configured to engage with the at least one cover retention element

when the tray is in the fully open position, thereby resisting further outward movement of the tray from the cover internal volume.

4. The apparatus of claim 3, wherein the at least one tray retention element comprises the tray rear side.

5. The apparatus of claim 4, wherein the at least one cover retention element is located on at least one of: an interior surface of the cover top side, an interior surface of the cover bottom side, an interior surface of the cover left side, and an interior surface of the cover right side.

6. The apparatus of claim 5, wherein the at least one cover retention element has a portion located on each of: an interior surface of the cover top side, an interior surface of the cover bottom side, an interior surface of the cover left side, and an interior surface of the cover right side.

7. The apparatus of any one of claims 1 to 6, wherein at least one of the at least one cover retention element is a detent ridge.

8. The apparatus of any one of claims 1 to 7, wherein at least one of the at least one cover retention element is a detent bead.

9. The apparatus of any one of claims 1 to 8, wherein the at least one cover retention element is a protrusion from at least one interior surface of the cover.

10. The apparatus of any one of claims 1 to 9, wherein the at least one cover retention element is a recess in at least one interior surface of the cover.

11. The apparatus of any one of claims 1 to 10, wherein the tray top opening extends in length from an inner surface of the tray front side to an inner surface of the tray rear side, and wherein the tray top opening extends in width from an inner surface of the tray right side to an inner surface of the tray left side.

12. The apparatus of claim 11, wherein at least one of the tray left side and the tray right side includes a notch located along the exposed portion of the tray top opening.

13. The apparatus of claim 12, further comprising a plurality of items contained within the tray, each of the plurality of items having a unit height and unit width, wherein each notch has a notch height that is less than the unit height and a notch width that is less than the unit width.
14. The apparatus of claim 13, wherein the notch height is at least 30% of the unit height.
15. The apparatus of any one of claims 1 to 14, wherein each of the at least one cover retention elements has a front side and a sloped ramp disposed on the front side.
16. The apparatus of any one of claims 1 to 15, further comprising at least one tray closure element that cooperates with at least one cover closure element when the tray is in the fully closed position to releasably retain the tray in the fully closed position.
17. The apparatus of claim 16, wherein the at least one tray closure element is located on the tray bottom side and the at least one cover closure retention element is located on the cover bottom side.
18. The apparatus of claim 17, further comprising at least one anti-compression ridge located on an exterior surface of the tray bottom side.
19. The apparatus of claim 18, wherein the at least one anti-compression ridge comprises at least two linear ridges that are parallel to the tray left side and tray right side.
20. The apparatus of claim 16, wherein the at least one tray closure element comprises the tray rear side.
21. The apparatus of any one of claims 1 to 20, wherein the tray front side comprises a finger slot formed between a front lip of the tray front side and the tray insertion stop lip, wherein the finger slot is configured to provide a grip for a user of the apparatus to withdraw the tray from the cover from the fully closed position to the fully open position.
22. The apparatus of claim 21, wherein the finger slot comprises at least one indent, the at least one indent positioned to provide a visible and tactile indicator to the user of an orientation of the tray top opening.

23. The apparatus of claim 21, wherein the finger slot extends around an entire exterior perimeter of the tray front side.

24. The apparatus of any one of claims 1 to 23, wherein the tray front side provides a moisture barrier between a content of the tray and an exterior environment of the apparatus when the tray is in the fully closed position.

25. The apparatus of any one of claims 1 to 24, wherein the tray front side further comprises a tray insertion stop that encircles and rests against the cover front edge when the tray is in the fully closed position.

26. An apparatus comprising:

a cover comprising a cover top side, a cover bottom side, a cover left side, a cover right side, and a cover rear side, which collectively define a cover internal volume, each of the cover top side, the cover bottom side, the cover left side, and the cover right side have a front edge that collectively define a cover front opening, the cover further comprising at least one cover retention element and a cover width extending from the cover left side to the cover right side;

a tray comprising a tray front side, a tray bottom side, a tray left side, a tray right side, and a tray rear side, wherein the tray front side, the tray left side, the tray right side, and the tray rear side collectively define a tray top opening having a tray length extending from the tray front side to the tray rear side and a tray width extending from the tray left side to the tray right side;

wherein the tray and cover are complementarily shaped and the tray is configured to be inserted within the cover internal volume through the cover front opening;

wherein the tray has a fully closed position in which the tray top opening is fully contained within the cover internal volume and the tray front side fully covers the cover front opening, and a fully open position in which the at least one cover retention element is configured to engage the tray to resist further outward movement of the tray from the cover internal volume, wherein, in the fully open position, the tray top opening comprises a covered portion that is contained within the cover internal volume, and an exposed portion comprising 75% or less of the tray length;

wherein the tray front side comprises a finger slot formed between a front lip of the tray front side and a tray insertion stop lip, the tray insertion stop lip configured to form a lid covering the cover front opening when the tray is in the fully closed position within the cover, wherein the finger slot is configured to provide a grip for a user of the apparatus to withdraw the tray from the cover from the fully closed position to the fully open position; and

wherein the tray front side further comprises a hollow front opening configured to receive the user's fingers to withdraw the tray from the cover from the fully closed position to the fully open position, the hollow front opening extending in depth from the front lip of the tray front side to an inner surface of a chamfered portion of the tray front side.

27. The apparatus of claim 26, wherein the hollow front opening further comprises at least one reinforcement ridge located between an inner surface of a top side of the tray front side and an inner surface of a bottom side of the tray front side, the at least one reinforcement ridge configured to provide rigidity, thereby preventing the user from collapsing the tray front side.

28. The apparatus of claim 27, wherein the at least one reinforcement ridge comprises an arcuate cutout configured to receive the user's fingers within the hollow front opening.

29. The apparatus of any one of claims 1 to 28, wherein the cover bottom side has a cover bottom shape that is concave along the cover width.

30. The apparatus of claim 29, wherein the cover top side has a cover top shape that is convex along the cover width.

31. The apparatus of claim 29 or 30, wherein the tray bottom side has a tray bottom shape that is concave along the tray width.

32. The apparatus of claim 29, 30, or 31, wherein the cover bottom shape is arcuate and has a radius of curvature no less than 8.0 inches (20.3 cm) to 14.0 inches (35.6 cm).

33. The apparatus of claim 32, wherein the cover bottom shape is arcuate and has a radius of curvature no less than 11.0 inches (27.9 centimeters) and 12.0 inches (30.5 centimeters).

34. The apparatus of any one of claims 1 to 33, further comprising a plurality of items contained within the tray, each of the plurality of items comprising one selected from the group of: chewing gum, a confectionary, a lozenge, a pill, a vitamin, a match, and a toothpick.

35. The apparatus of claim 34, wherein each of the plurality of items comprises a confectionary or chewing gum.

36. The apparatus of claim 34 or 35, wherein the cover front side includes a lip having a perimeter that is substantially planar and that is shaped to enable the cover and tray to stand on end.

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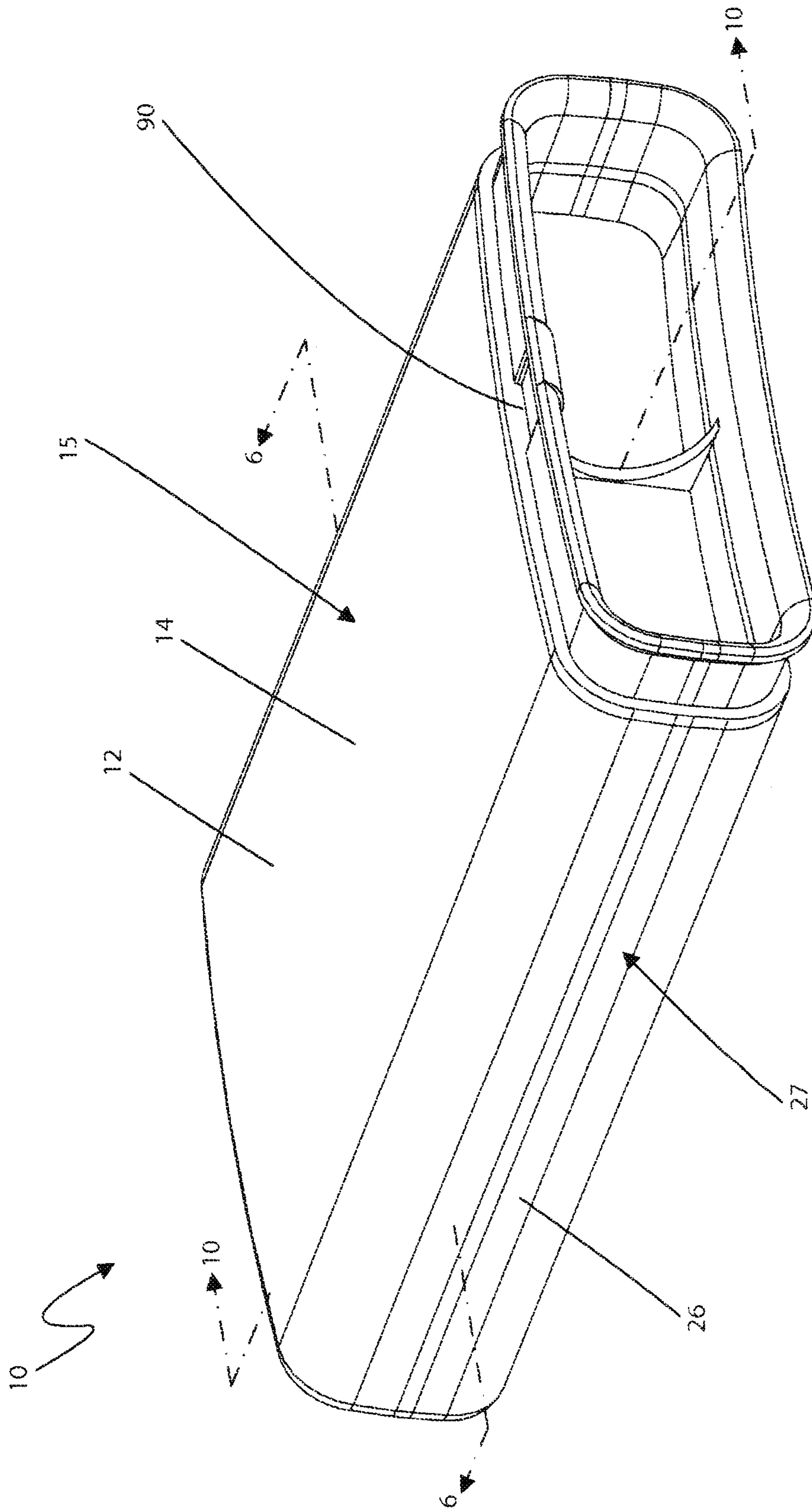


FIG. 1

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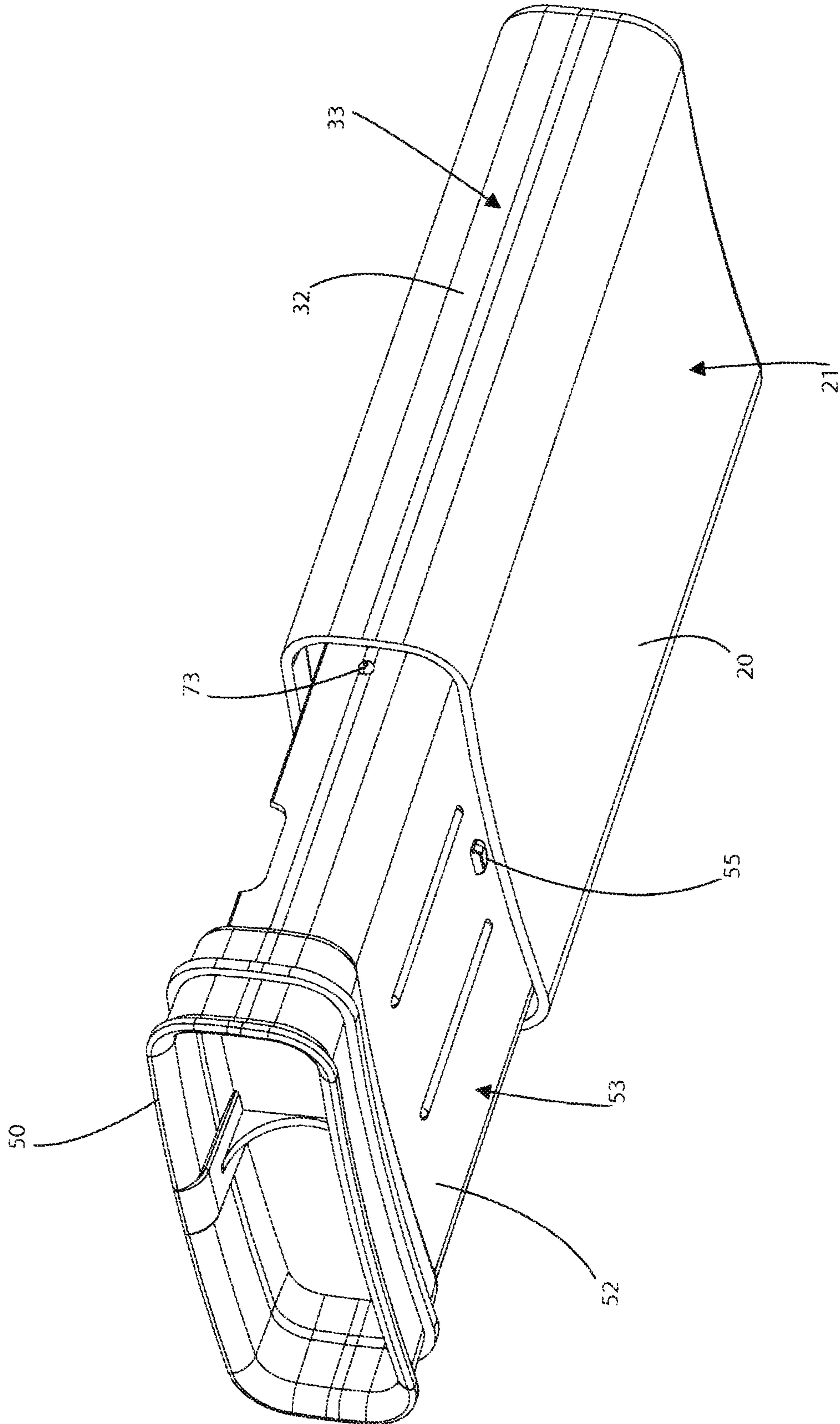


FIG. 2

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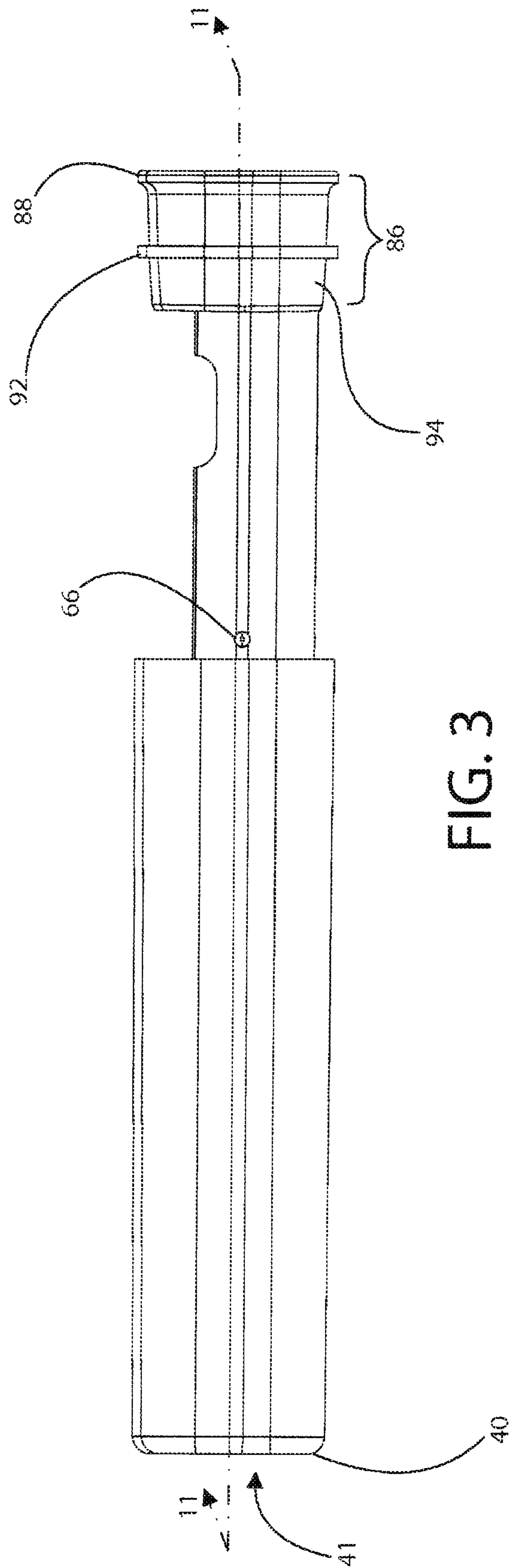


FIG. 3

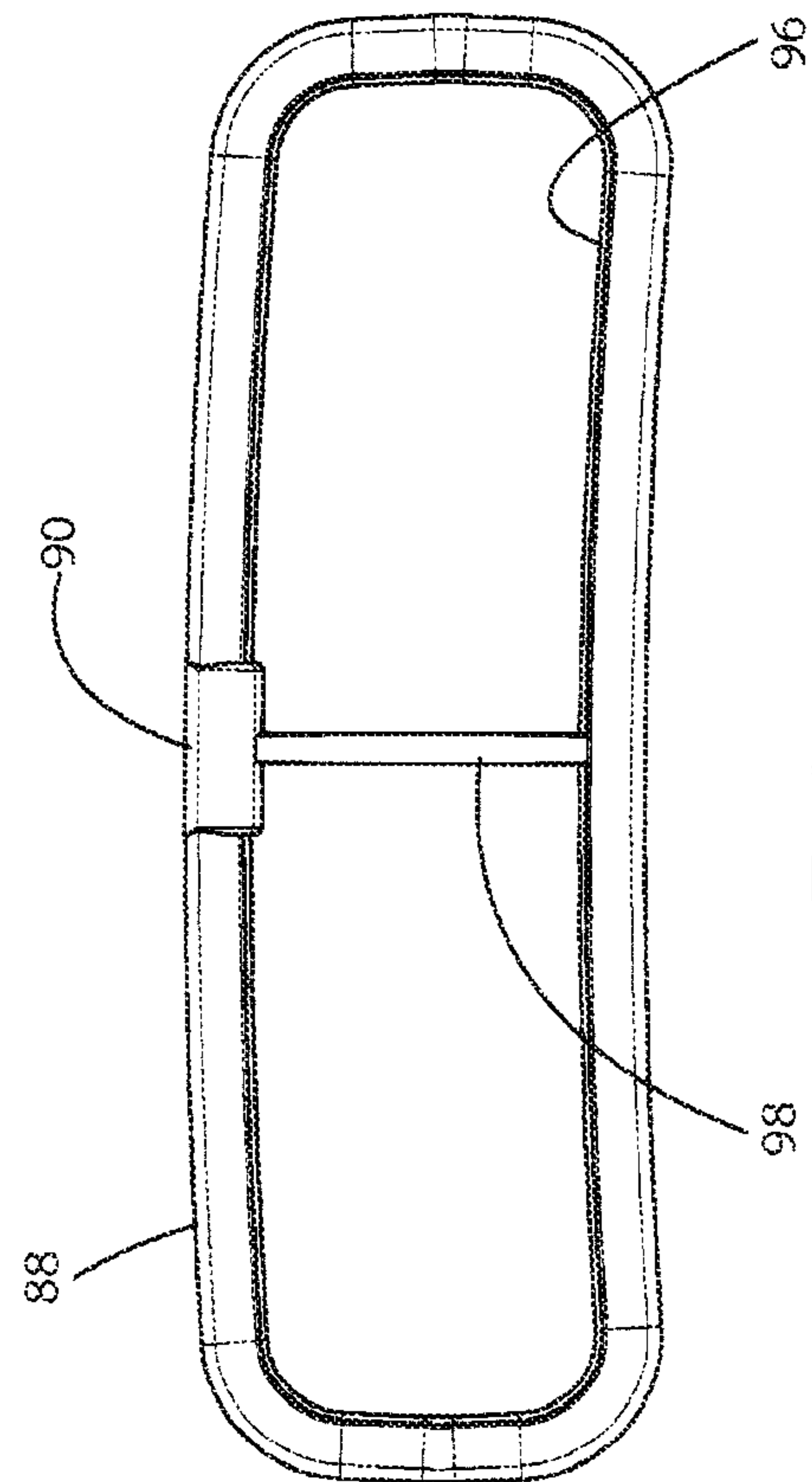


FIG. 4

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FIG. 5

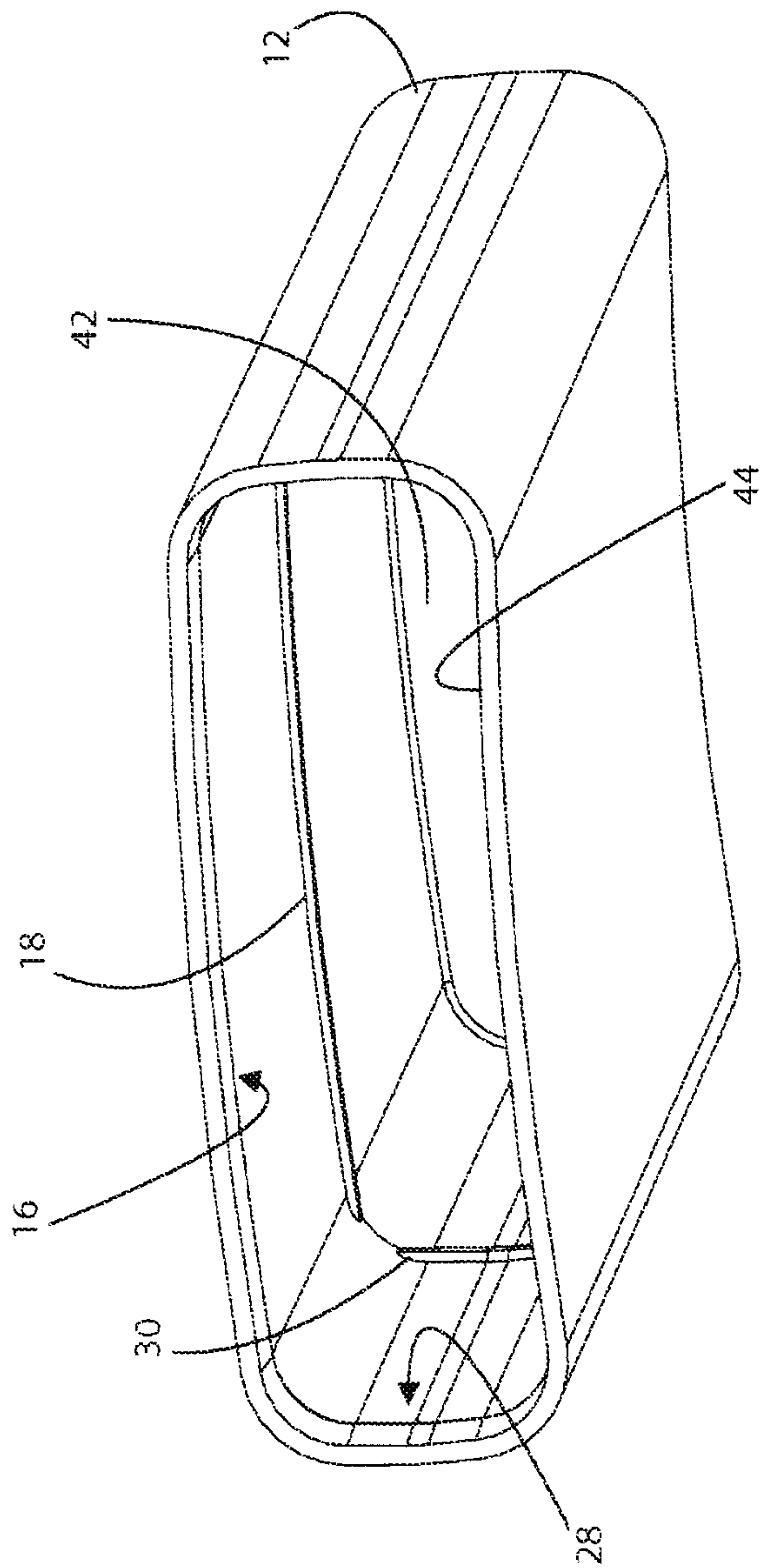


FIG. 6

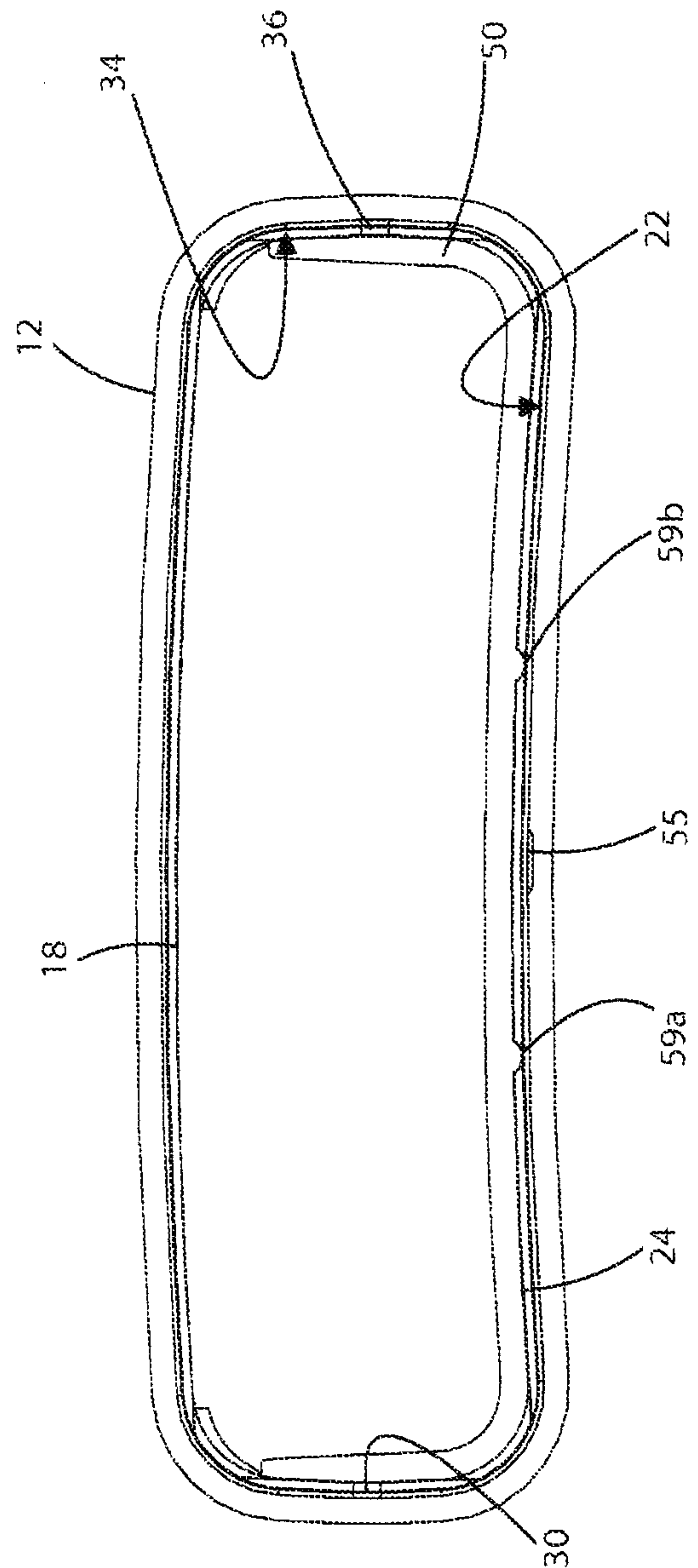


FIG. 7

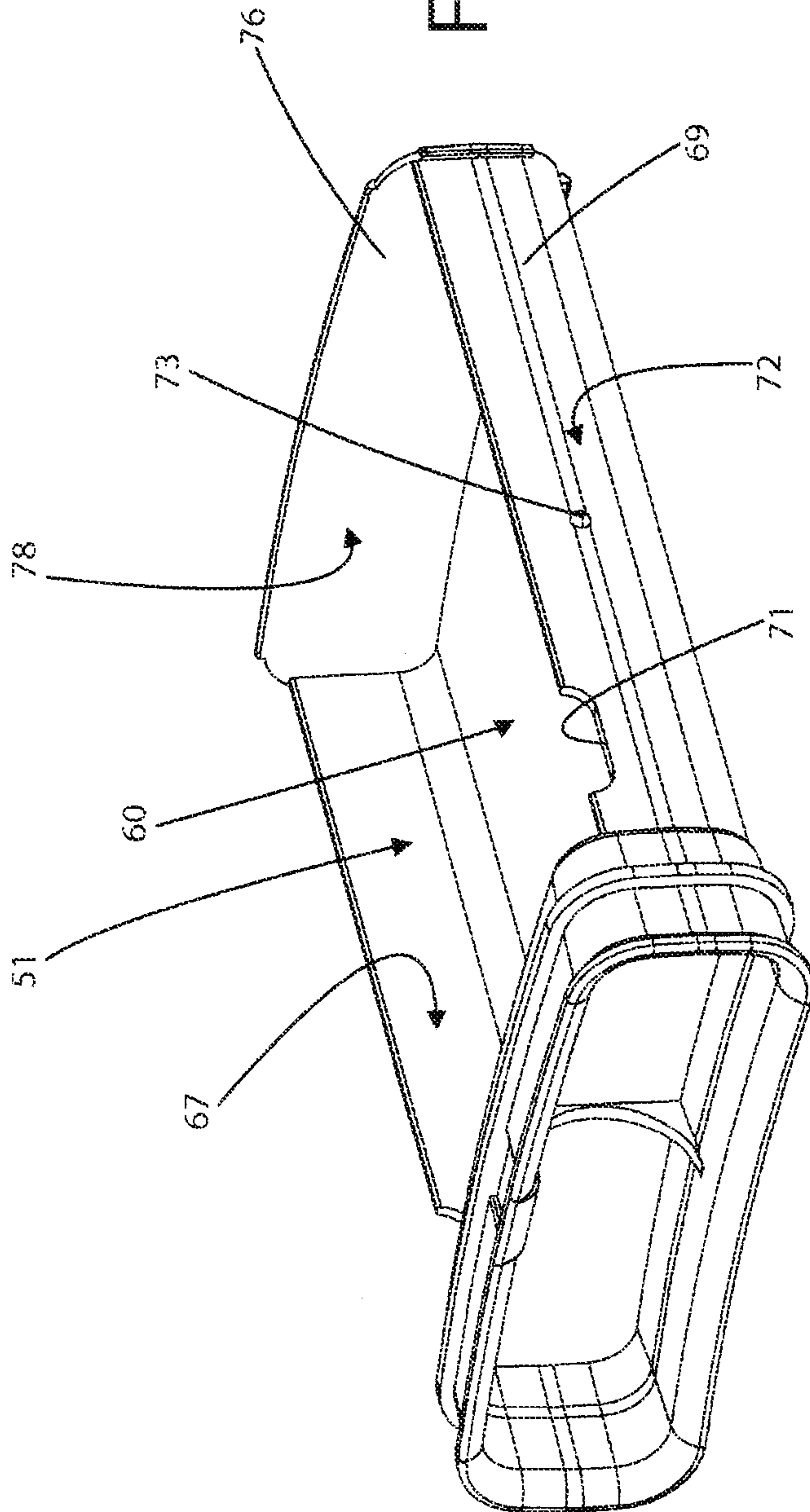
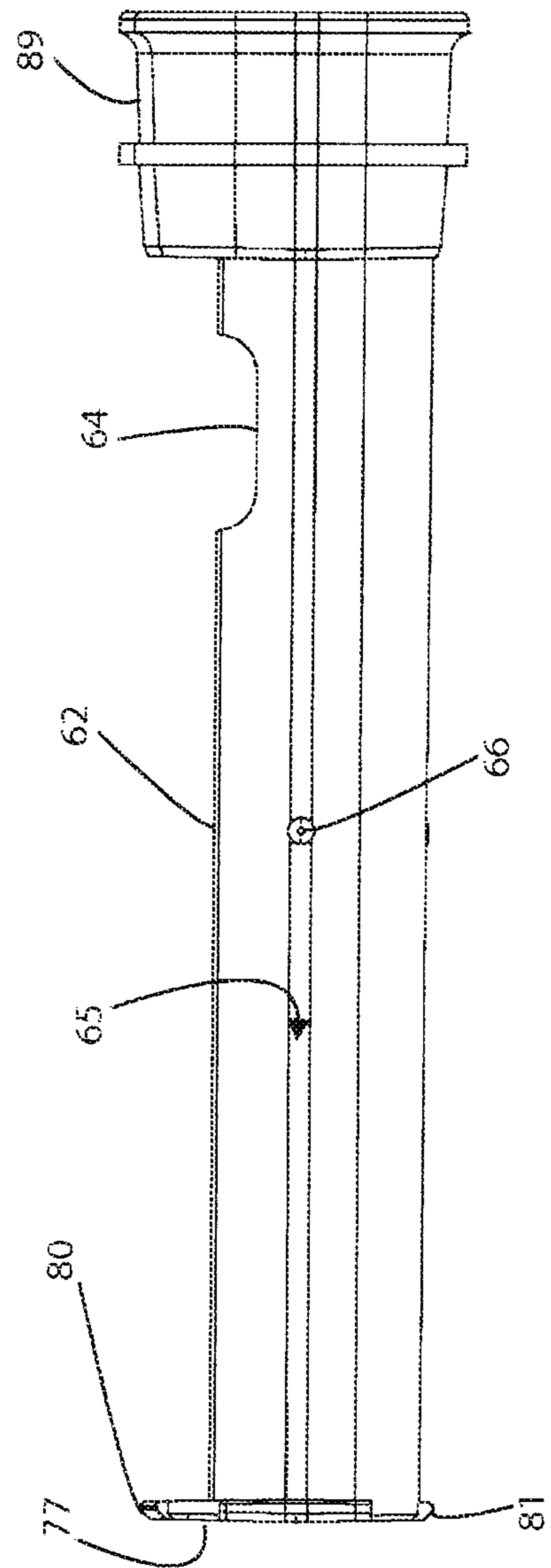
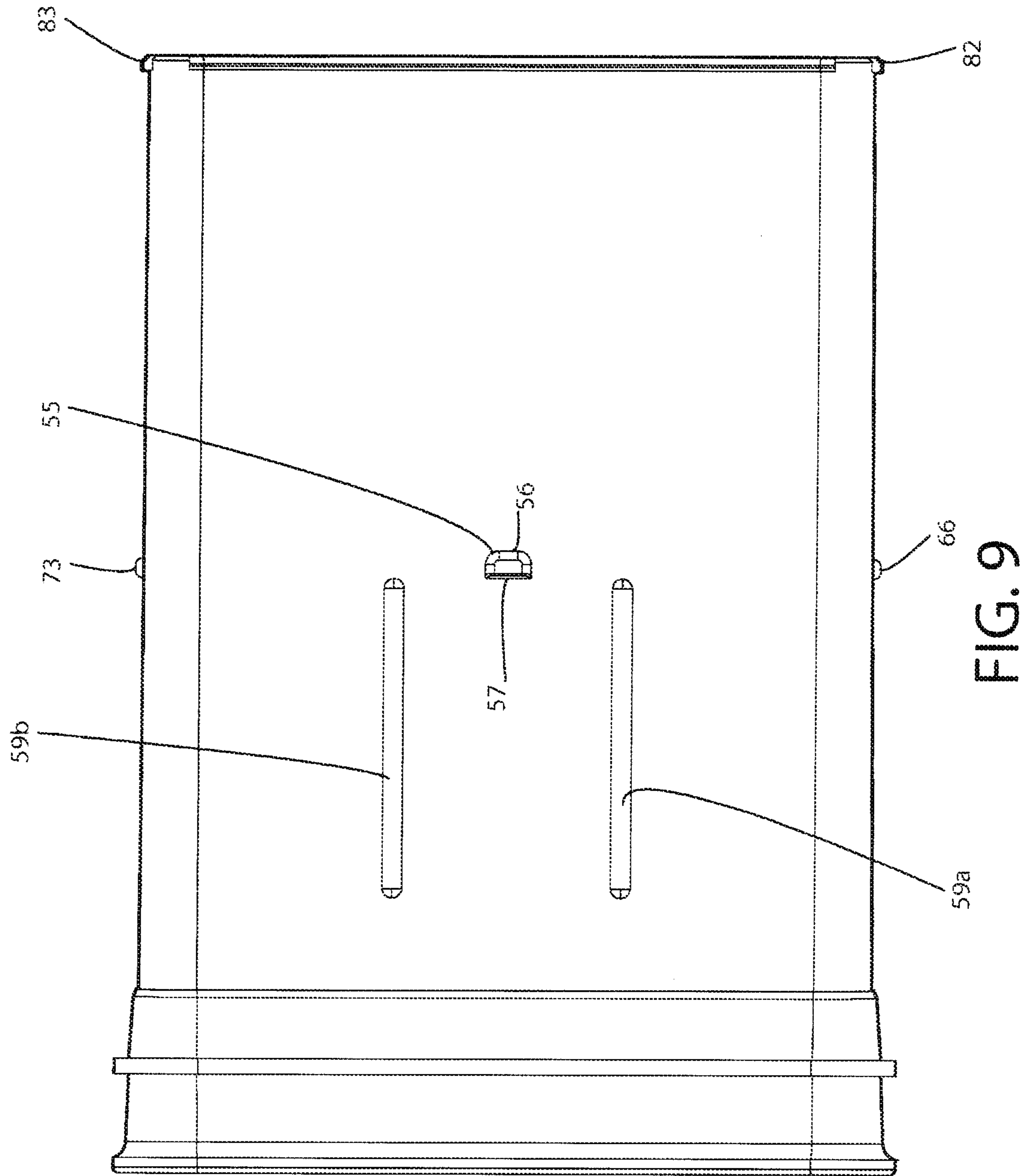


FIG. 8



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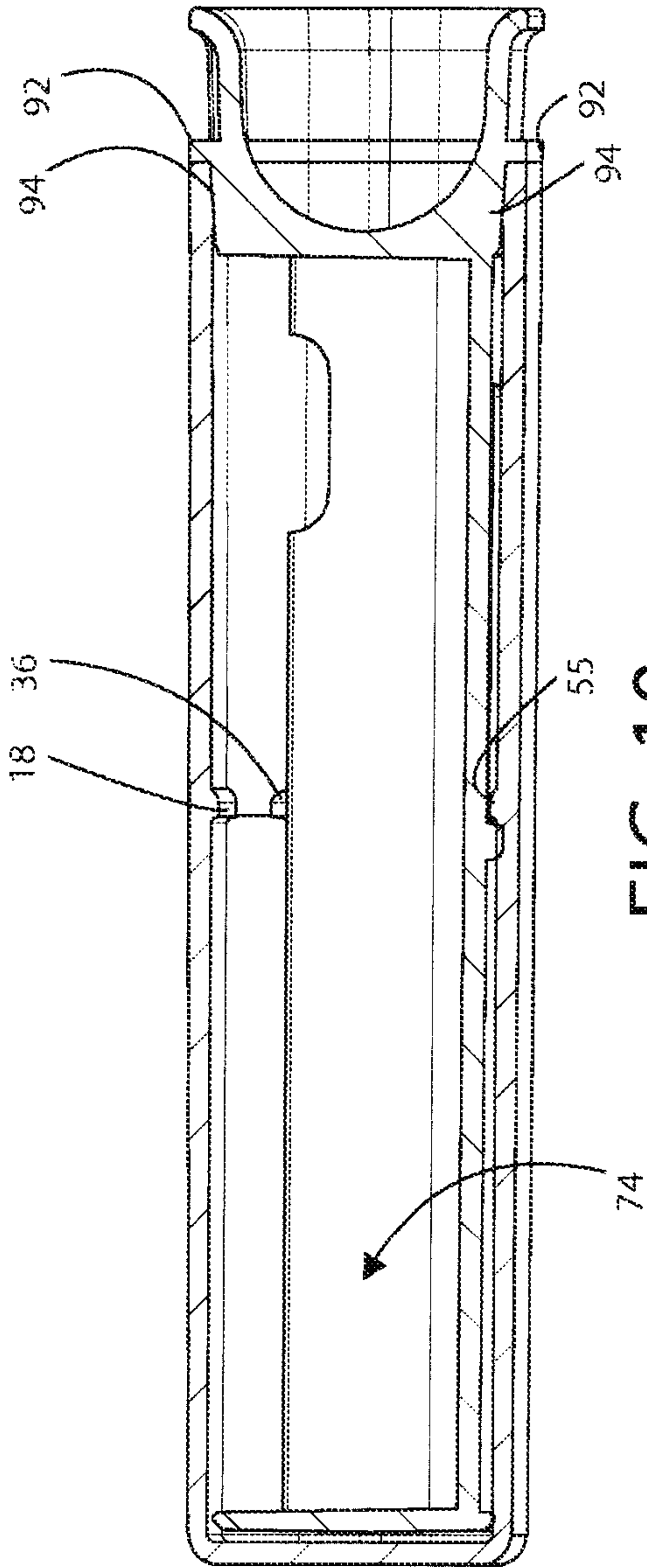


FIG. 10

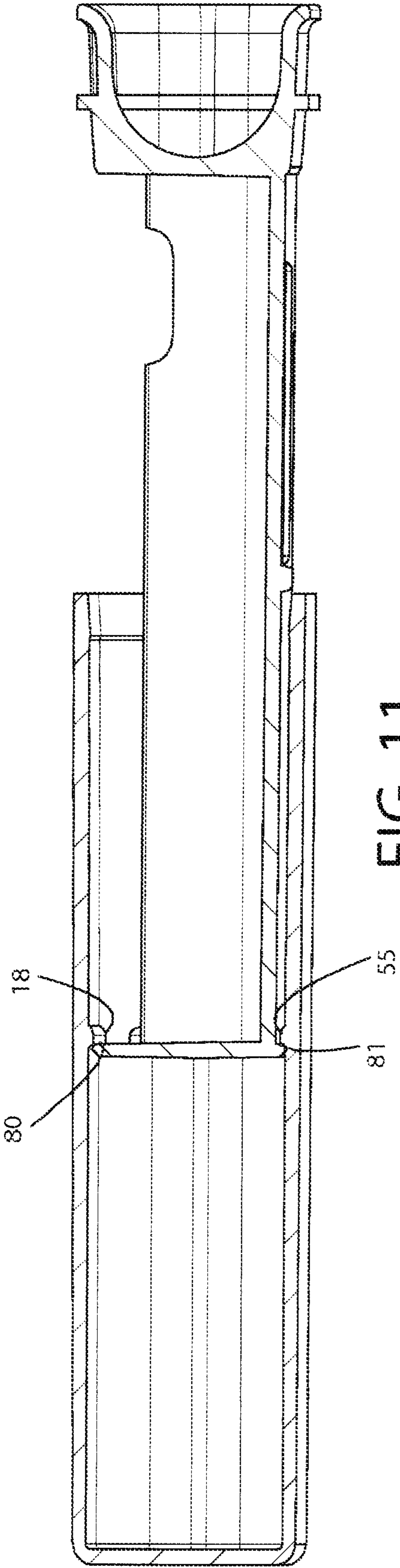


FIG. 11

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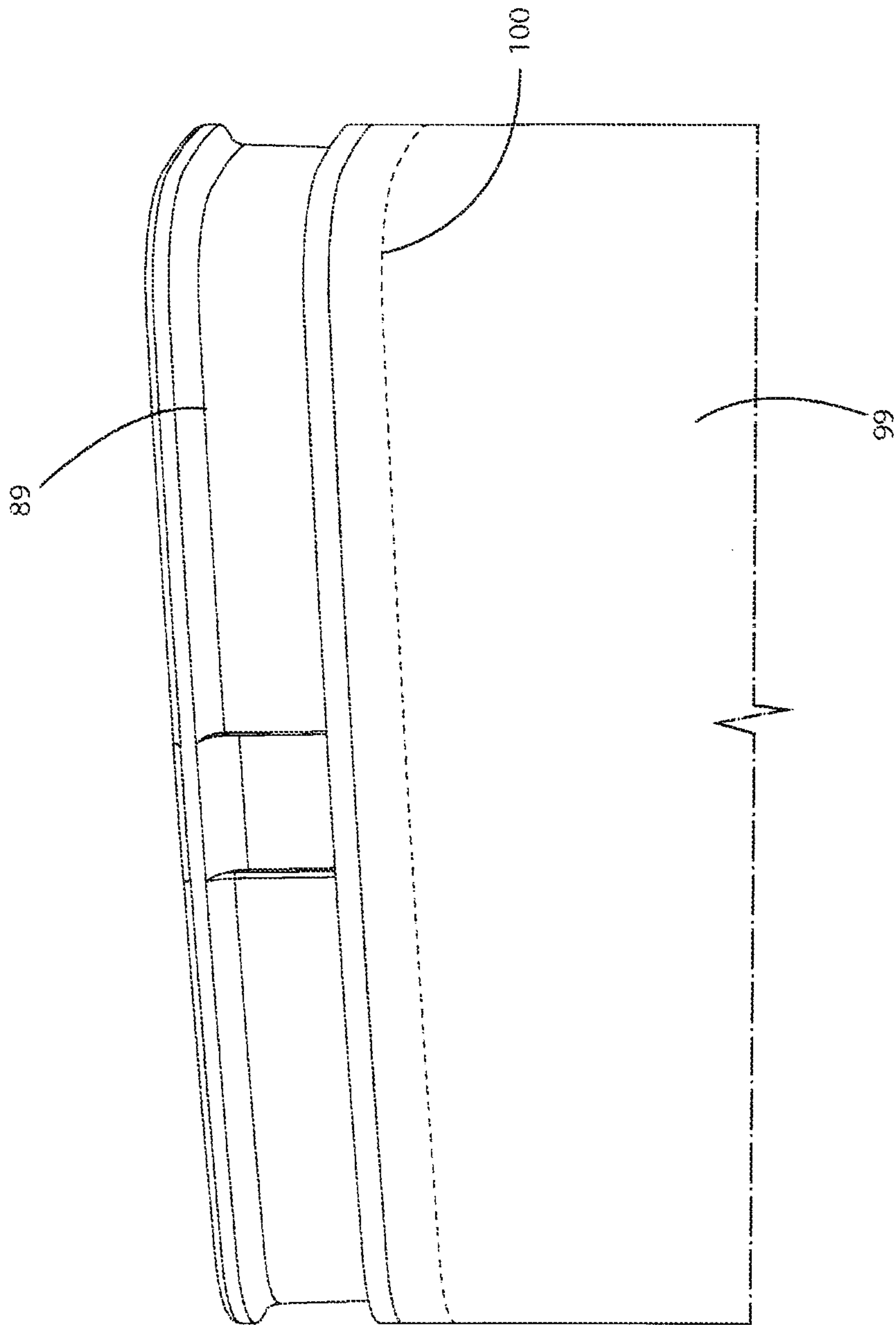


FIG. 12

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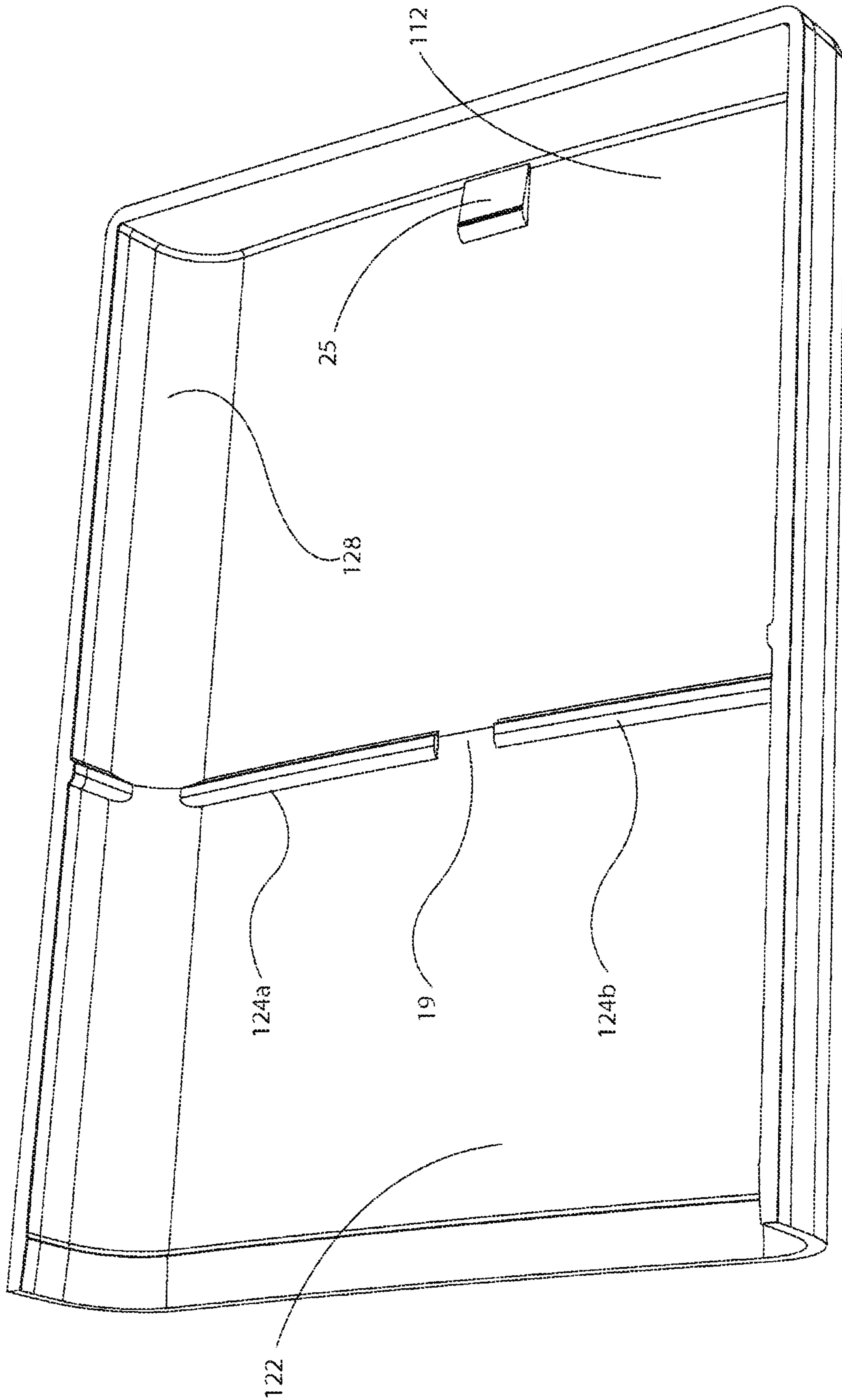


FIG. 13

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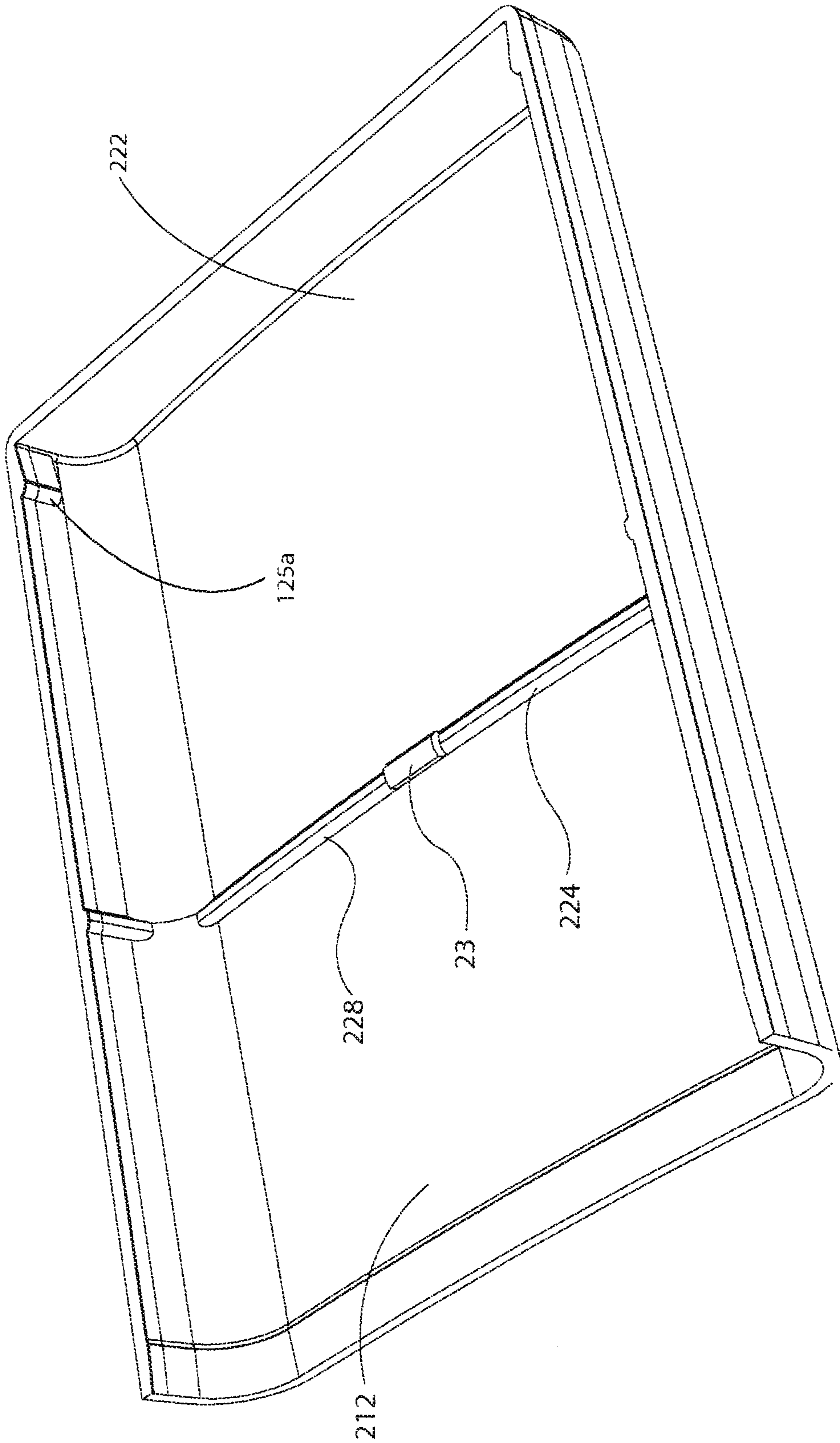


FIG. 14

