US010385554B2

(12) **United States Patent**
O'Neill et al.

(10) **Patent No.: US 10,385,554 B2**
(45) **Date of Patent: Aug. 20, 2019**

(54) **OUTLET BOX**

(71) Applicant: **Accor Technology, Inc.**, Kirkland, WA (US)

(72) Inventors: **Jerry Edward O'Neill**, Kirkland, WA (US); **Charlie E Whitney, Jr.**, East Wenatchee, WA (US)

(73) Assignee: **Accor Technology, Inc.**, Kirkland, WA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **15/721,589**

(22) Filed: **Sep. 29, 2017**

(65) **Prior Publication Data**

US 2018/0094411 A1 Apr. 5, 2018

Related U.S. Application Data

(60) Provisional application No. 62/402,896, filed on Sep. 30, 2016.

(51) **Int. Cl.**

E03C 1/02	(2006.01)
D06F 39/08	(2006.01)
E03B 7/09	(2006.01)
E03C 1/184	(2006.01)

(52) **U.S. Cl.**

CPC ***E03C 1/021*** (2013.01); ***D06F 39/08*** (2013.01); ***E03B 7/095*** (2013.01); *E03C 1/184* (2013.01); *Y10T 137/698* (2015.04)

(58) **Field of Classification Search**

CPC Y10T 137/698; D06F 39/08; E03C 1/021; E03B 7/095

See application file for complete search history.

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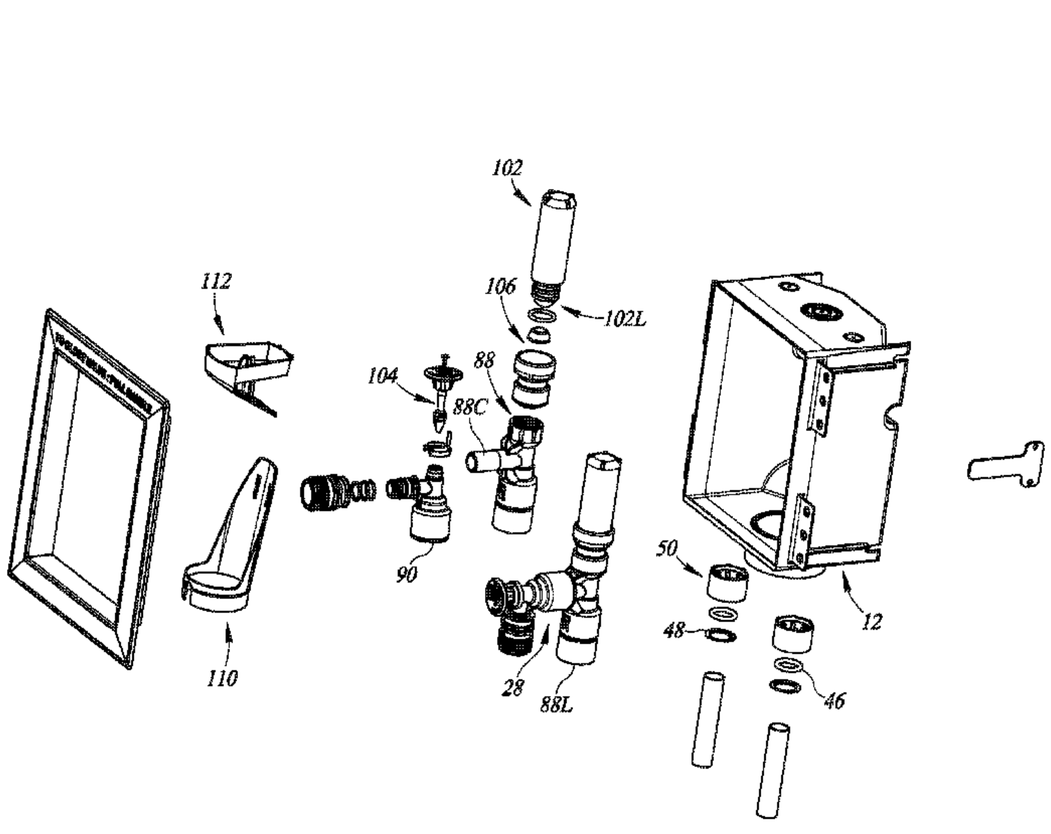
Primary Examiner — Kevin F Murphy

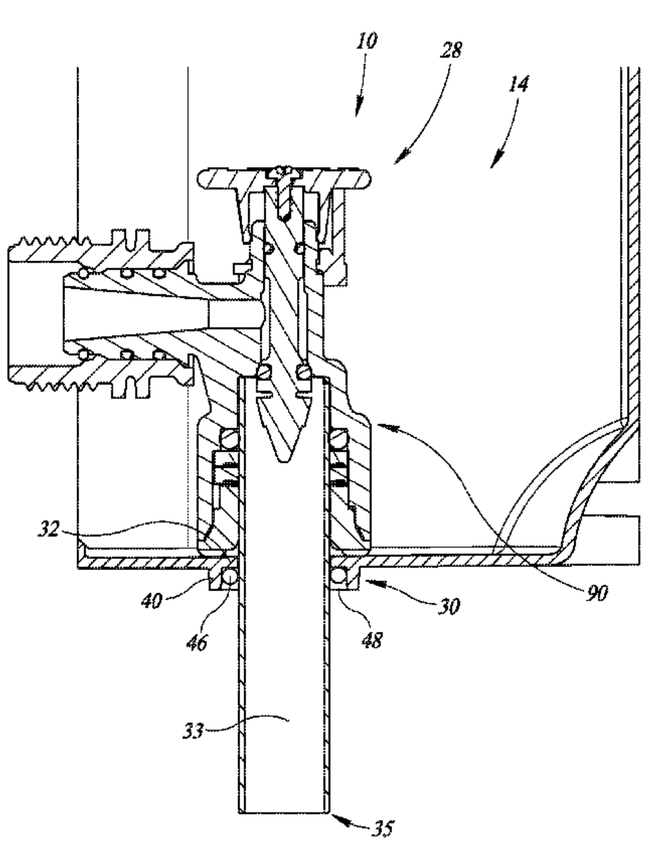
(74) *Attorney, Agent, or Firm* — Davis Wright Tremaine LLP; George C. Rondeau, Jr.

(57) **ABSTRACT**

A utility box for mounting at least in part within a wall for use with a fluid carrying supply pipe, the box comprising, a housing including a top wall, a bottom wall, a first side wall and a second side wall, a back wall and a front opening providing access into an interior of the housing defined by the top, bottom, first side, second side and back walls, a bottom wall aperture in the bottom wall sized for extending the pipe through the bottom wall aperture with the pipe terminating in a free end portion positioned within the interior of the housing at a location above the bottom wall, a valve attachable to the free end portion of the pipe, the junction of the valve and the pipe being within the interior of the housing above the bottom wall, and a first seal positioned to provide a fluid-tight seal between the bottom wall and the pipe to prevent fluid within the interior of the housing from passing out of the interior of the housing through the bottom wall aperture.

13 Claims, 84 Drawing Sheets





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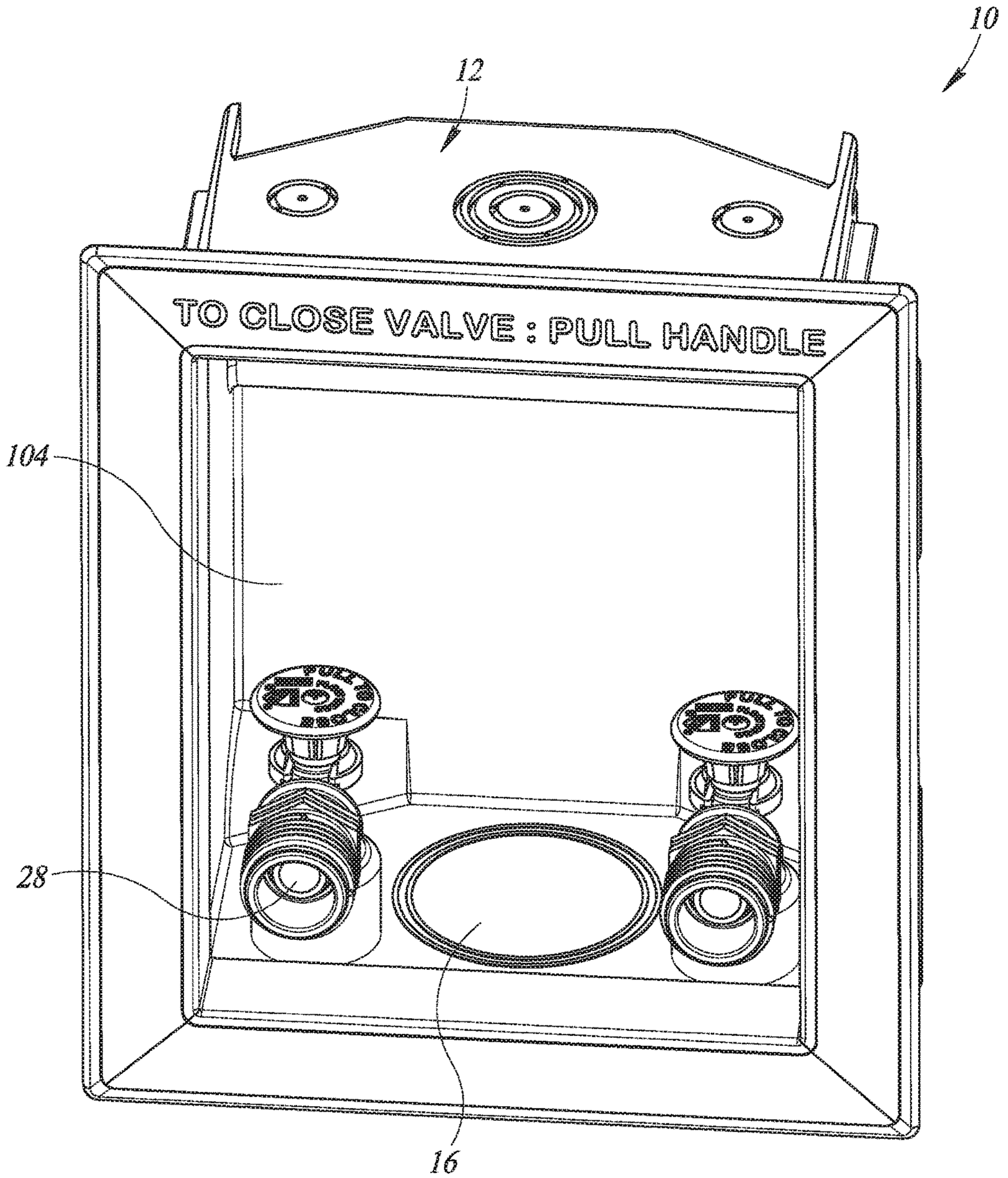
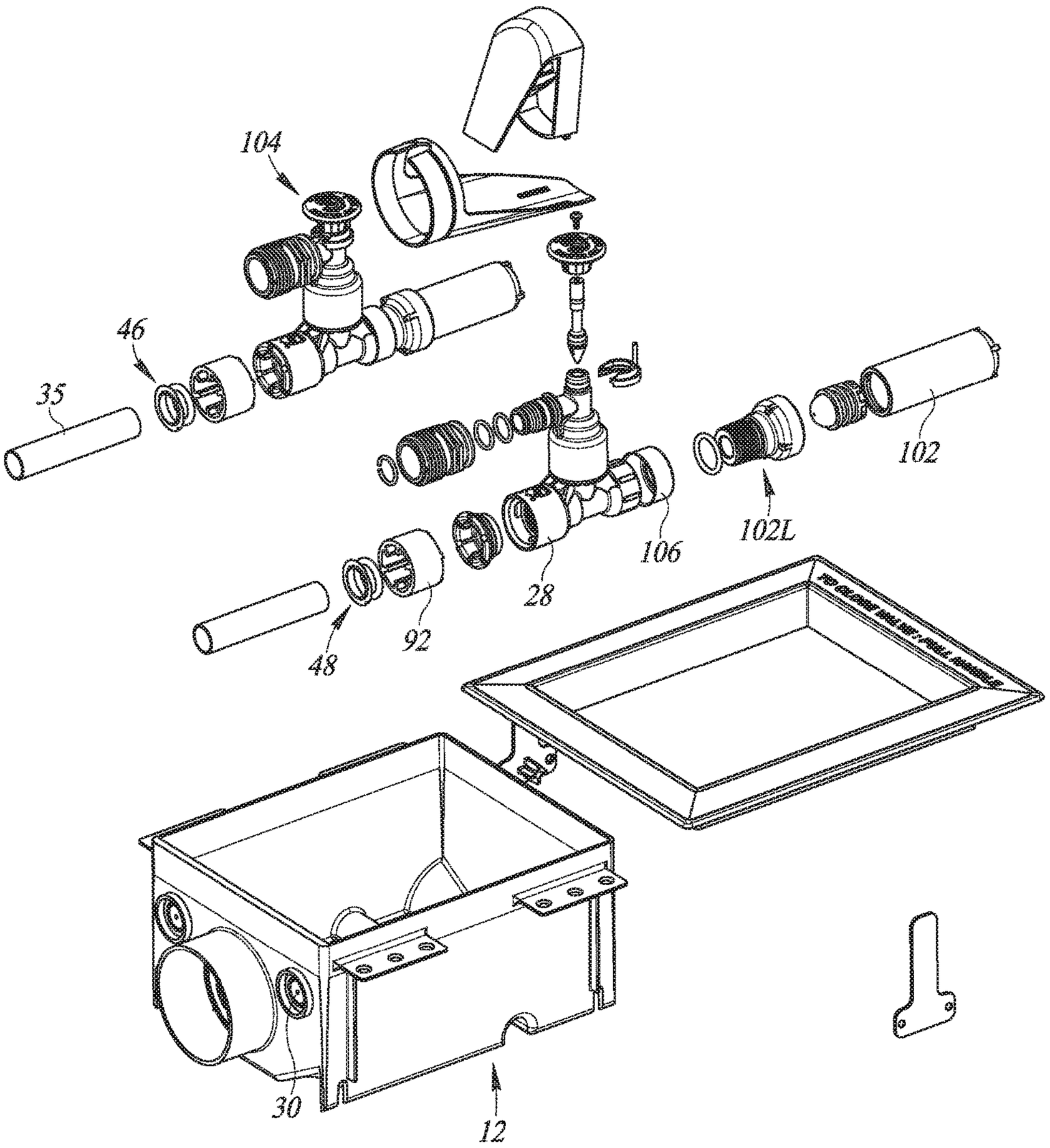


FIG. 1



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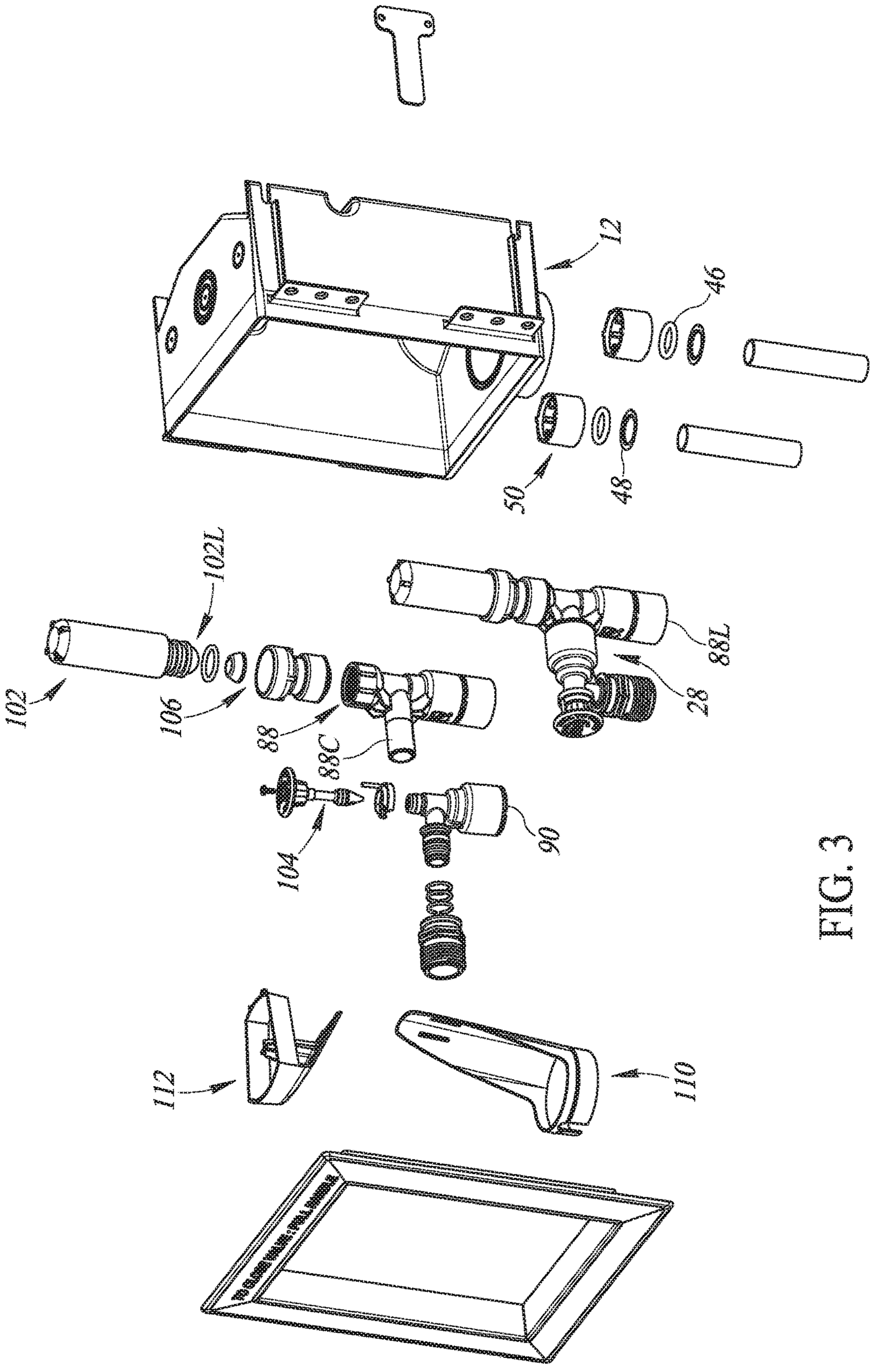


FIG. 3

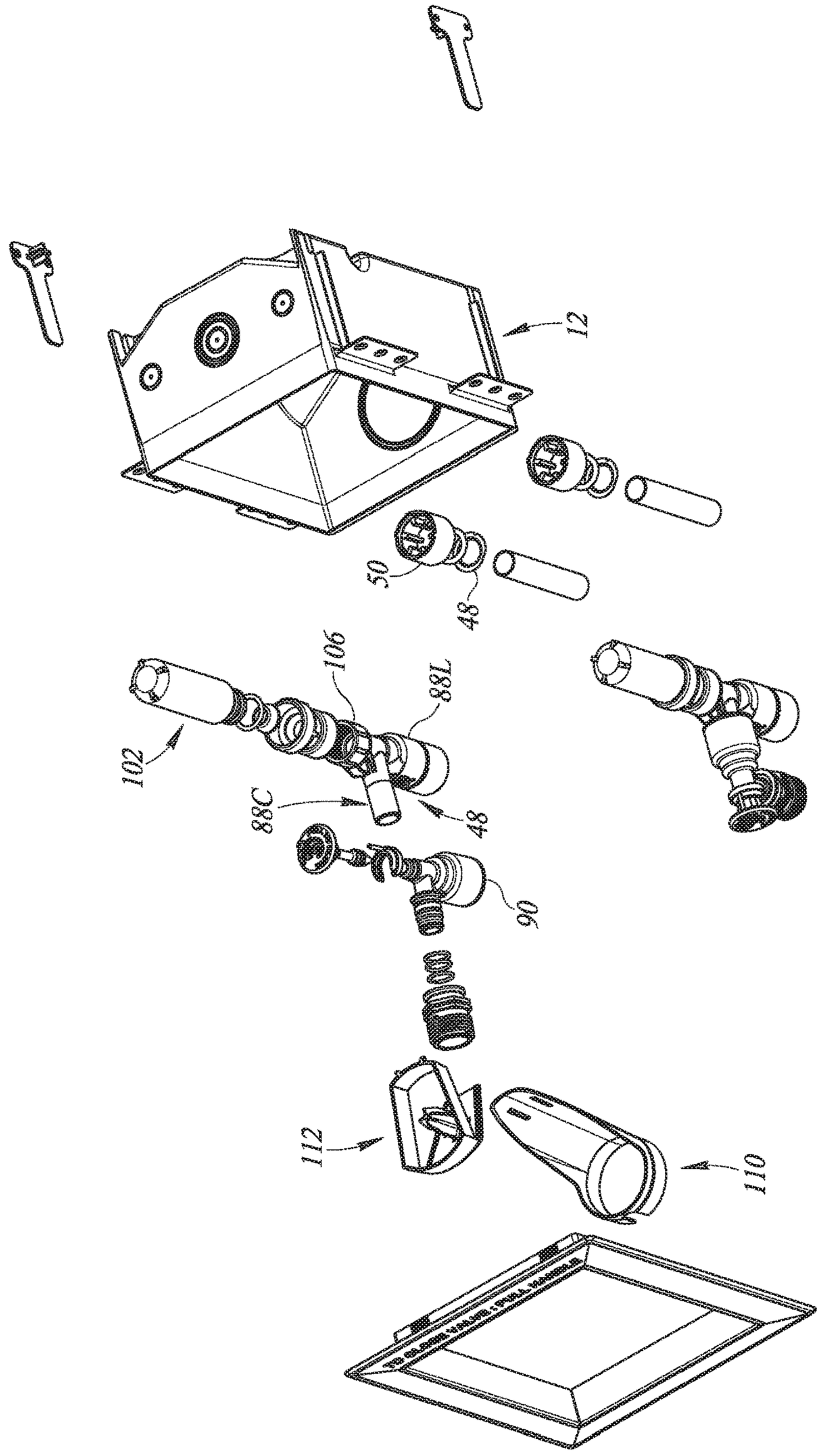
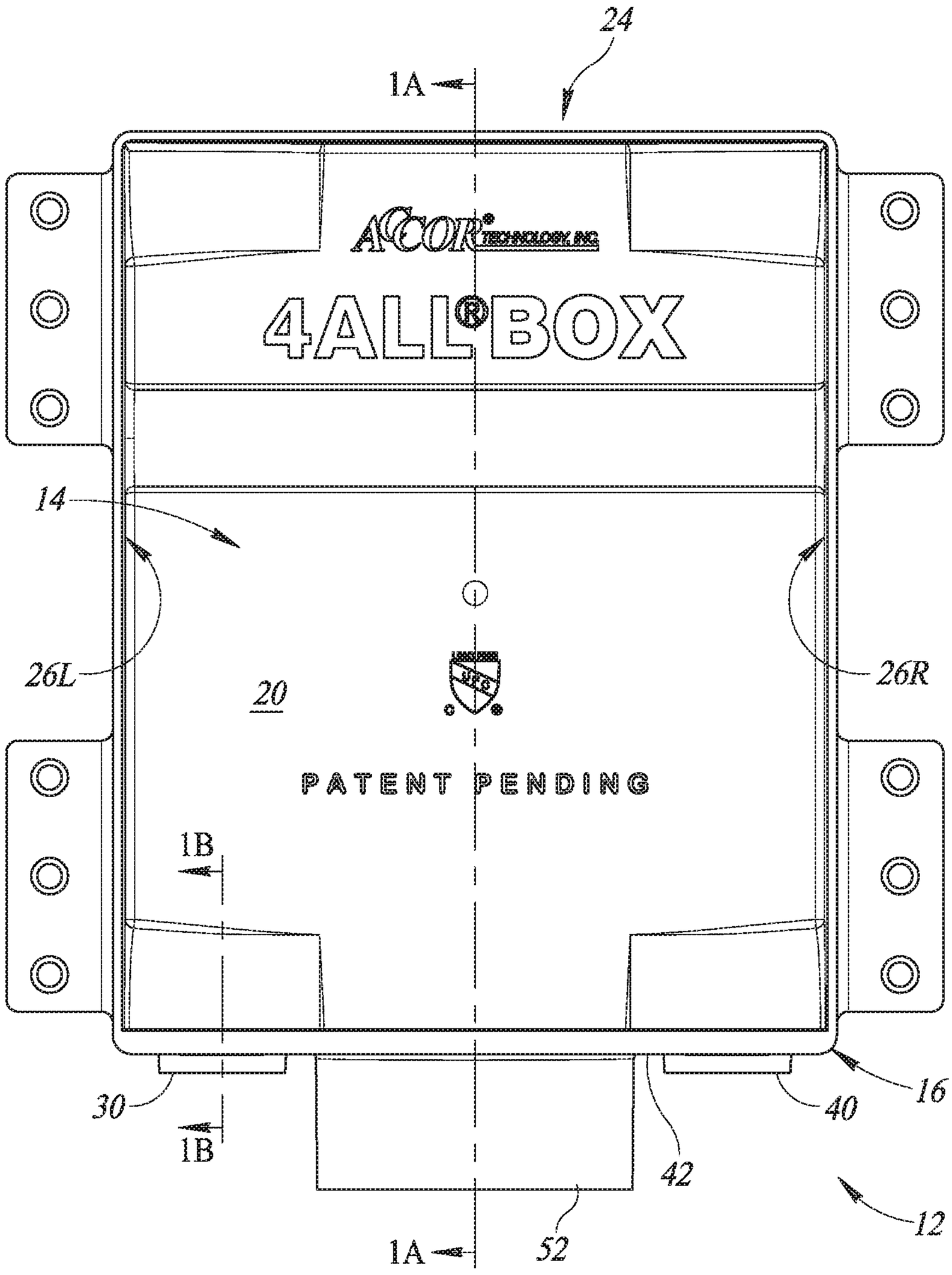


FIG. 4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4ALL® BOX
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PATENT PENDING
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FIG. 5

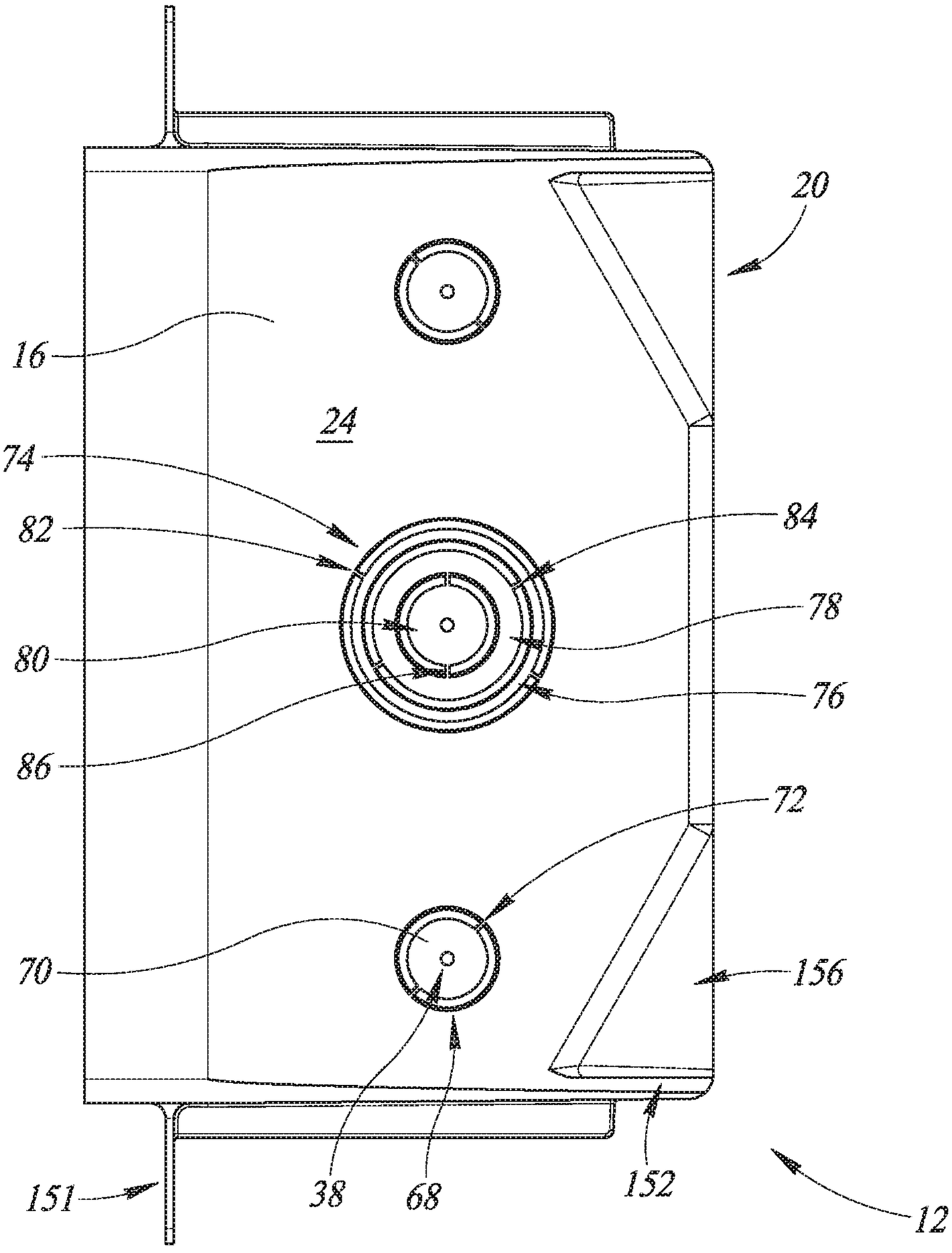


FIG. 6

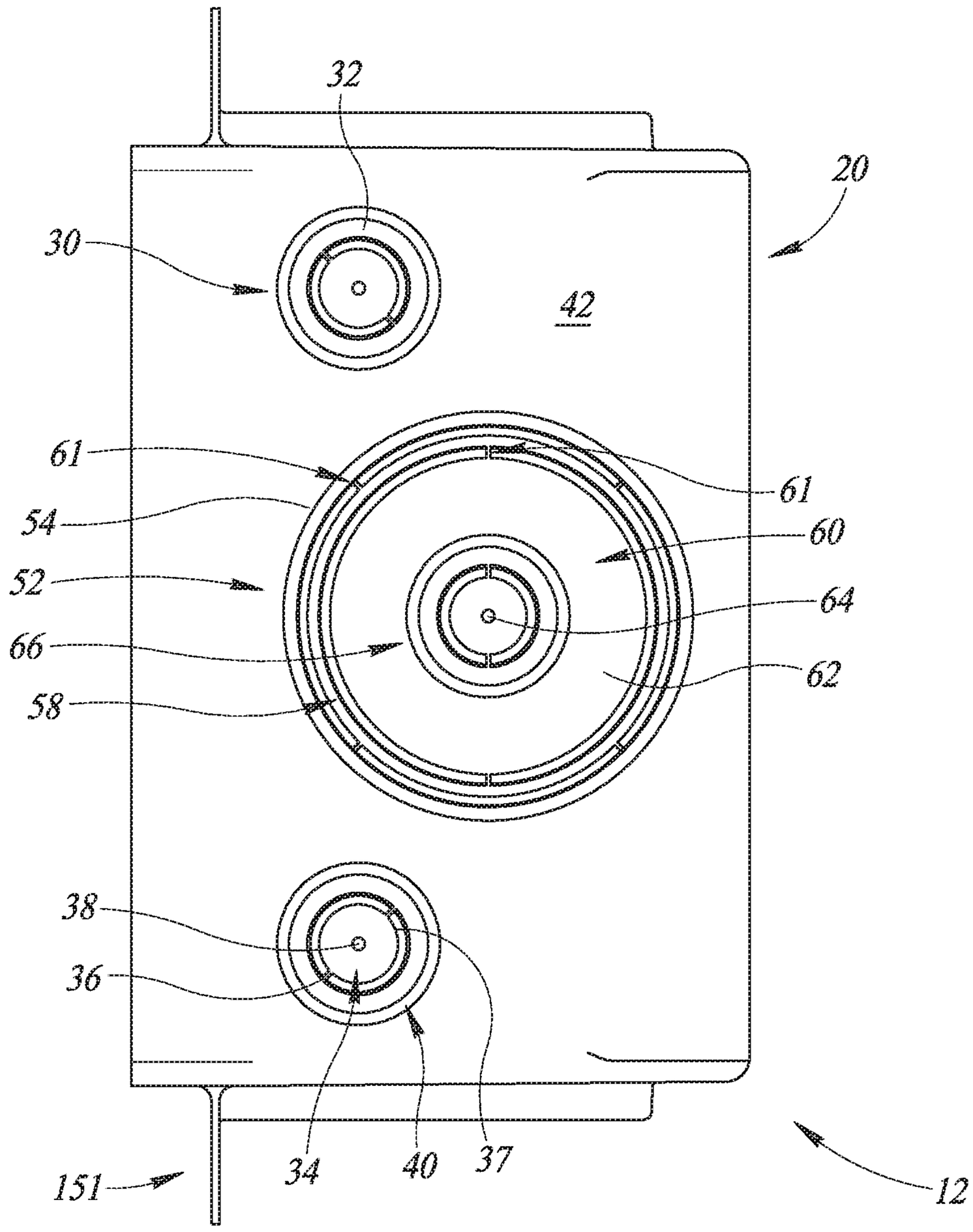


FIG. 7

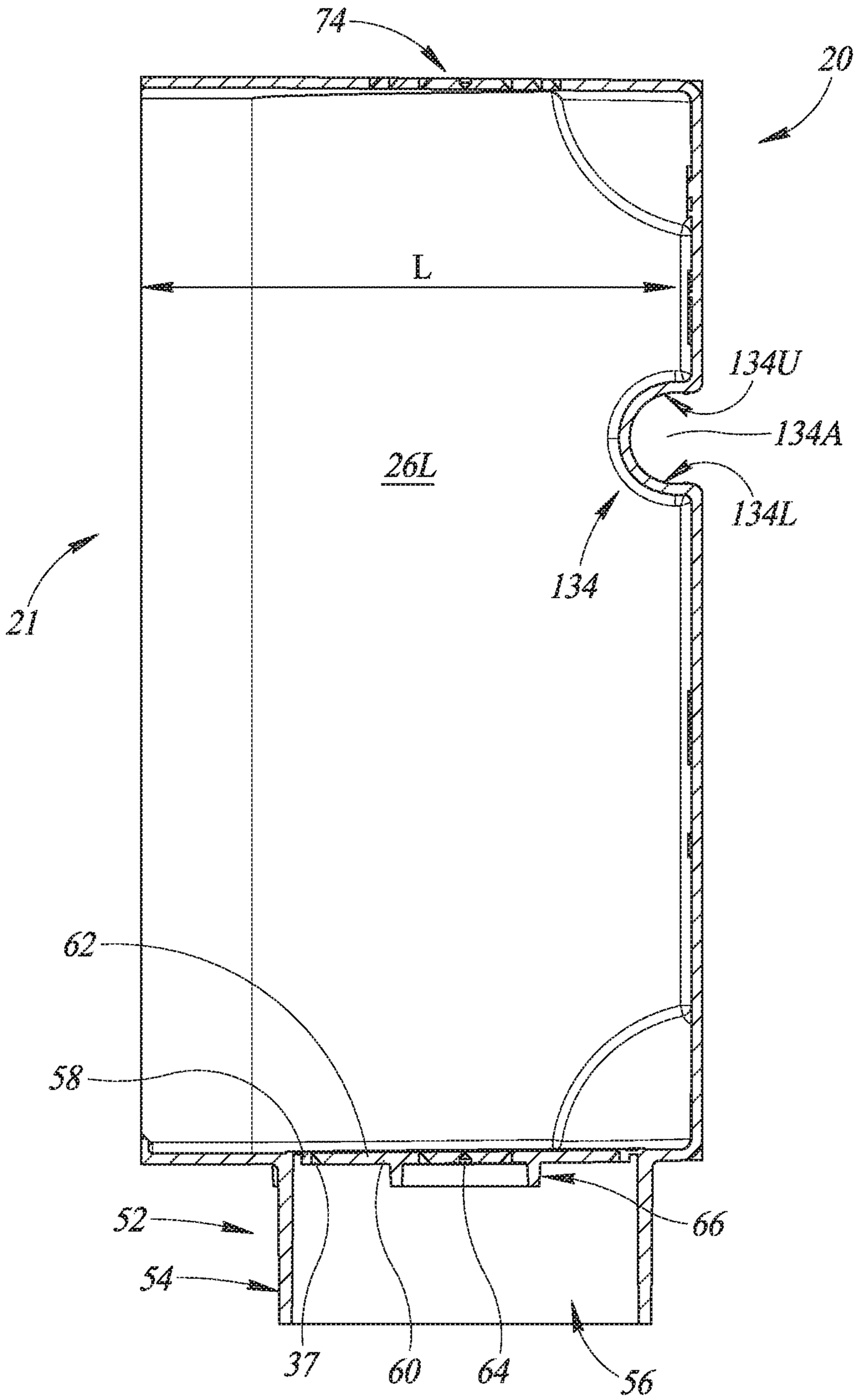


FIG. 8A

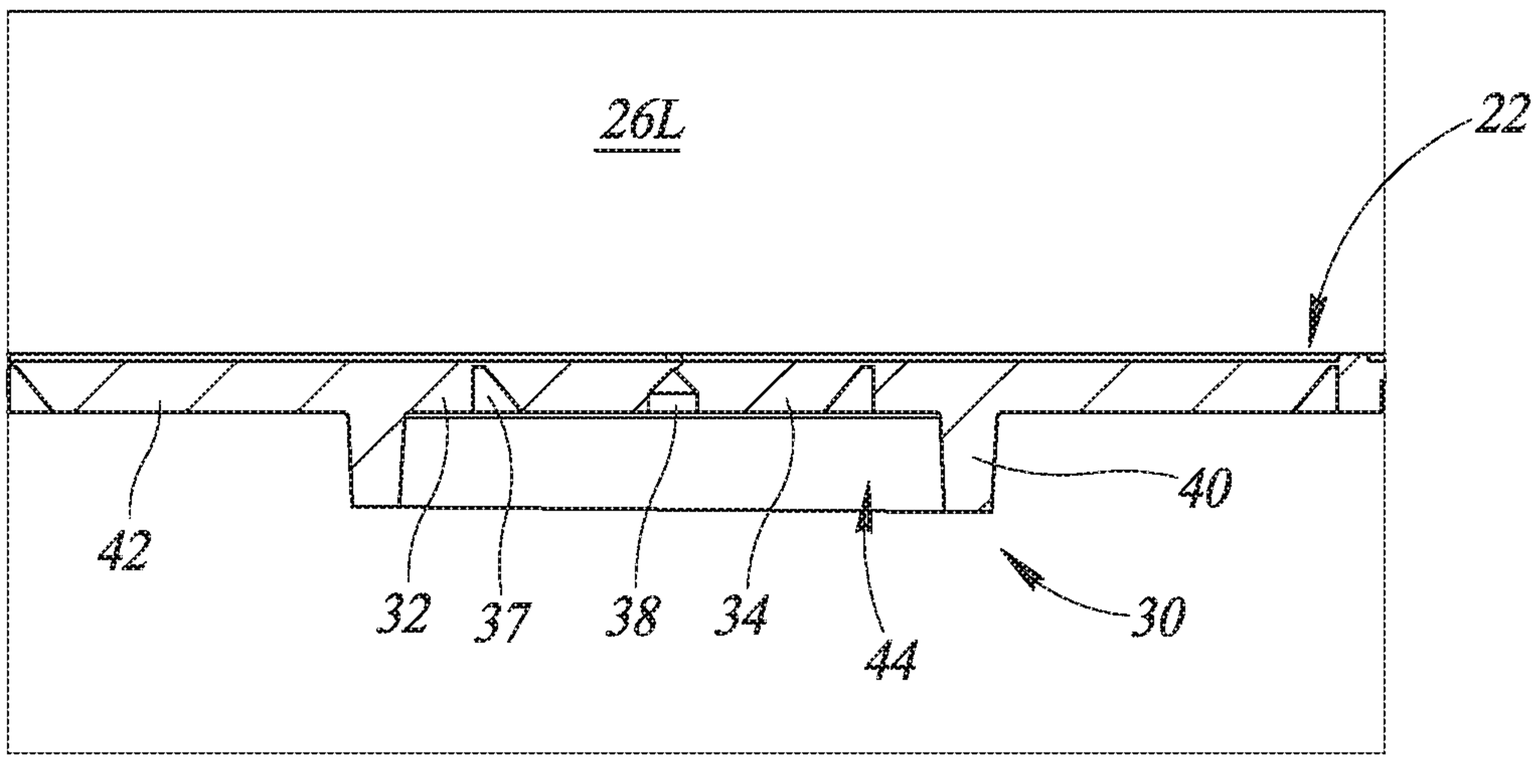
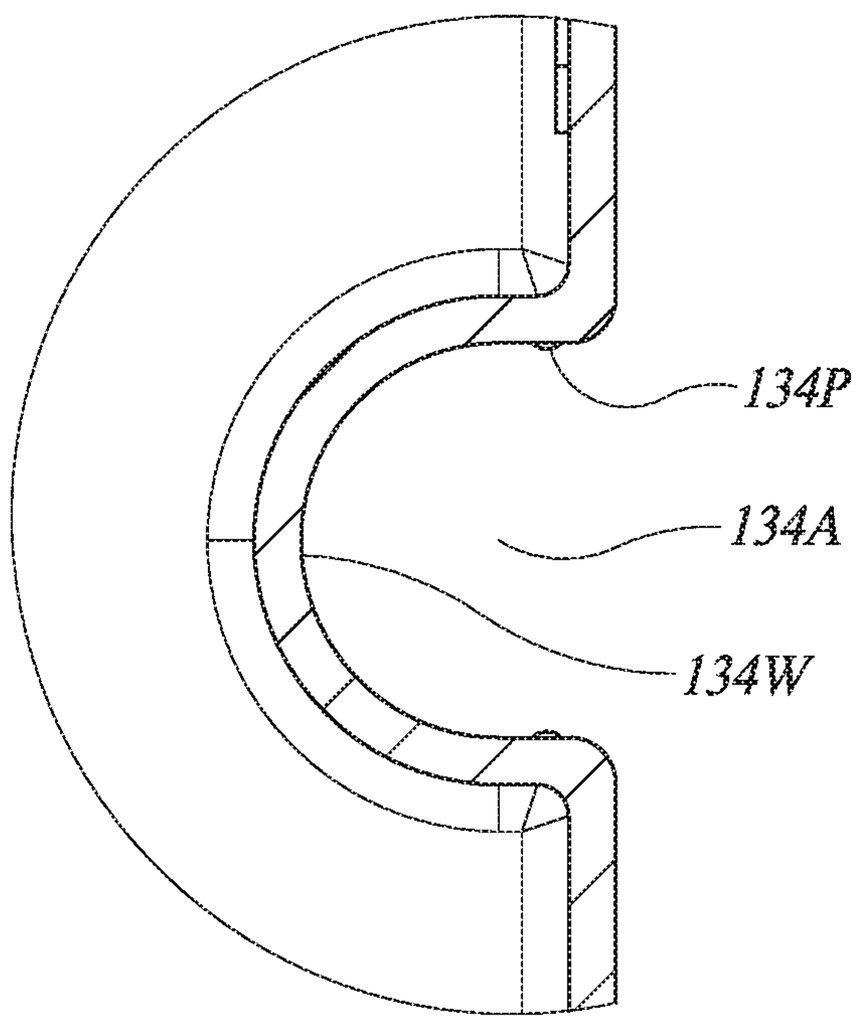


FIG. 8B



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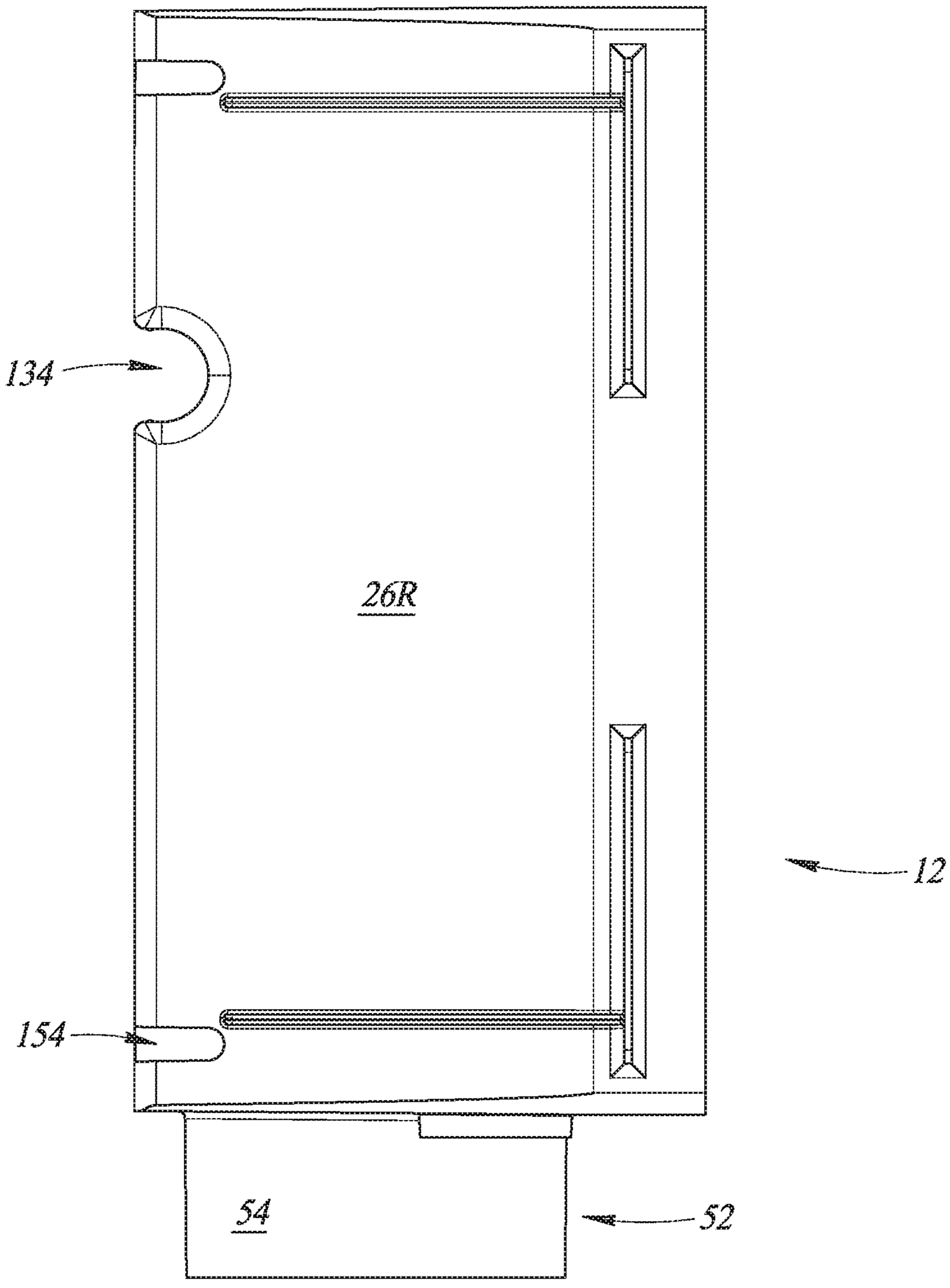
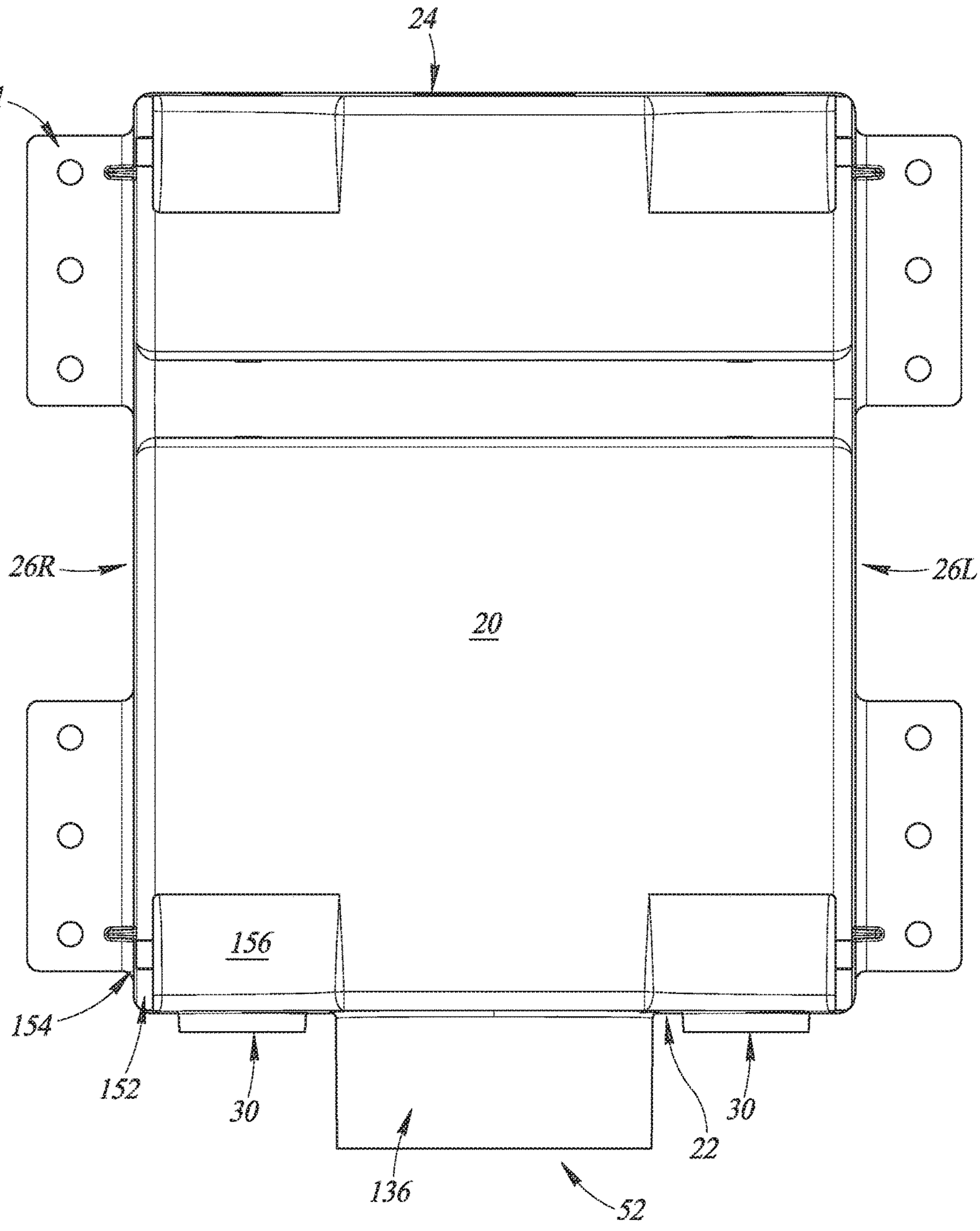


FIG. 10



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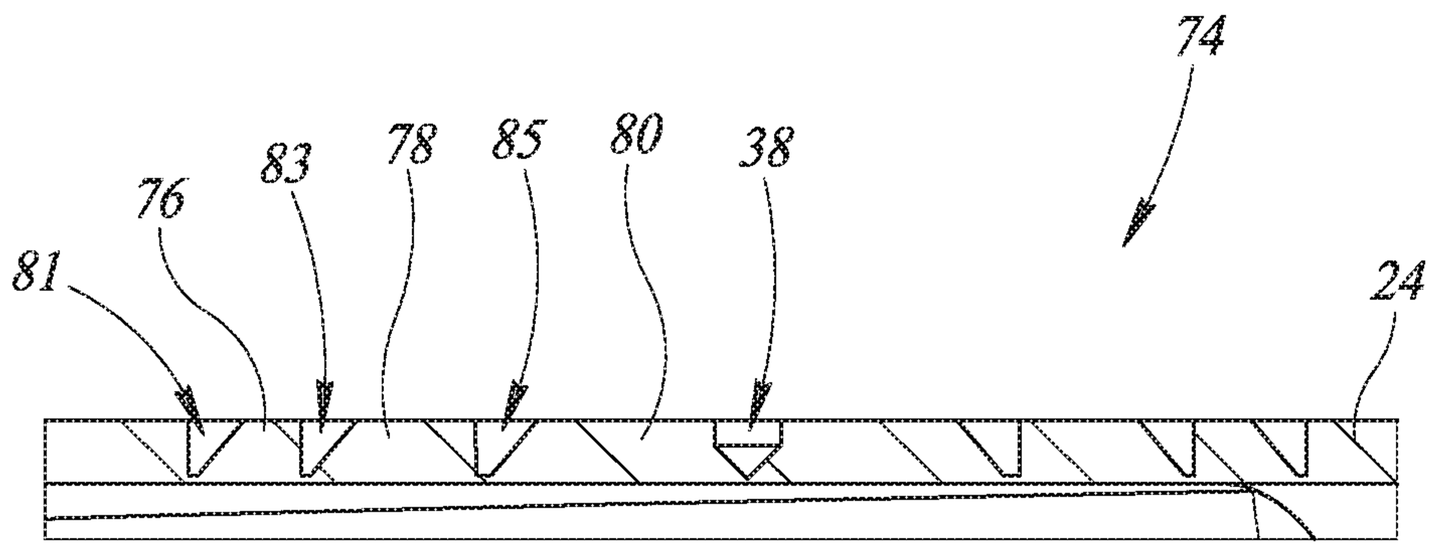


FIG. 12

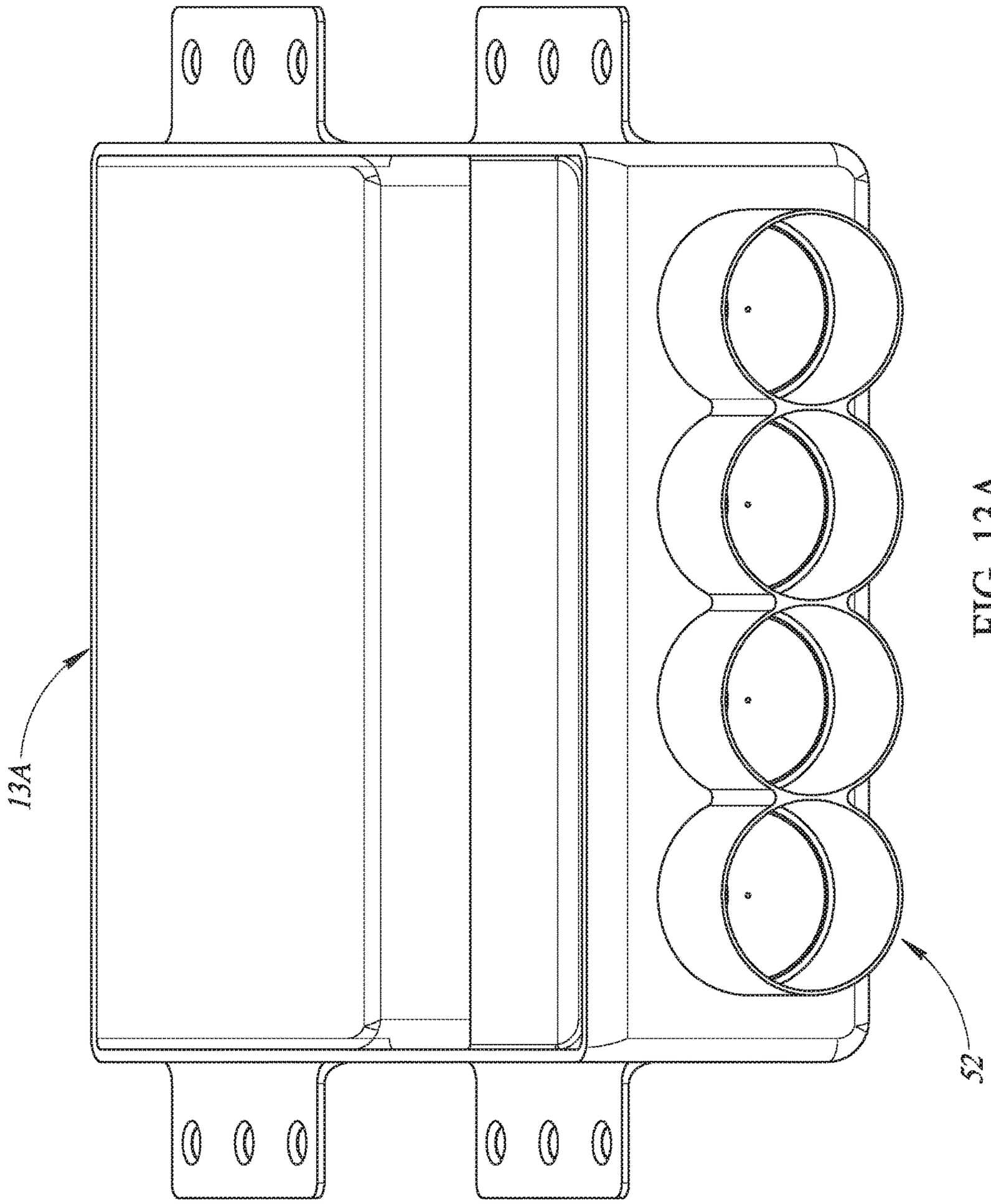


FIG. 13A

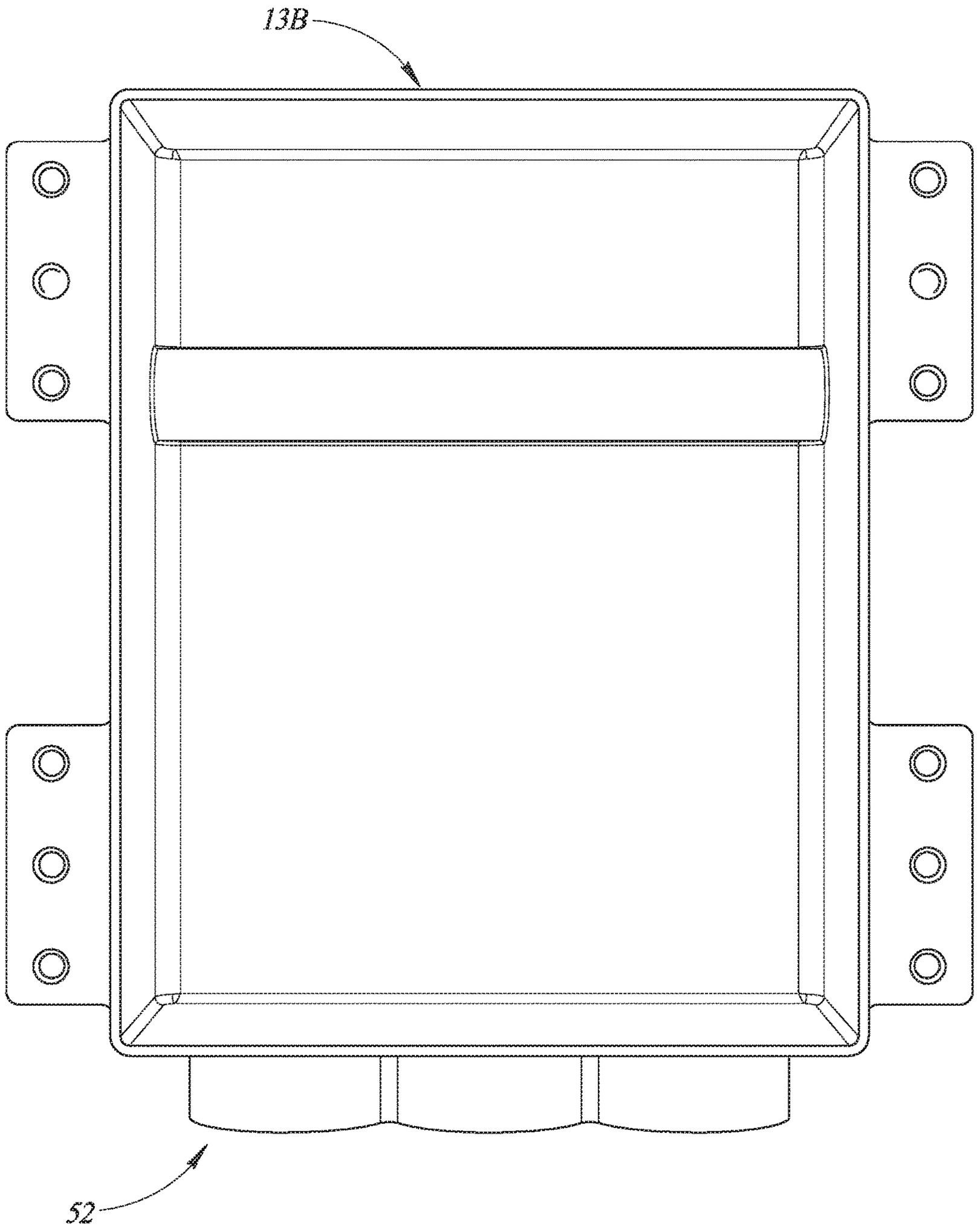


FIG. 13B

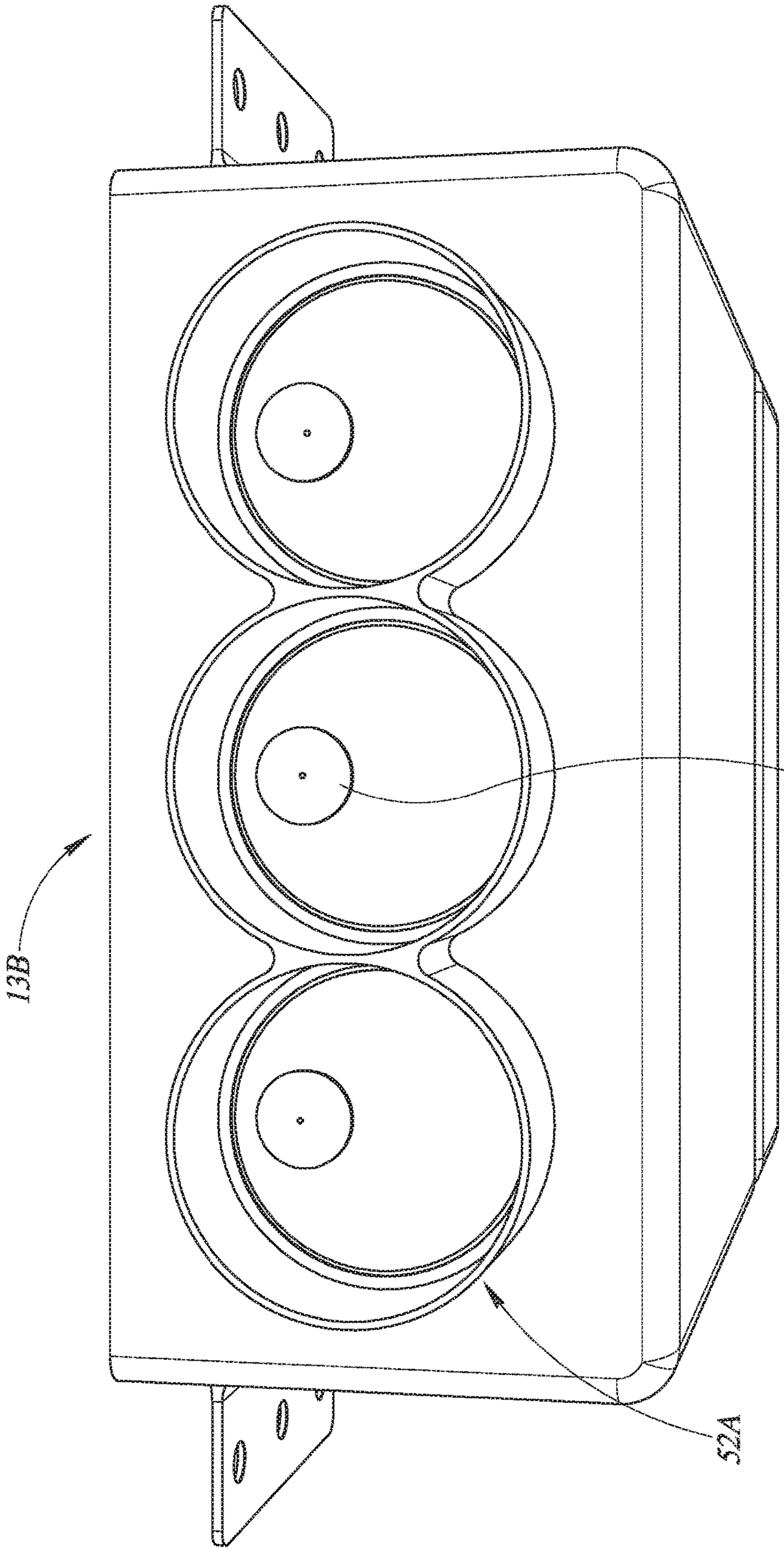
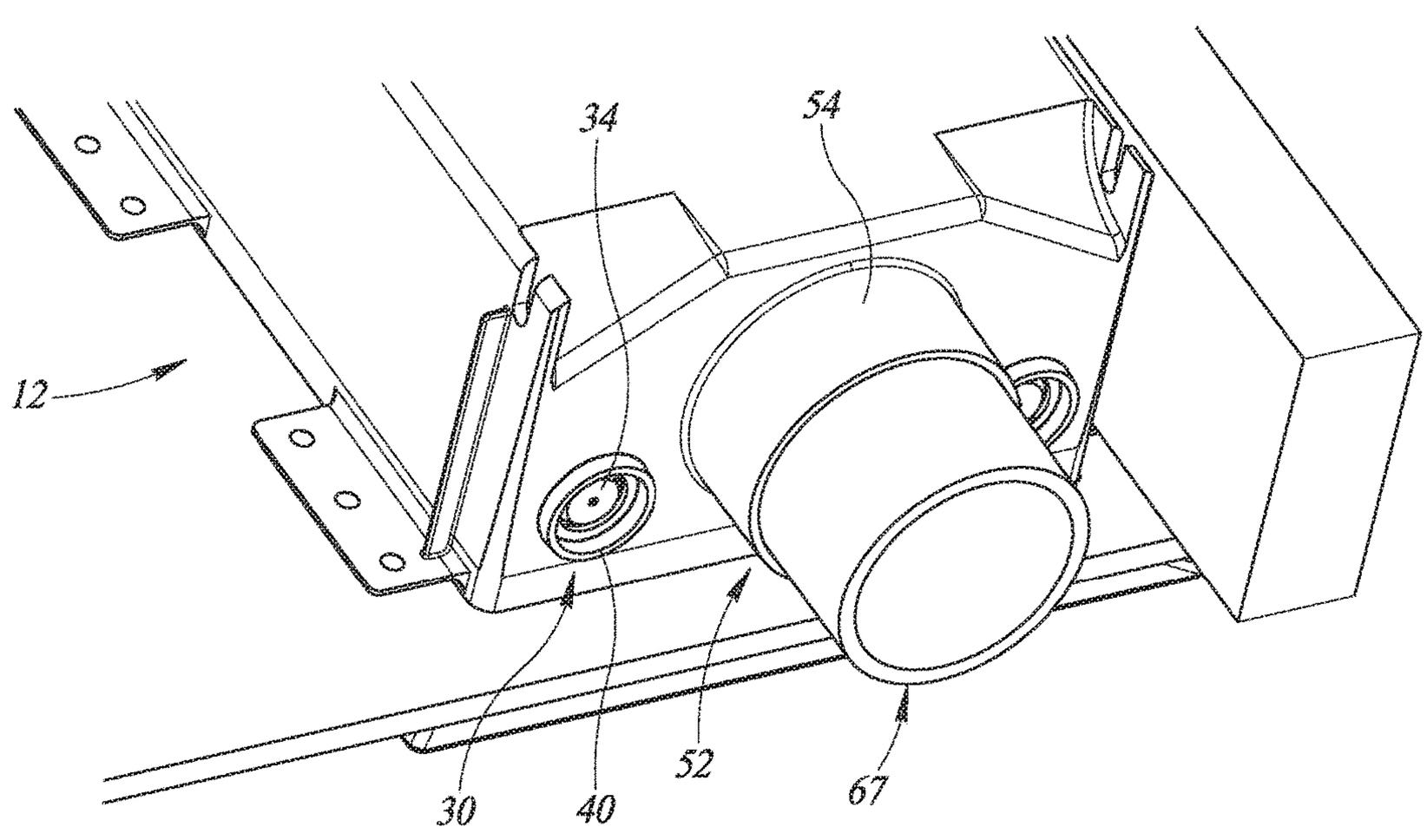


FIG. 13C



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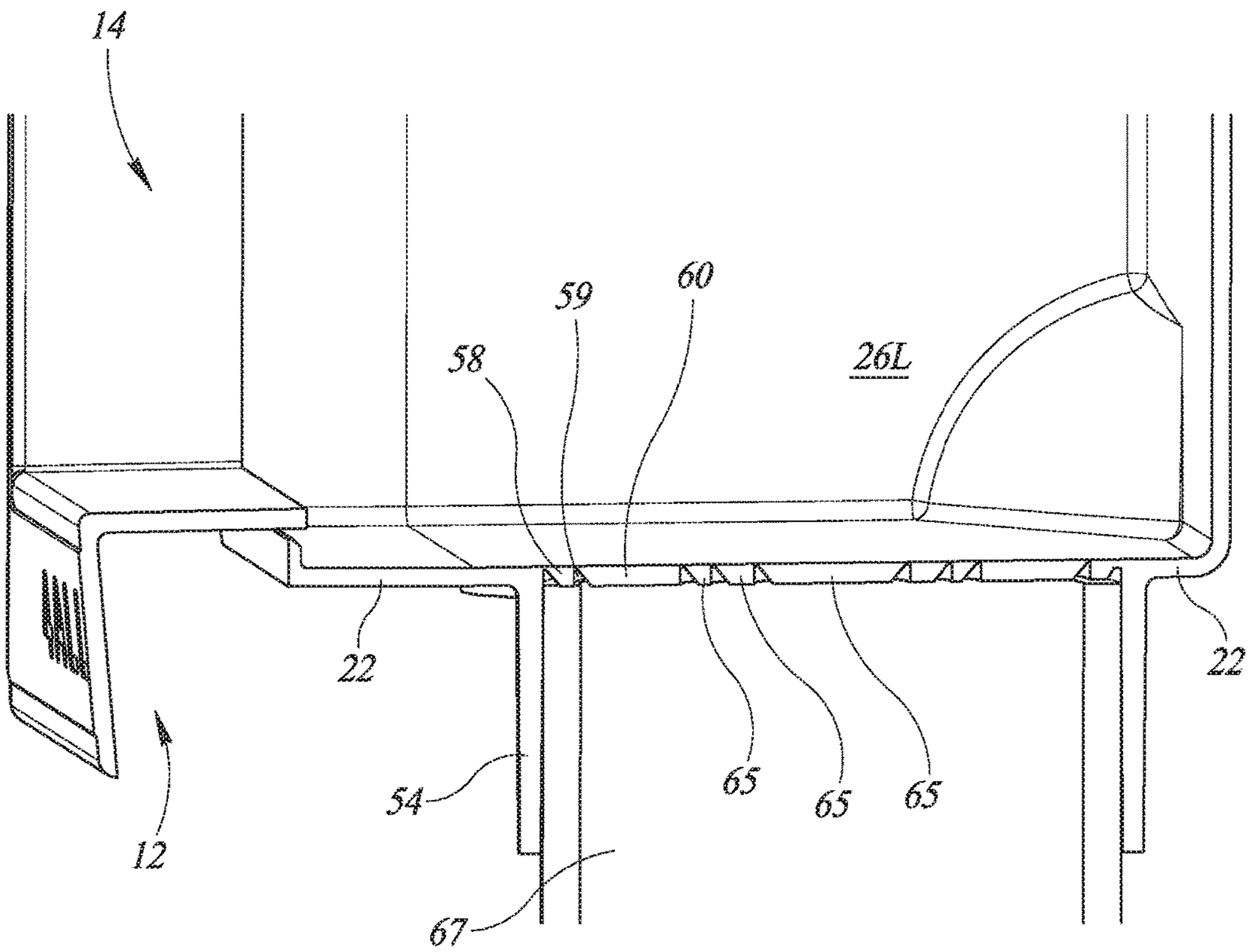

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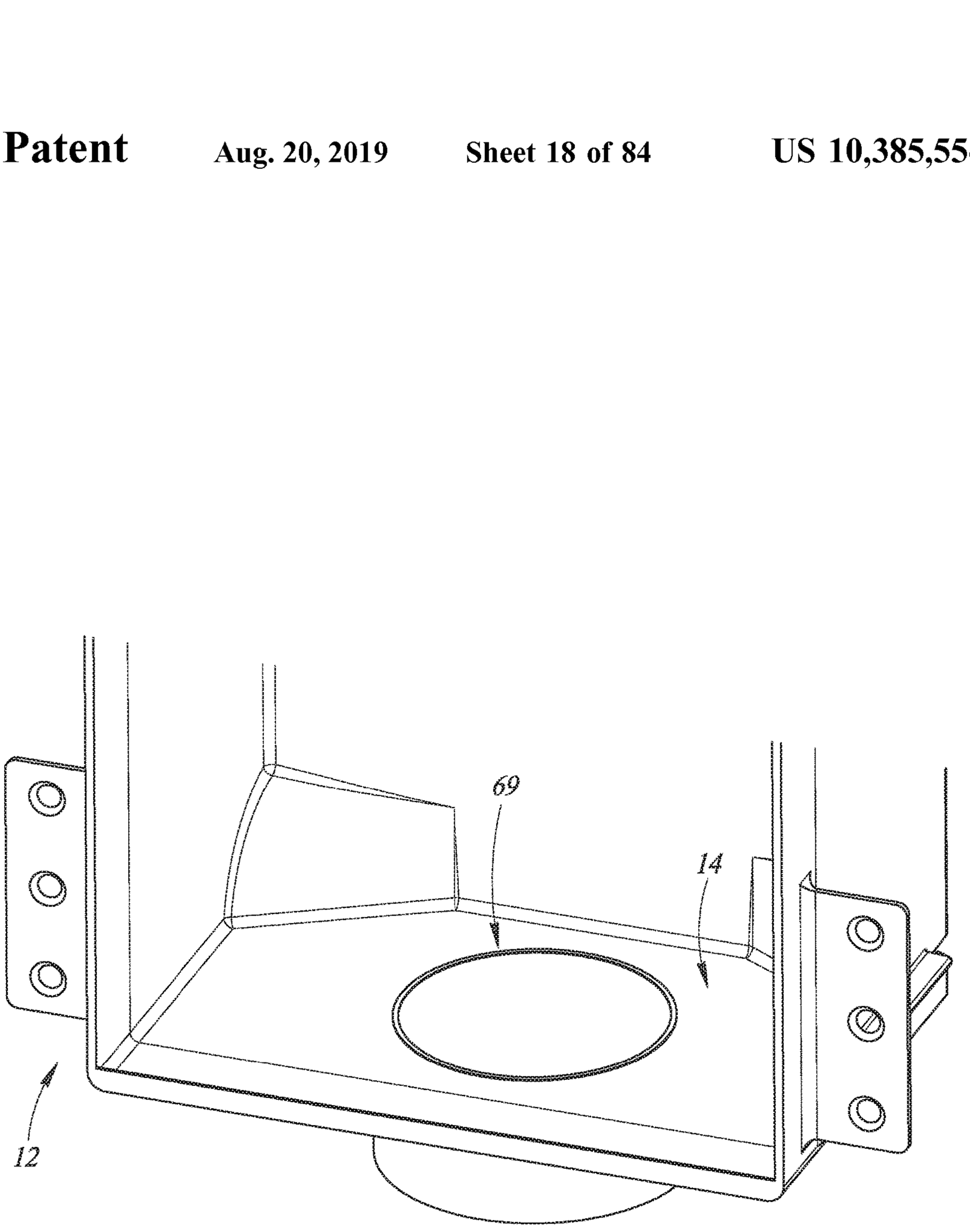

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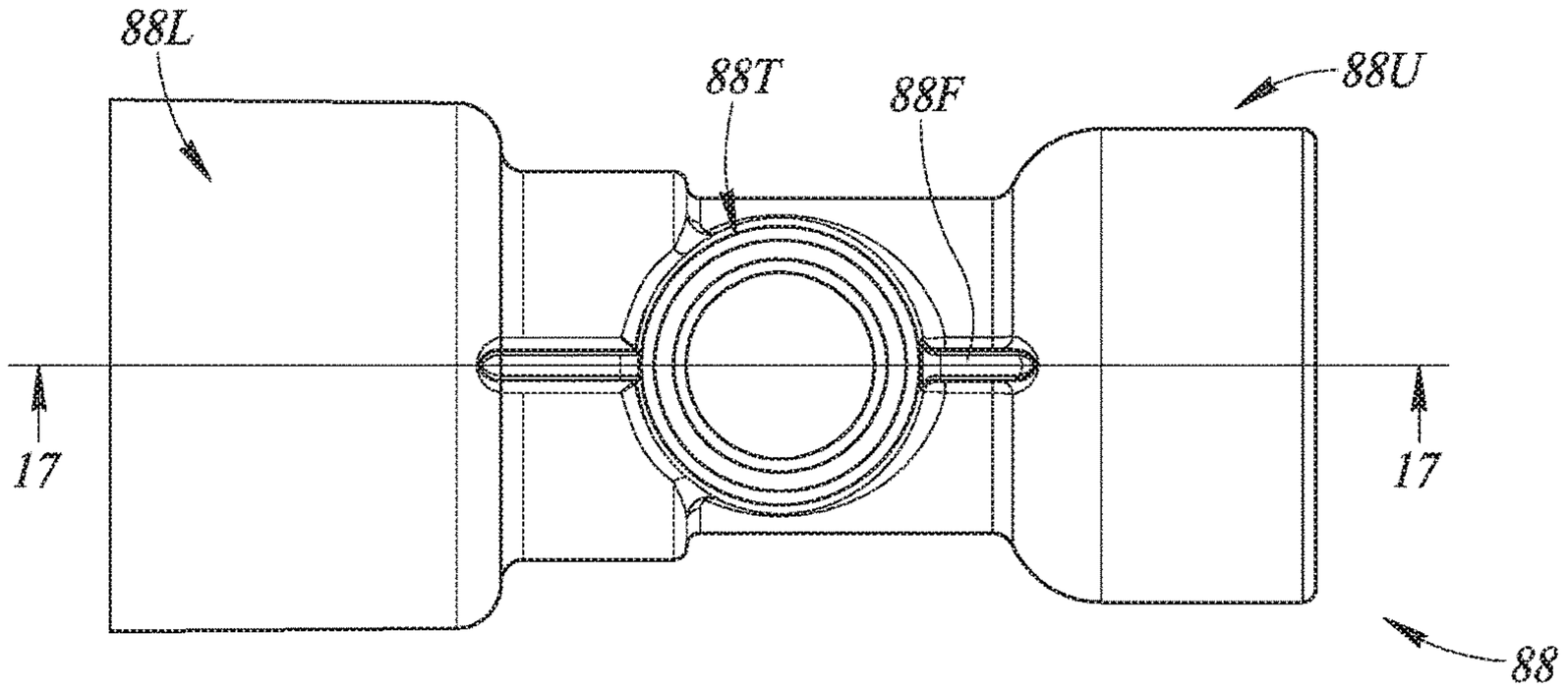


FIG. 16A

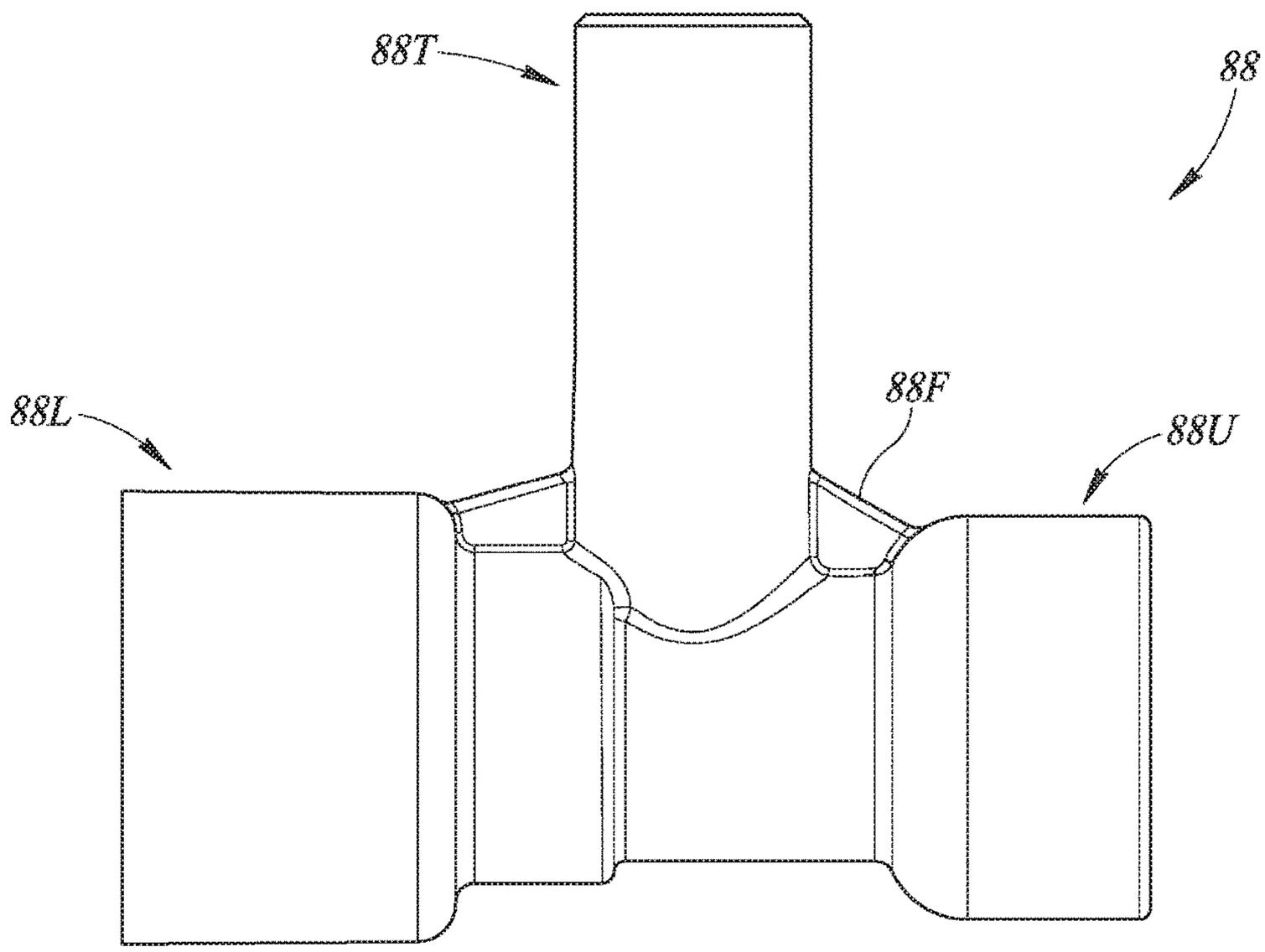
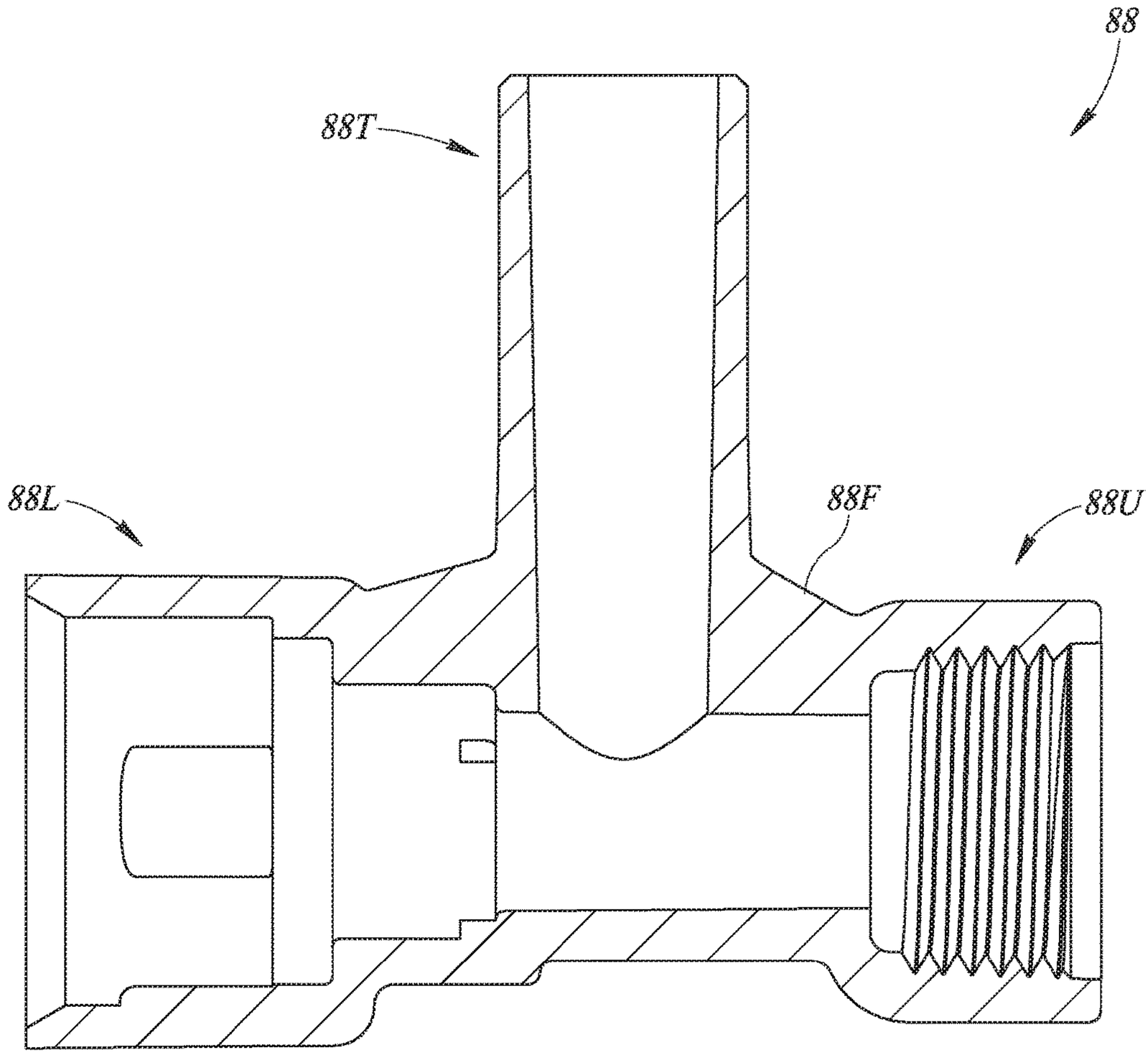


FIG. 16B



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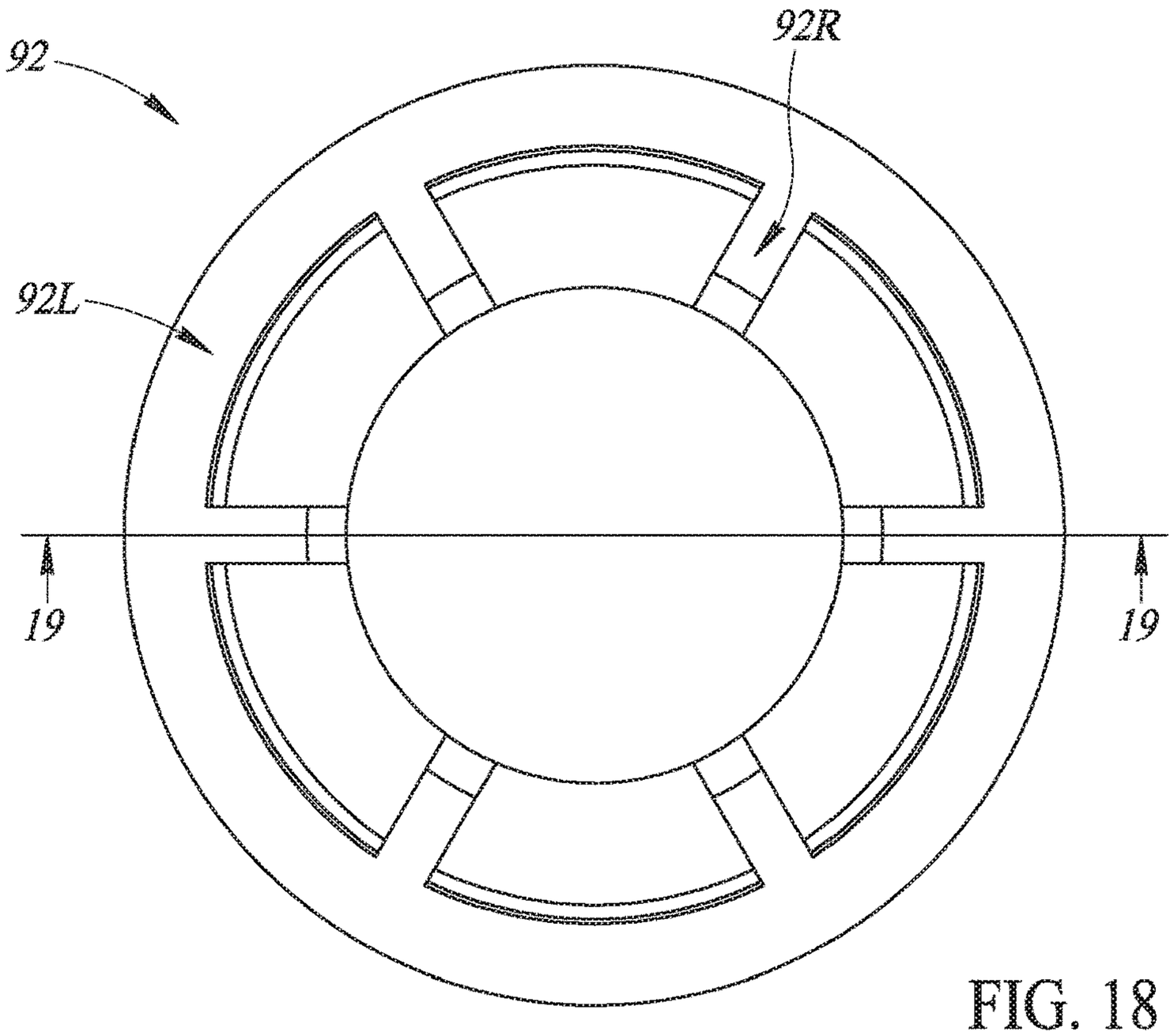


FIG. 18

FIG. 19

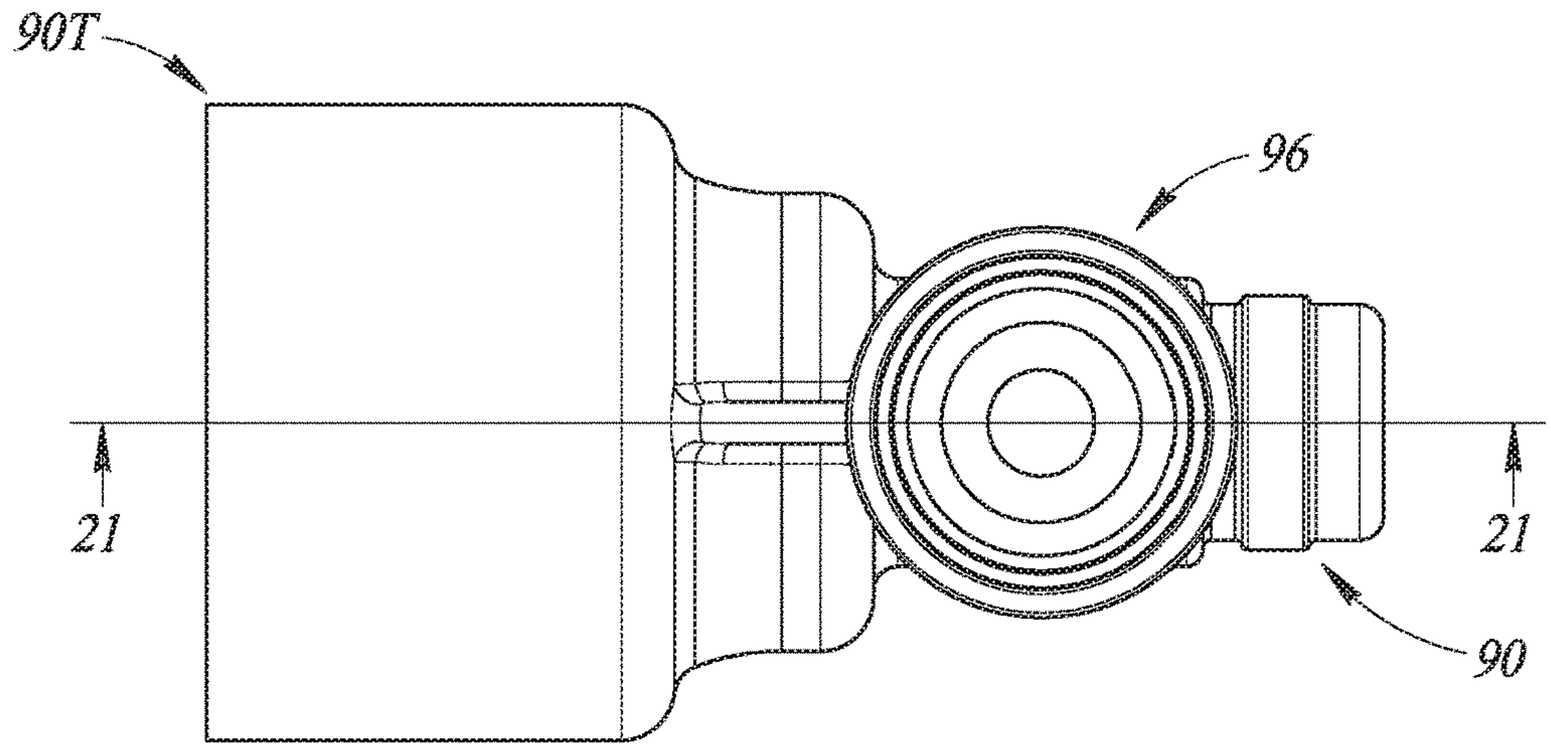


FIG. 20A

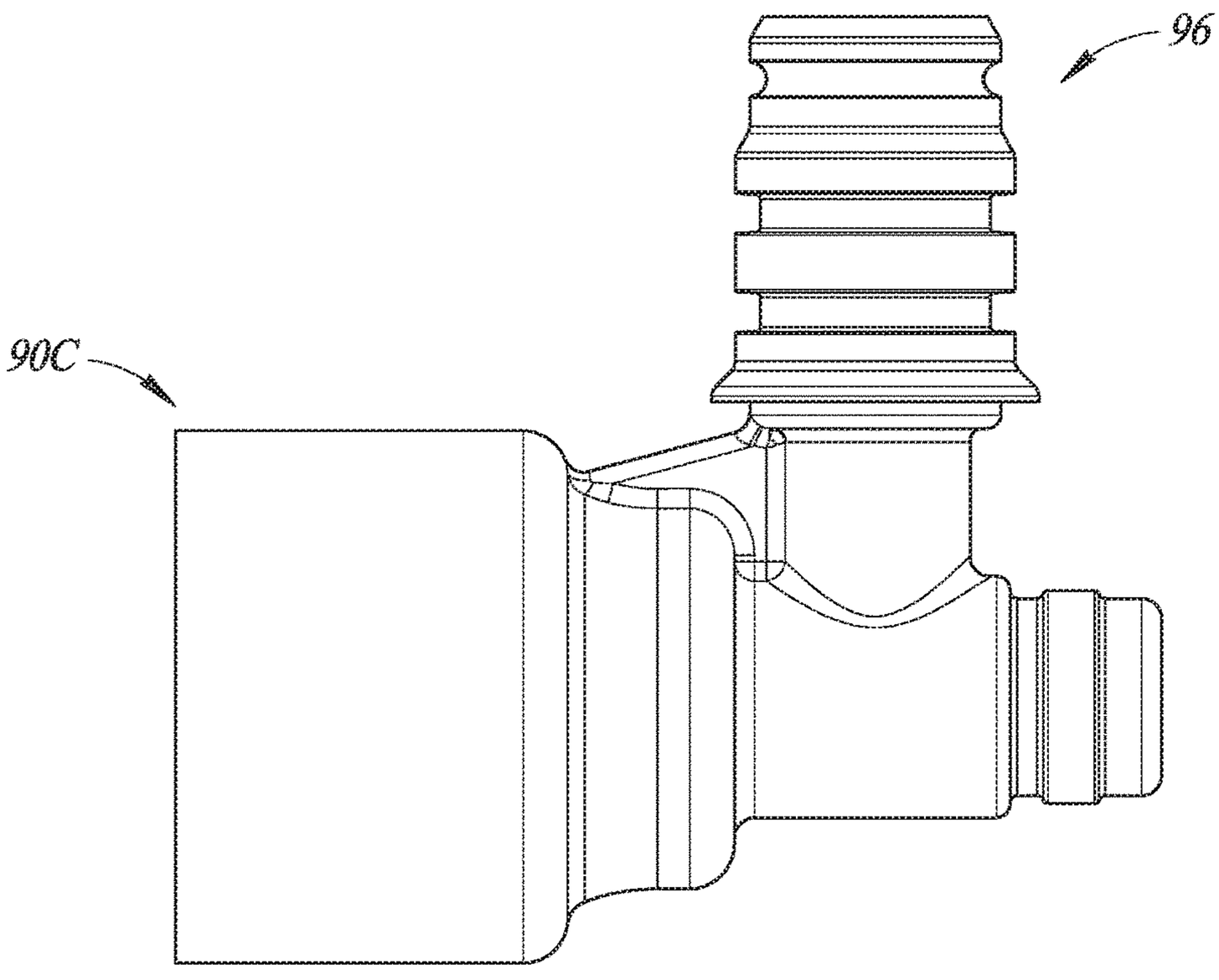


FIG. 20B

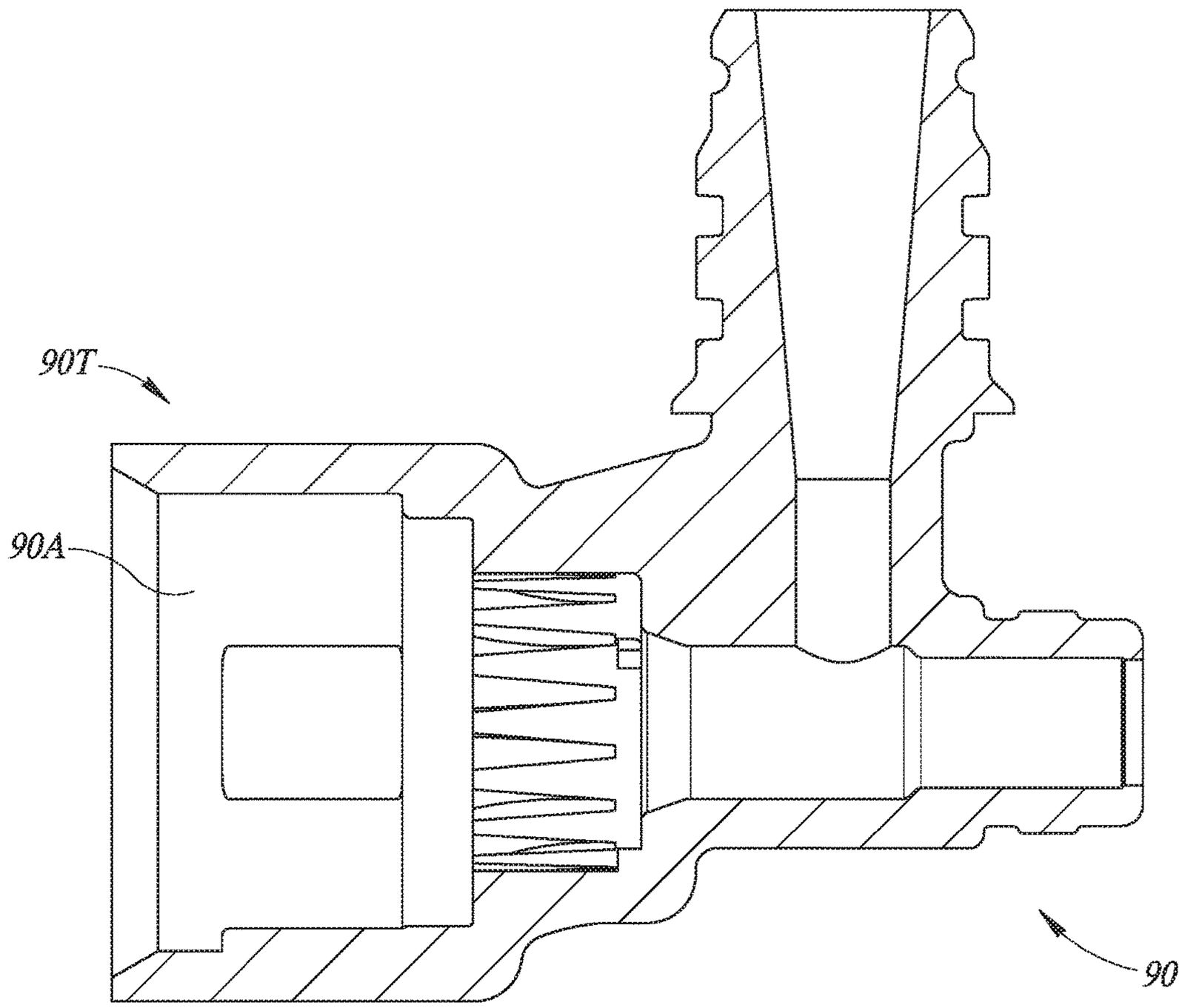


FIG. 21

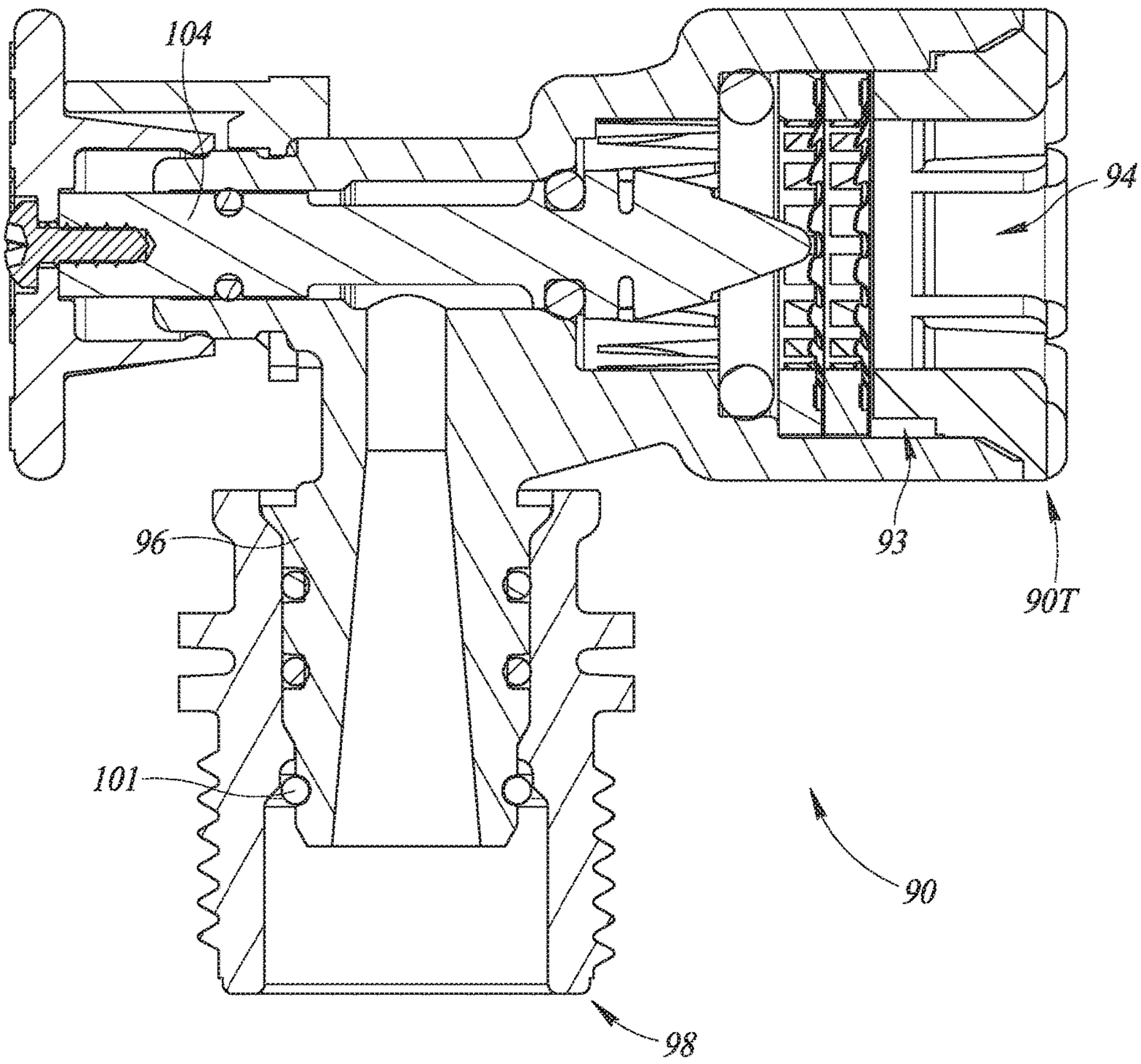
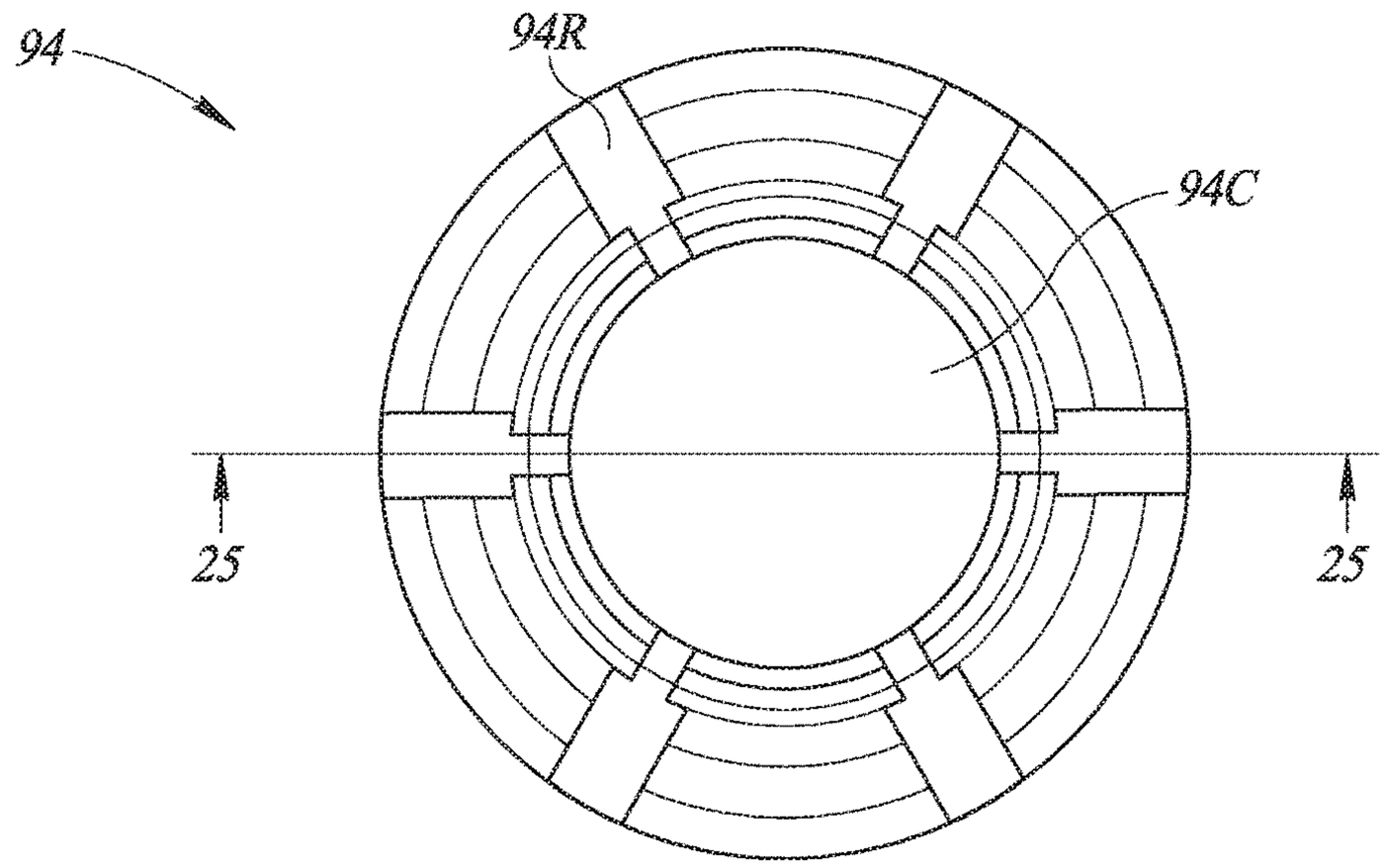


FIG. 22



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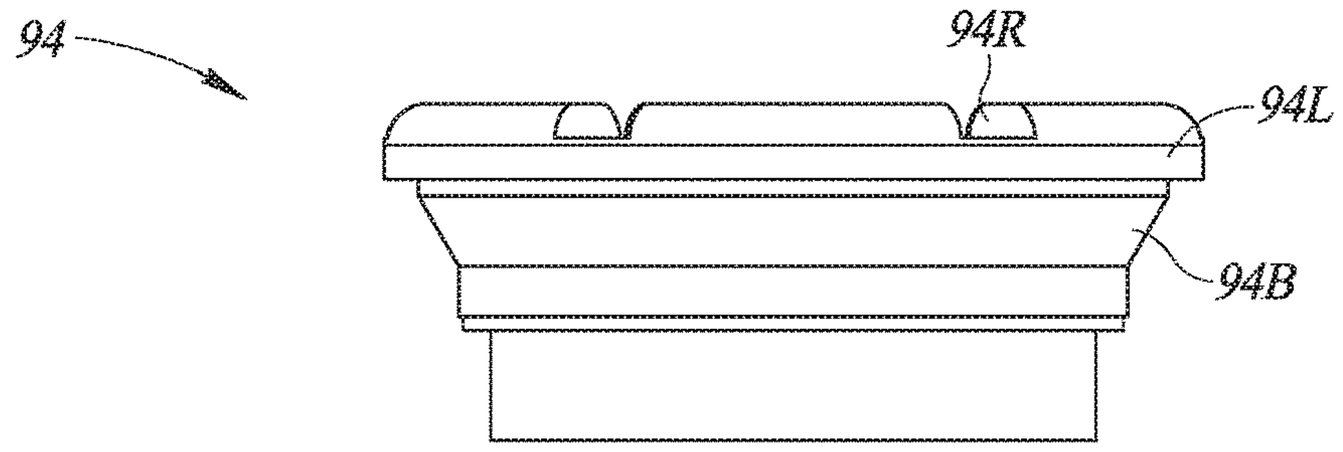
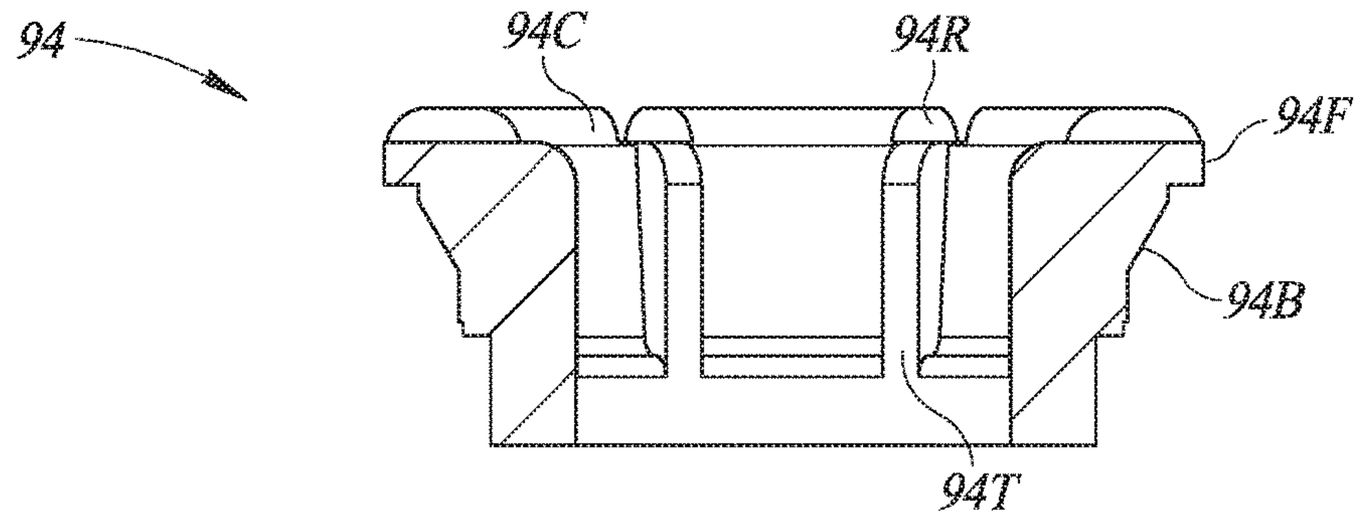


FIG. 24



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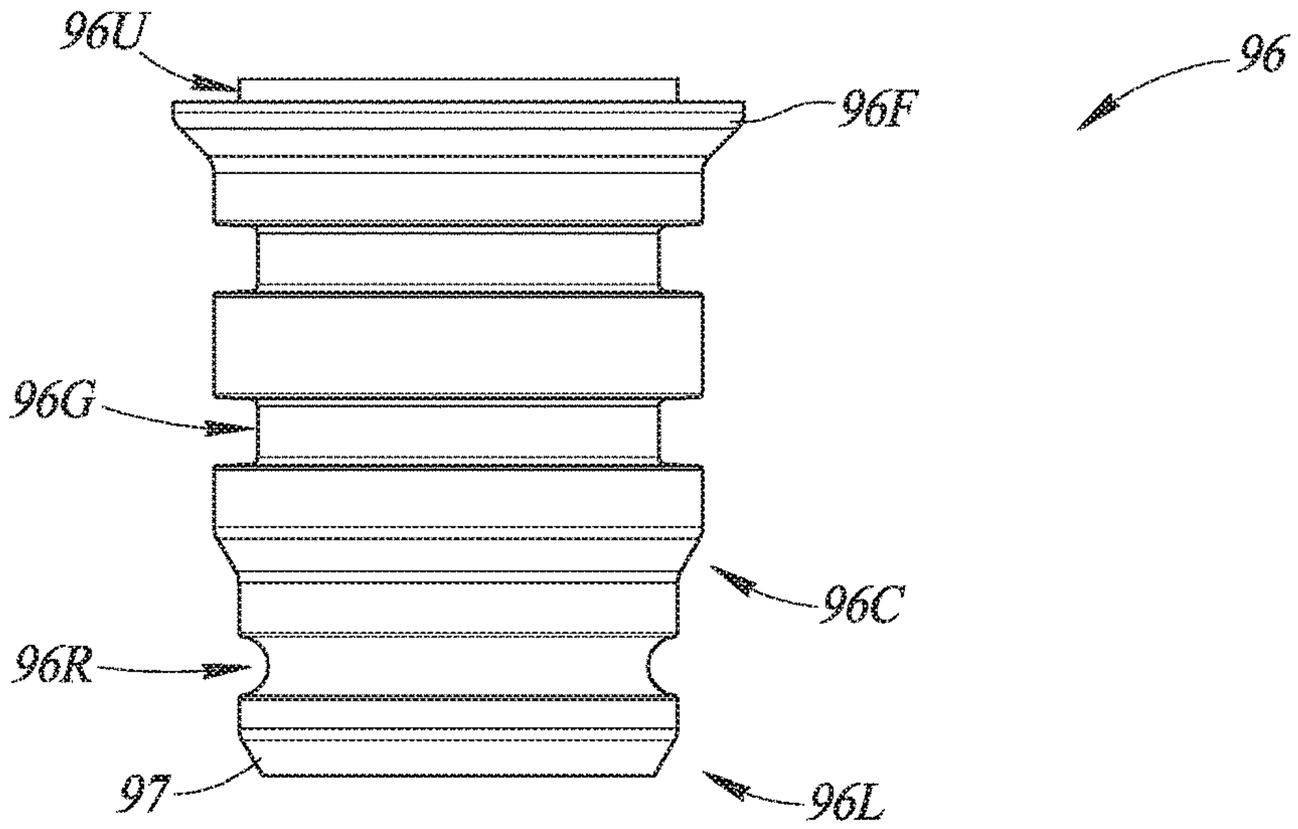

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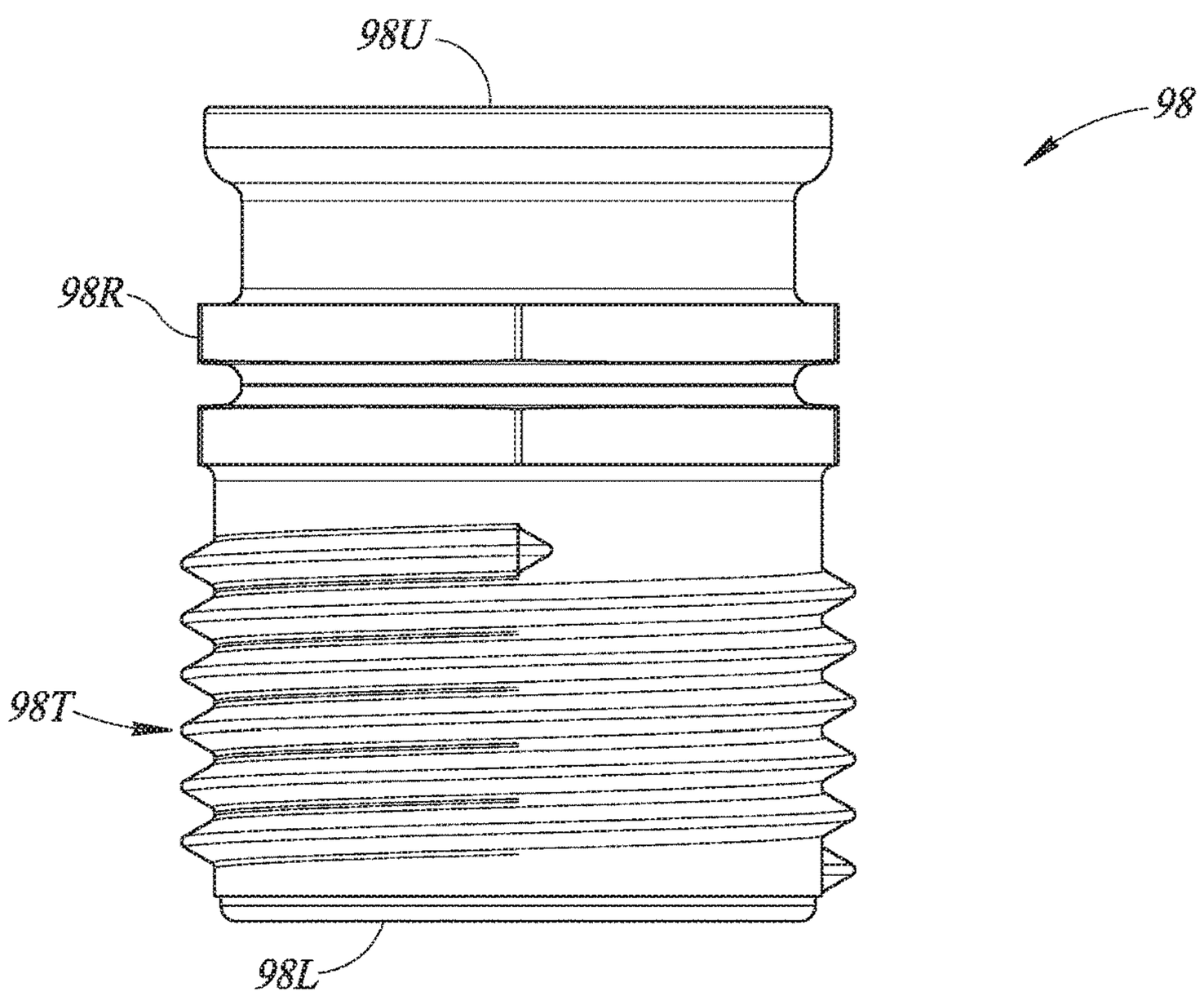

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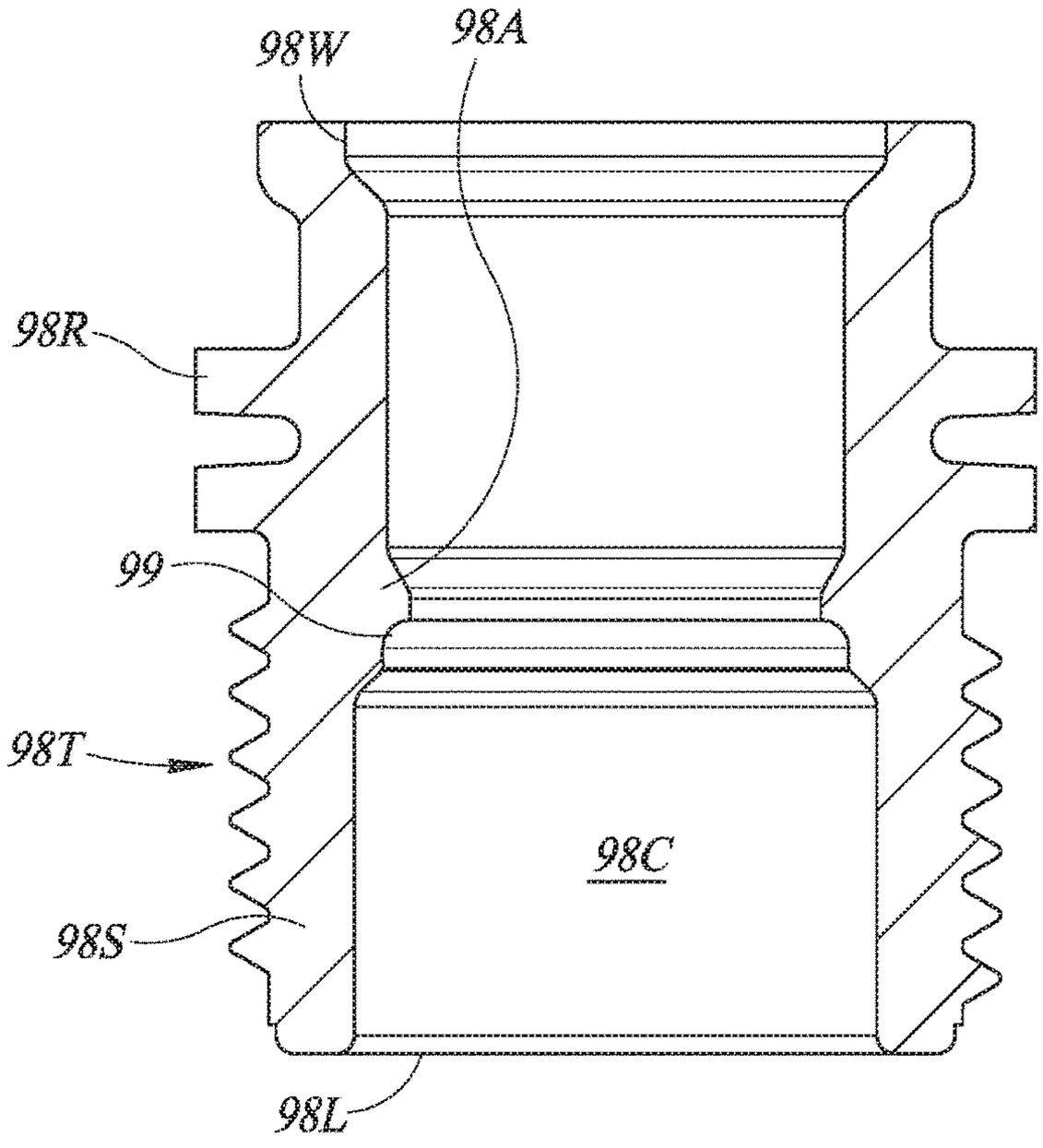


FIG. 28

FIG. 29

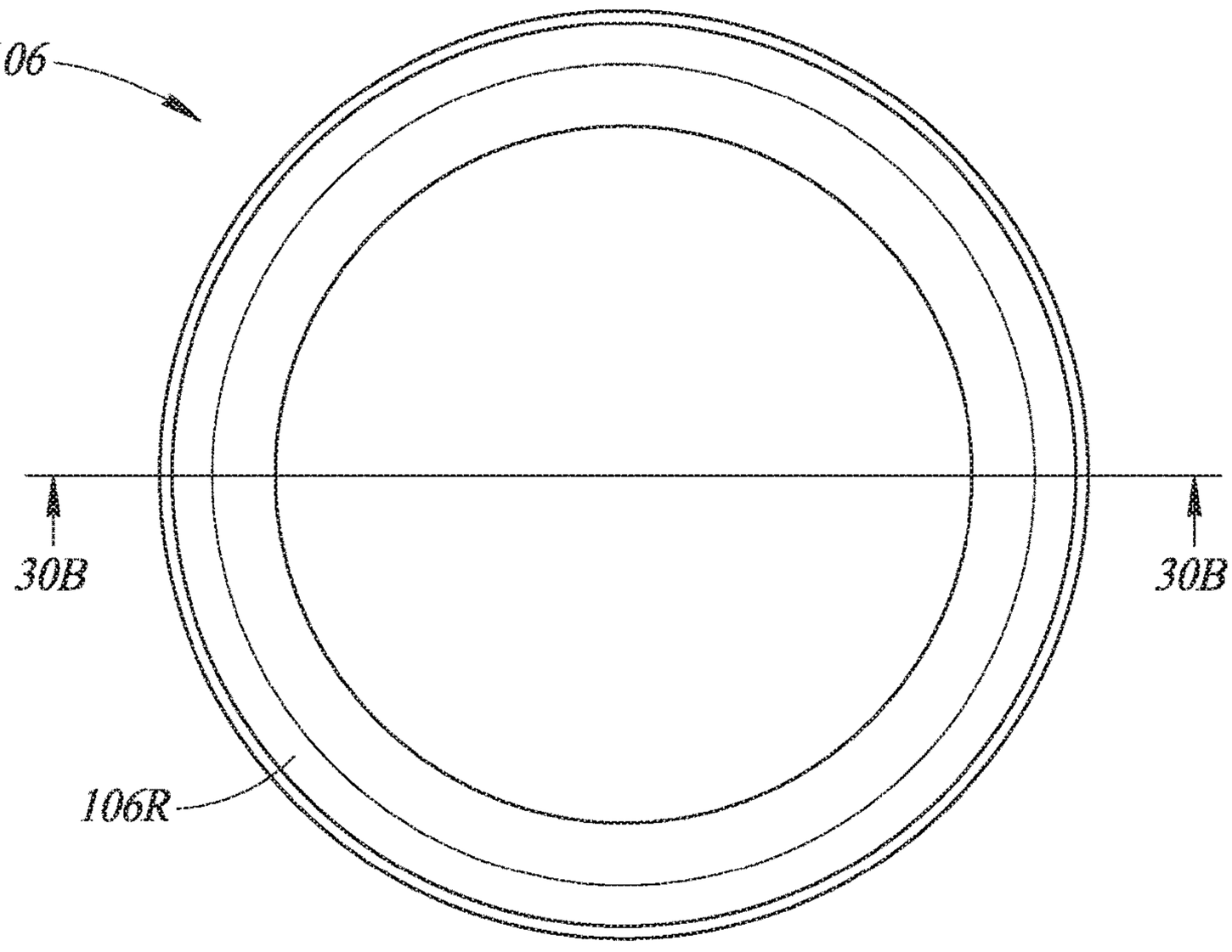


FIG. 30A

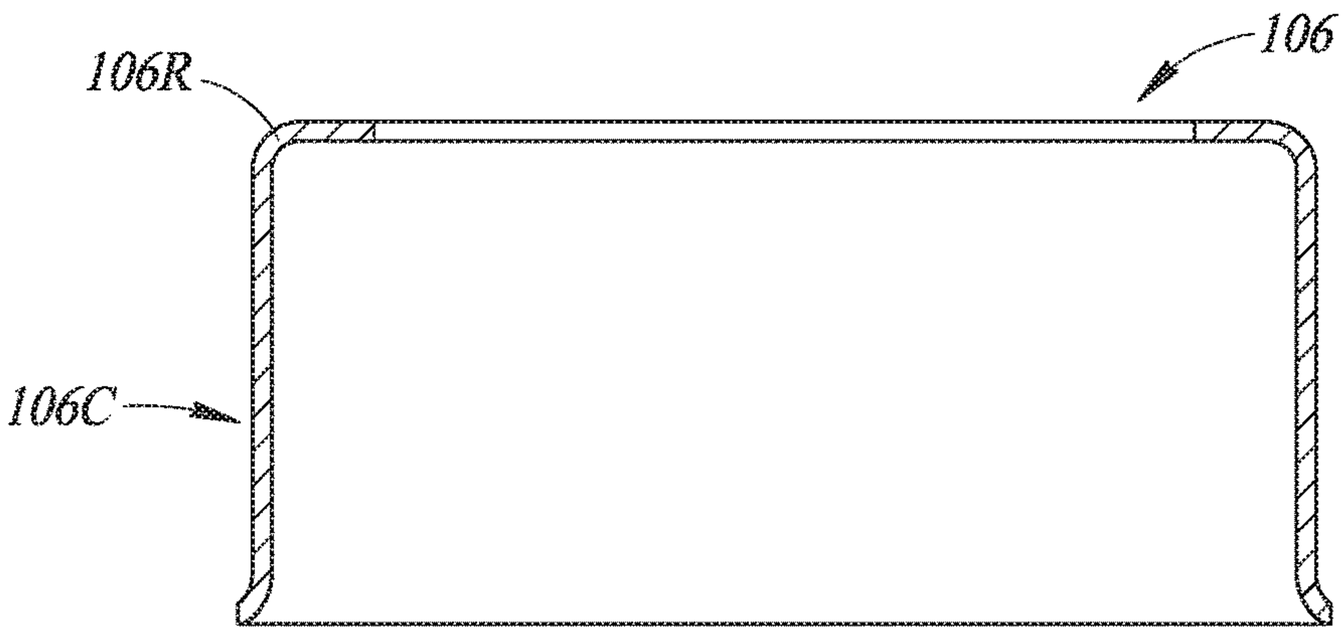
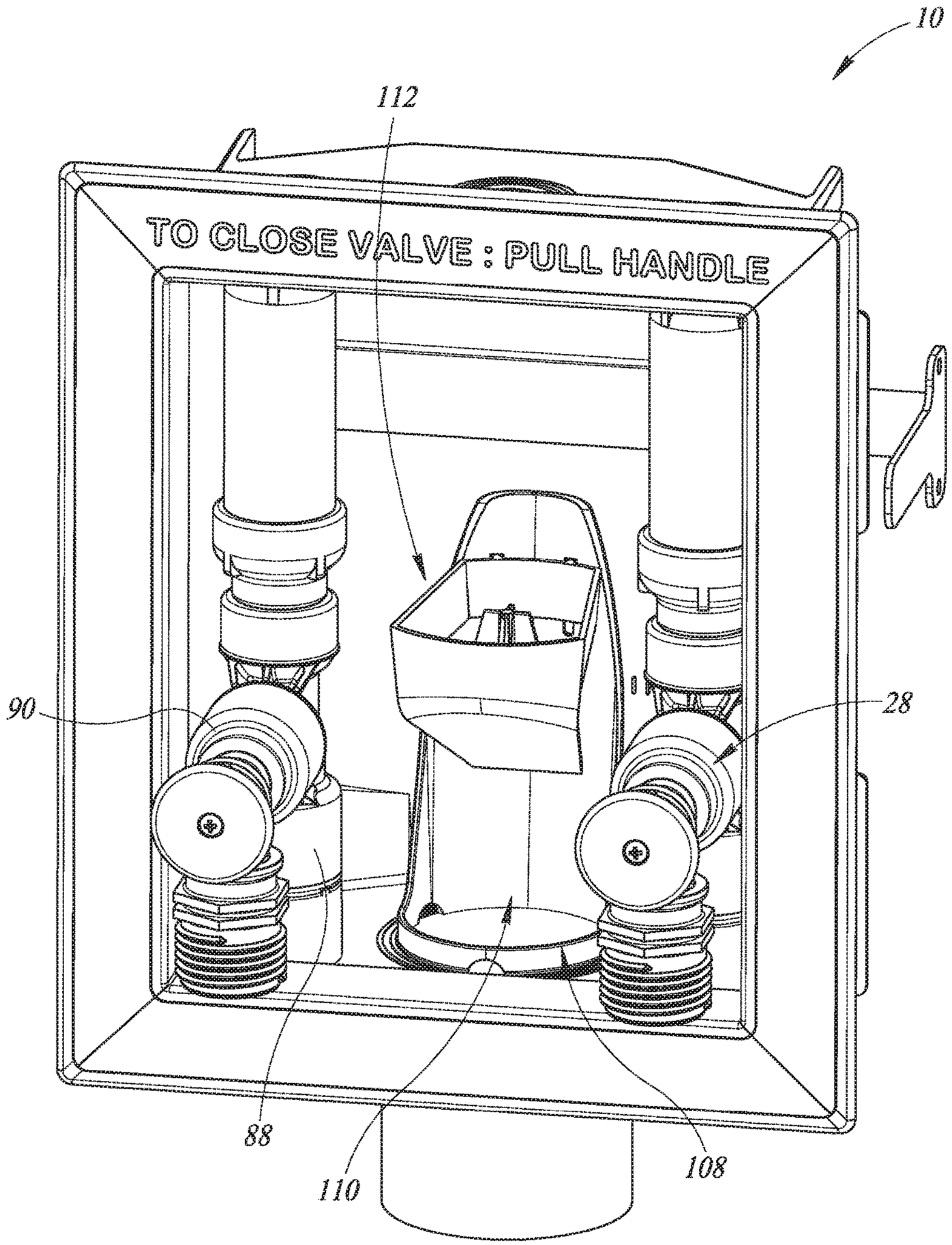


FIG. 30B



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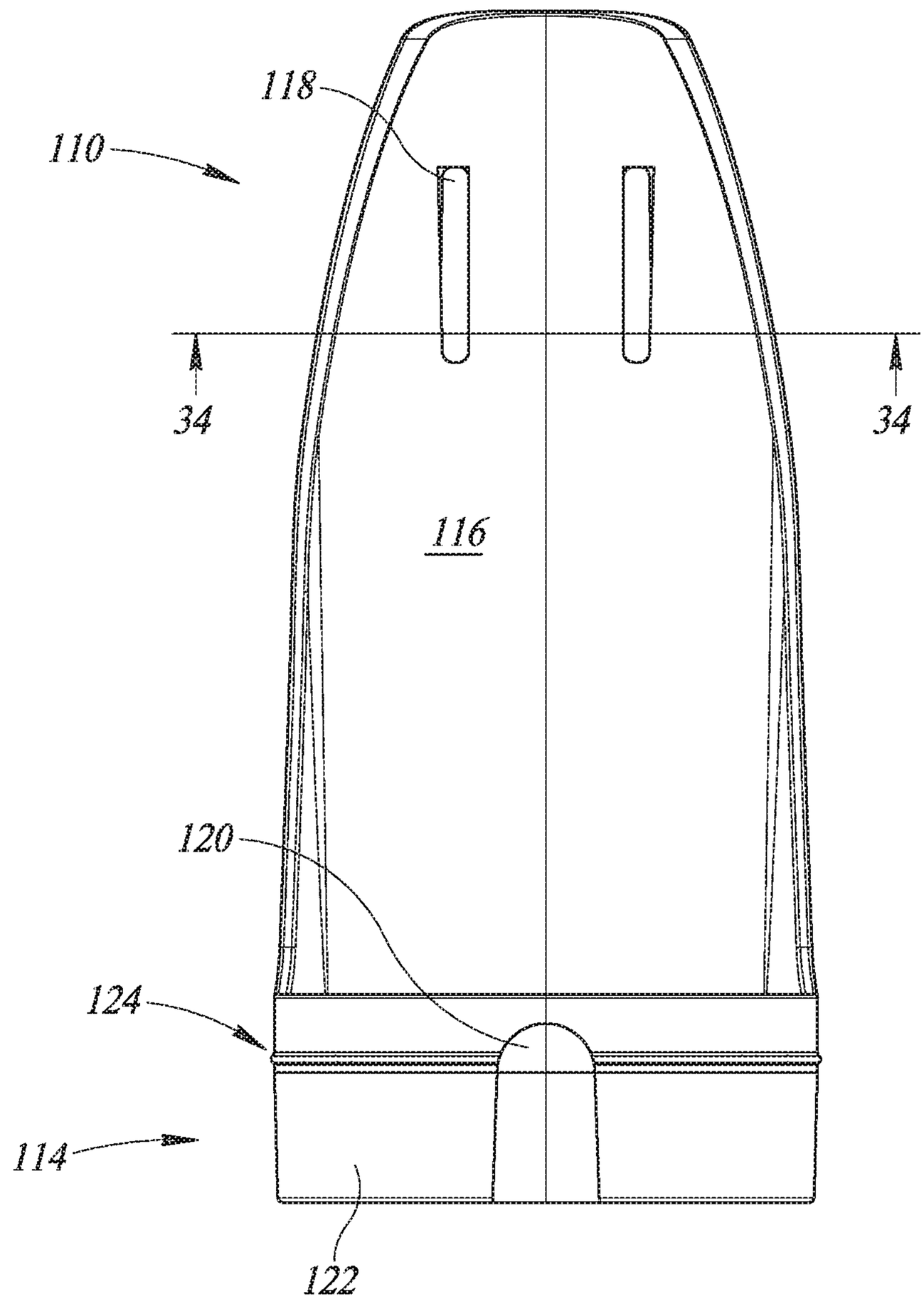
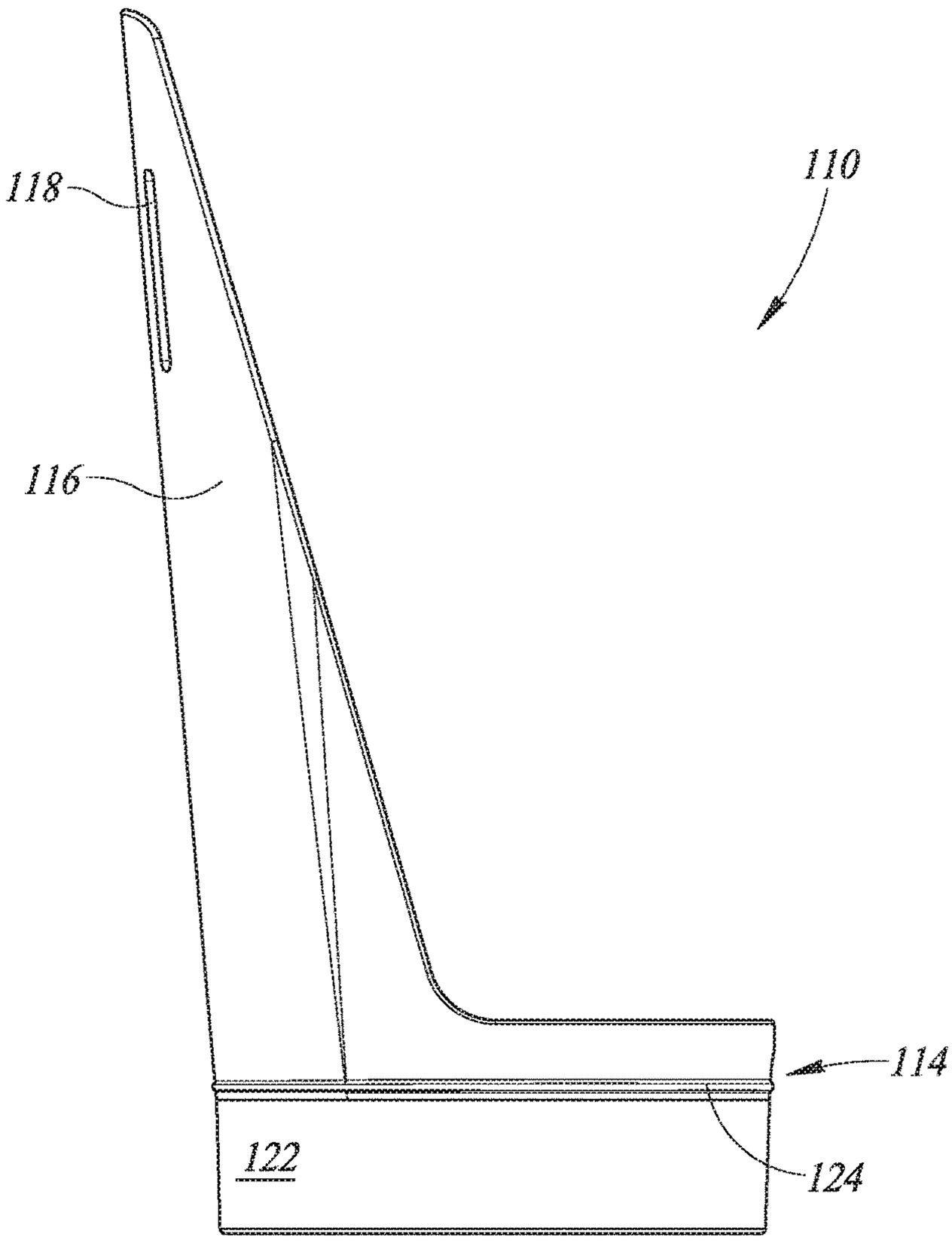


FIG. 32



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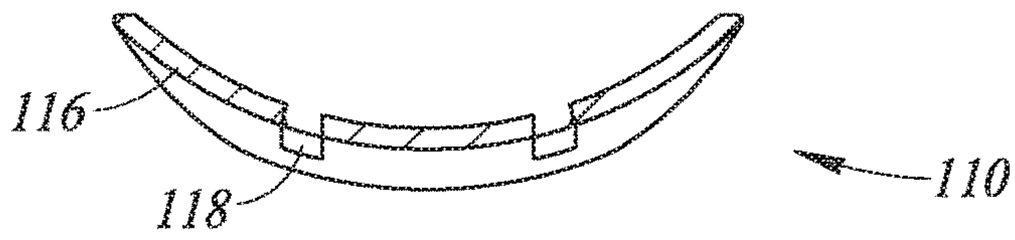
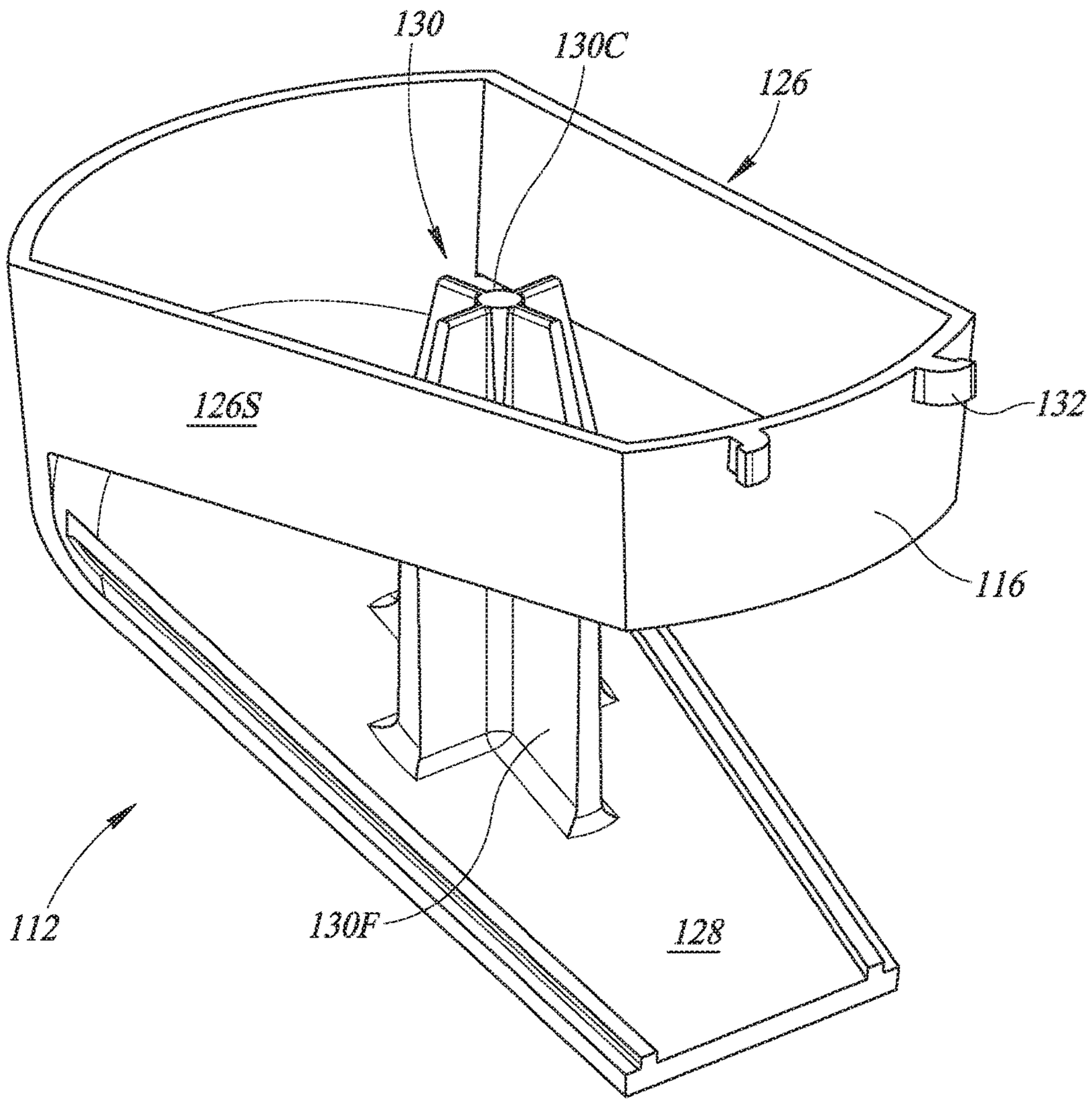


FIG. 34



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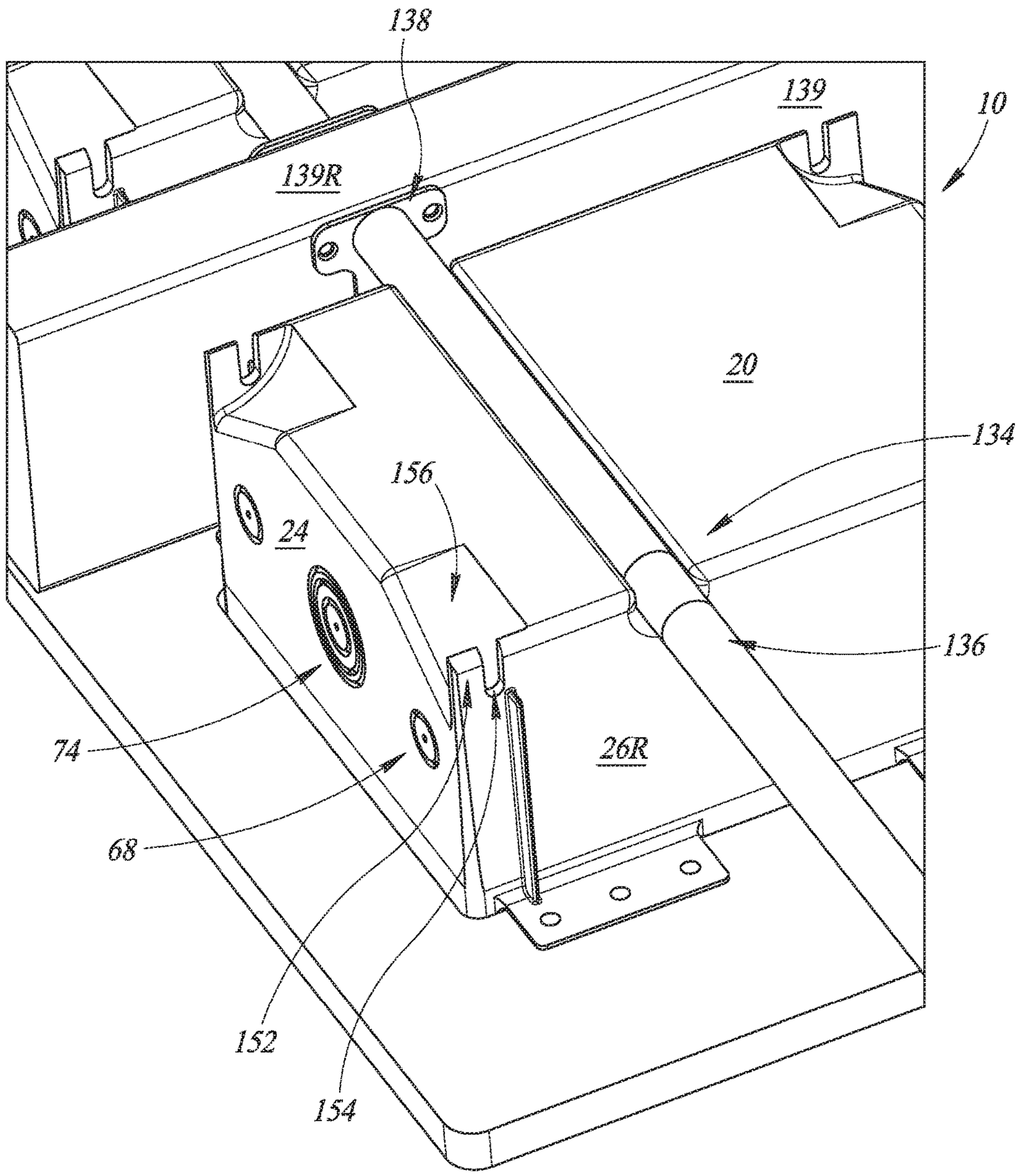
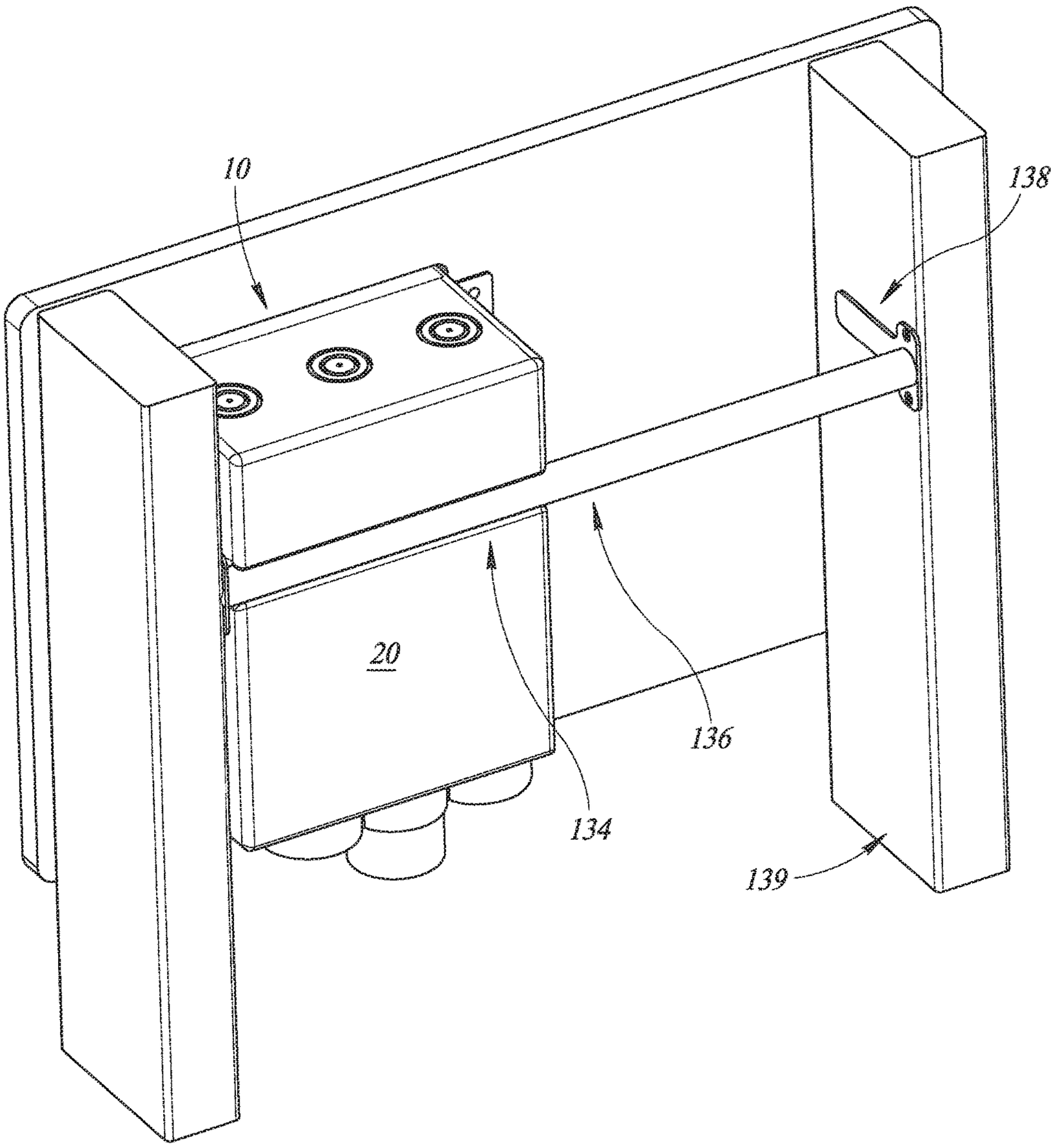


FIG. 36



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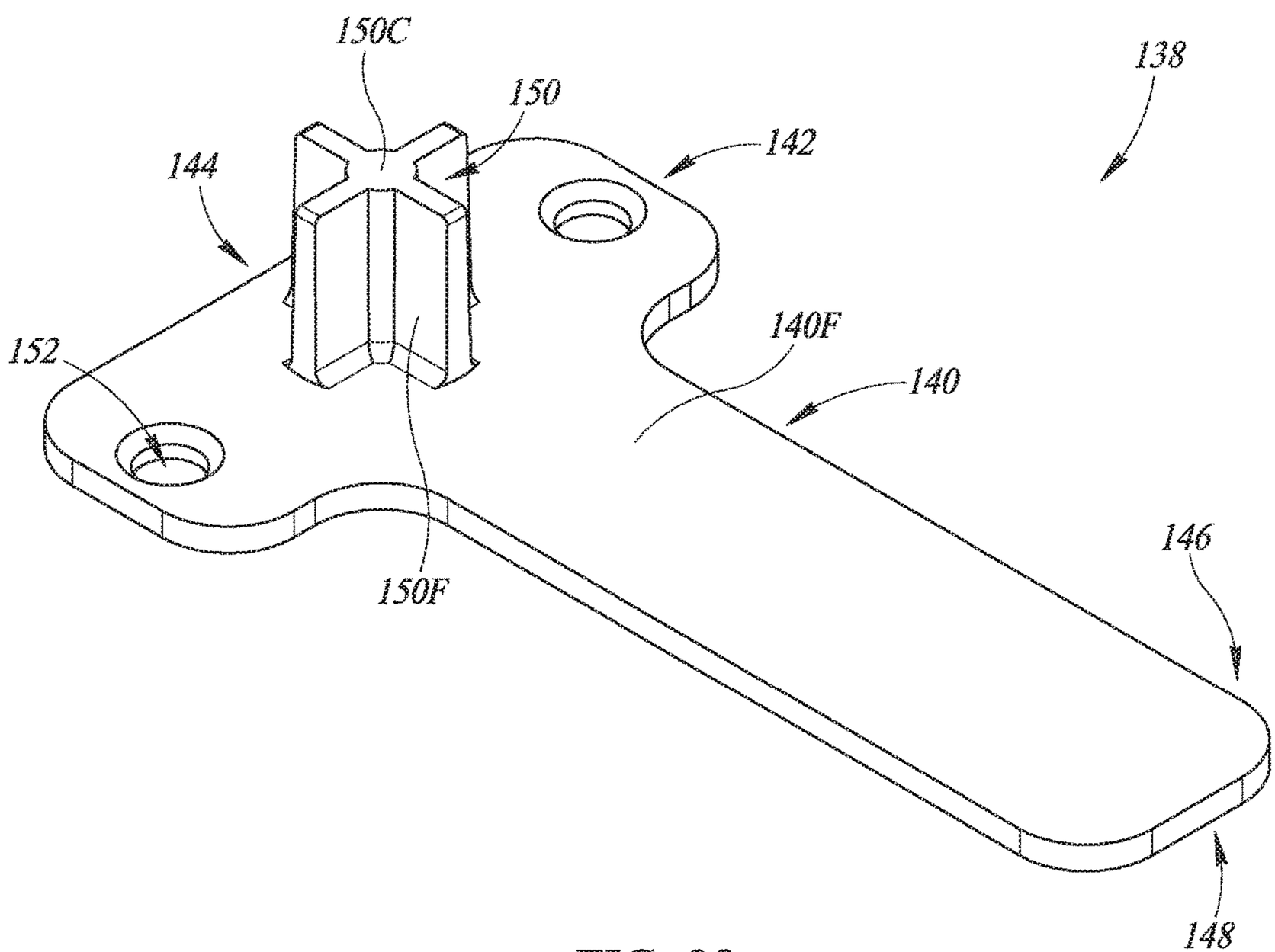

FIG. 38

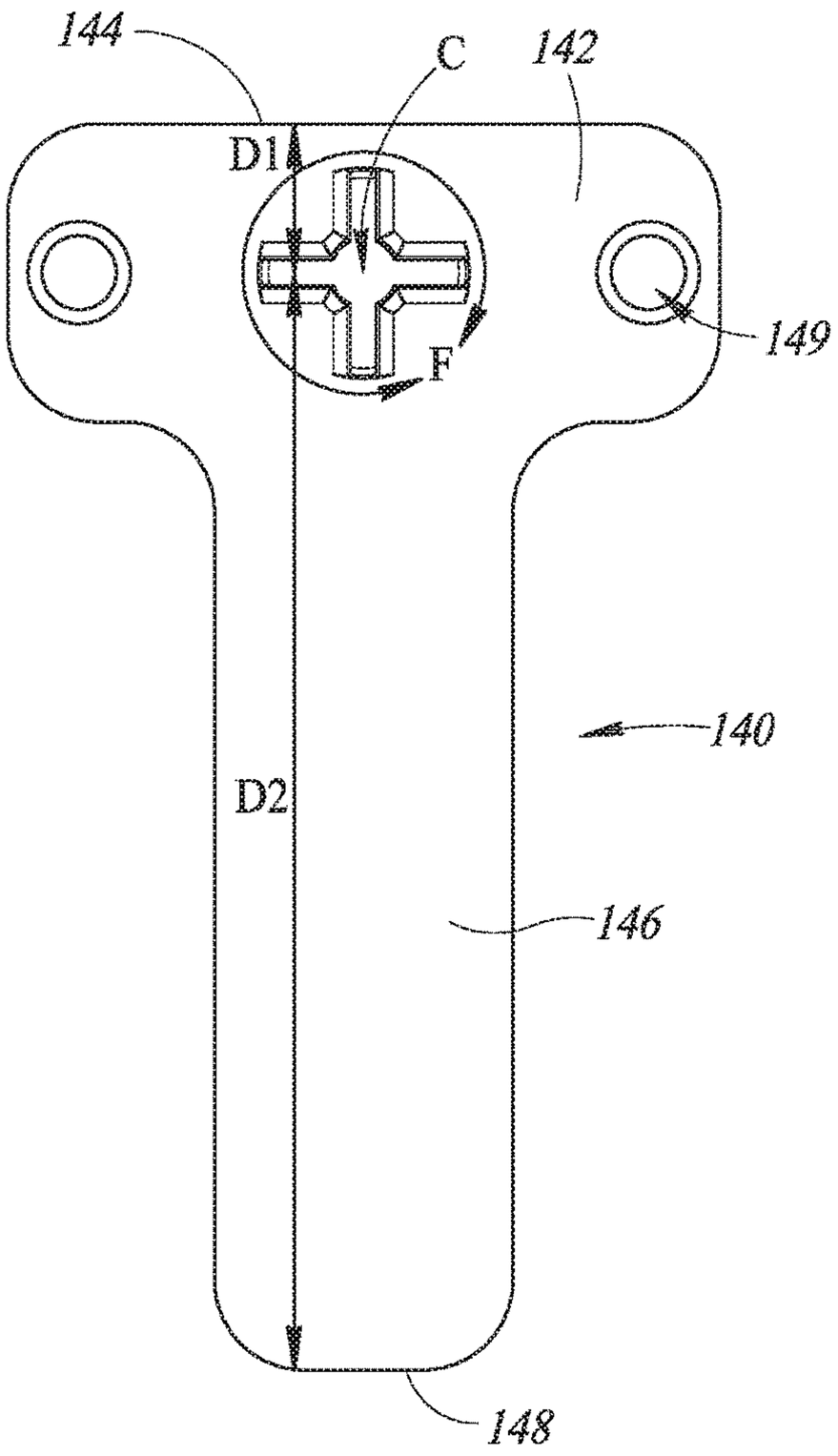
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FIG. 39

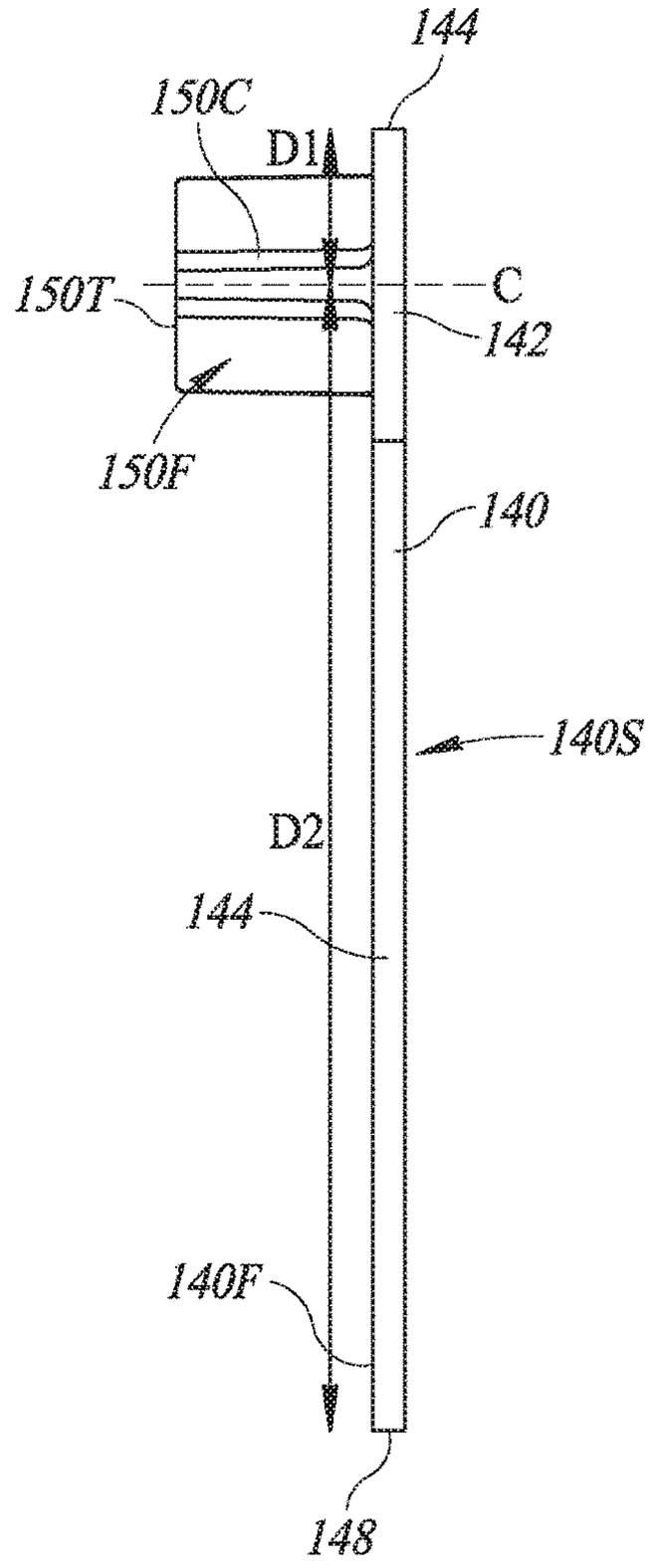
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FIG. 40

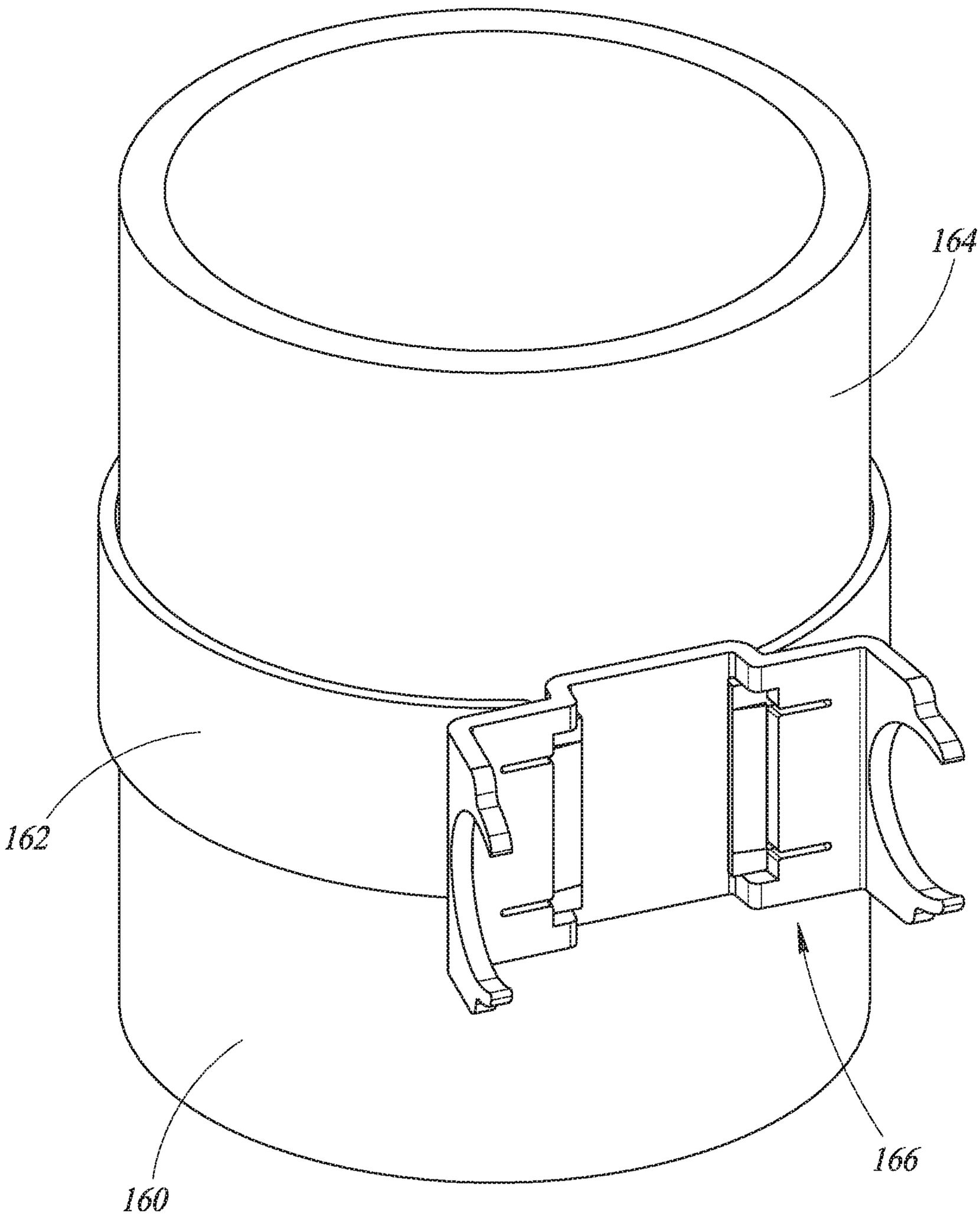

FIG. 41

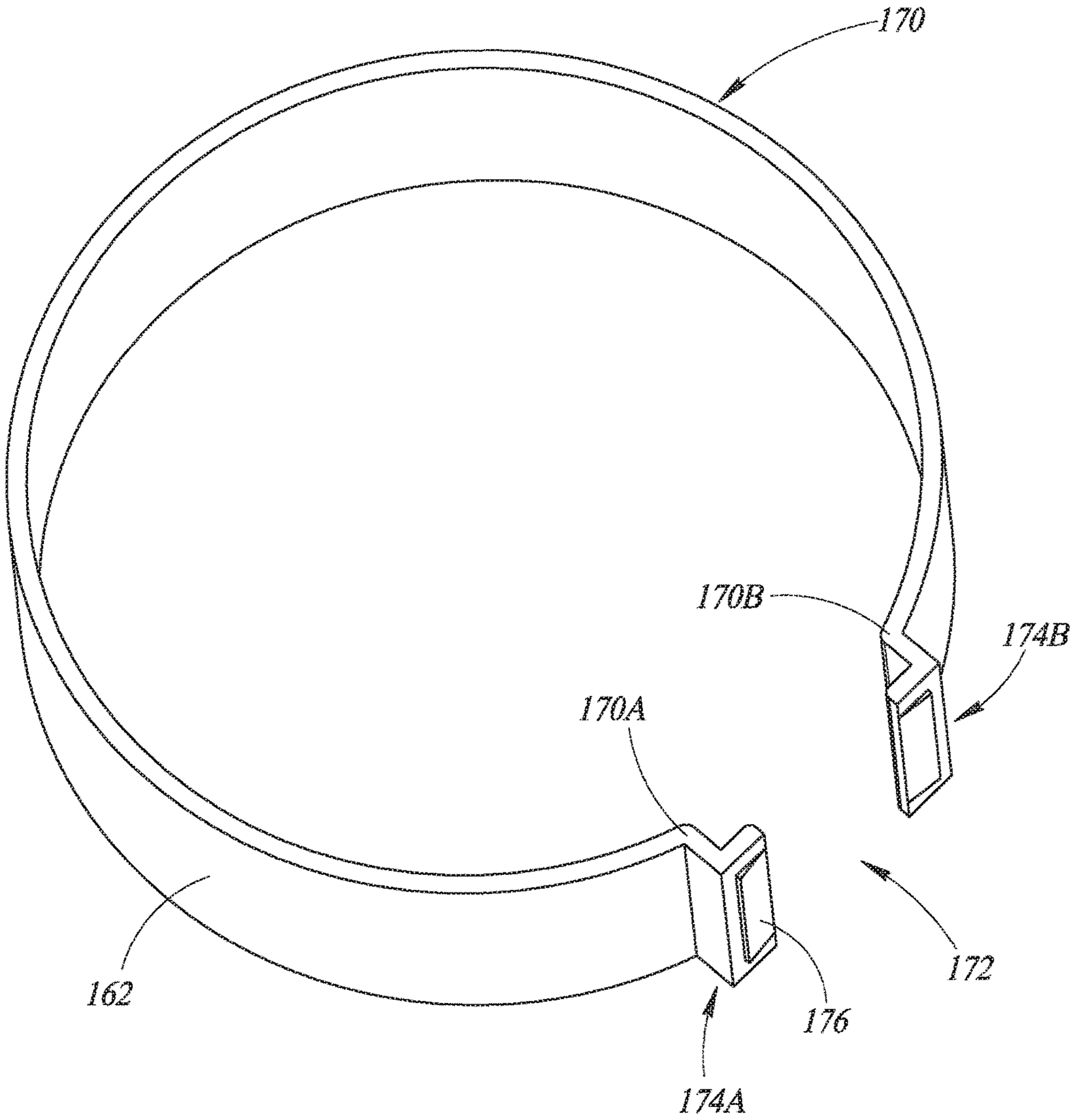

FIG. 42

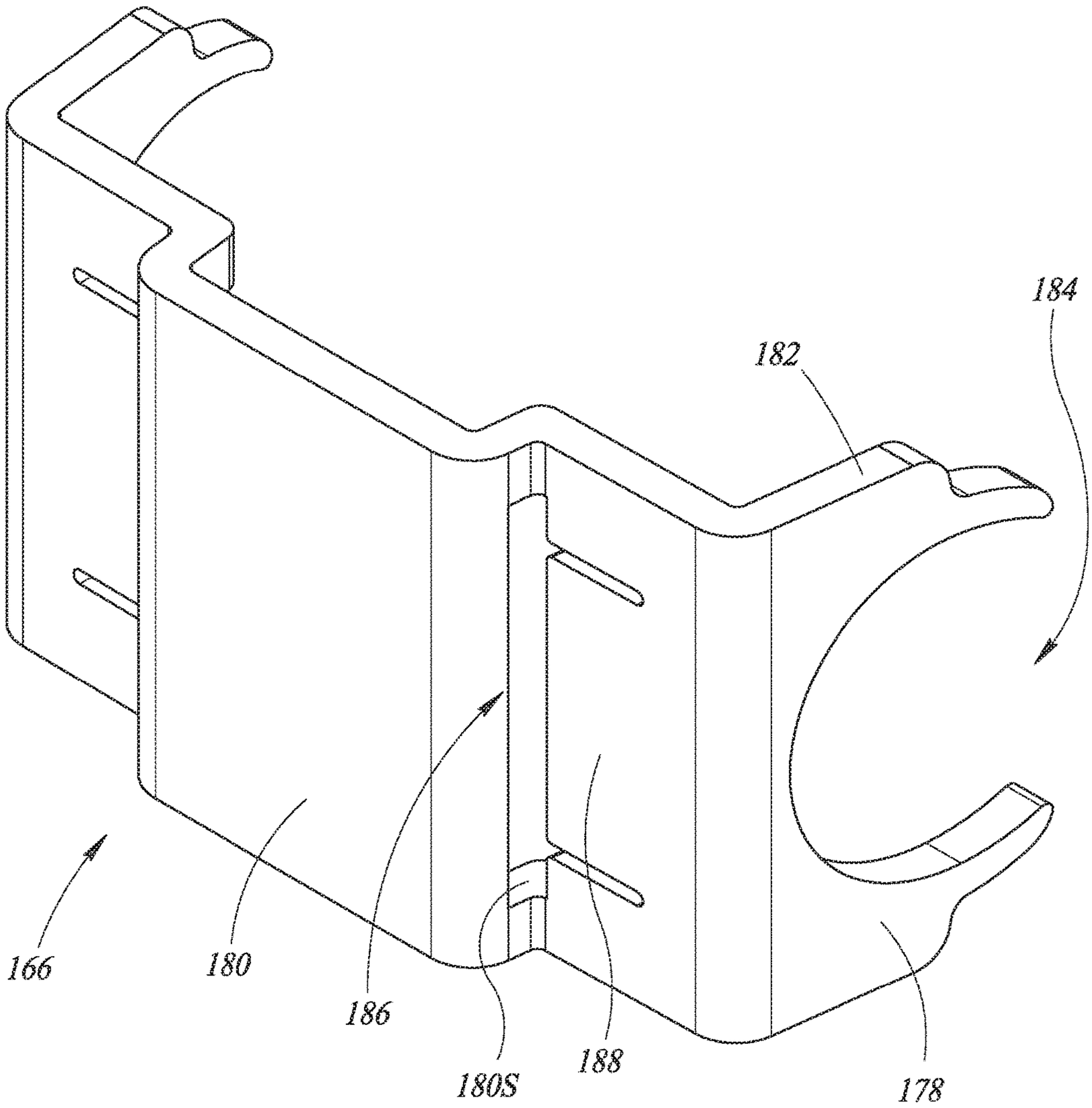

FIG. 43

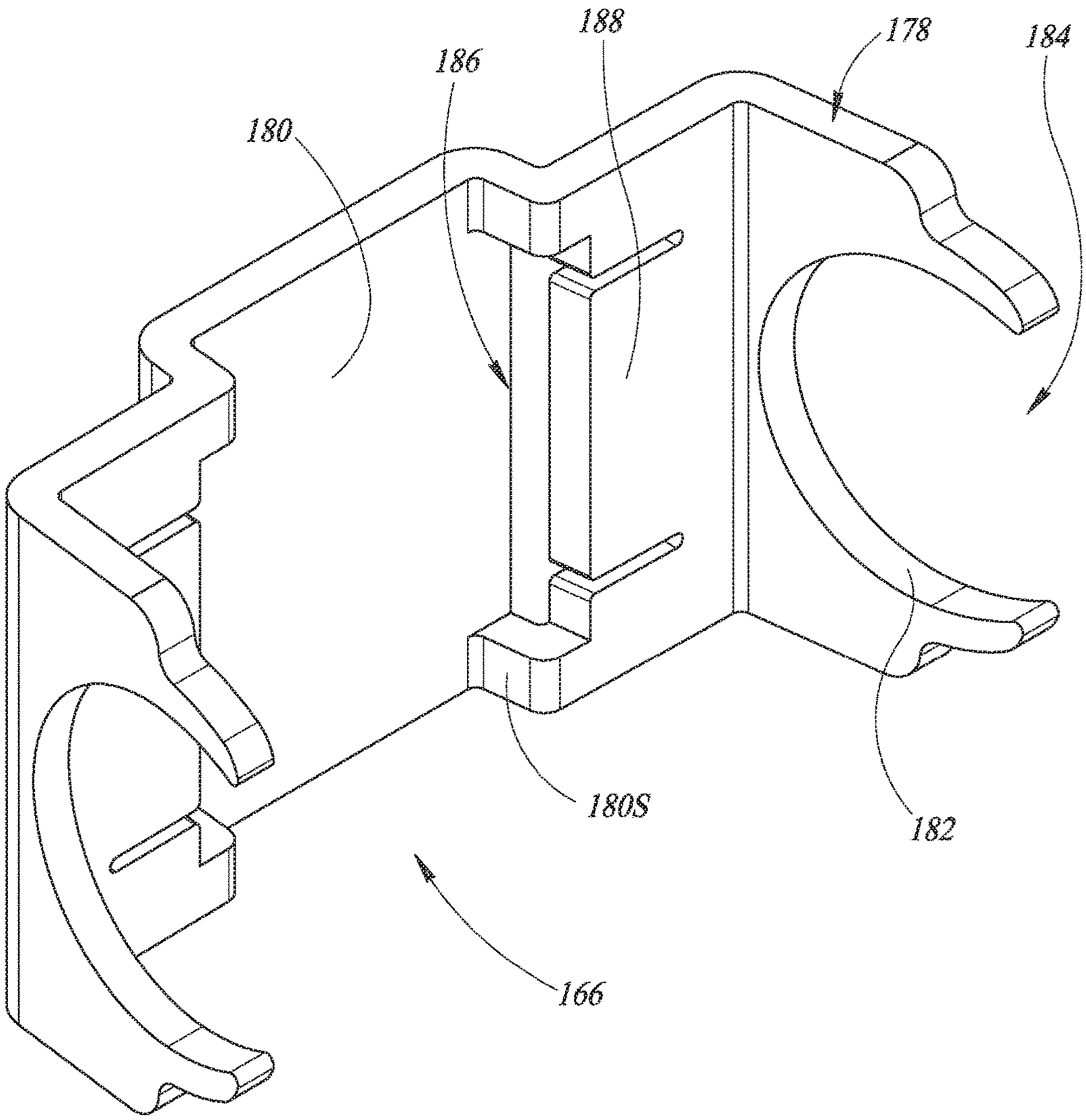

FIG. 44

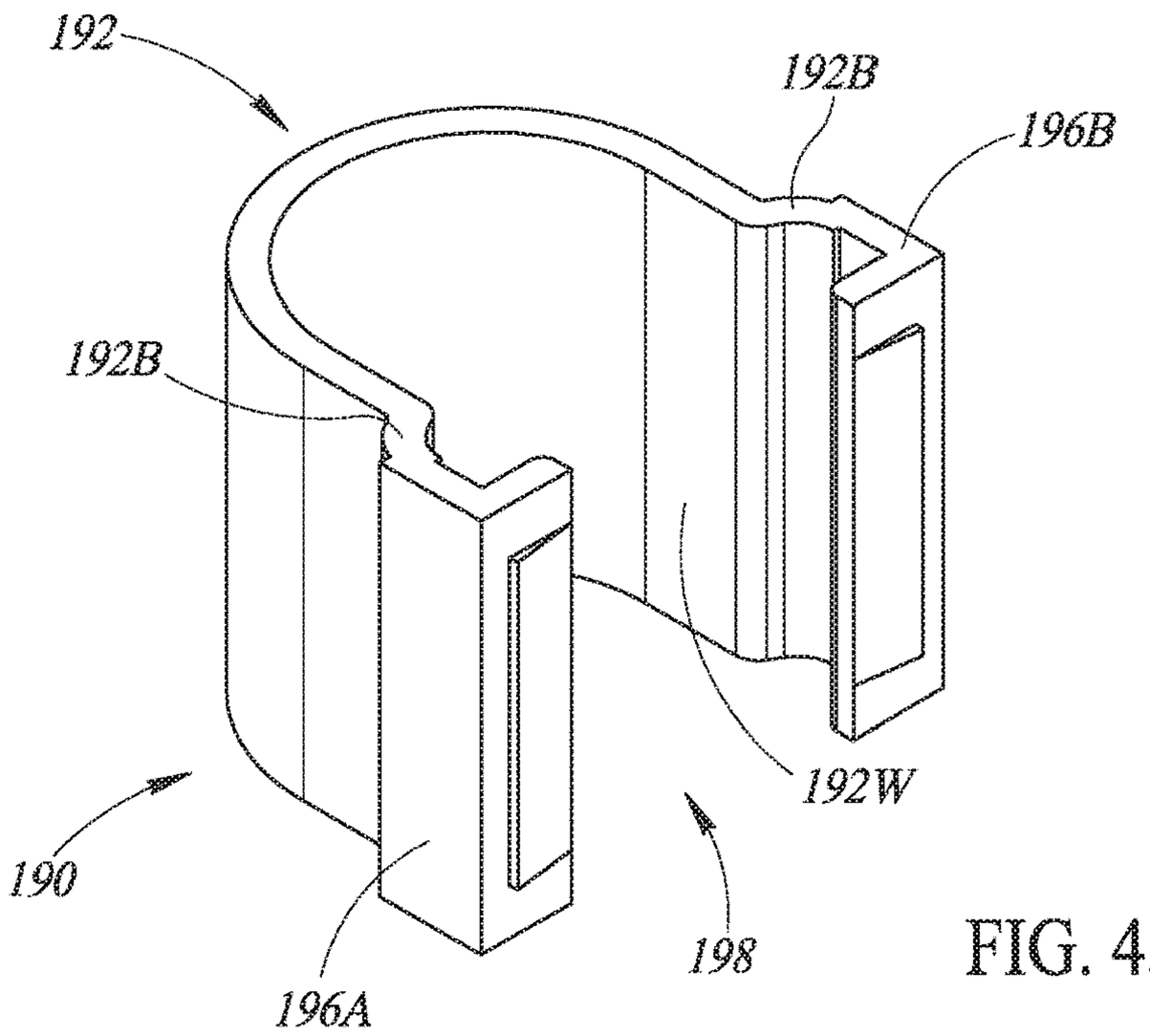
192
192B
196B
192B
192W
190
198
196A

FIG. 45

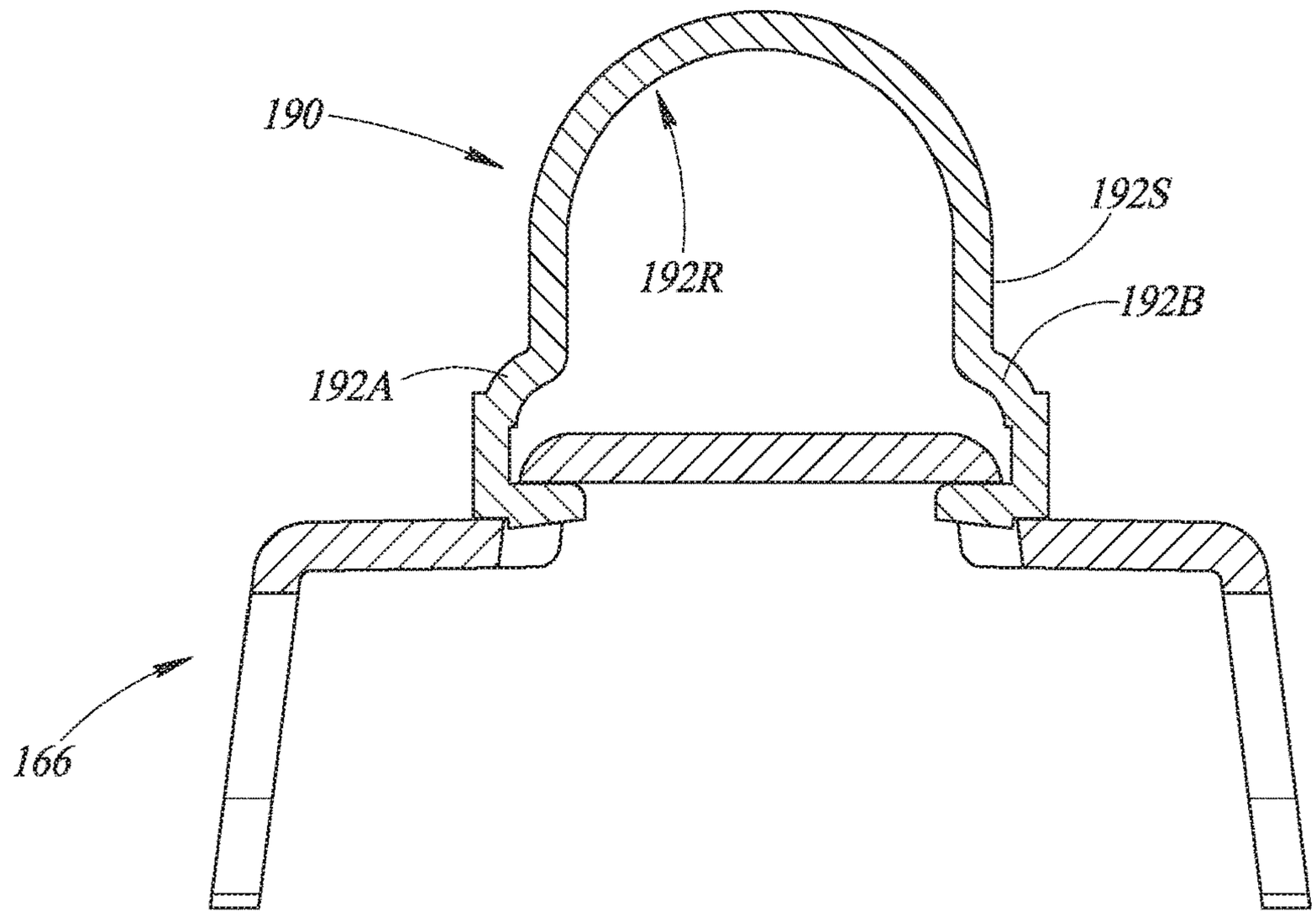
190
192S
192R
192B
192A
166

FIG. 46

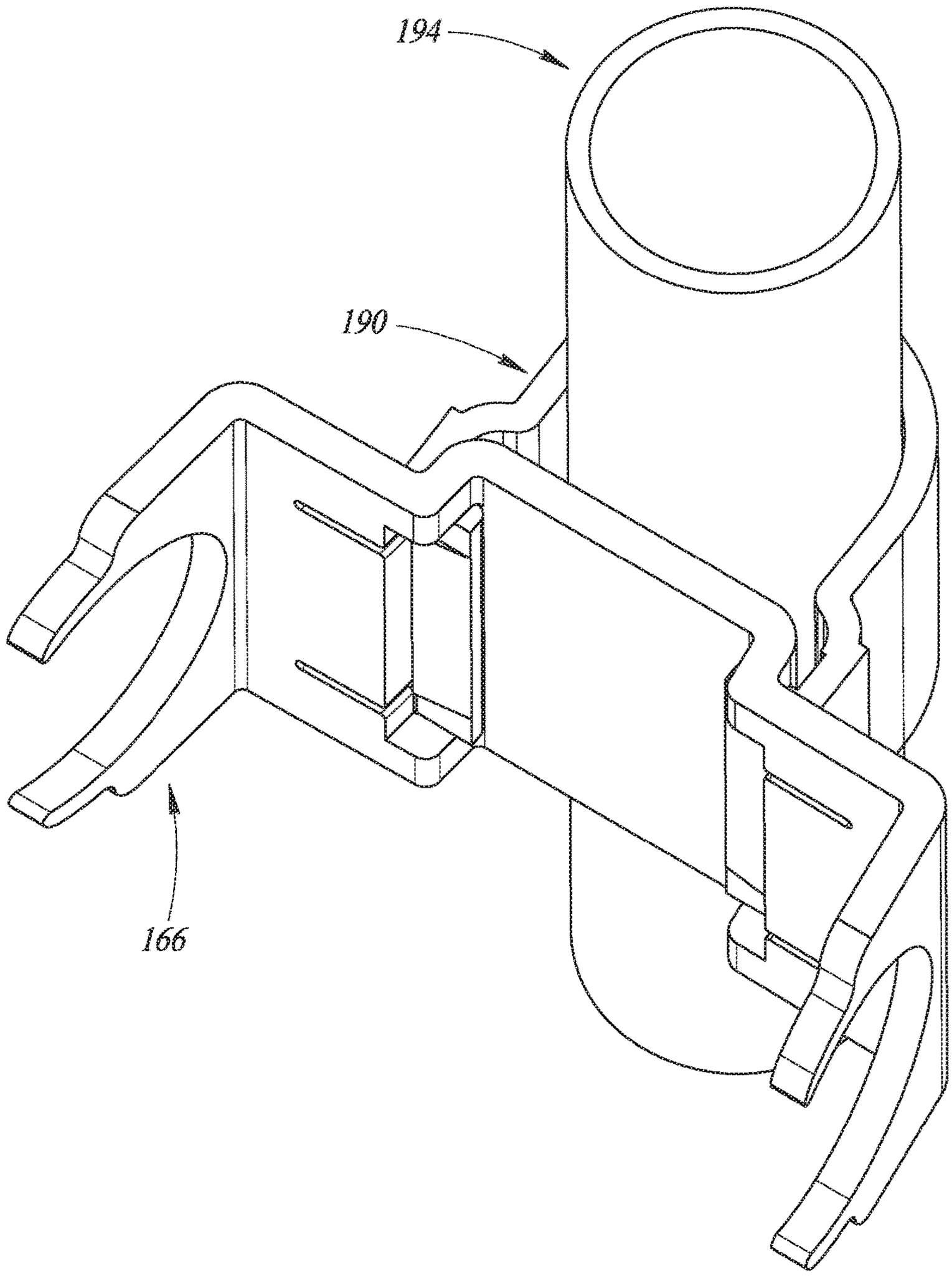

FIG. 47

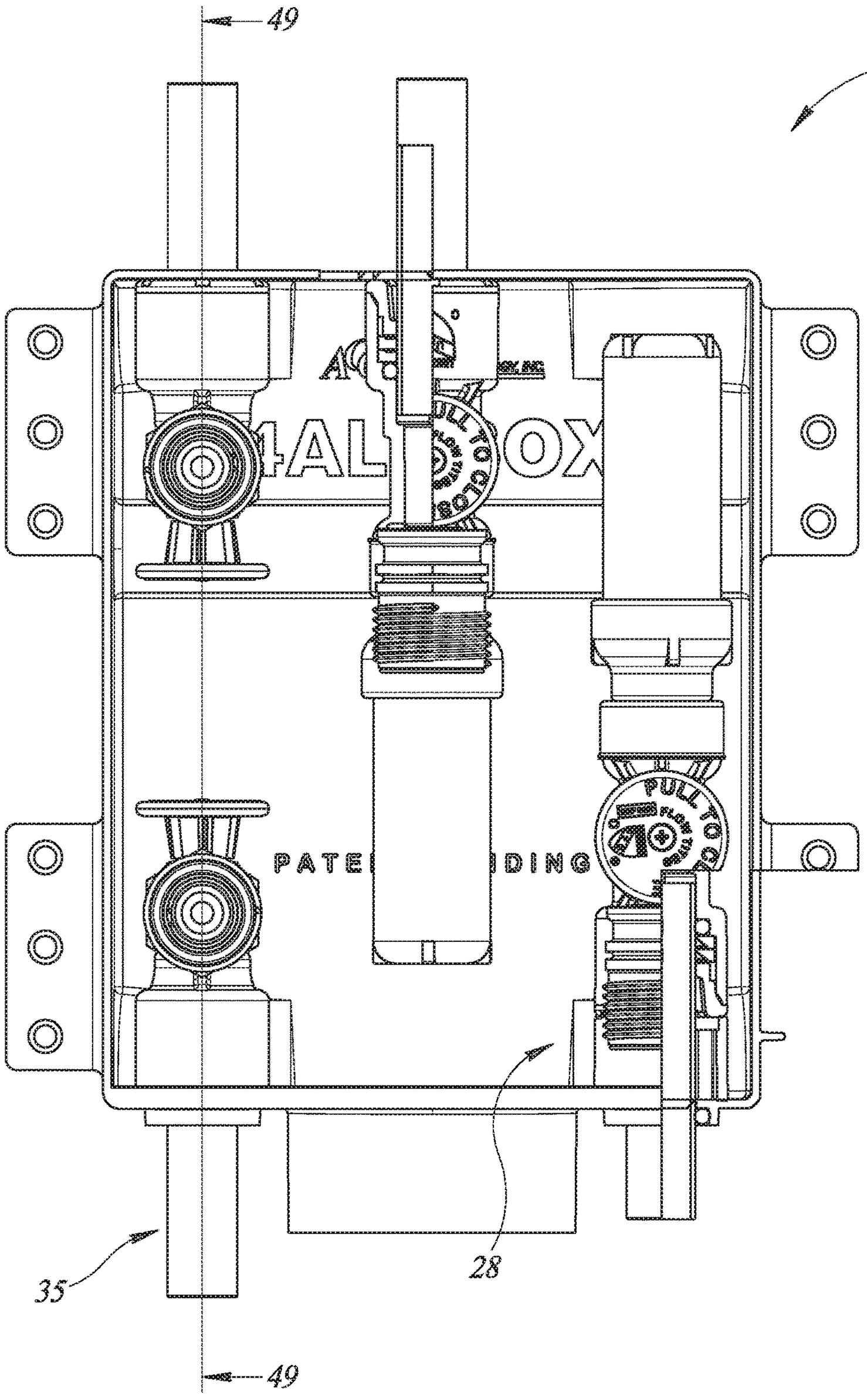

FIG. 48

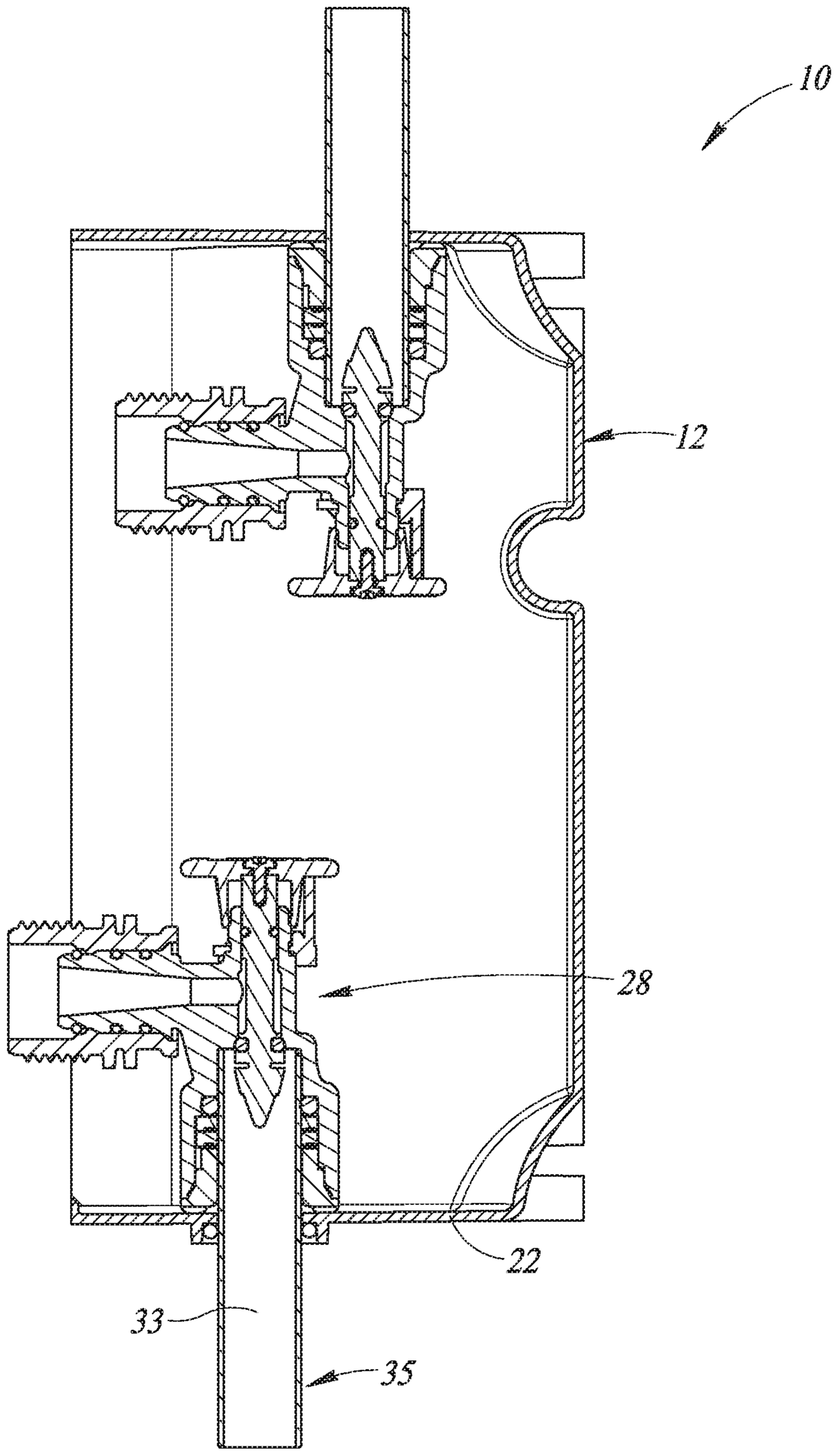

FIG. 49

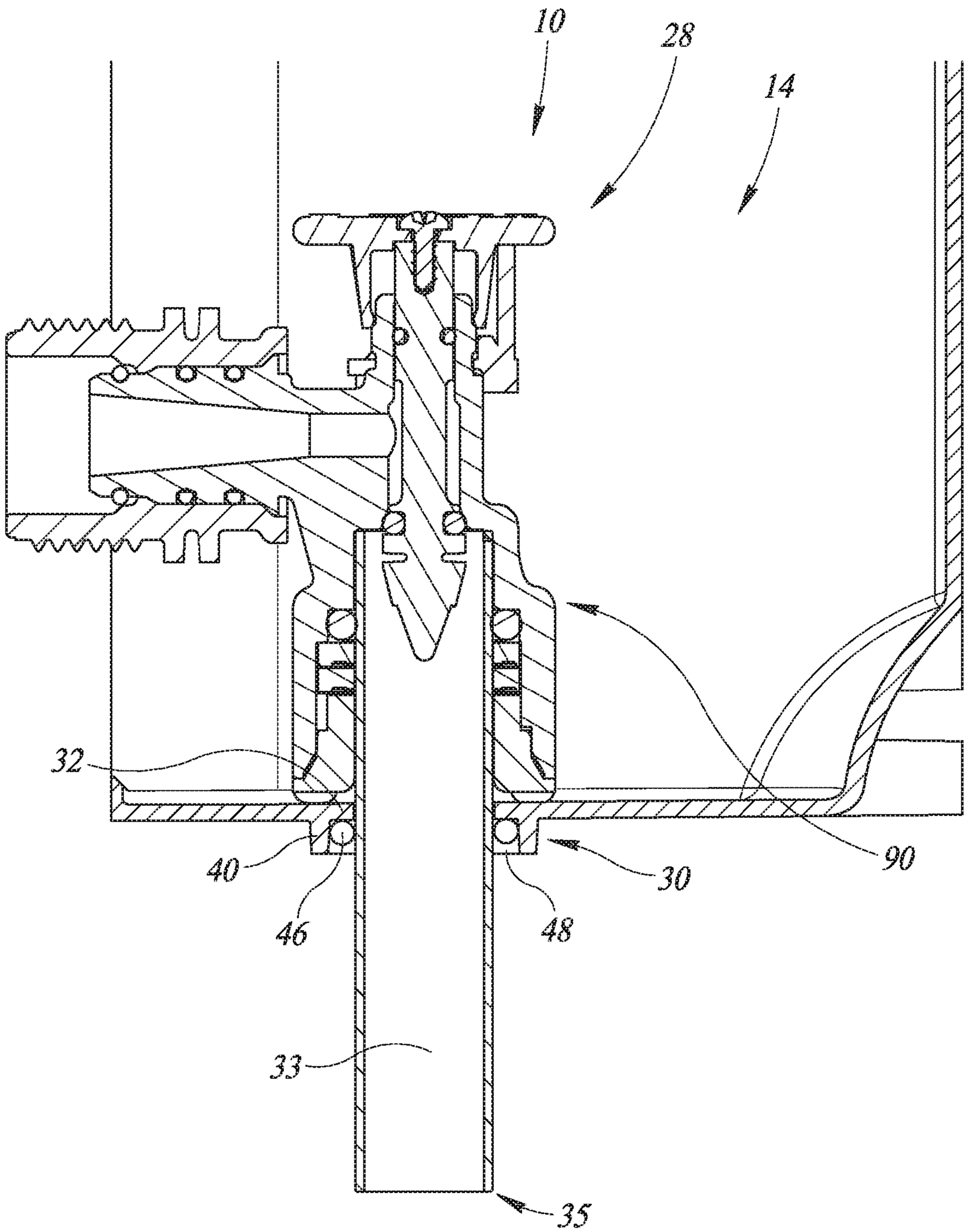

FIG. 50

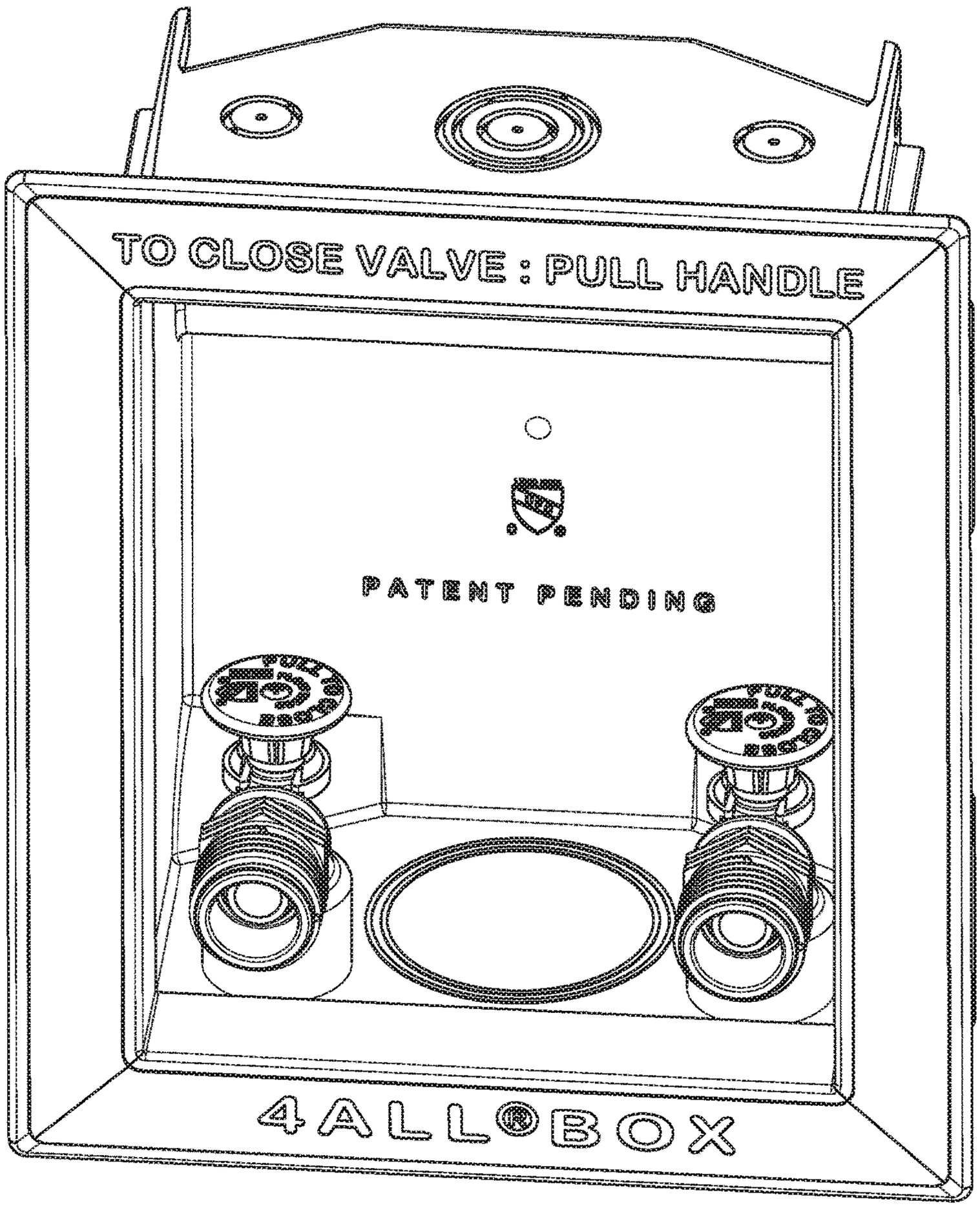

FIG. 51

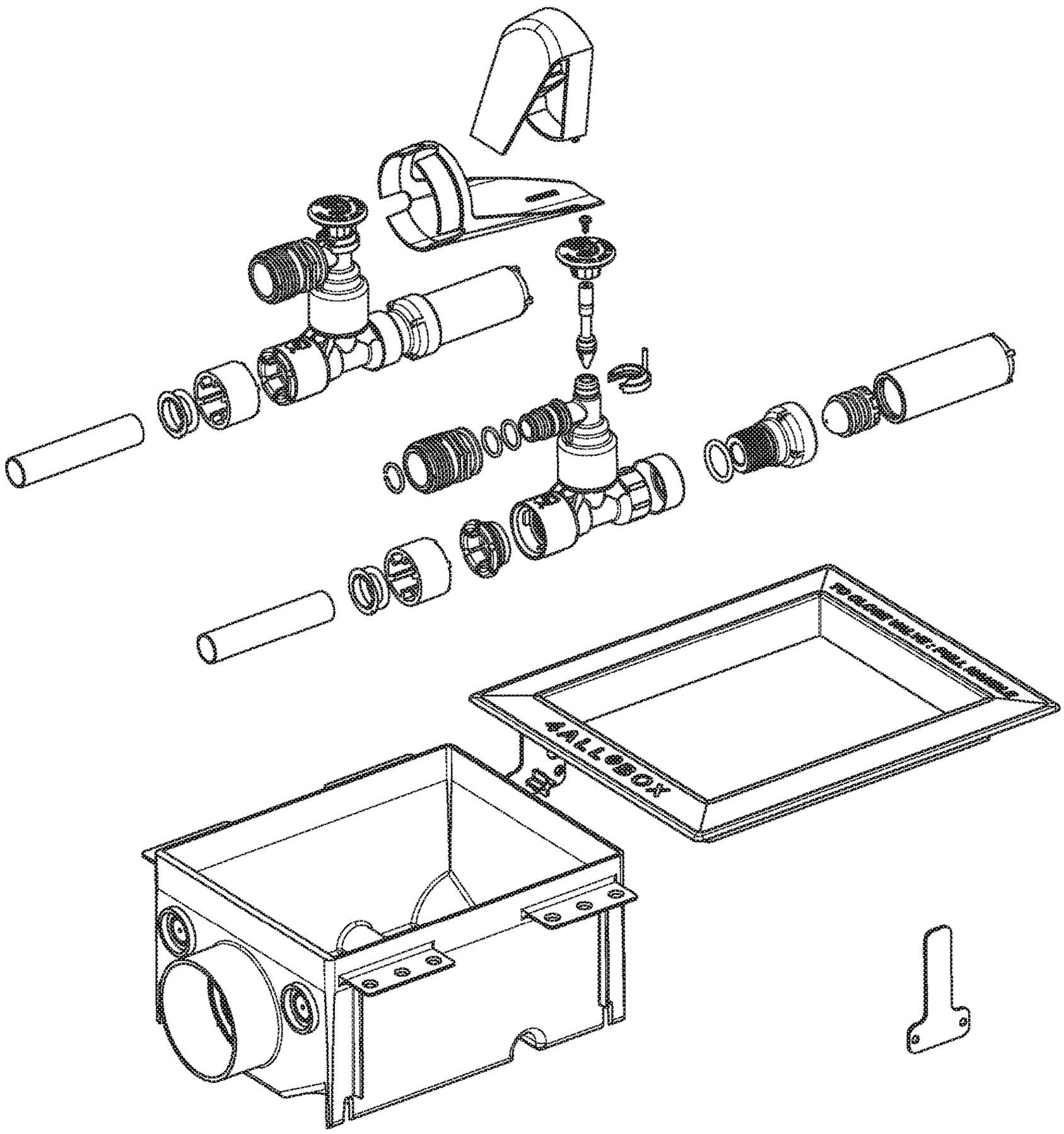

FIG. 52

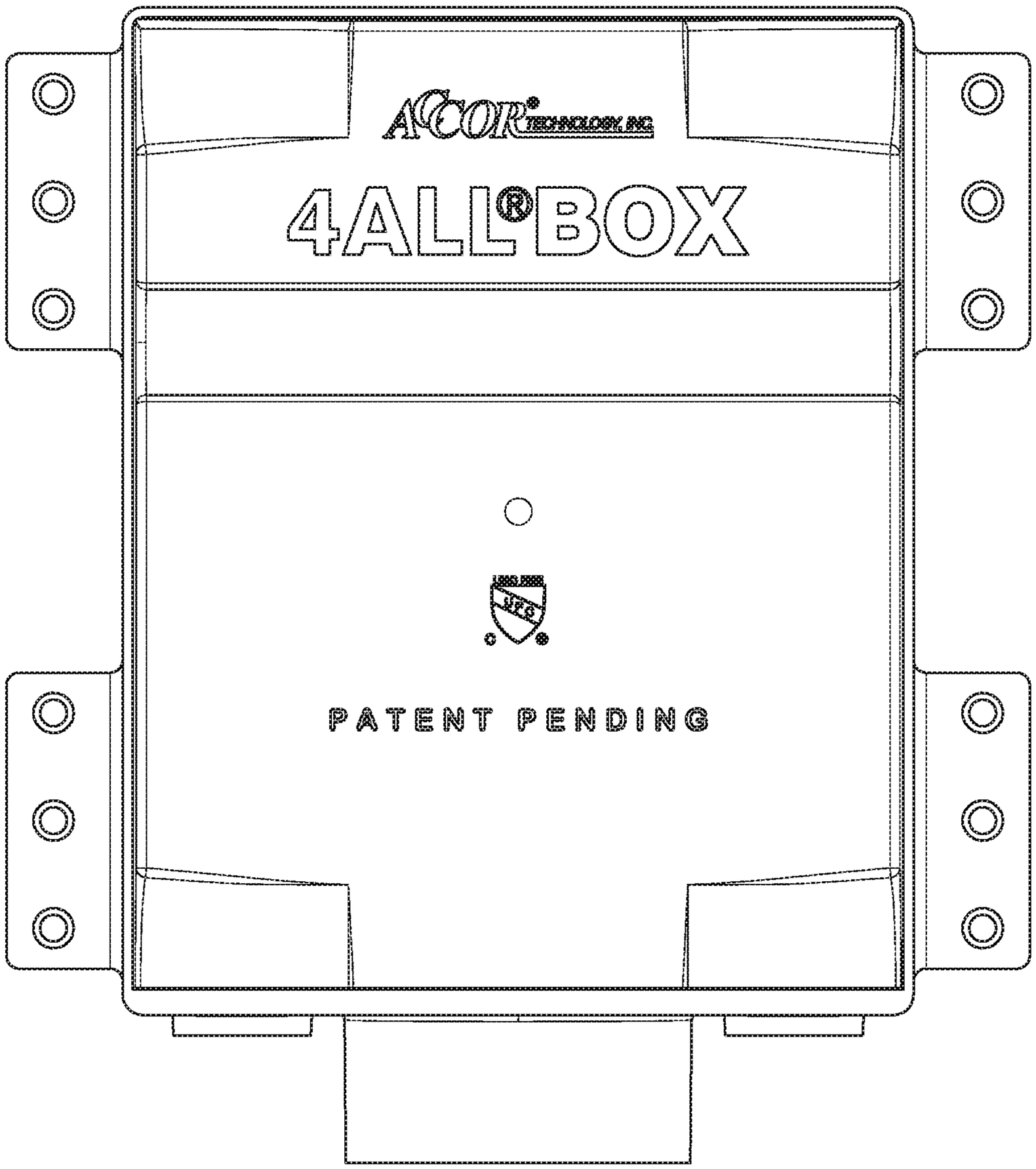

FIG. 53

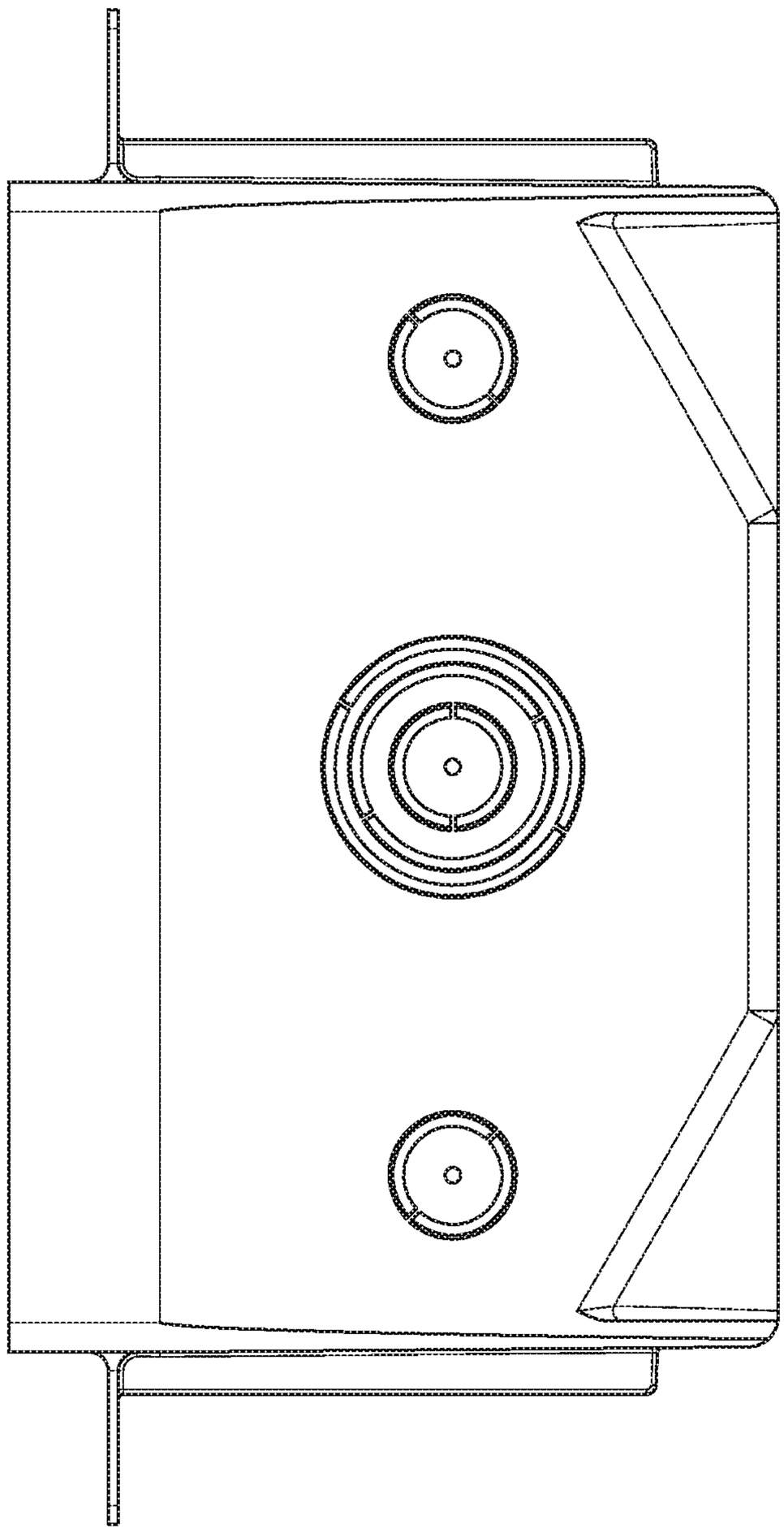

FIG. 54

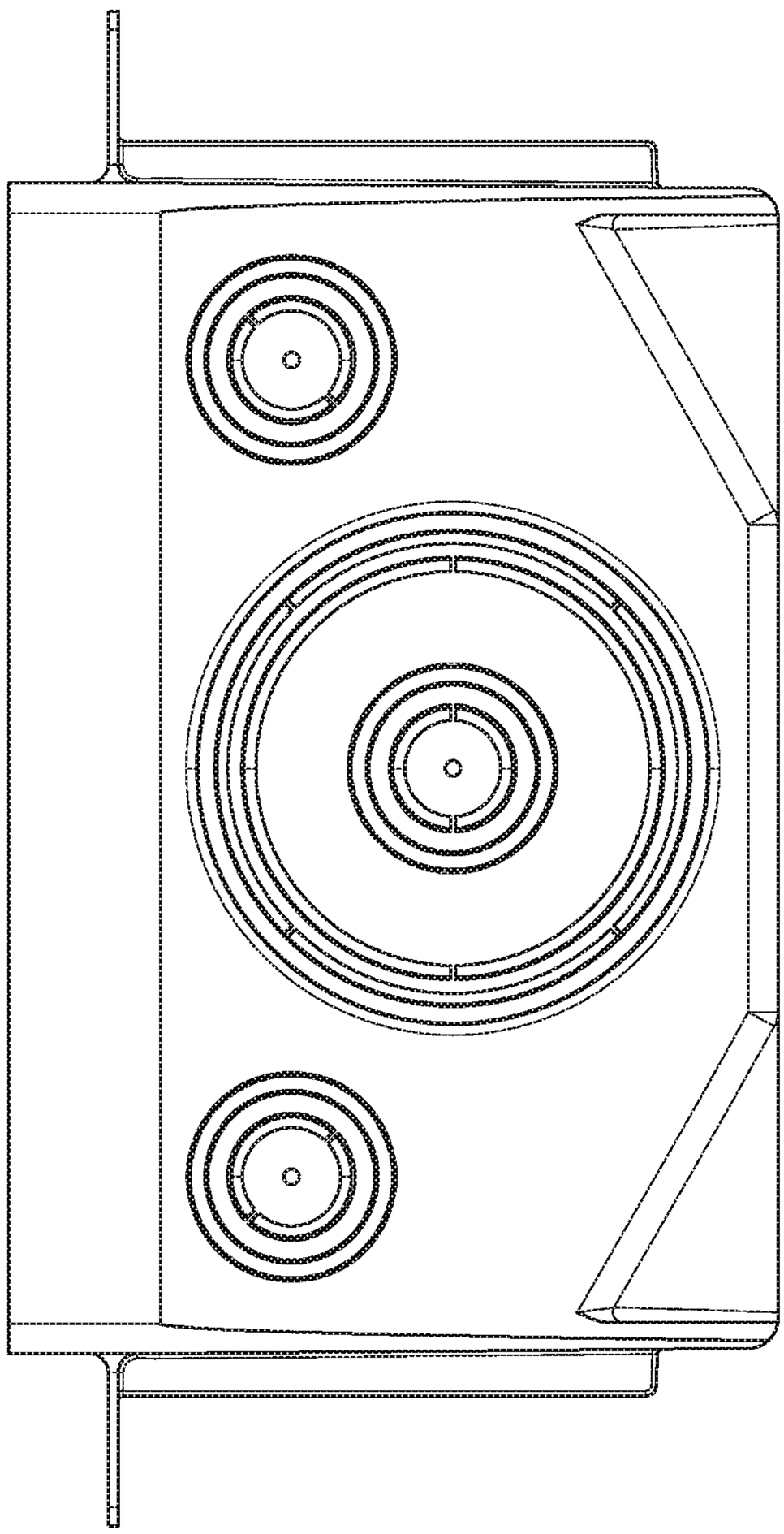

FIG. 55

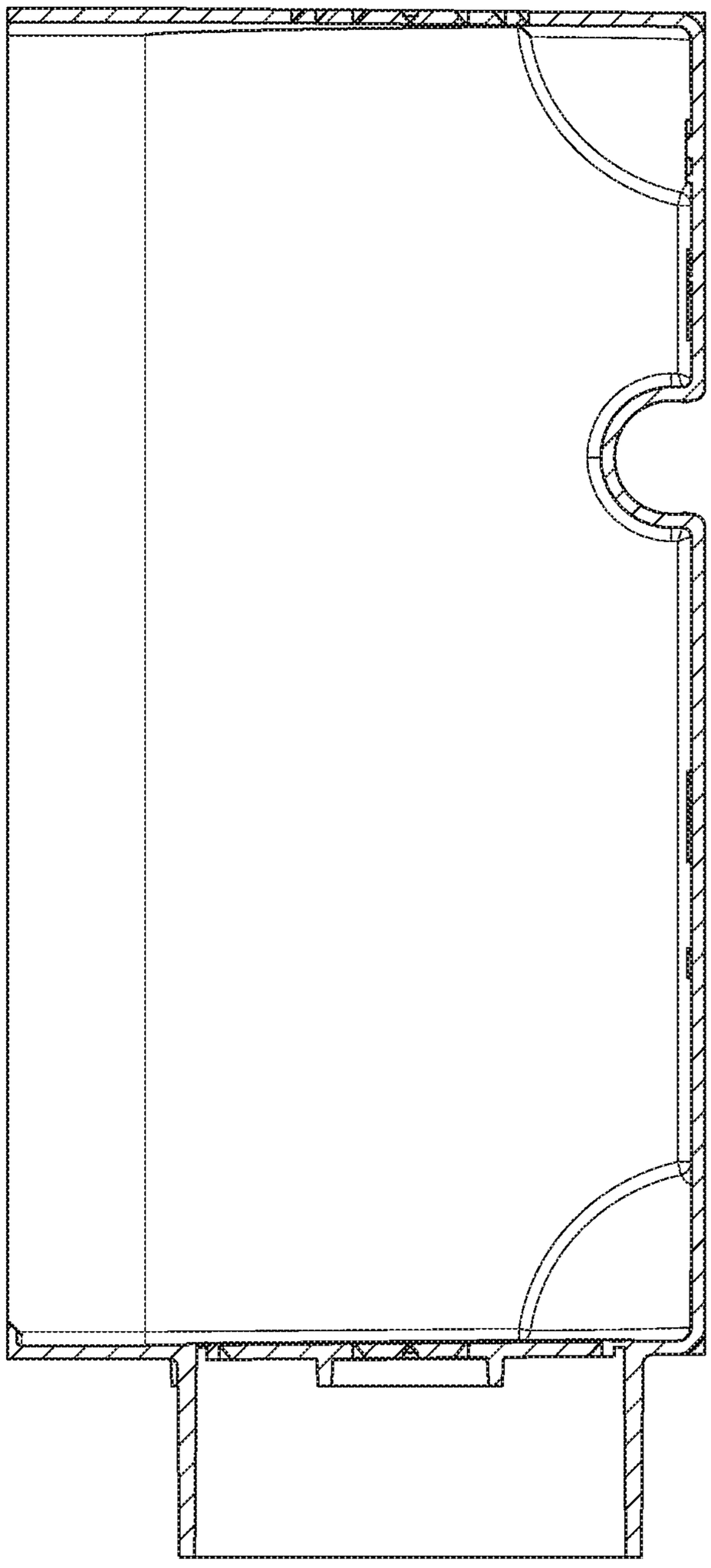

FIG. 56A

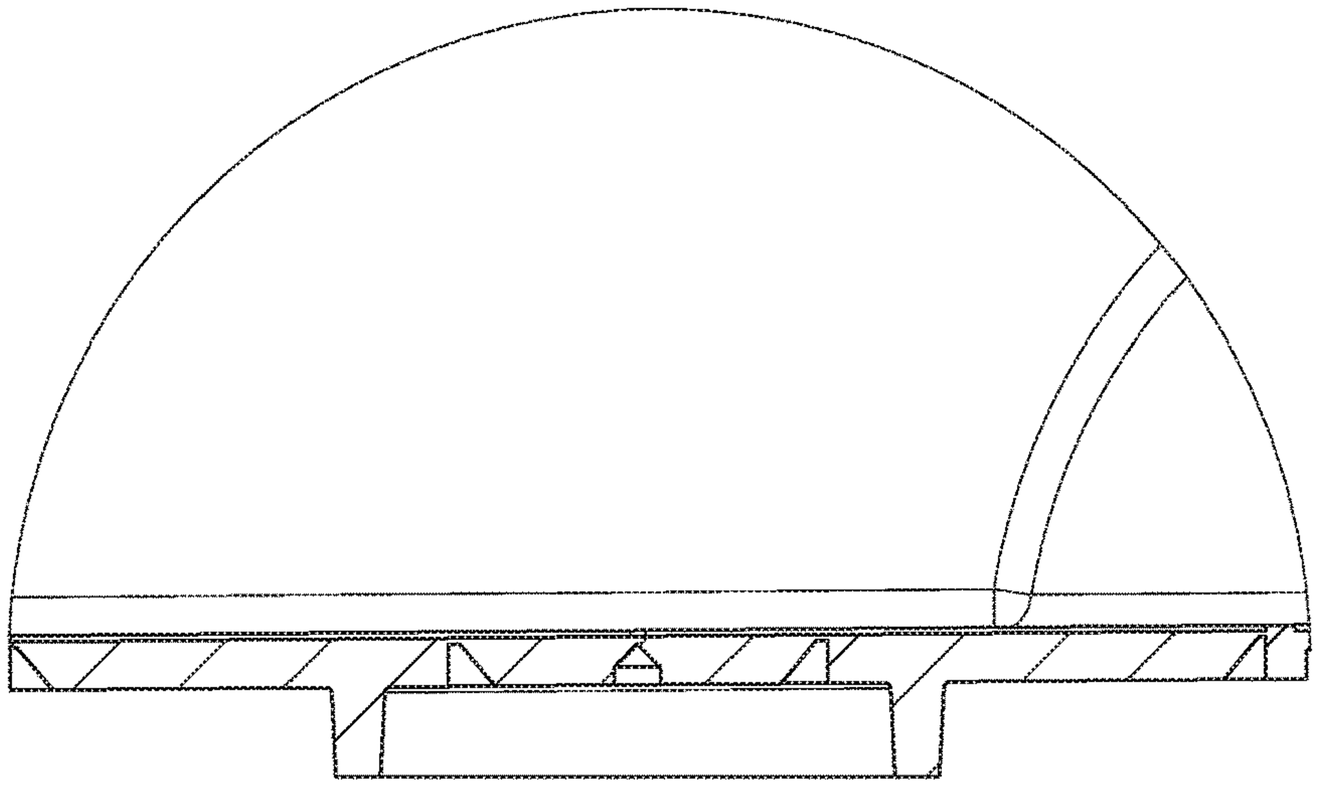

FIG. 56B

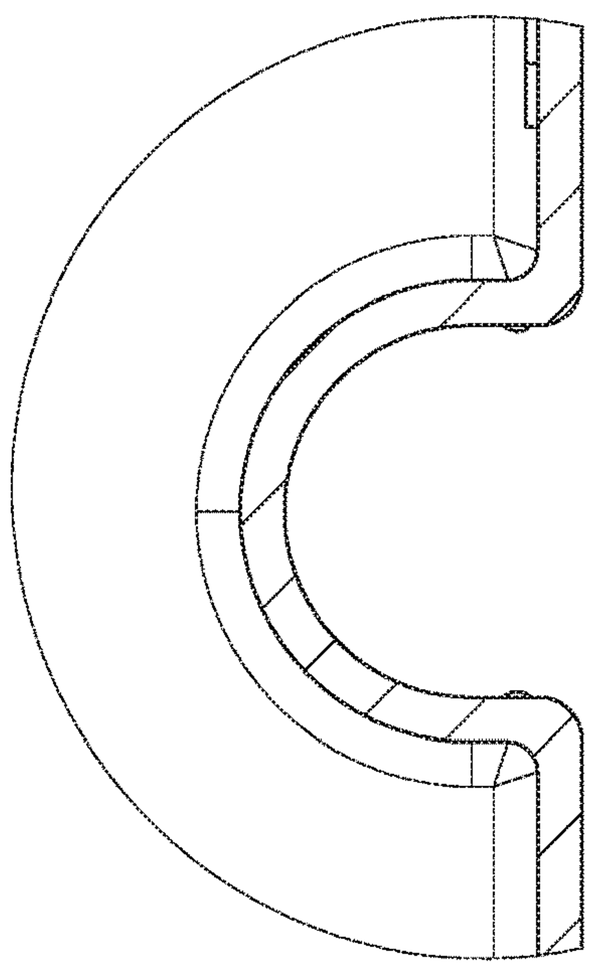

FIG. 57

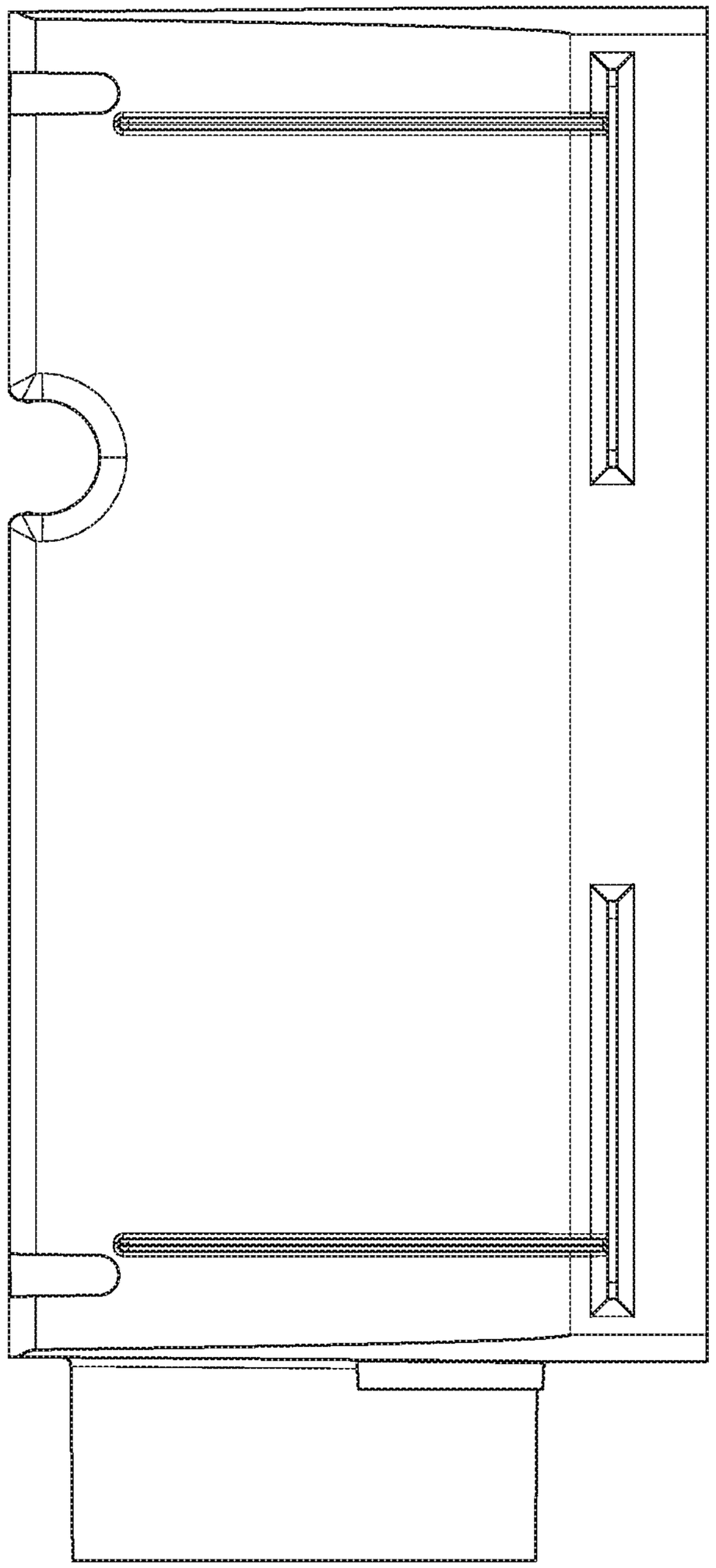

FIG. 58

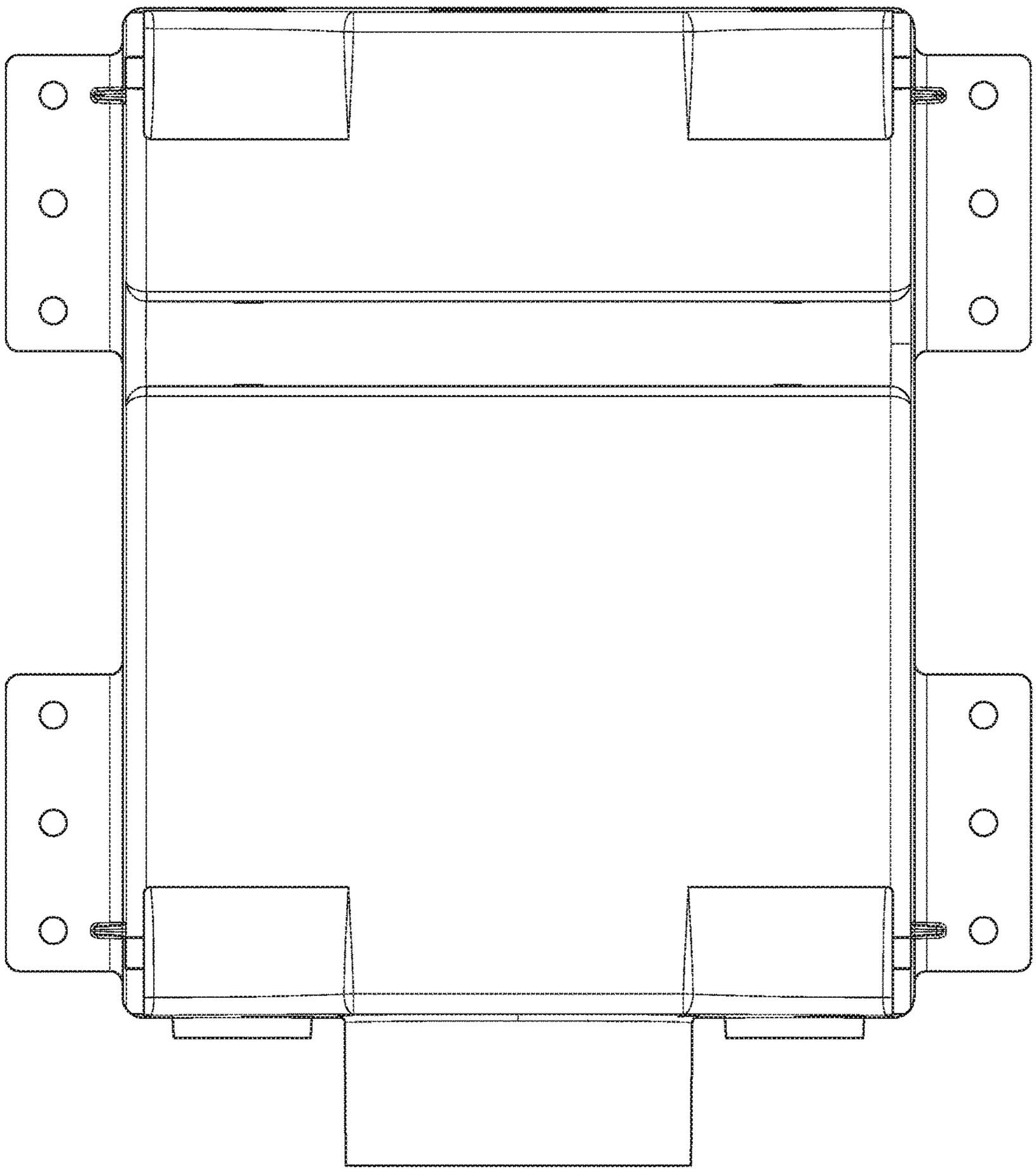

FIG. 59

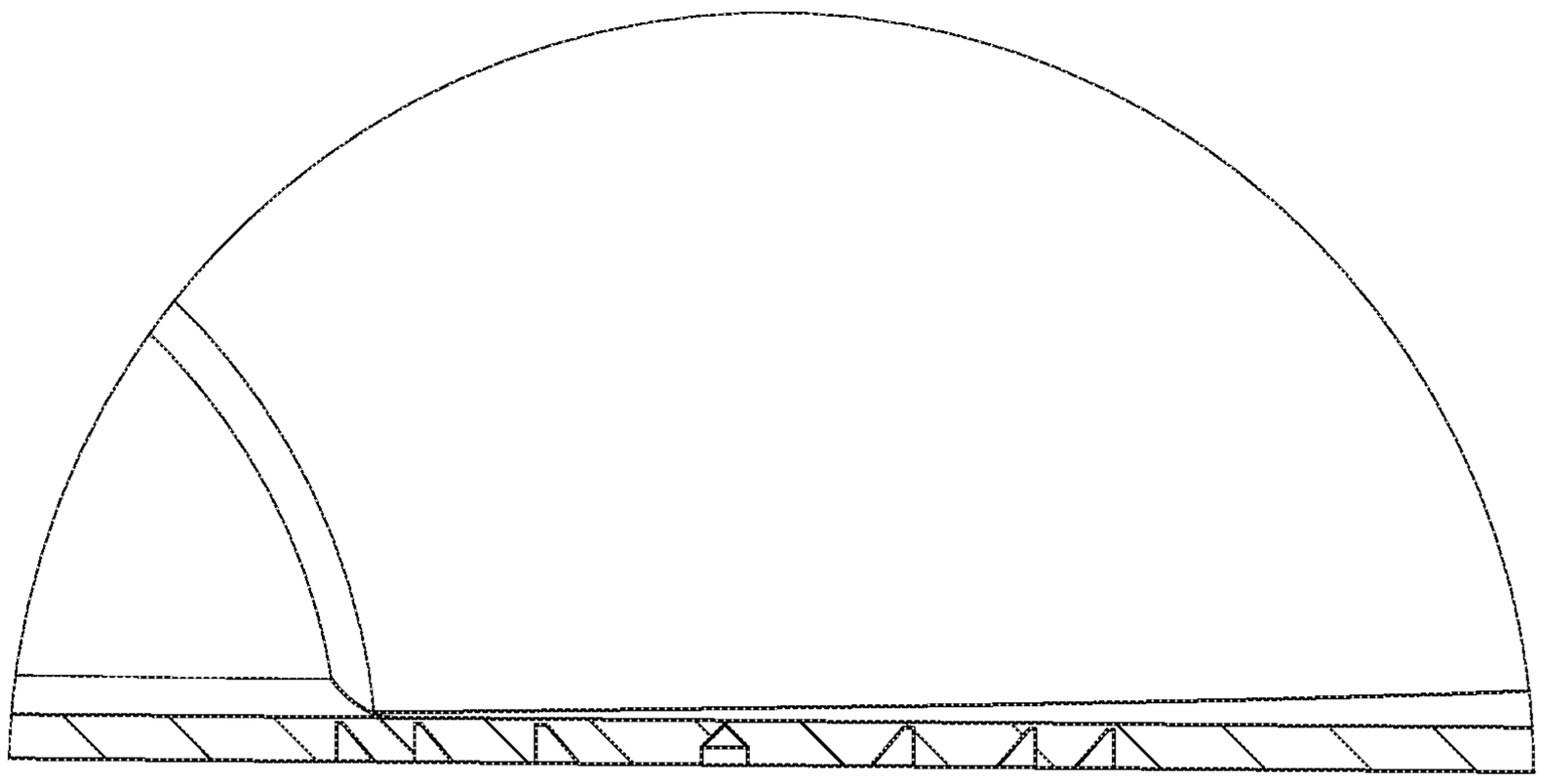

FIG. 60

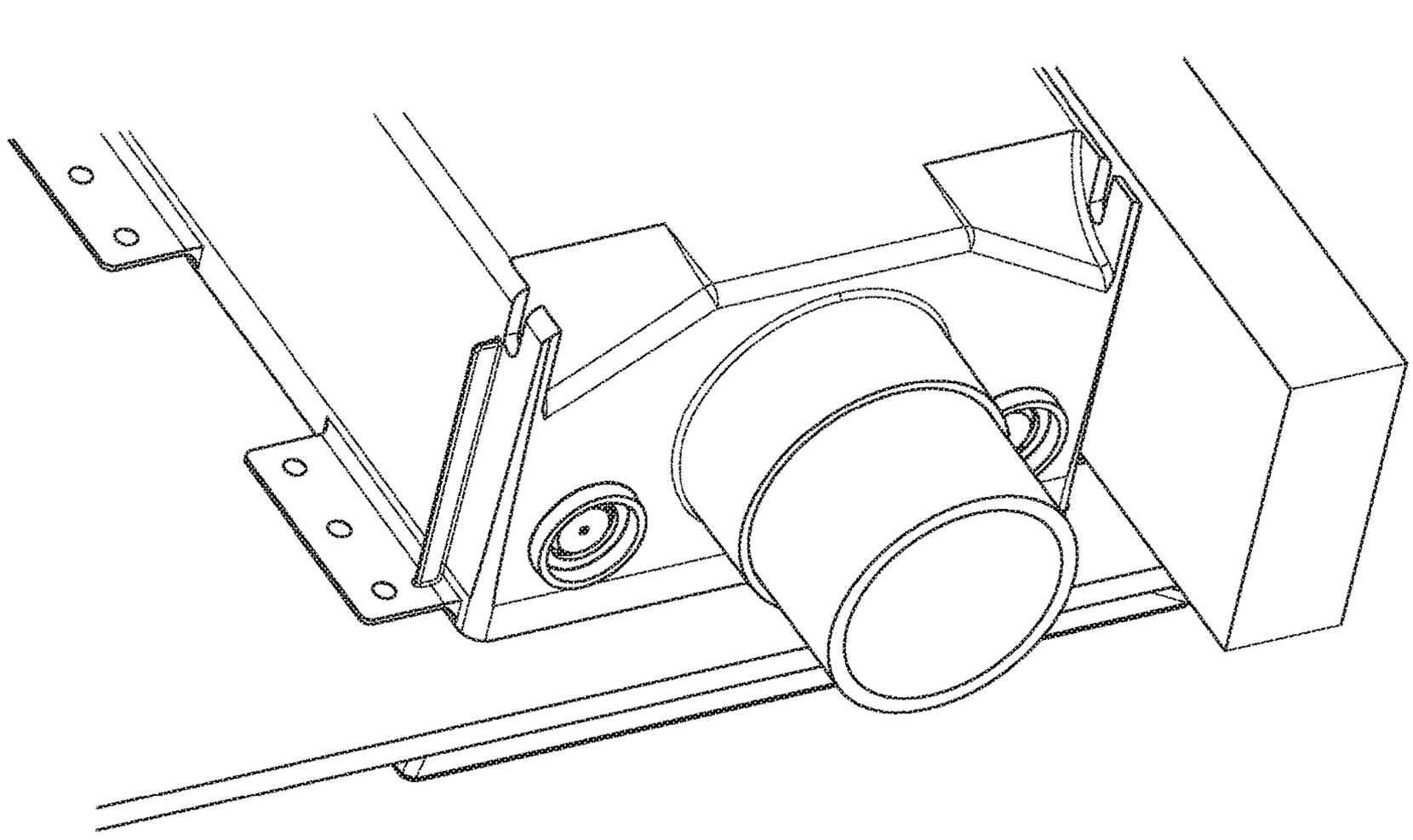

FIG. 61A

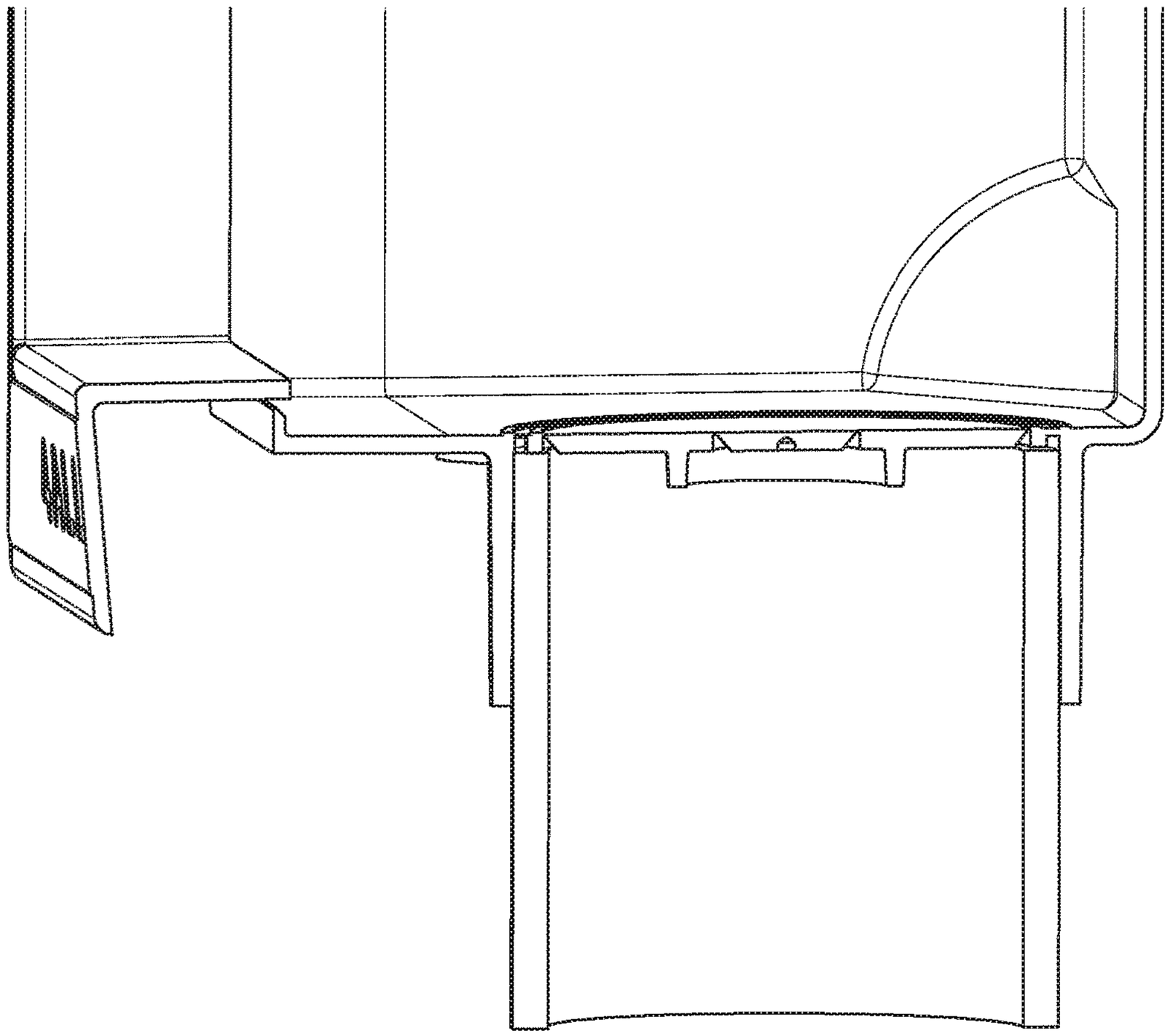

FIG. 61B

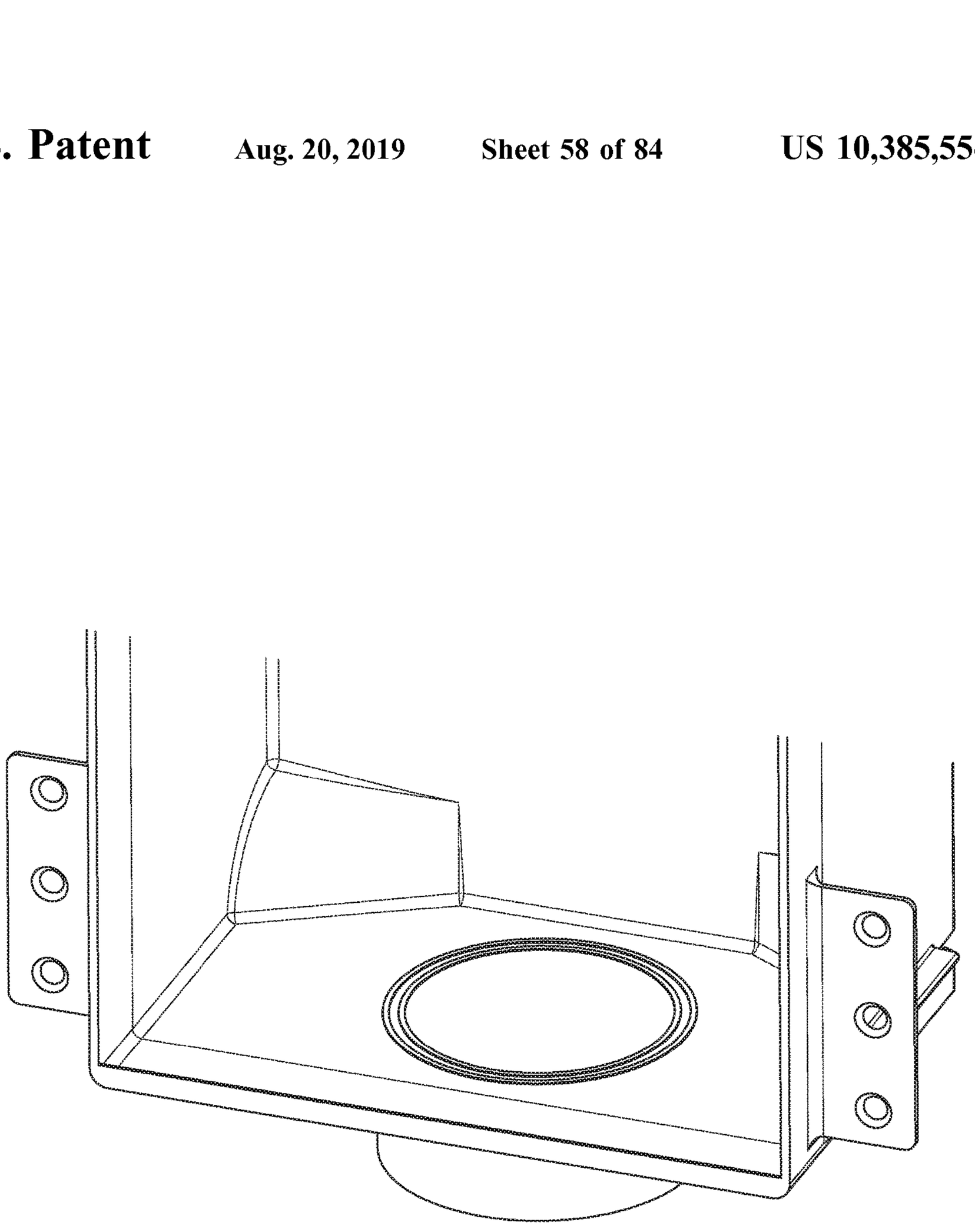

FIG. 62

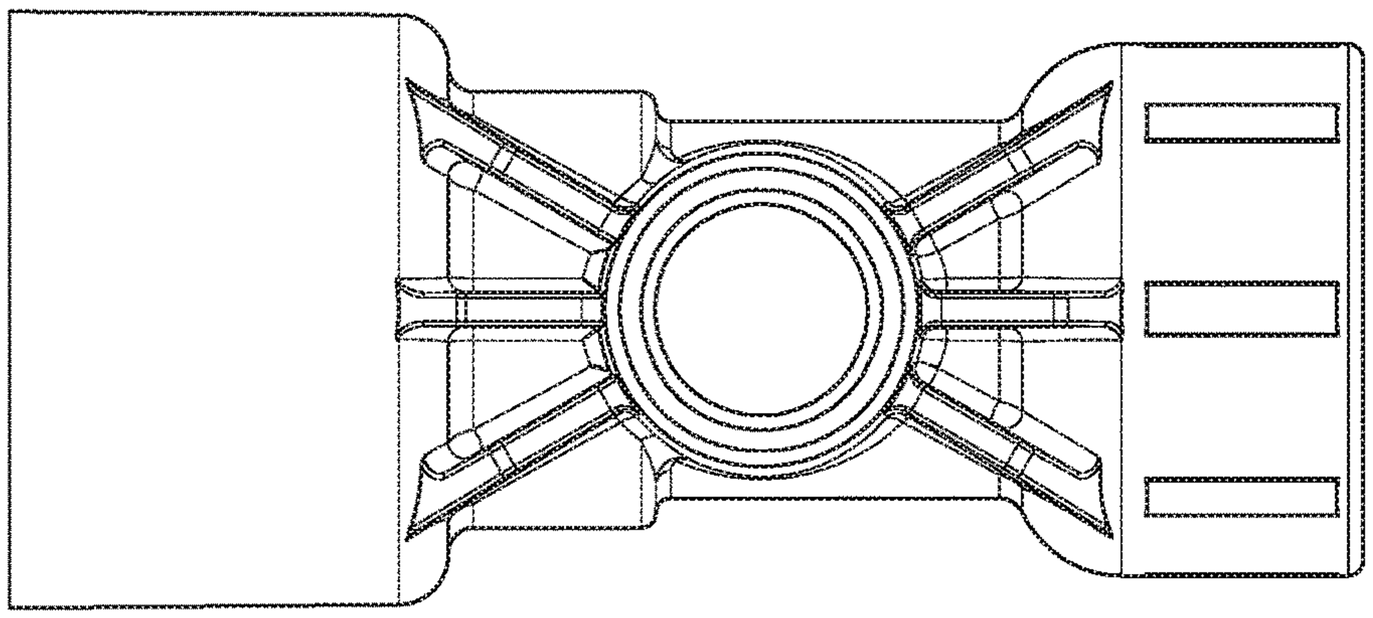

FIG. 63A

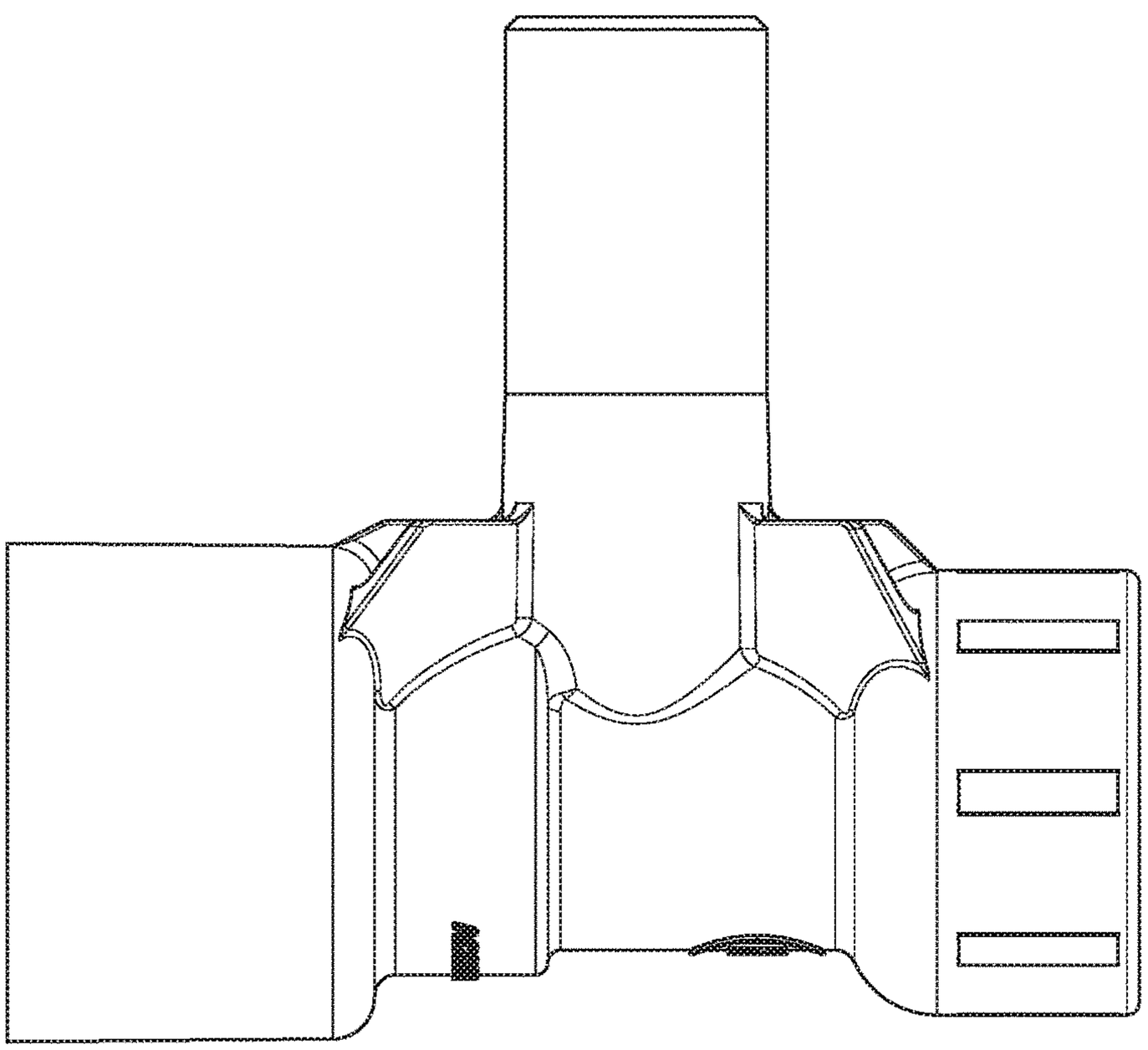

FIG. 63B

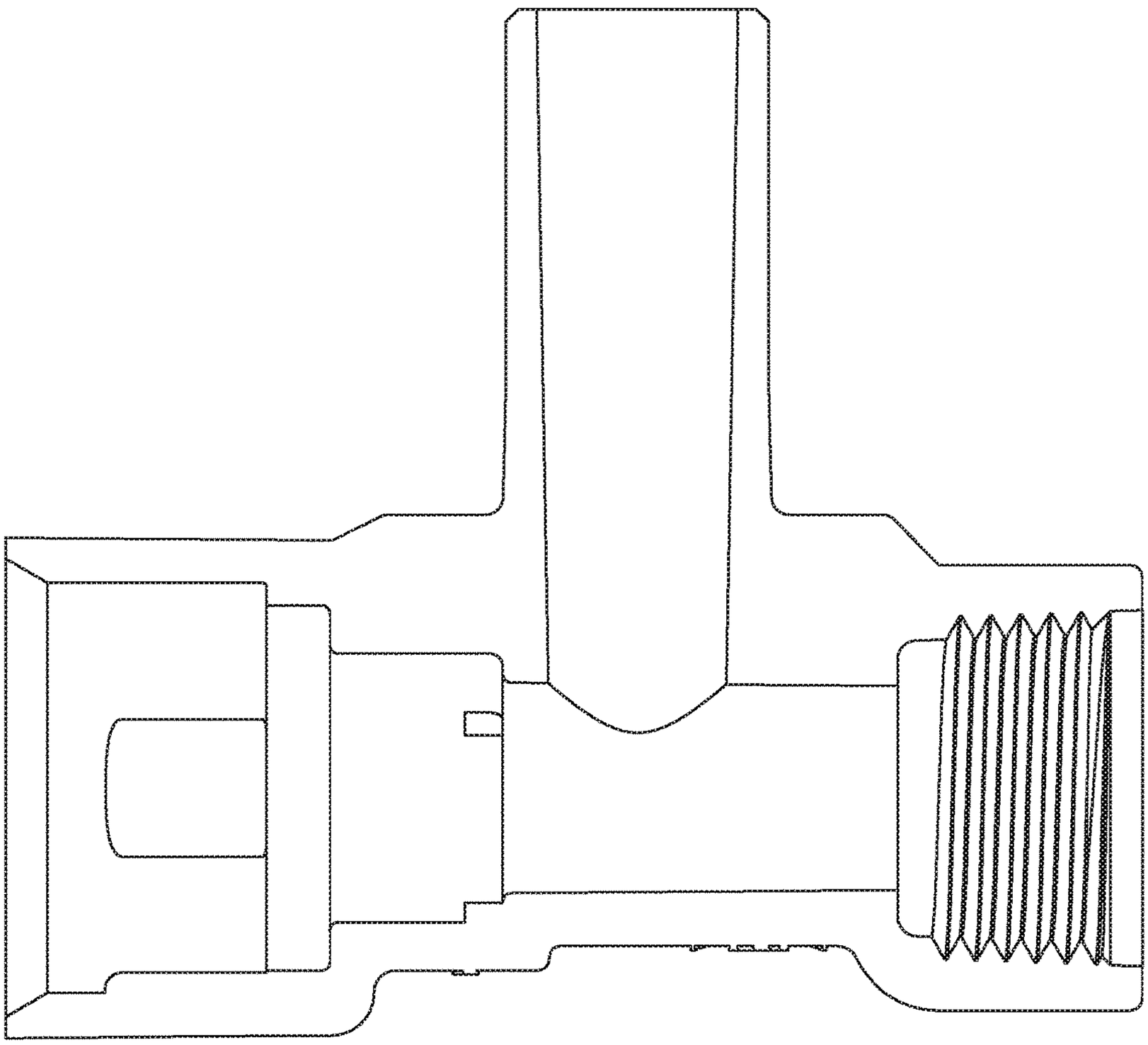

FIG. 64

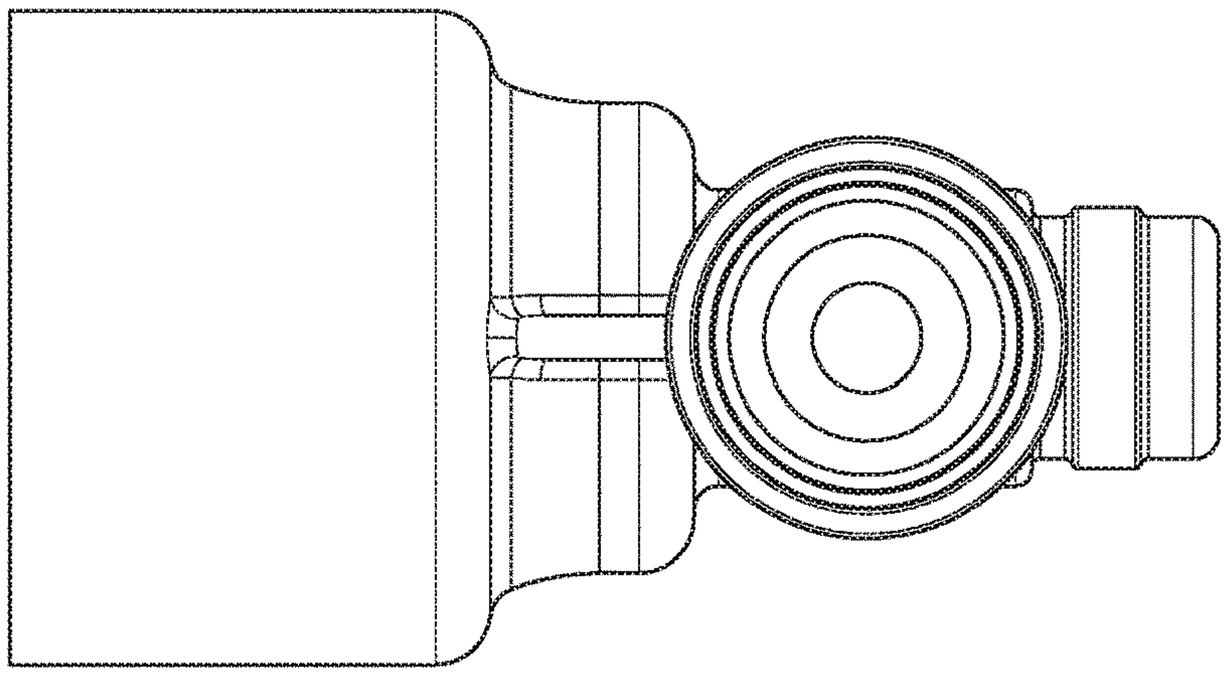

FIG. 65A

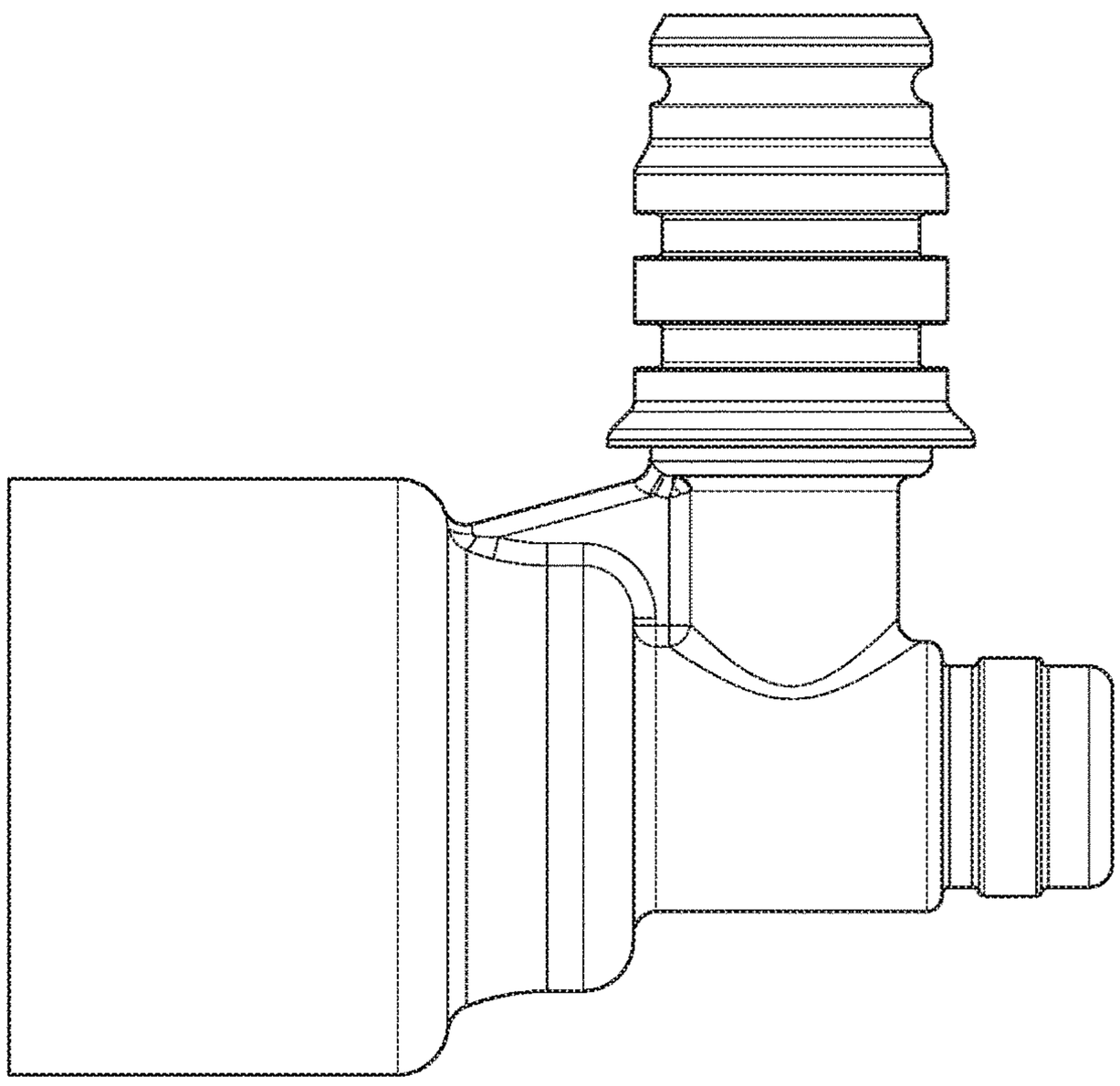

FIG. 65B

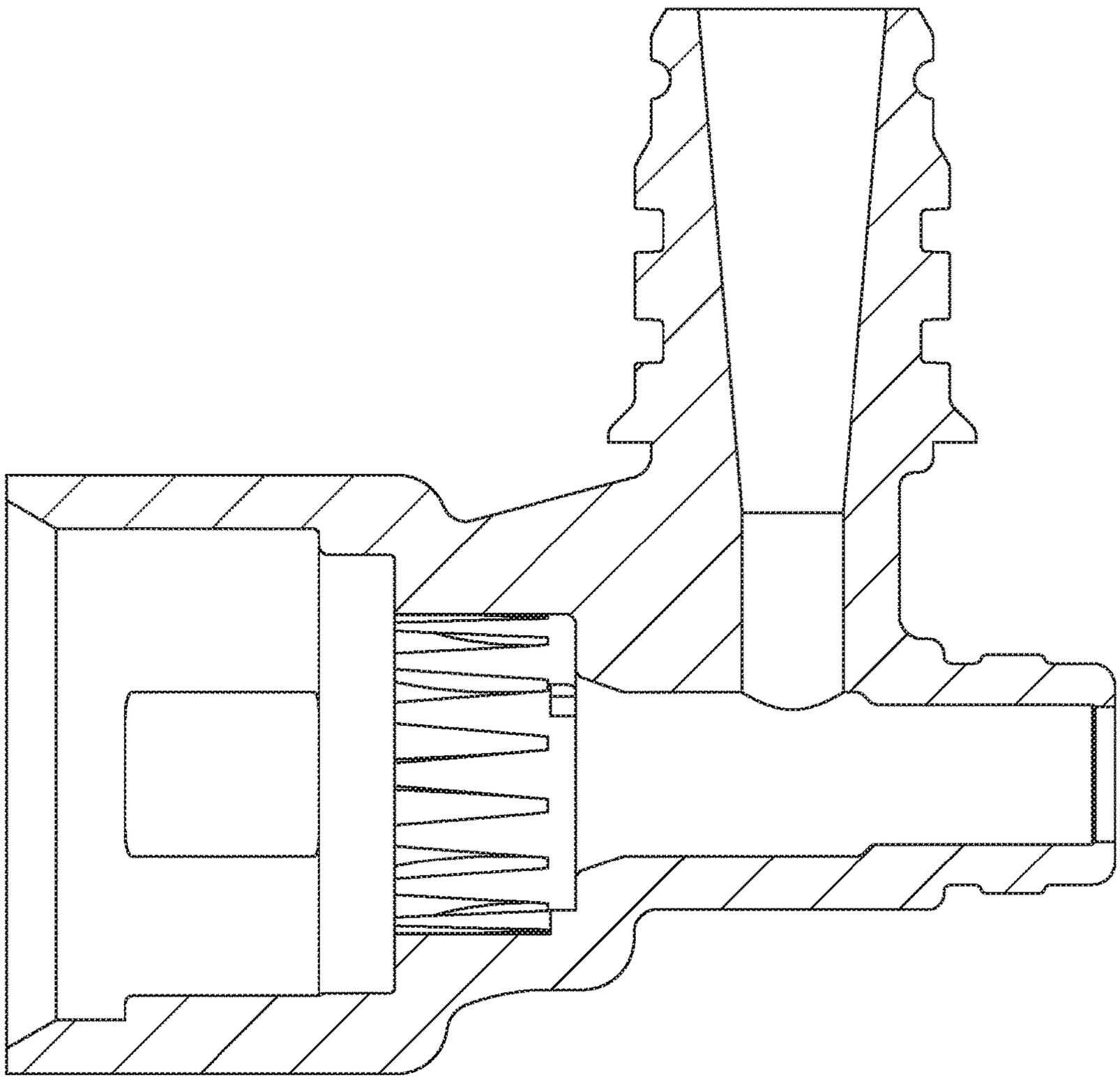

FIG. 66

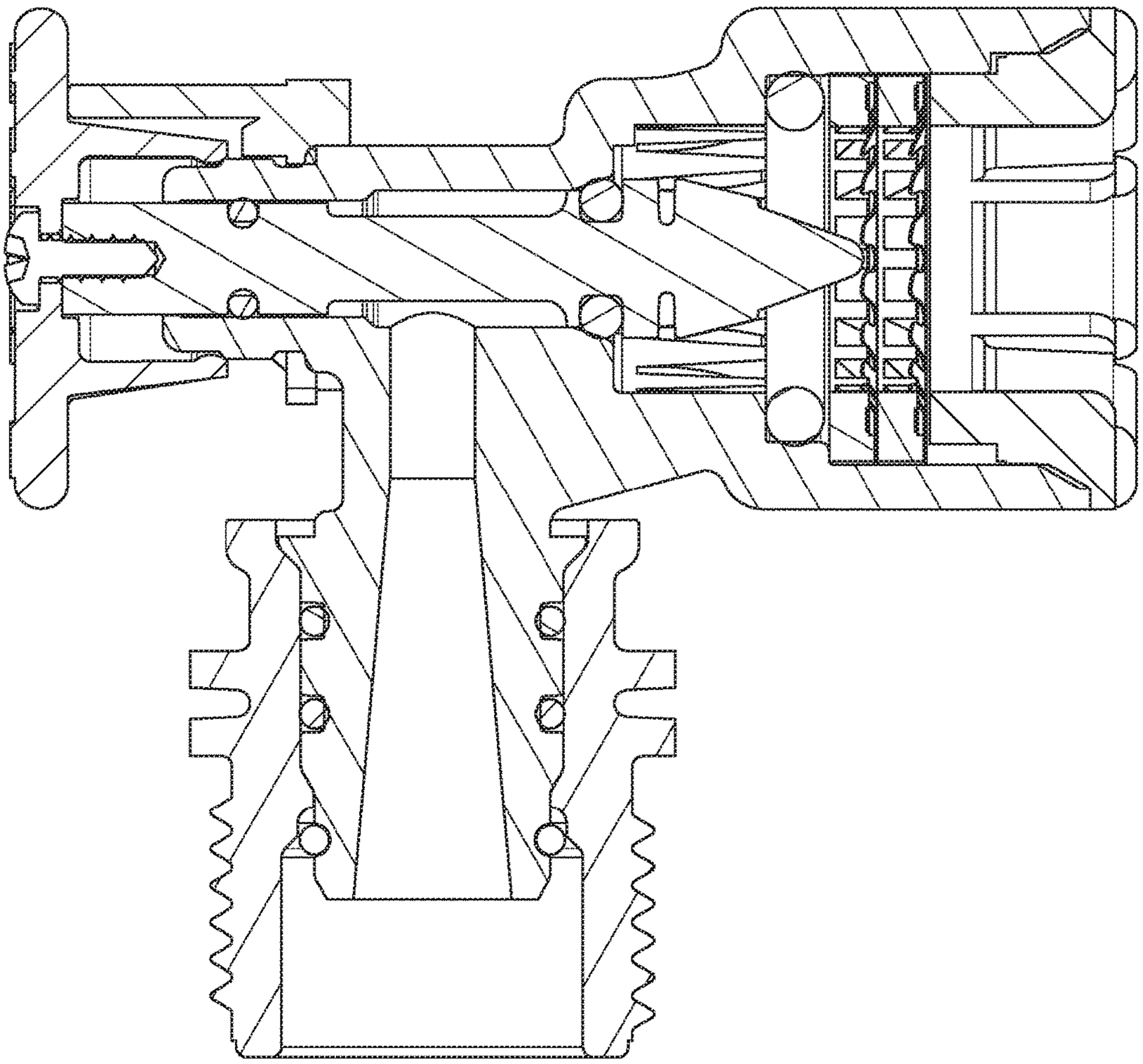

FIG. 67

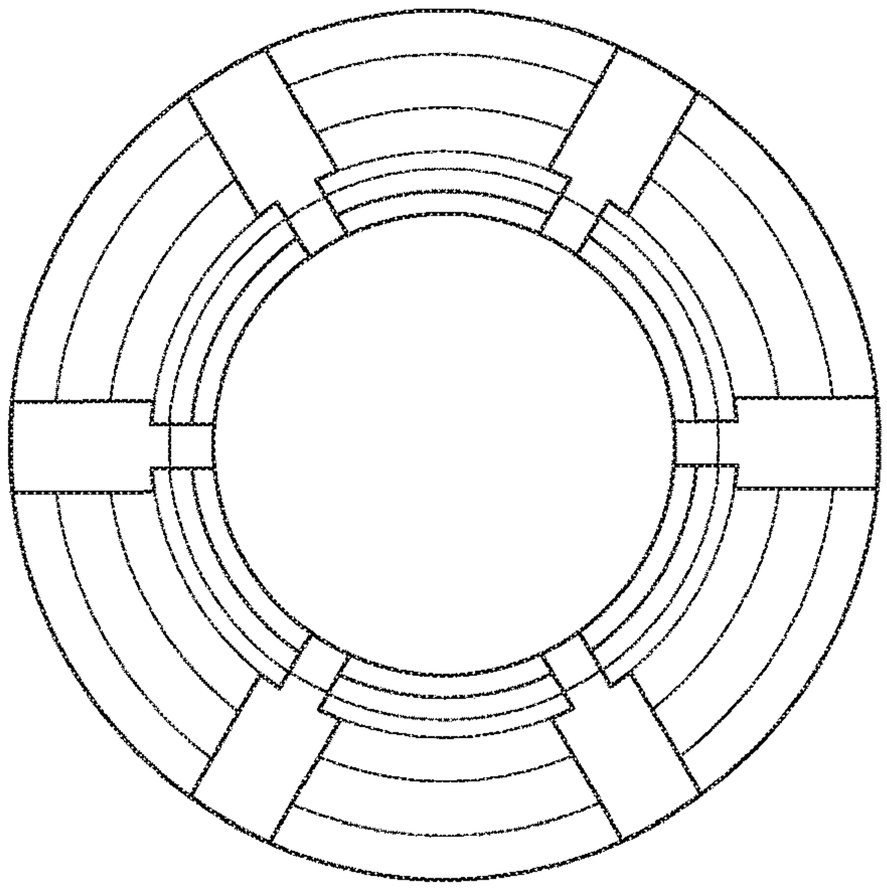

FIG. 68

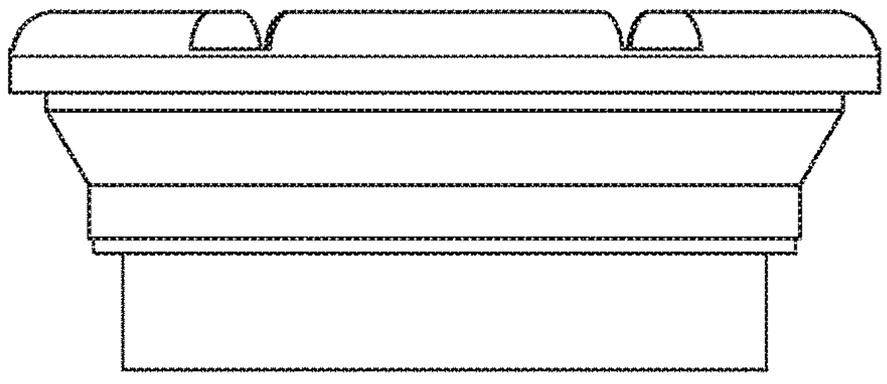

FIG. 69

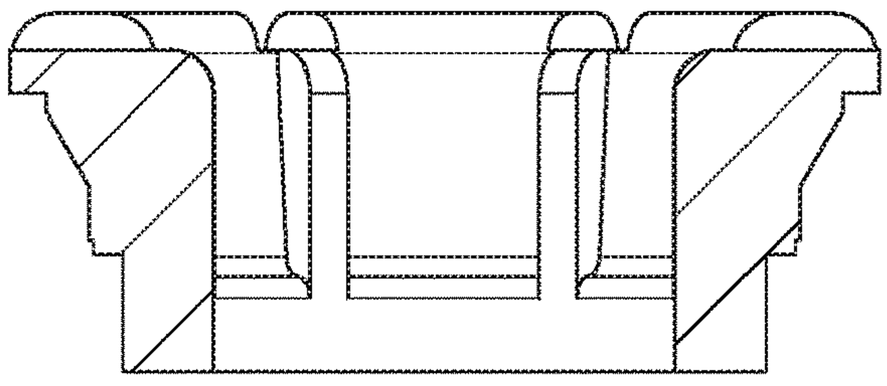

FIG. 70

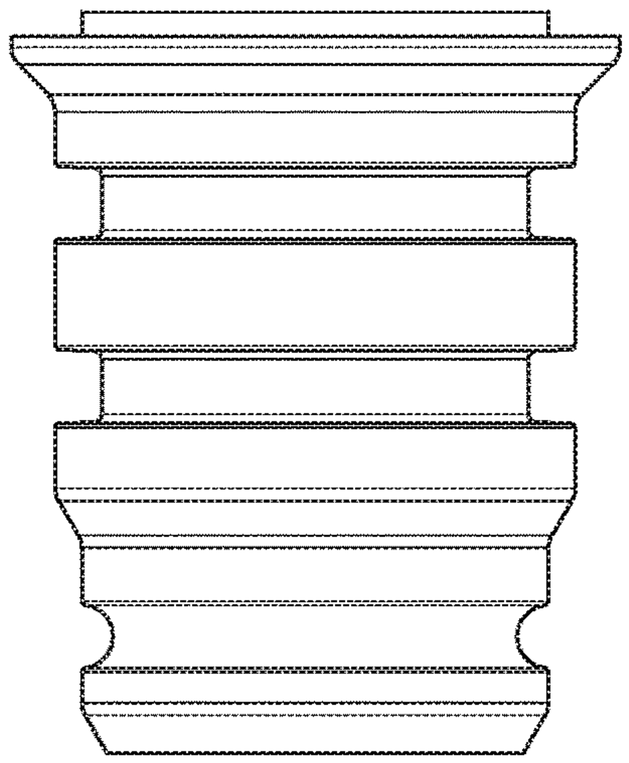

FIG. 71

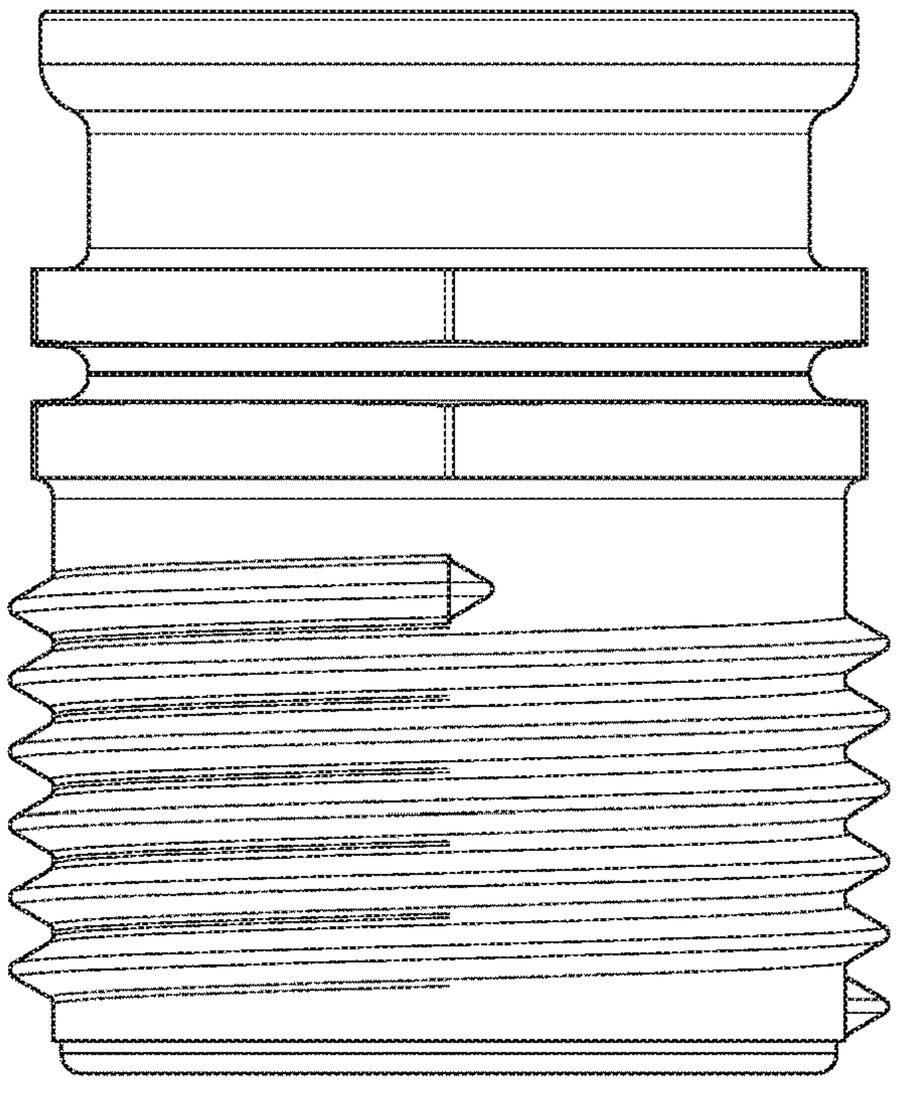

FIG. 72

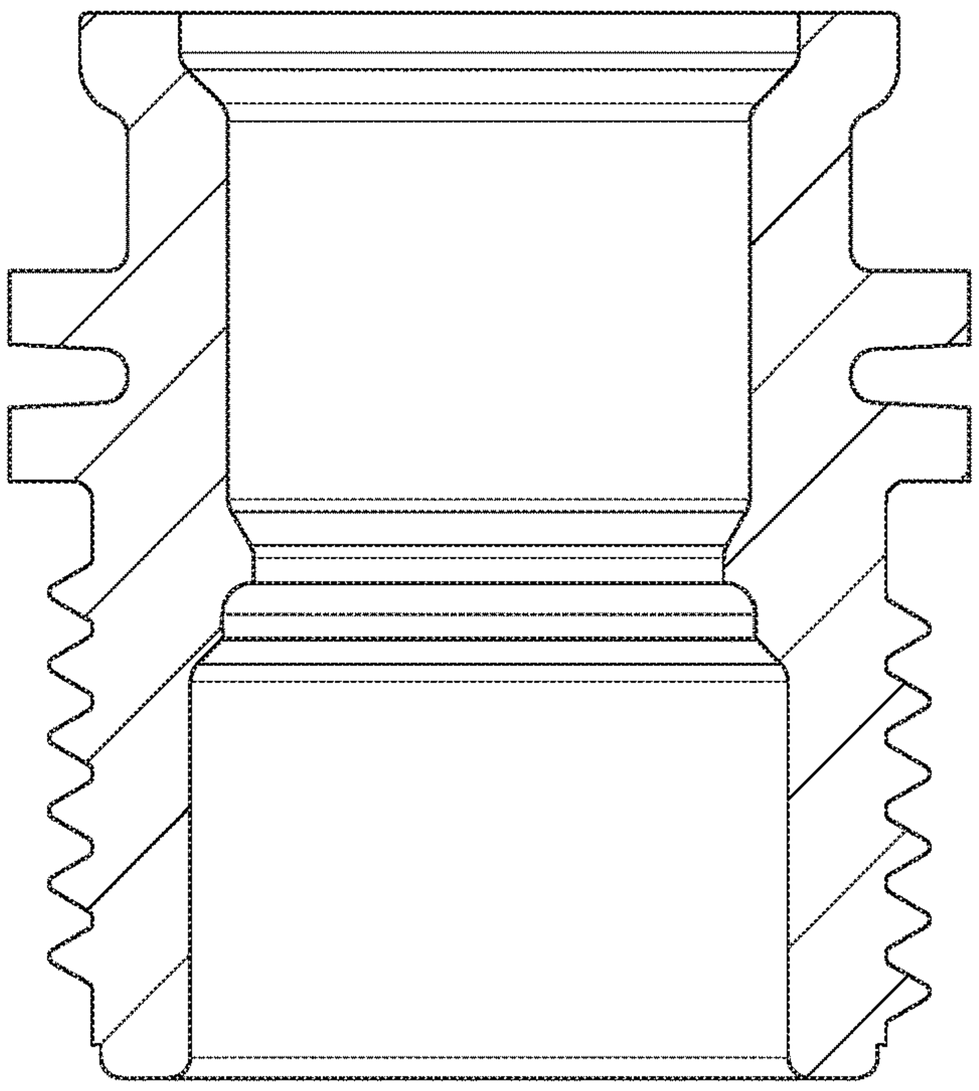

FIG. 73

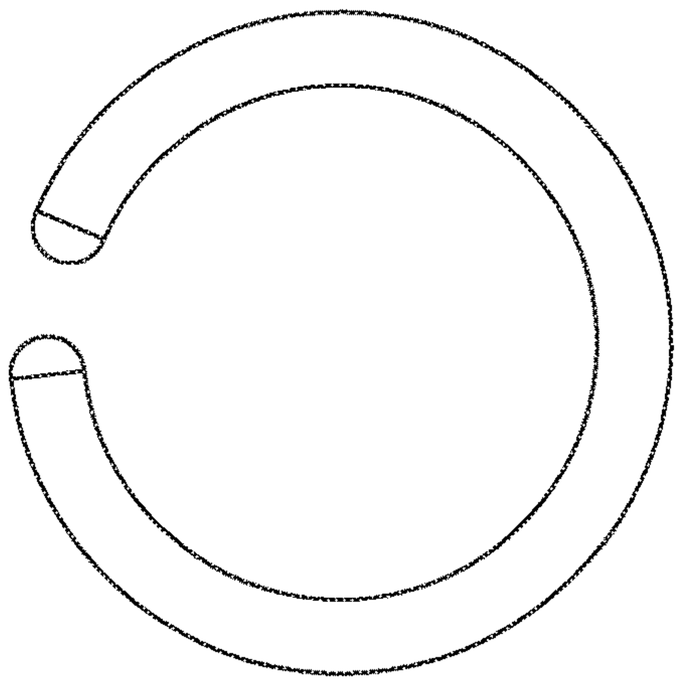

FIG. 74

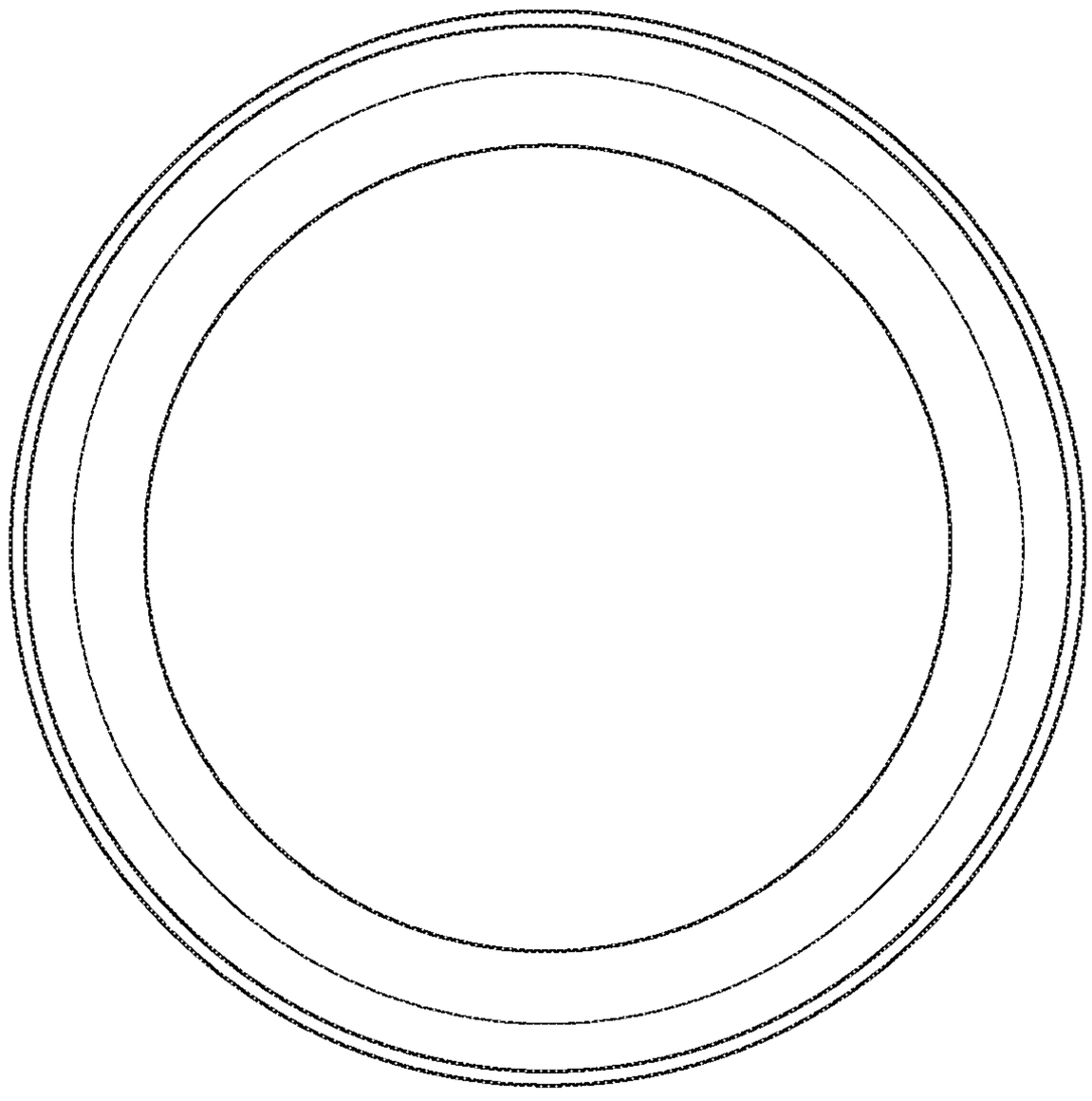

FIG. 75A

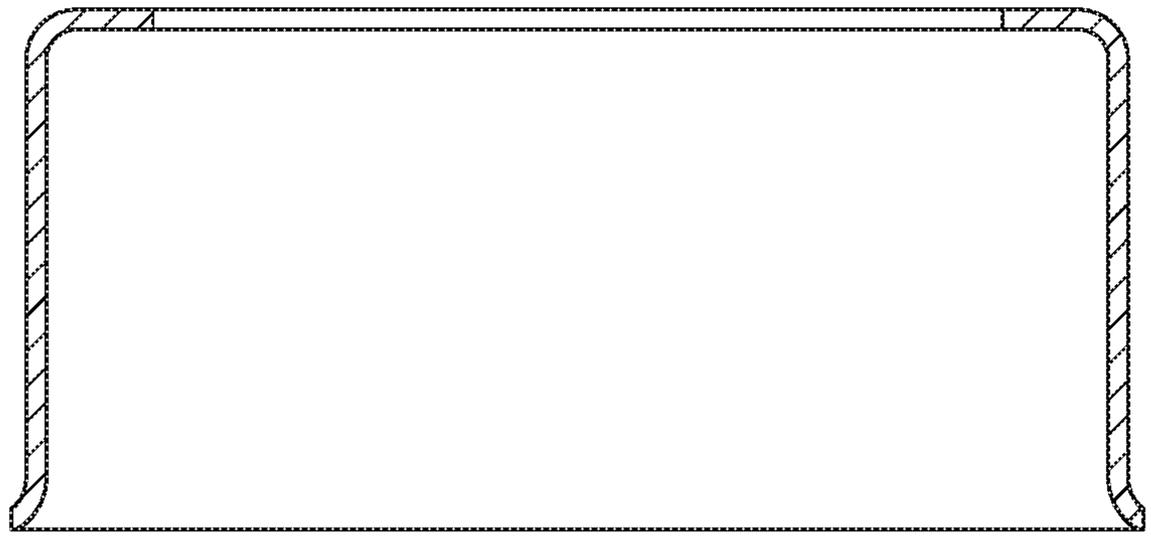

FIG. 75B

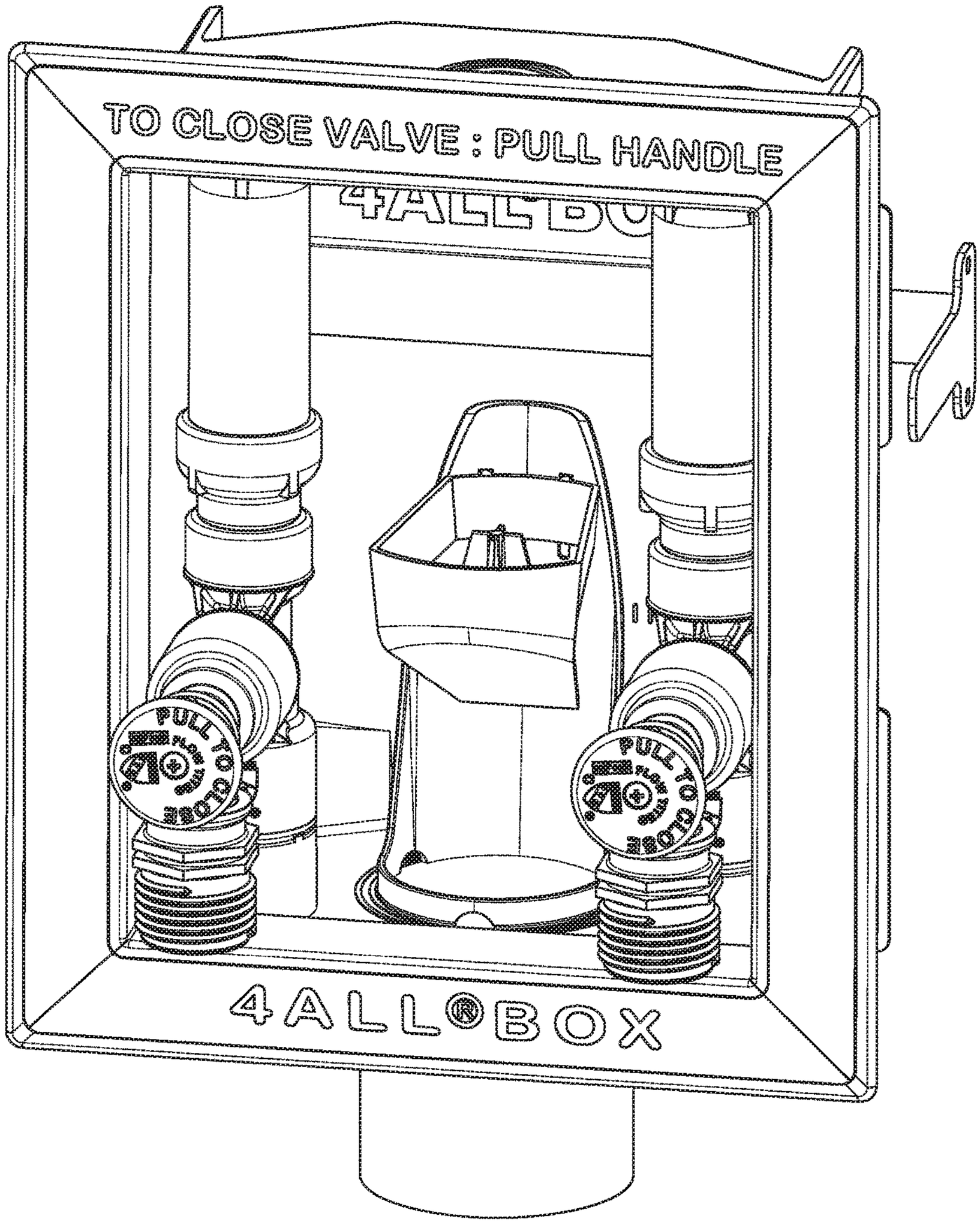
TO CLOSE VALVE : PULL HANDLE
PULL TO CLOSE
PULL TO CLOSE
4ALL®BOX

FIG. 76

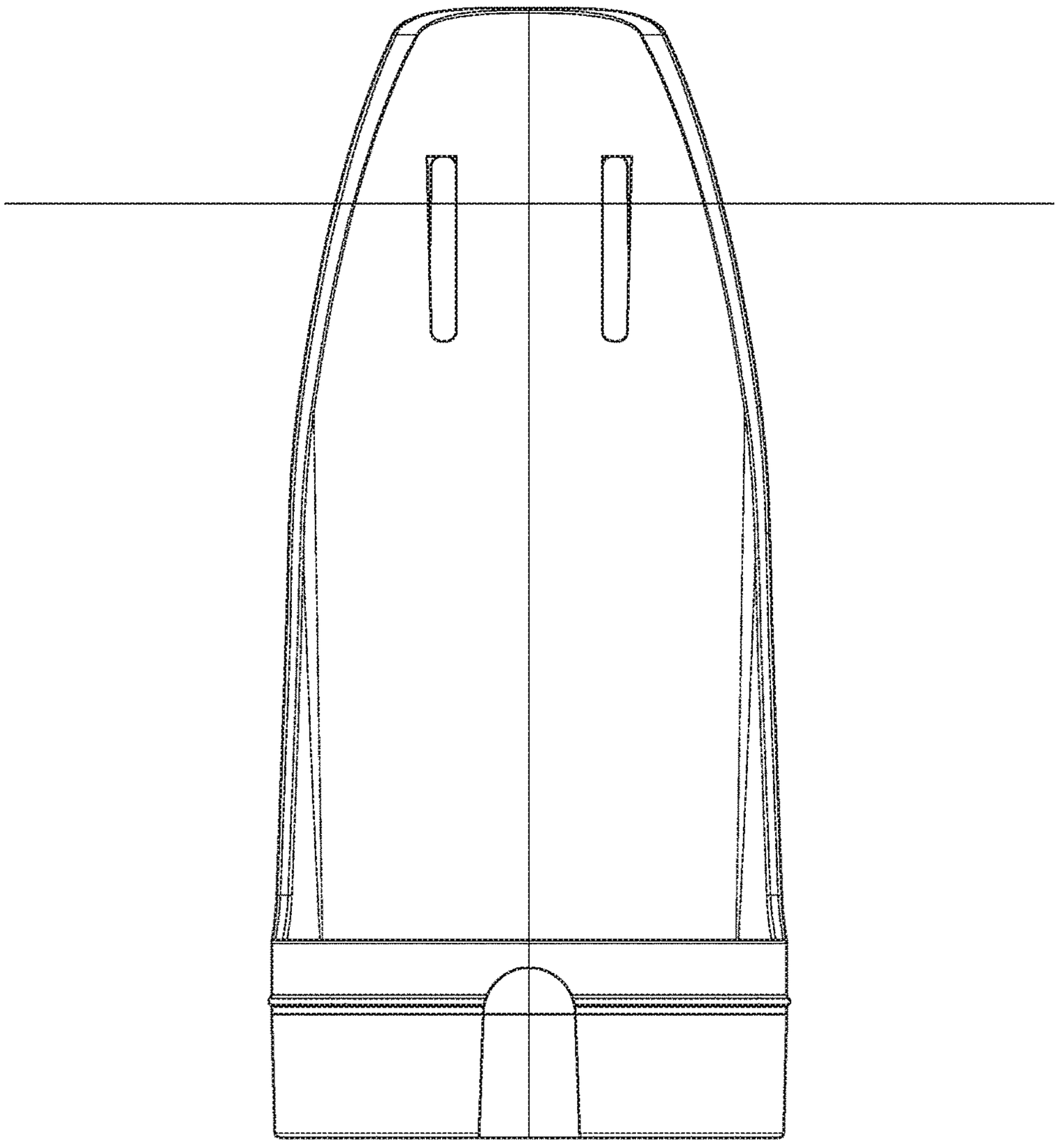

FIG. 77

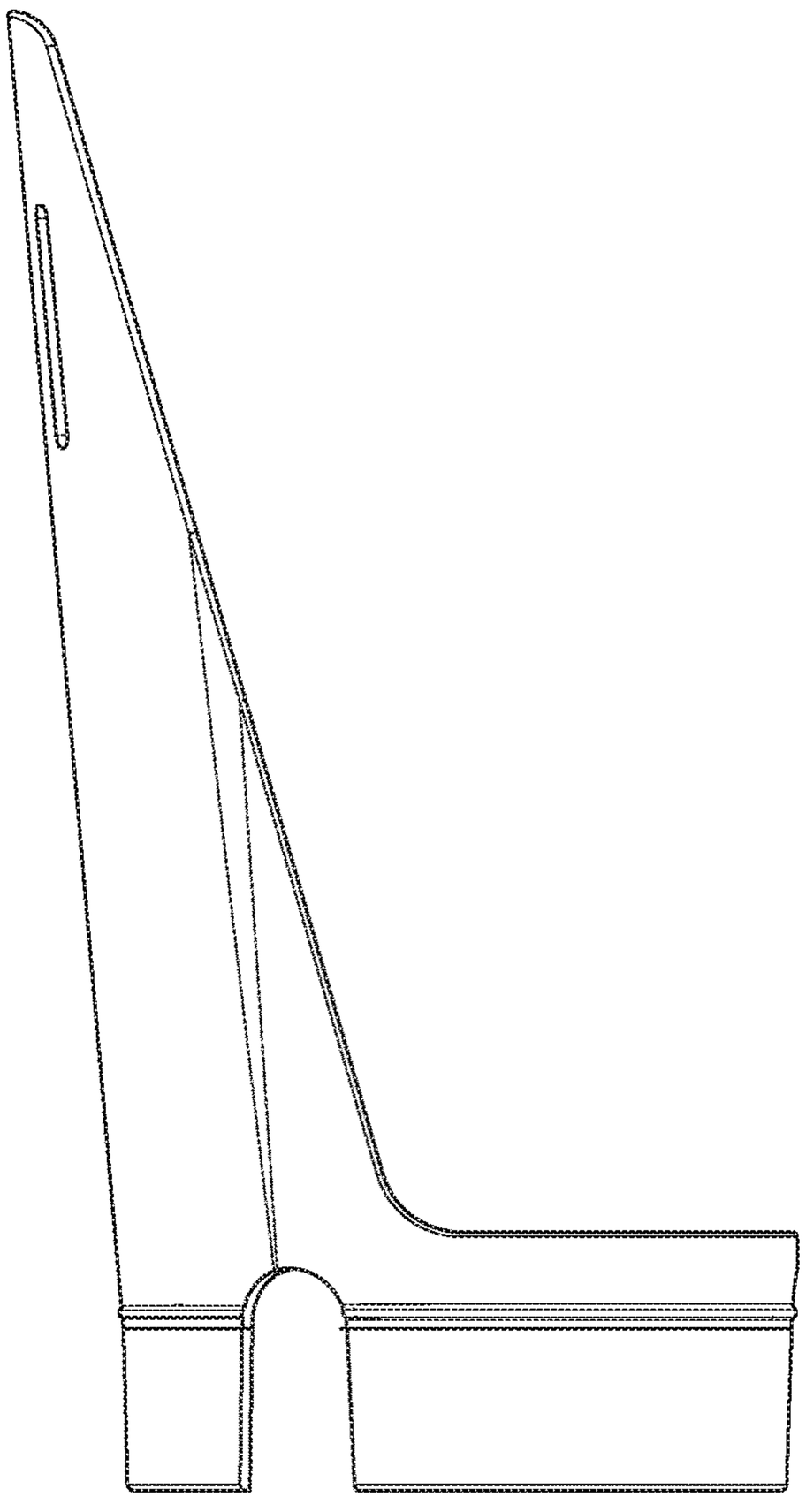

FIG. 78

FIG. 79

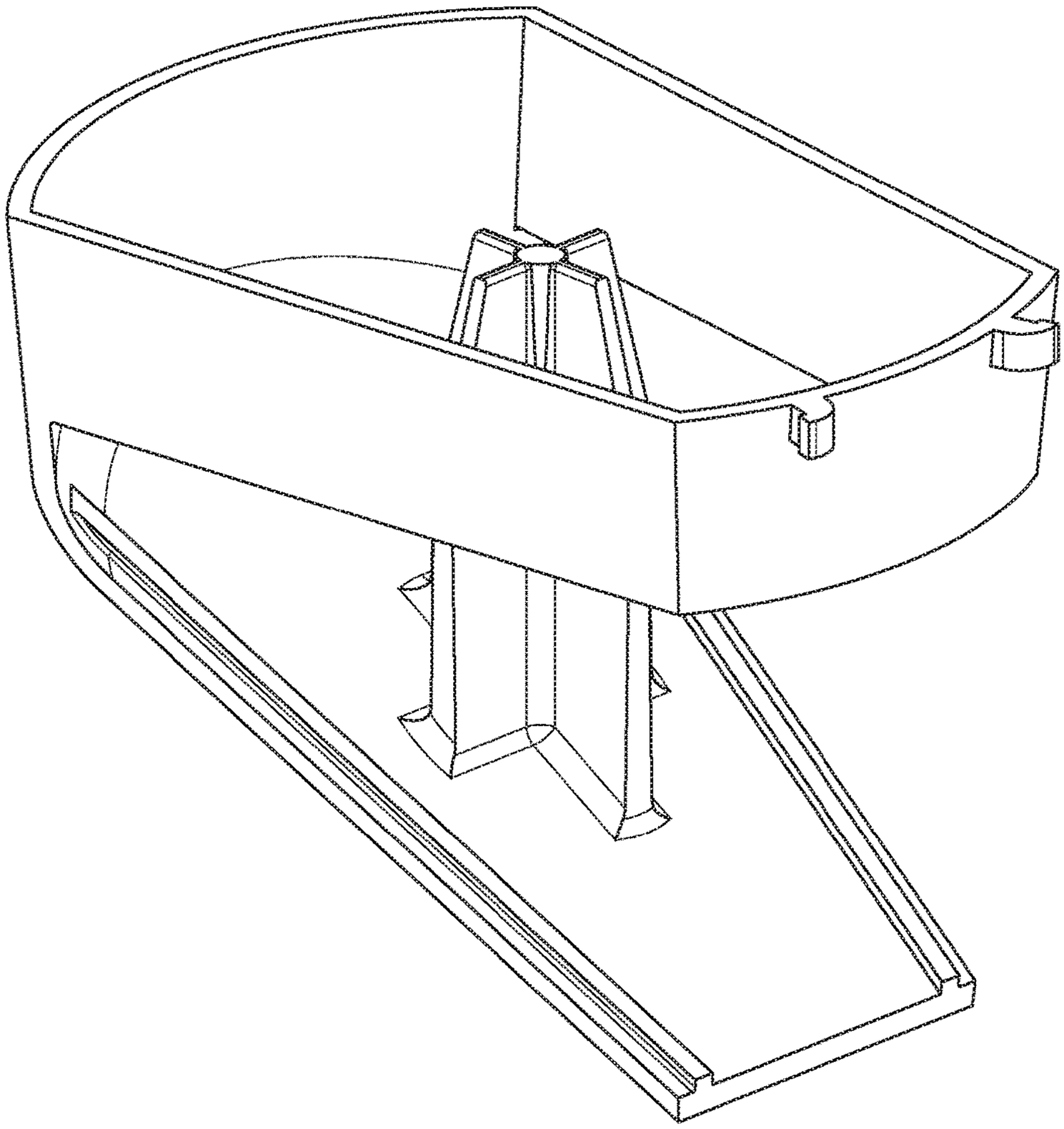

FIG. 80

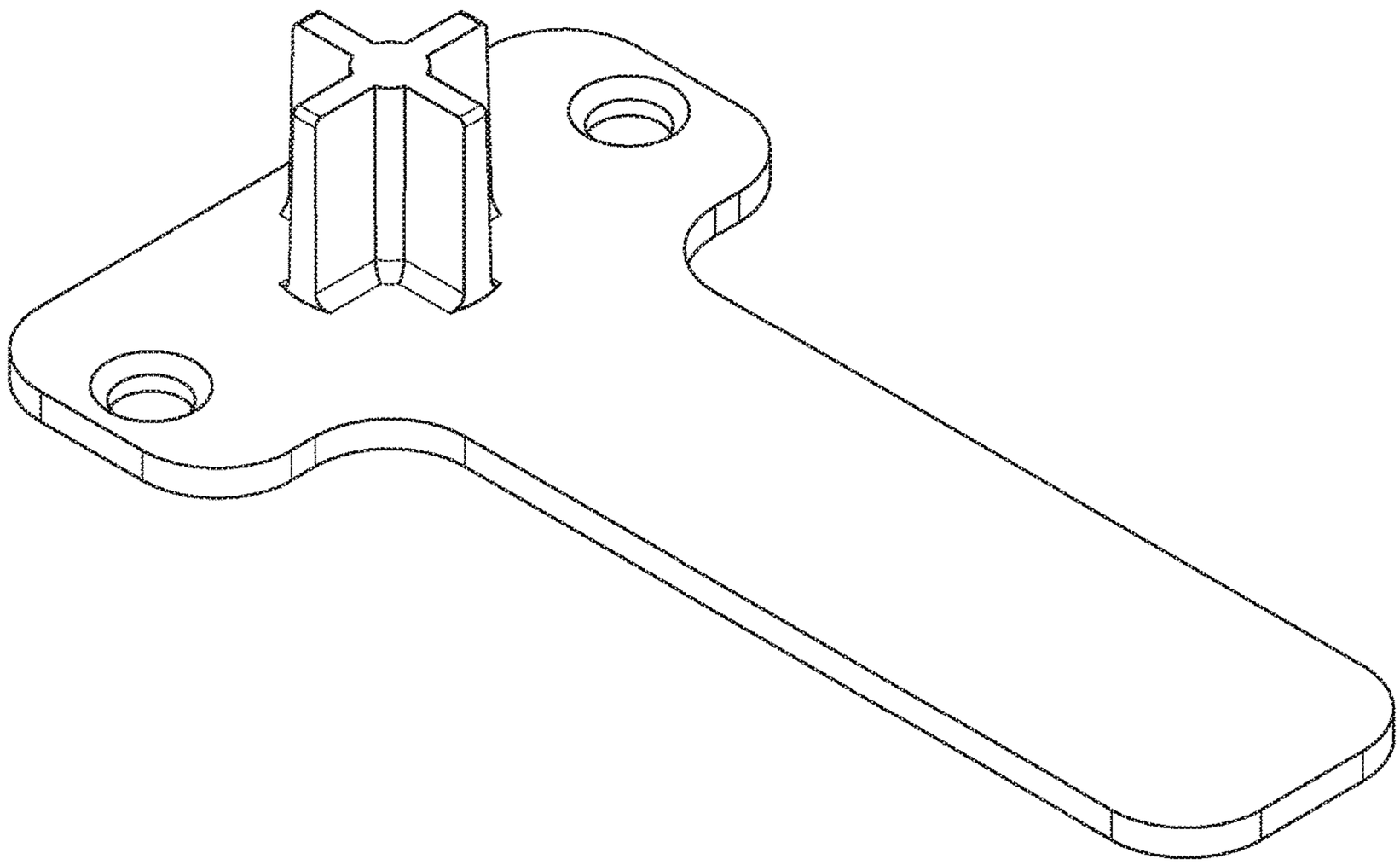

FIG. 81

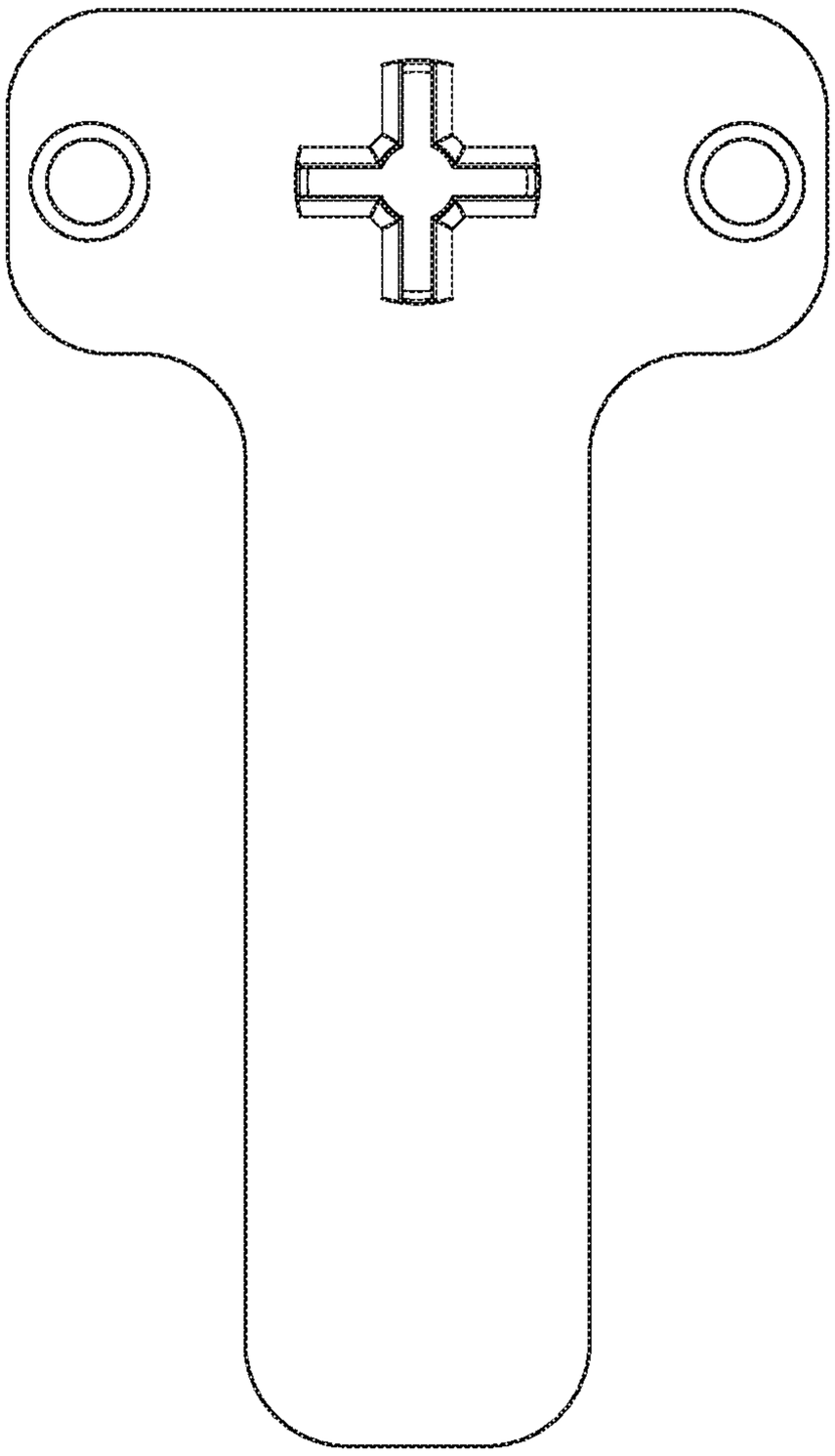

FIG. 82

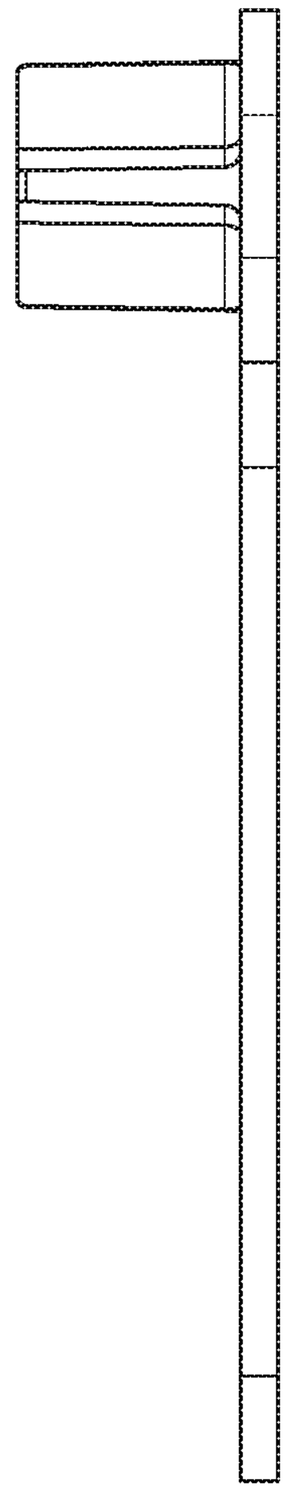

FIG. 83

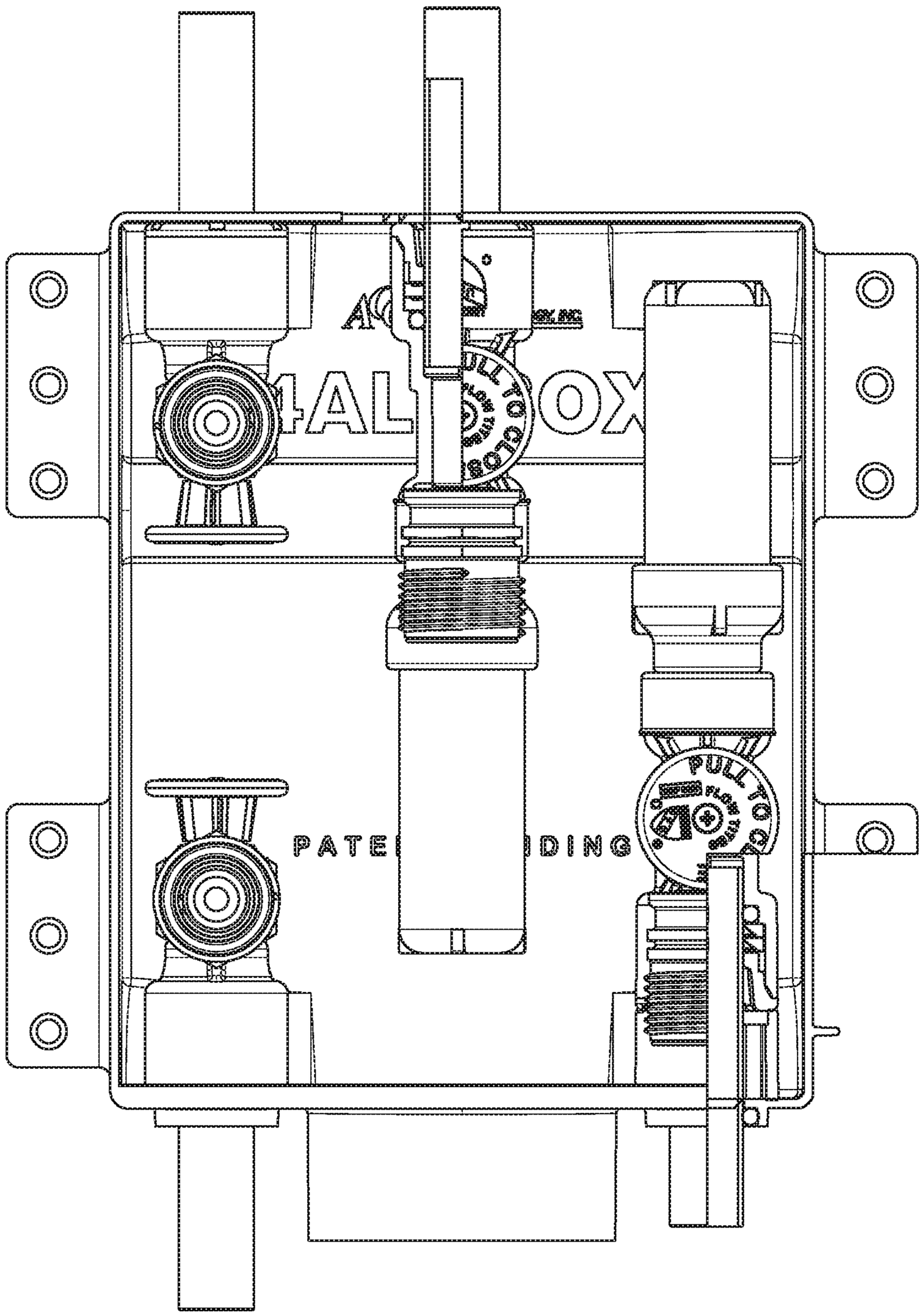

FIG. 84

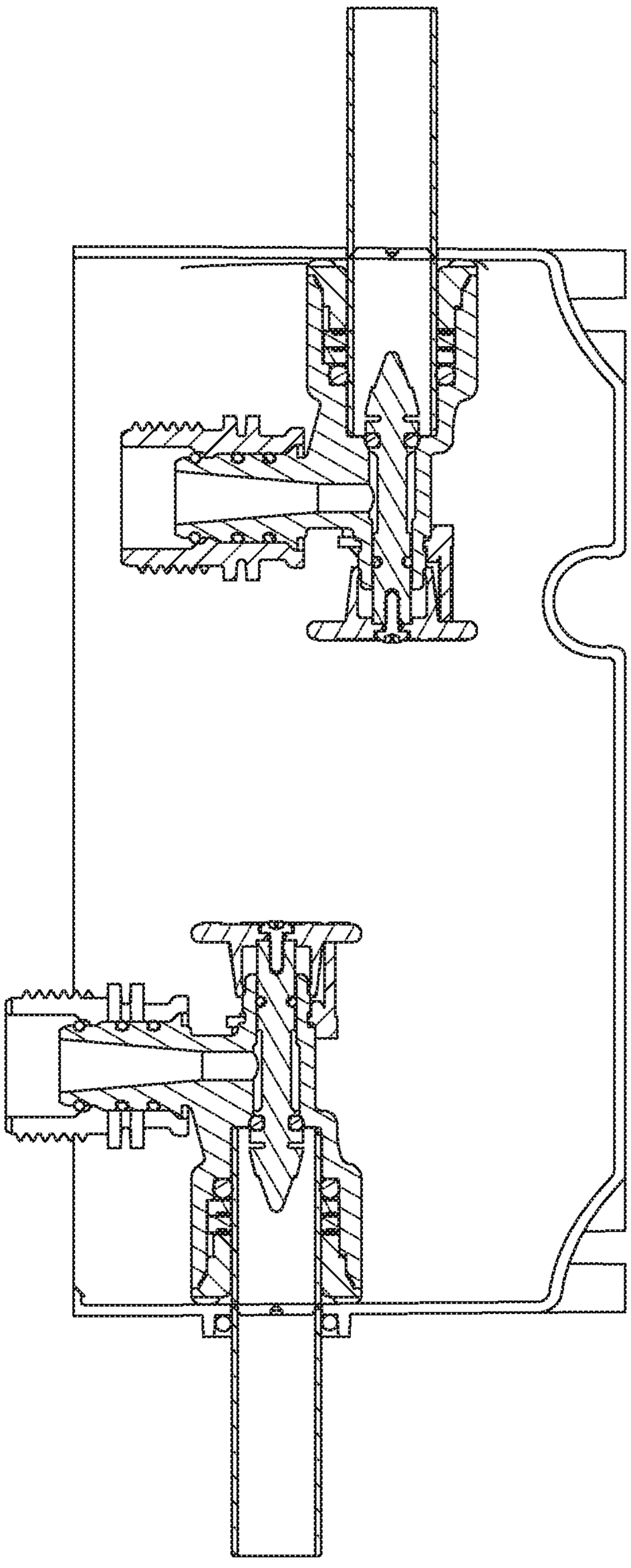

FIG. 85

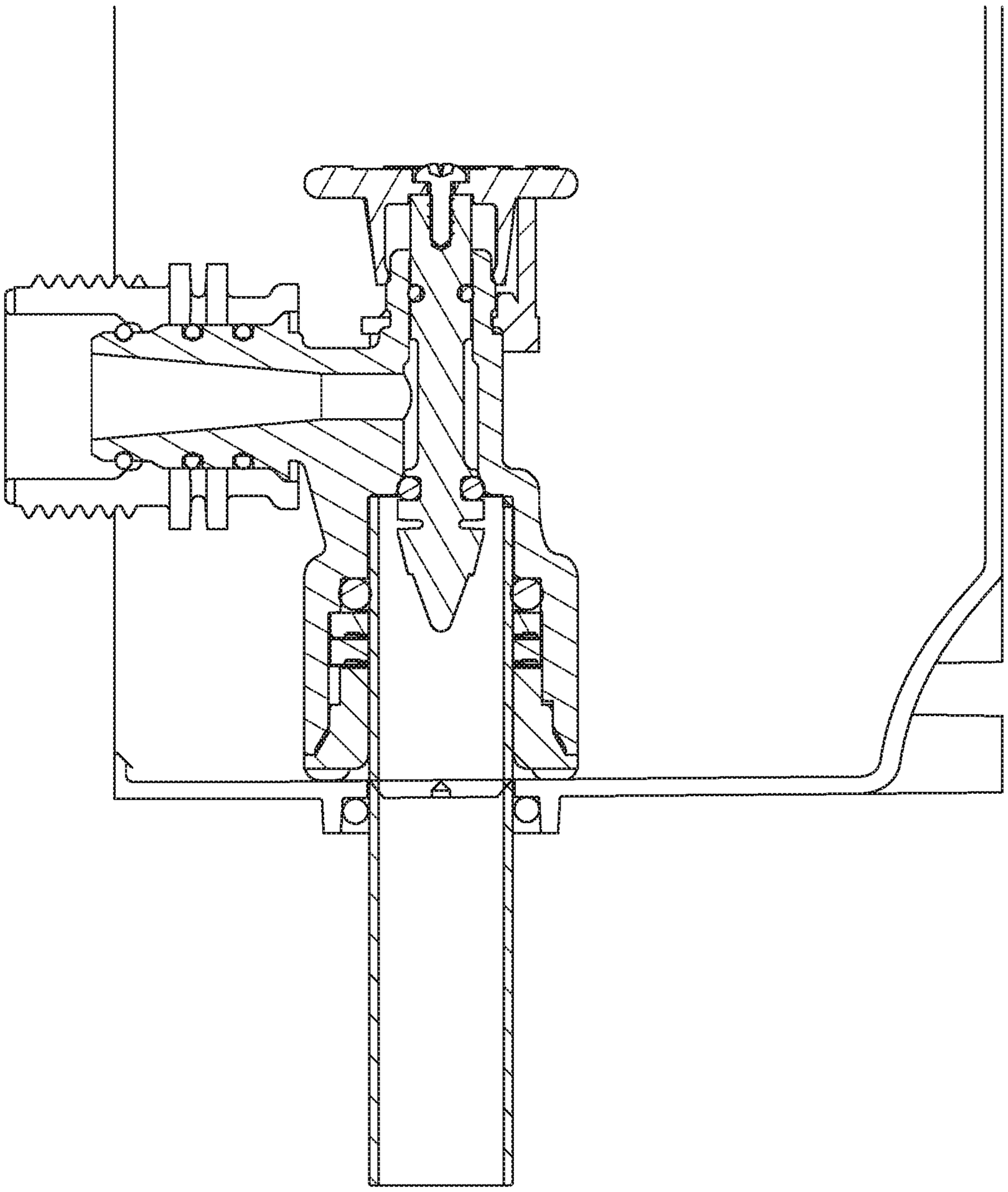

FIG. 86

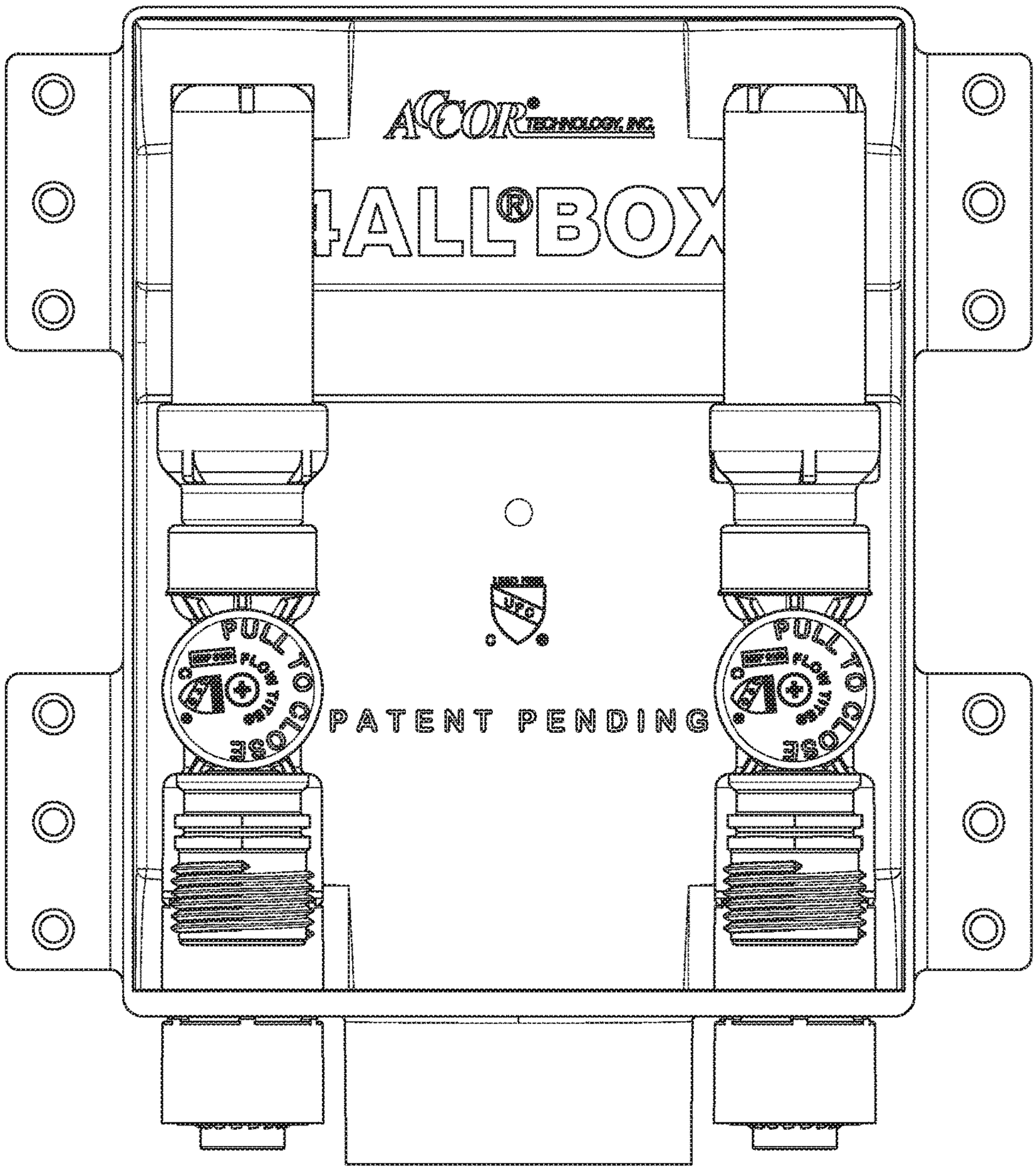
ACOR TECHNOLOGY INC.
ALL® BOX
PULL TO CLOSE
FLOW
PULL TO CLOSE
FLOW
PATENT PENDING

FIG. 87A

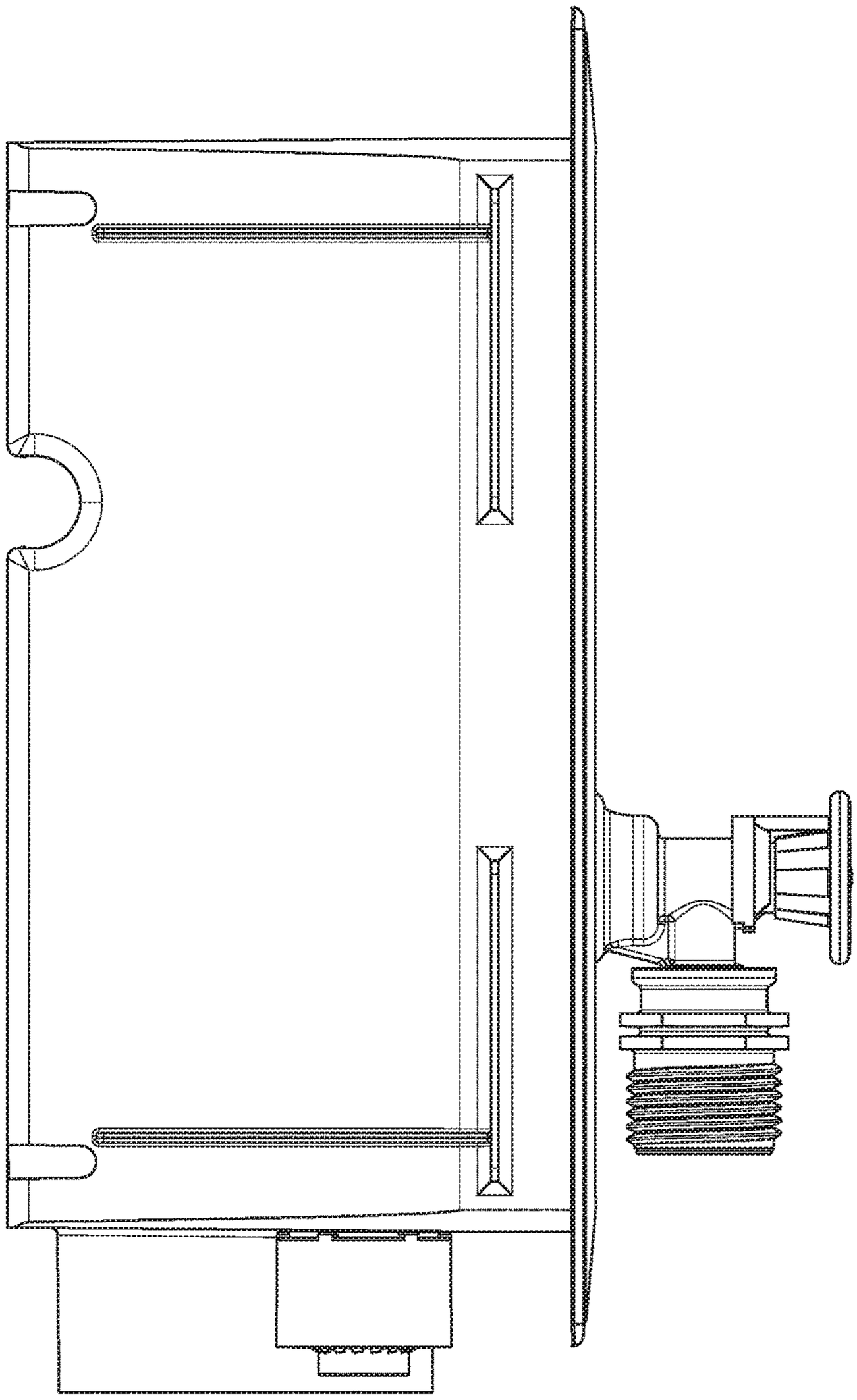

FIG. 87B

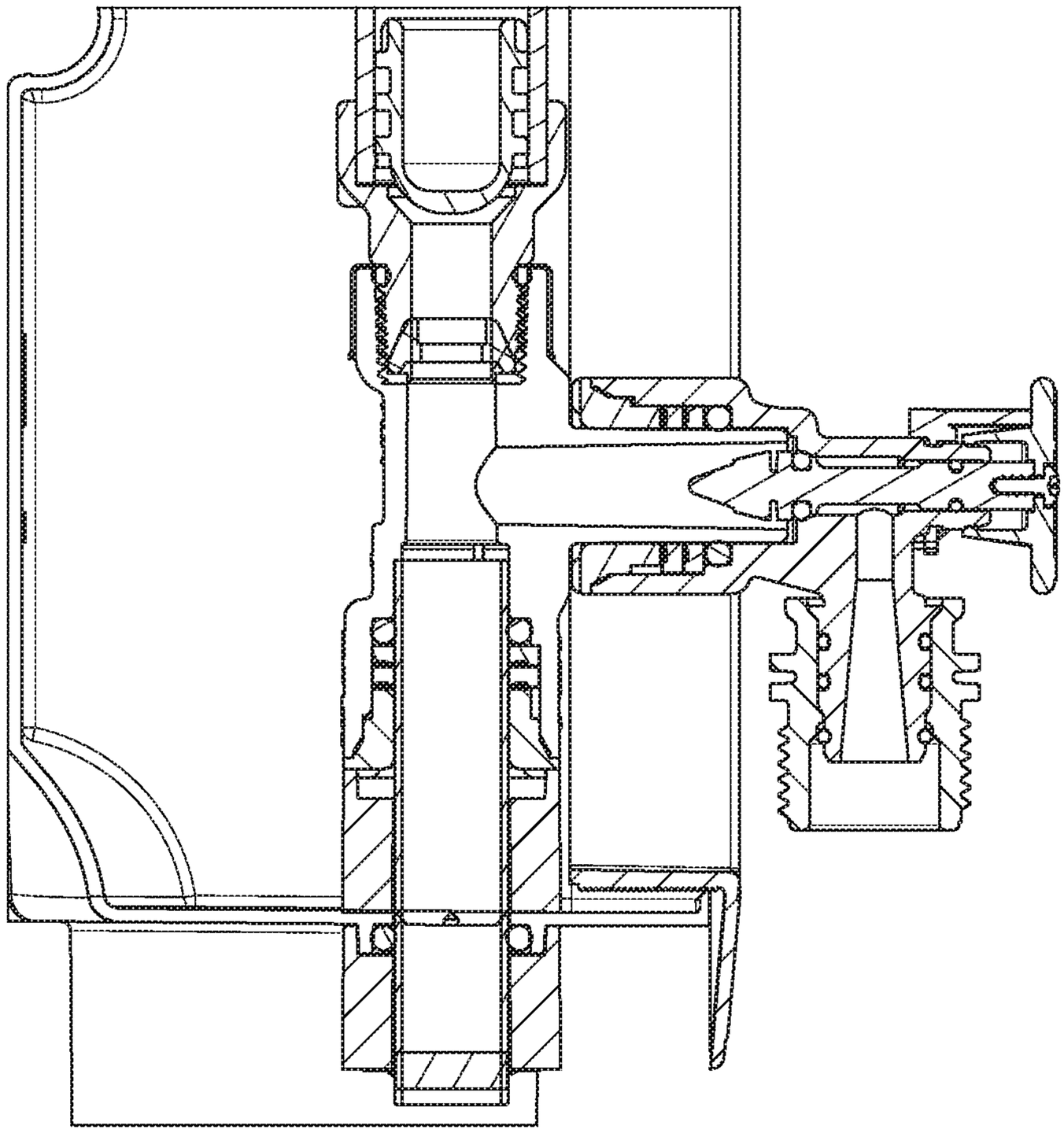

FIG. 87C

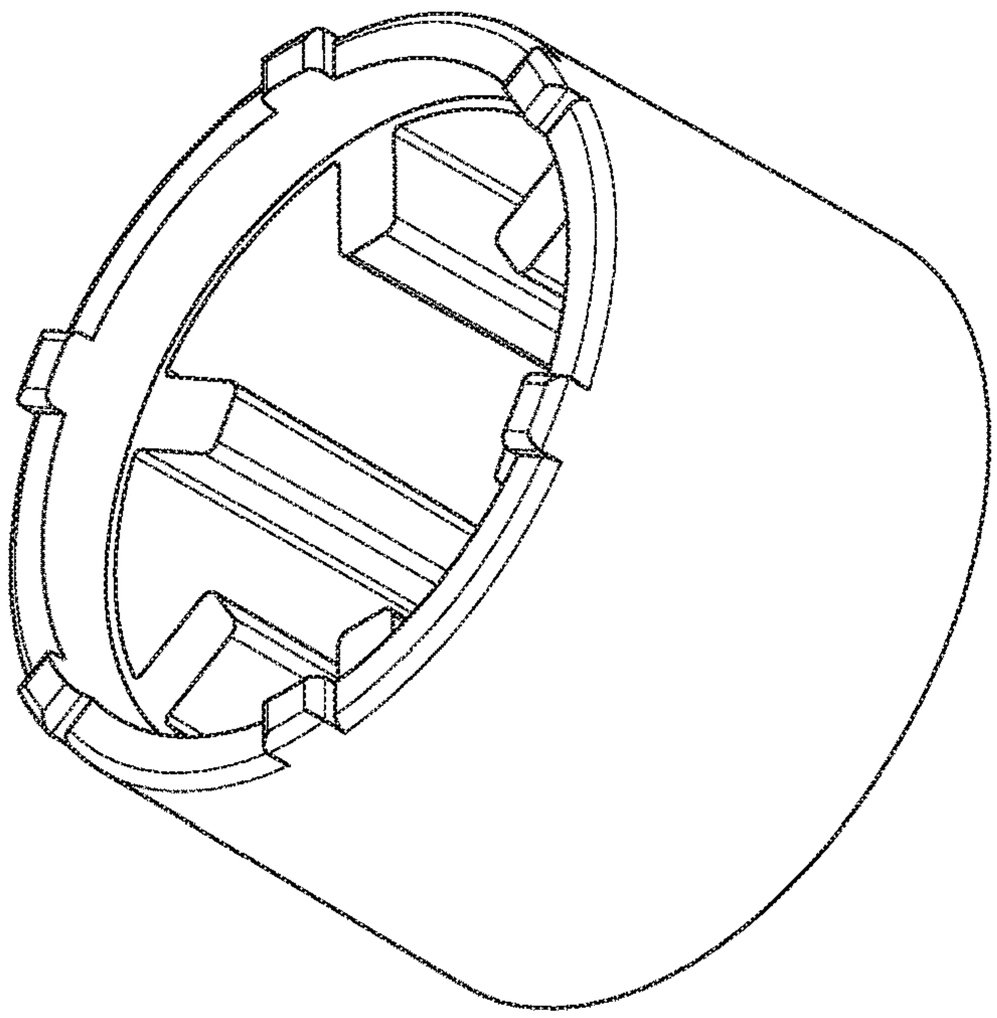

FIG. 88A

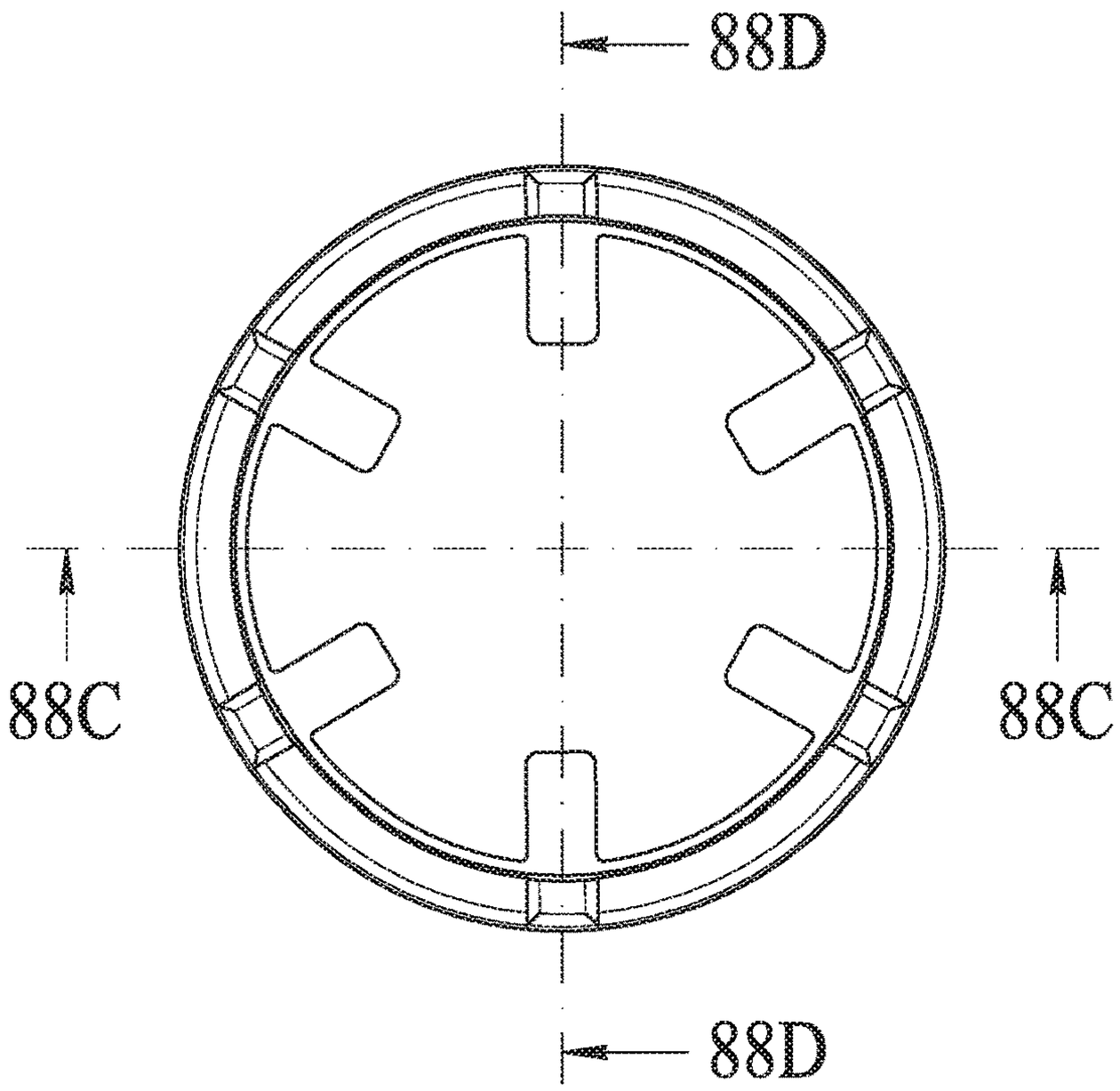

FIG. 88B

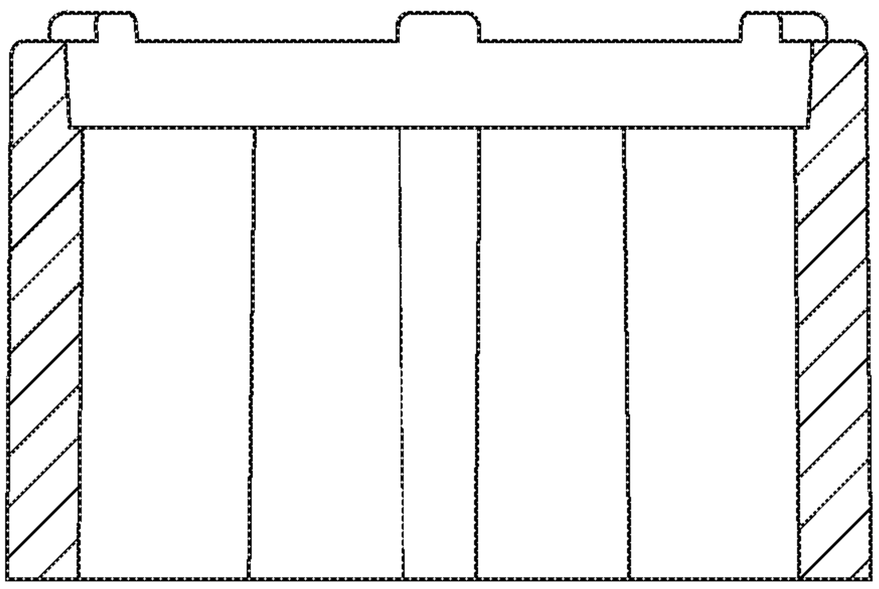

FIG. 88C

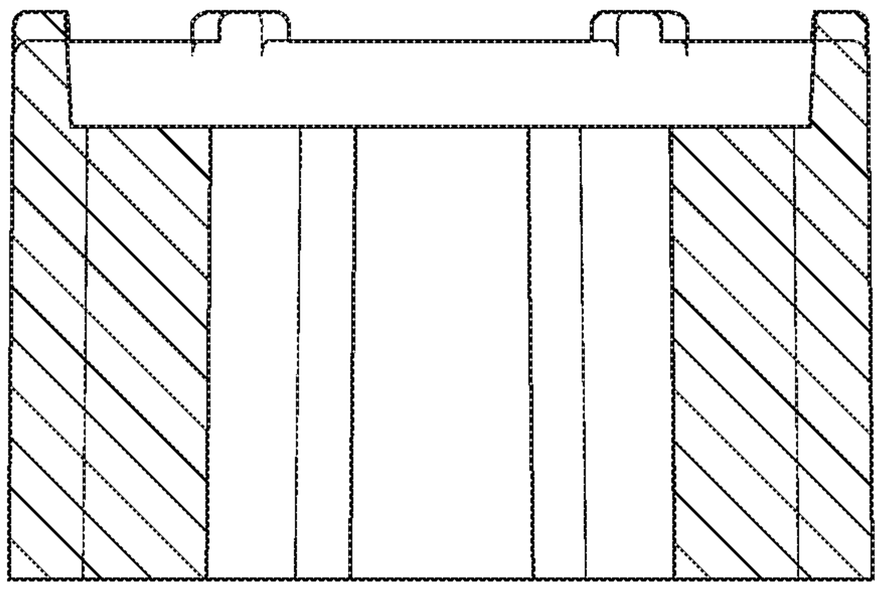

FIG. 88D

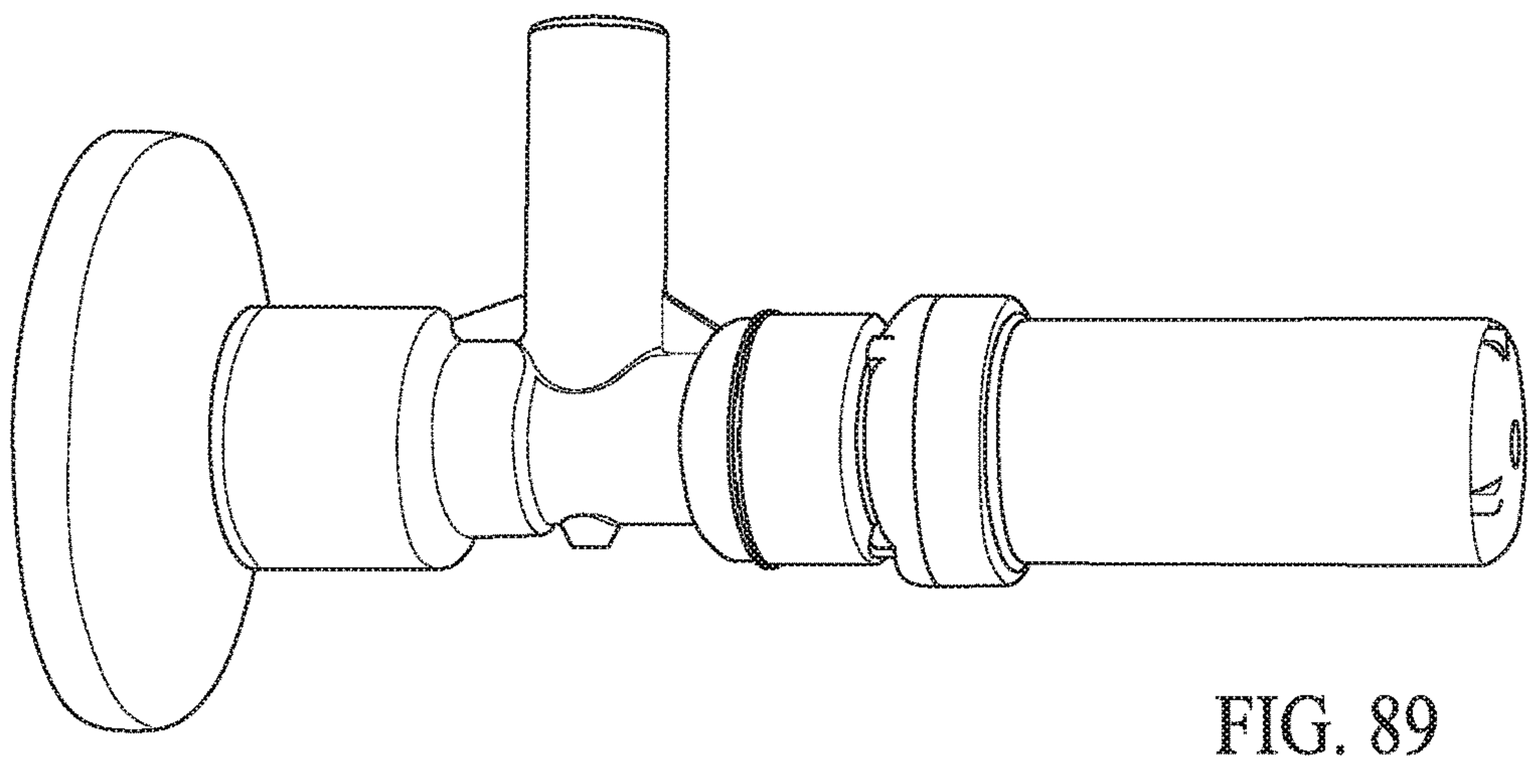

FIG. 89

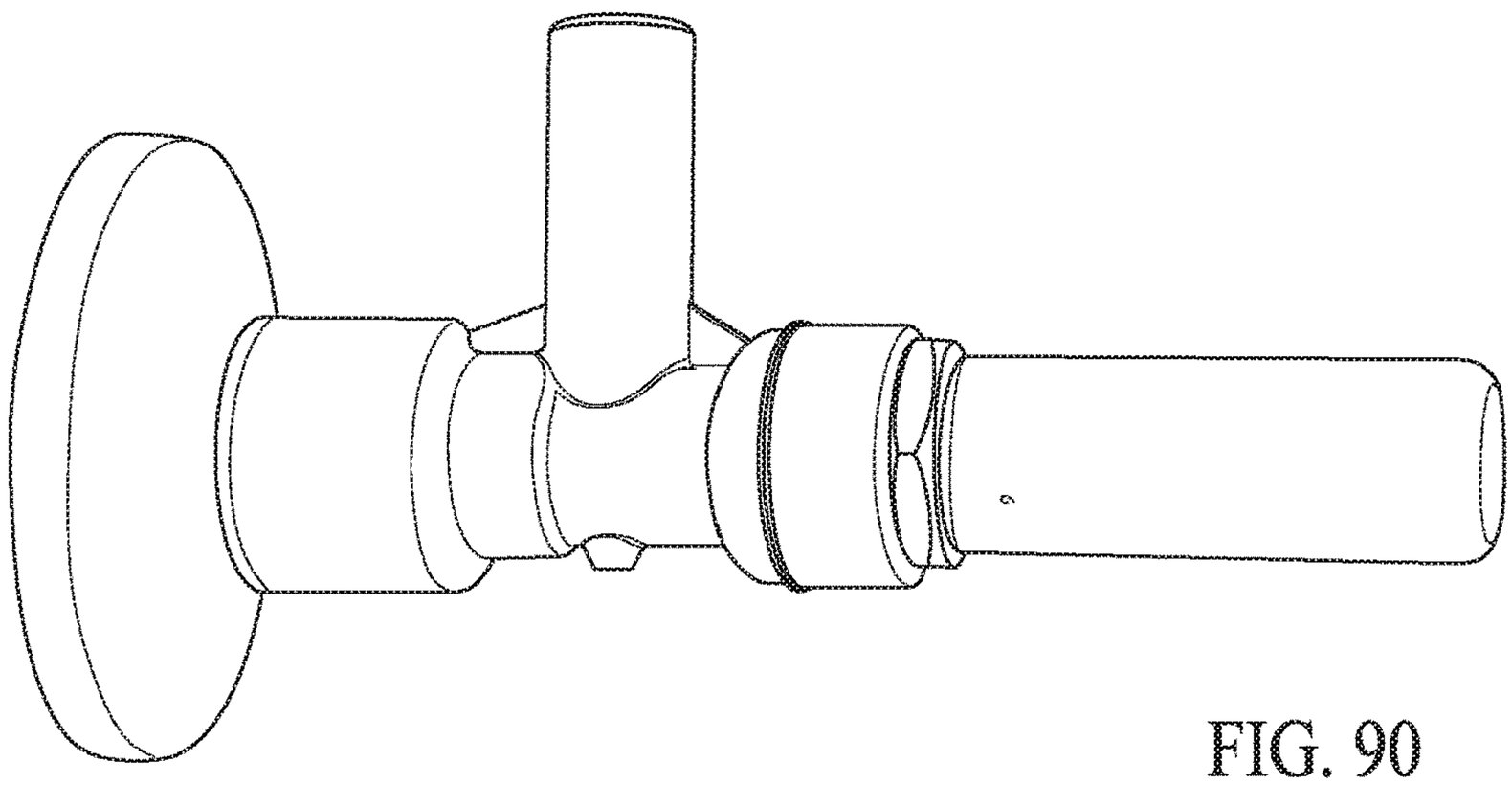

FIG. 90

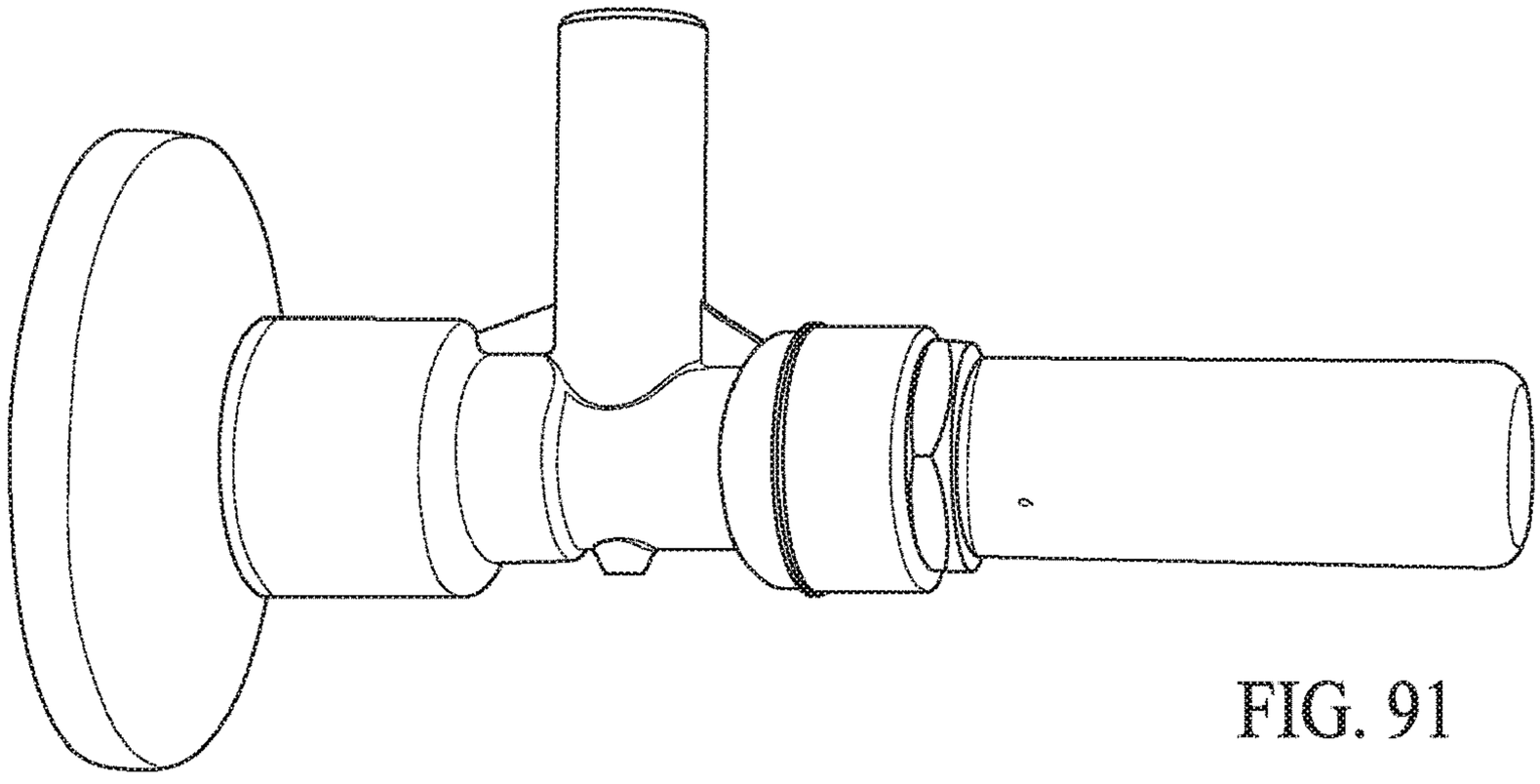

FIG. 91

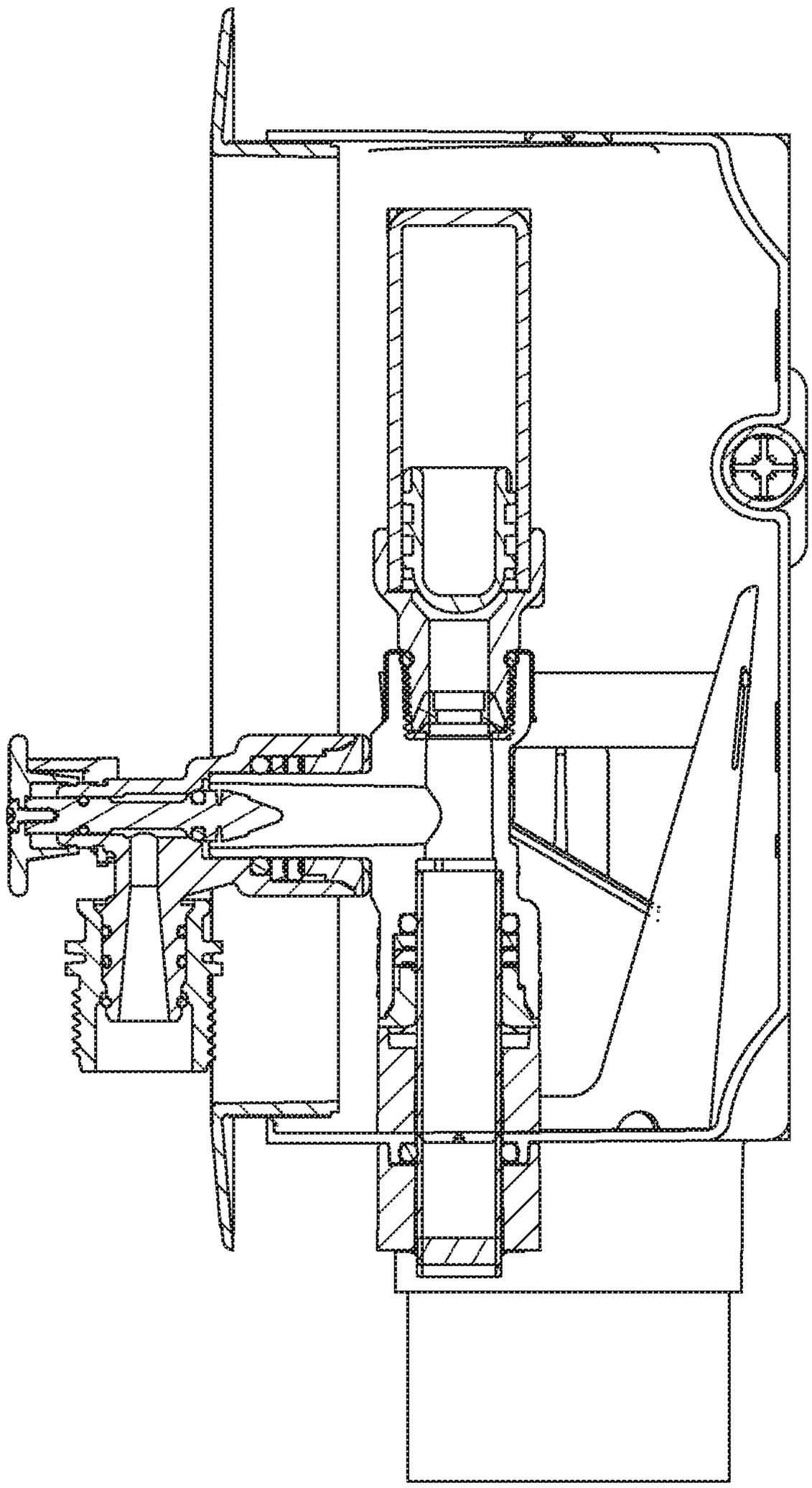

FIG. 92

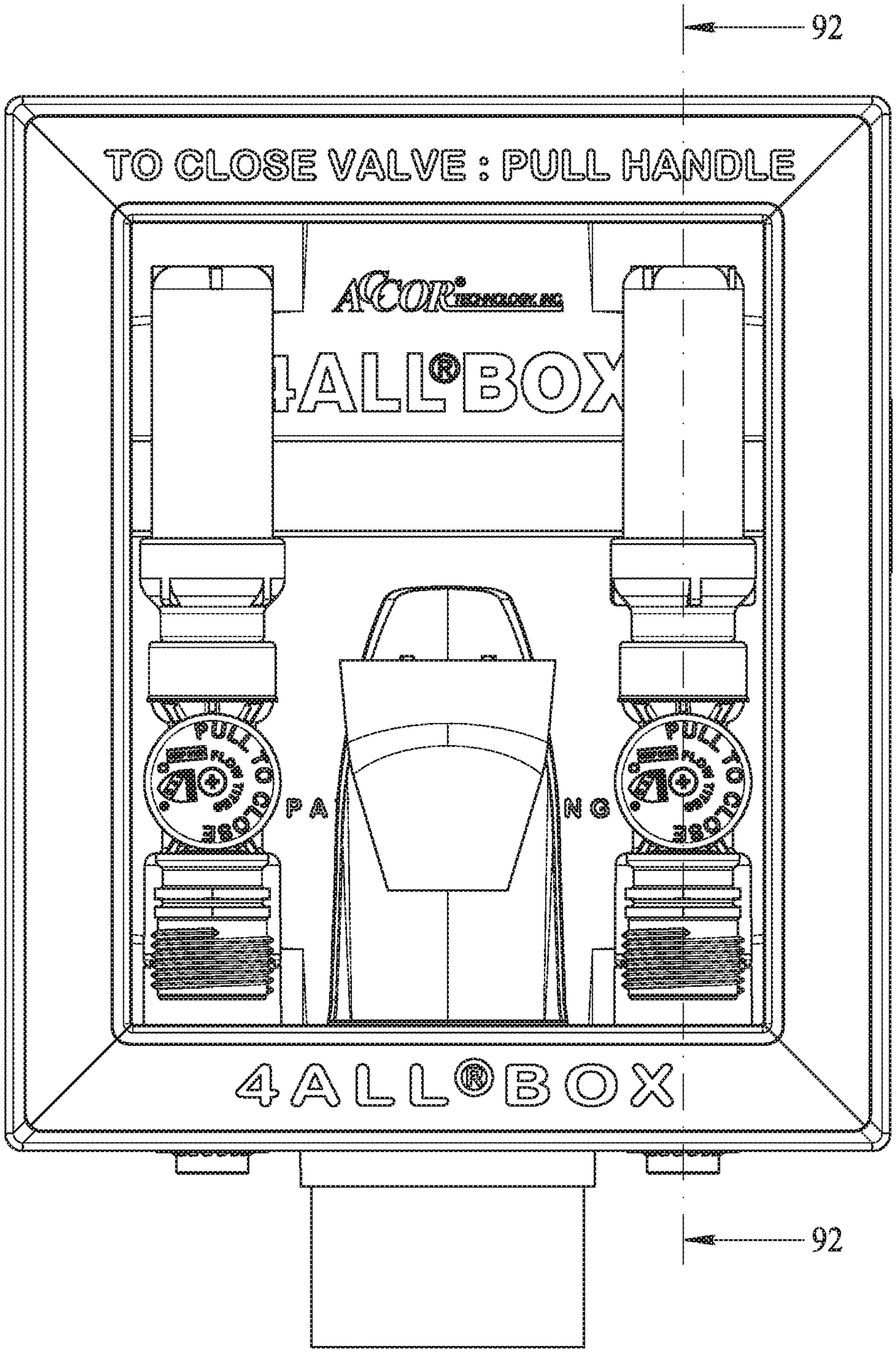
92
TO CLOSE VALVE : PULL HANDLE
ACCOR
4ALL®BOX
PULL TO CLOSE
PA
NG
4ALL®BOX
92

FIG. 93

OUTLET BOX

RELATED APPLICATIONS

This application claims benefit of U.S. Provisional Application No. 62/402,896, filed on Sep. 30, 2016, the entire disclosures and content of which are hereby incorporated by reference in their entirety.

FIELD OF INVENTION

The invention relates to outlet boxes for mounting in a wall, and more particularly, to outlet boxes having a housing with one or more apertures for installing fixtures for utilities, such as water.

BACKGROUND

Utility outlet boxes may be installed in building walls to provide access and/or disposal points for utilities, such as water. In one application, outlet boxes may be installed within building walls during the construction or renovation, and pipes and/or fixtures may be connected to the outlet boxes. Leaks that develop in the outlet box, such as in the connected pipes and/or fixtures connected thereto, may be difficult to discover because water drains out of the outlet box. Water leaking in the outlet box may drain or otherwise intrude into interior portions of the surrounding wall potentially causing mold or water damage. Additionally, even if the leak is discovered, removal of a portion of the wall or removal of the outlet box from the wall or may be required to repair or discover the offending leak. Accordingly, there is a need for an outlet box that prevents water leaks from intruding into the surrounding building walls, that increases detectability of leaks, and that improves ease of repair of leaky fixtures and/or pipes connected to the outlet box.

Previously-implemented outlet boxes may also be difficult to mount to building walls and may not be securely attached when mounted thereto. For example, some currently existing methods for attachment of outlet boxes include securing the outlet boxes using straps. However, straps may require access to the rear of the outlet box during installation, and not provide adequate structural support for the outlet box alone. There is therefore the need for an apparatus that facilitates an easier and more secure means of mounting the outlet boxes within building walls.

Previously-implemented outlet boxes are also configured for use in a single application, such as installing a water fixture for supplying water to an appliance. Installation of additional boxes may be necessary to provide additional drains, an air admittance valve, or additional water supply valves, for example. Therefore, currently existing outlet boxes do not provide sufficient versatility for installing different combinations of fixtures.

Further, previously-implemented outlet boxes do not easily accommodate attachment of differently sized pipes or different fixtures, and do not allow for pipes and/or fixtures to be connected to the outlet boxes at different positions. For example, a pipe above an outlet box may need to be routed to the underside of the utility box because the top of the utility box does not include an appropriate receptacle for receiving the pipe. Even when the previously-implemented outlet box installed in the building wall has an appropriately located receptacle for receiving a pipe (e.g., at the bottom), the receptacle may not be appropriately sized for connecting the pipe. The previously-implemented may not allow for installation of fixtures having differently sized attachment portions.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** illustrates a perspective view of a utility box according to a first embodiment.

FIG. **2** illustrates a first exploded view of the utility box of FIG. **1**.

FIG. **3** illustrates a second exploded view of the utility box of FIG. **1**.

FIG. **4** illustrates a third exploded view of the utility box of FIG. **1**.

FIG. **5** illustrates a front view of a box main housing of the utility box of FIG. **1**.

FIG. **6** illustrates a top plan view of the box main housing of FIG. **5**.

FIG. **7** illustrates a bottom plan view of the box main housing of FIG. **5**.

FIG. **8**A illustrates an enlarged cross-sectional view substantially along line **1**A-**1**A of the box main housing of FIG. **5**.

FIG. **8**B illustrates an enlarged cross-sectional view substantially along line **1**B-**1**B of the box main housing of FIG. **5**.

FIG. **9** illustrates an enlarged cross-sectional view substantially along line **1**A-**1**A of a support receptacle of the box main housing of FIG. **5**.

FIG. **10** illustrates a right side view of the box main housing of FIG. **5**.

FIG. **11** illustrates a rear view of the box main housing of FIG. **5**.

FIG. **12** illustrates an enlarged cross-sectional view substantially along line **1**A-**1**A of a second upper receptacle of the box main housing of FIG. **5**.

FIG. **13**A illustrates a bottom perspective view of a box main housing according to a second embodiment.

FIG. **13**B illustrates a front view of a box main housing according to a third embodiment.

FIG. **13**C illustrates a bottom perspective view of the box main housing of FIG. **13**B.

FIG. **14**A illustrates a bottom perspective view of the box main housing of FIG. **5** positioned against an interior side of a building wall and having a pipe inserted into a second lower receptacle thereof.

FIG. **14**B illustrates a cross-sectional view of a lower wall of the box main housing of FIG. **14**A taken along line **1**-**1** of FIG. **5**.

FIG. **15** illustrates a front perspective view of the lower wall of the box main housing of FIG. **5**.

FIG. **16**A illustrates a front view of a first manifold body of a valve assembly.

FIG. **16**B illustrates a left side view of the first manifold body of FIG. **16**A.

FIG. **17** illustrates a cross-sectional view of the first manifold body of FIG. **16**A substantially along line **2**-**2**.

FIG. **18** illustrates a bottom view of a manifold spacer.

FIG. **19** illustrates a cross-sectional view of the manifold spacer of FIG. **18** substantially along line **3**-**3**.

FIG. **20**A illustrates a front view of a second manifold body of the valve assembly.

FIG. **20**B illustrates a left side view of the second manifold body of FIG. **20**A.

FIG. **21** illustrates a cross-sectional view of the second manifold body of FIG. **20**A substantially along line **4**-**4**.

FIG. **22** illustrates a cross-sectional view of a liquid flow switch and a bushing assembly installed in the second manifold body of FIG. **20**A substantially along line **4-4**, and having a port interface and a C-clip attached to the second manifold body.

FIG. **23** illustrates a bottom plan view of an end bushing of the bushing assembly of FIG. **22**.

FIG. **24** illustrates a side view of the end bushing of FIG. **23**.

FIG. **25** illustrates a cross-sectional view of the end bushing of FIG. **23** along the line **5-5**.

FIG. **26** illustrates a side view of a port of the second manifold body of FIG. **20**A.

FIG. **27** illustrates a side view of the port interface of FIG. **22**.

FIG. **28** illustrates a cross-sectional view of the port interface of FIG. **27**.

FIG. **29** illustrates a plan view of the C-clip of FIG. **22**.

FIG. **30**A illustrates a top plan view of a manifold support ferrule.

FIG. **30**B illustrates a cross-sectional view of the manifold support ferrule of FIG. **30**B along the line **6-6**.

FIG. **31** illustrates the utility box of FIG. **1** equipped with a pair of valve assemblies and a drain assembly.

FIG. **32** illustrates a front view of a drain base of the drain assembly of FIG. **31**.

FIG. **33** illustrates a right side view of the drain base.

FIG. **34** illustrates a cross-sectional view of the drain base of FIG. **32** substantially along line **7-7**.

FIG. **35** illustrates a top perspective view of a retaining member of the drain assembly of FIG. **31**.

FIG. **36** illustrates a top rear perspective view of a mounting bracket and a pipe supportably attaching the utility box of FIG. **1** to wall studs and an adjacent second utility box.

FIG. **37** illustrates a top rear perspective view of the mounting bracket and the pipe of FIG. **36** supportably attaching a utility box according to a second embodiment to wall studs.

FIG. **38** illustrates a perspective view of the mounting bracket of FIG. **36**.

FIG. **39** illustrates a front view of the mounting bracket of FIG. **36**.

FIG. **40** illustrates a side view of the mounting bracket of FIG. **36**.

FIG. **41** illustrates a perspective view of a pipe support bracket attached to a pipe according to a first embodiment.

FIG. **42** illustrates a perspective view of a collar of the pipe support bracket of FIG. **41**.

FIG. **43** illustrates a rear perspective view of a brace of the pipe support bracket of FIG. **41**.

FIG. **44** illustrates a front perspective view of a brace of the pipe support bracket of FIG. **41**.

FIG. **45** illustrates a perspective view of a second collar of a pipe support bracket according to a second embodiment of the pipe support bracket.

FIG. **46** illustrates a cross-sectional view of the pipe support bracket of FIG. **45**.

FIG. **47** illustrates a perspective view of the pipe support bracket of FIG. **45**.

FIG. **48** illustrates a front view of a utility box having a plurality of valve assemblies installed therein, and provided with partially transparent and partial sectional views of some of the valve assemblies.

FIG. **49** illustrates a cross-sectional view of the utility box of FIG. **48** taken substantially along line **8-8**.

FIG. **50** illustrates an enlarged cross-sectional view of a water valve assembly installed in the utility box of FIG. **48** taken substantially along line **8-8**.

FIGS. **51-93** illustrate additional embodiment of the utility box and its component parts similar to those shown in FIGS. **1-50**.

DETAILED DESCRIPTION

A utility box **10** according to a first embodiment is shown in FIG. **1**. The utility box **10** is configured to be installed in the wall of a residential or commercial building to provide one or more access and/or disposal points for utilities. The utility box **10** may be comprised of a rigid waterproof material, such as plastics, polymers, or polyvinyl chloride (PVC); however, other similar materials are contemplated. In this first embodiment, the utility box **10** is configured to provide water access and disposal points for appliances, such as washing machines, dishwashers and ice makers; however, those of ordinary skill in the art will recognize that the configuration of the utility box may be suitable for other applications.

The utility box **10** includes a box main housing **12** having a generally three-dimensional square or rectangular outer shape, as shown in FIGS. **5**, **6**, **7**, **8**A, **10** and **11**. A forwardly opening cavity portion **14** is defined by housing walls **16** extending rearwardly from an opening **18** and terminating at a rear wall **20**. The housing walls **16** are comprised of a lower wall **22**, an upper wall **24** opposite to the lower wall, and opposing left and right sidewalls **26**L and **26**R, as shown in FIG. **5**. The opening **18** is sized to allow a user's hand to reach into the cavity portion **14** for operation, installation and removal of water valves and drains therein, as described below.

The utility box **10** includes one or more receptacles for connecting a water pipe to the utility box, and for installation of a water supply valve or drain, such as a valve assembly **28** shown in FIGS. **1**, **2**, **3**, and **4**. A pair of laterally offset first lower receptacles **30** is disposed on the lower wall **22**, as shown in FIGS. **5**, **7**, **8**B, and **11**. The lower receptacles **30** each include an annular wall **32** circumferentially extending around a removable circular knockout portion **34**, as shown in FIGS. **7** and **8**B. The knockout portion **34** is at least partially joined or connected to the lower wall **22** by two narrow bridge portions **36** extending radially inward from the annular ring to the knockout portion, as shown in FIGS. **3** and **9**. The bridge portions **36** are located at 180° from one another around the knockout portion **34**. The knockout portion **34** may include an outer portion **37** having a thickness less than the annular wall **32**, the outer portion extending around the circumference of the knockout portion **34** between the bridge portions **36** and connecting the knockout portion to the annular wall **32**. The outer portion **37** may have a tapered or angular cross-sectional shape that tapers radially inward from an upper surface to a lower surface of the knockout portion **34**. The knockout portion **34** may be removed by cutting through all or most of the outer portion **37**, using a utility knife or blade for example, without severing the bridge portions **36**. The remaining bridge portions **36** may be broken after severing the outer portion to prevent unintentional loss of the knockout portion within the wall or a pipe. The bridge portions **36** may act as pivot points about which the knockout portion **34** may be rotated to increase strain in, and thereby weaken, the bridge portions. After rotating the knockout portion **34** about the bridge portions **36**, the user may grip the knockout portion and sever the bridge portions **36** to remove the knockout portion

from the utility box **10** without the dropping it into a wall or pipe below. Removal of the knockout portion **34** creates an aperture **33** defined by the surrounding annular wall **32**, the aperture being sized and shaped to receive a corresponding part, such as a pipe, having a known size and shape.

In other embodiments, an air gap may space the annular wall **32** apart from the knockout portion **34** instead of having the outer portion **37** therebetween. A pilot guide **38** is provided to guide a drill bit through a center the bottom side of the knockout portion to create an aperture of a desired size therein for receiving a pipe or hose, as shown in FIG. **8**B. The pilot guide **38** may be a hole or divot extending partially or completely through the center of the knockout portion **34**. The lower receptacles **30** include a cylindrical sidewall portion **40** extending downwardly from a lower surface **42** of the lower wall **22** around the annular wall **32** and defining a cavity **44** therein.

The design of the receptacles (e.g., lower receptacles **30**) and associated components prevents water from leaking therethrough and into the wall containing the utility box **10**. Installation of the pipe and associated components are now described with reference to FIGS. **48**, **49**, and **50**. First, an upper end of a pipe **35** is inserted through the aperture **33** of the lower receptacle **30** to extend between the cavity portion **14** and a lower side of the lower wall **22**. An O-ring **46** may be positioned around the pipe **35** below the lower wall **22** and against or abutting the annular wall **32**. The O-ring **46** is sized and shaped to resiliently and radially compress between the outer diameter of the pipe **35** and the inner diameter of the cylindrical sidewall portion **40**, thereby forming a fluid-tight seal around the pipe **35** at the lower surface of the annular wall **32**.

A metallic gripper ring **48** having circumferentially spaced axially and radially inwardly protruding teeth (described in U.S. Pat. No. 6,464,266, which is incorporated herein in its entirety by reference) may be installed around the pipe **35** beneath the O-ring **46** to help retain the O-ring within the cavity **44**. When the pipe **35** is inserted through the gripper ring **48**, the inwardly protruding teeth of the gripper ring **48** bend in the direction of insertion, and dig into or press inwardly against the outer diameter of the pipe **35**. For instance, the teeth of the gripper ring **48** may bend downwardly when the pipe **35** is inserted downwardly through the aperture **33**. The pipe **35** may be rotated in a first direction (e.g., clockwise) relative to the gripper ring **48** to score the outer diameter of the pipe **35** and prevent further movement of the pipe **35** through the gripper ring **48**. The gripper ring **48** may have a larger diameter than the inner diameter of the sidewall portion **40** so as to abut a lower side of the sidewall portion **40**. In some embodiments, the gripper ring **48** may be fixed to the bottom of the sidewall portion **40** using adhesives or sonic welding, by way of non-limiting example.

When the pipe **35** is inserted through the aperture **33**, the O-ring **46**, and the gripper ring **48**, as described above, the pipe **35** is maintained in fluid-tight attachment to the box main housing **12**. Thereafter, a valve assembly **28** or other assembly may be installed over the upper end of the pipe **35** within the cavity portion **14**, as described below. If the valve assembly **28** leaks or breaks, or water otherwise accumulates within the cavity portion **14**, the O-ring **46** sealed around the pipe **35** prevents liquid from leaking through the aperture **33** and into the wall. The inside of the building walls is thereby protected from leaks within or around the utility box **10**, and leaking water will pool within the cavity portion **14** providing a visual indication of a leak. Moreover, a leaky valve assembly **28** may be removed and replaced without removal of the building wall or the box main housing **12** from the wall. Thus, the valve assembly **28** may be easily removed or replaced without extensive cost or effort.

The utility box **10** may be provided with the pipe **35** installed in the fluid-tight configuration. Alternatively, the pipe **35** may be installed in the fluid-tight configuration on site.

In some embodiments, one or more second lower receptacle **52** having a different configuration than the first lower receptacles **30** may also be disposed on the lower wall **22**, as shown in FIGS. **7** and **8**A. The second lower receptacle **52** may have a larger outer diameter than the first lower receptacles **30** to allow for attachment of a pipe **67** having a larger diameter than the pipe **35**. A second sidewall **54** having a cylindrical shape with a larger diameter than the sidewall **40** extends downwardly from the lower wall **22** to define a downwardly opening cavity **56**. The second sidewall **54** may have a length extending downwardly farther than the sidewall **40**. The second lower receptacle **52** may include one or more removable knockout portions for installing a pipe and/or a water supply or drain. For example, an annular first knockout portion **58** of the second lower receptacle **52** is located radially inward of the second sidewall **54**. The first knockout portion **58** may be connected to the lower surface **22** by an outer portion **59** and a plurality of the bridge portions **61** substantially similar to those described above, except that there may be a different number of bridge portions than two. For example, the second lower receptacle **52** may have four bridge portions **61** spaced apart at 90° from one another around the perimeter of the first knockout portion **58**. The first knockout portion **58**, including all portions of the second lower receptacle **52** located radially inward thereof, by severing the bridge portions **61** and the outer portion **59**.

The second lower receptacle **52** may include a second knockout portion **60** located radially inward from the first knockout portion **58**. The second knockout portion **60** may include a circular plate **62** having a radial wall thickness greater than the first knockout portion. The second knockout portion **60** may be connected to the first knockout portion **58** by a plurality of the bridge portions **63** and/or the outer portion in the manner described above. The circular plate **62** is removable from the second lower receptacle **52** without also removing the first knockout portion **58**. In particular, a pipe **67** having a similar inner diameter to the first knockout portion **58** may be inserted upward into the cavity **56** and abutting against a lower surface of the first knockout portion **58**, as shown in FIGS. **14**A and **14**B. The first knockout portion **58** is sized such that it is too large to fall into the pipe **67** when the knockout portion **58** is severed or removed from the box main housing **12**.

The outer portion **37** between the second knockout portion **60** and the first knockout portion **58** may be broken or severed to remove the second knockout portion **60**. A blade or other tool may be used to cut along at least some of the outer portion **37**, and a user may push or pull the second knockout portion **60** to further separate the second knockout portion **60** and the first knockout portion **58** along the outer portion **37**. The bridge portion(s) **36** is thicker than the outer portion **37**, and designed so that it may not be broken when the outer portion **37** is severed so as to prevent the second knockout portion **60** from falling into the pipe below the receptacle. After breaking the outer portion **37**, the user may then grip the second knockout portion **60** and break the remaining bridge portion **36** to separate the second knockout portion **60** from the second lower receptacle **52** without removing the first knockout portion **58**. Thereafter, a drain

assembly may be installed in the second lower receptacle **52** through the cavity portion **14** of the utility box **10**.

The box main housing **12** may include a feature providing a guide or outline **69** indicating where to cut to remove a knockout portion, as shown in FIG. **15**. The guide **69** may be an annular recess disposed on an upper surface of the lower wall **22** in the cavity portion **14**, and coaxially located with the knockout portions of the second lower receptacle **52** (or other receptacles). The guide **69** in the present embodiment is circumferentially located along the outer diameter of the first knockout portion **58**. A user may insert the tip of a blade in and cut along the guide **69** to remove the knockout portion **58** and the portions radially inward therefrom. Therefore, the knockout portion **58** may be removed after the utility box **10** is installed in a building wall or without requiring access to the lower surface of the lower wall **22**. In some embodiments, the guide **69** may include an outline or indication provided on the upper surface of the lower wall **22**. There may be a plurality of concentrically-located guides **69** on each receptacle for which the guides are provided. For example, there may be another guide **69** located between the first knockout portion **58** and the second knockout portion **60** (i.e. located along the outer portion **59**) for removing the second knockout portion **60** while leaving the first knockout portion **58** installed. One or more of the other receptacles (e.g., first lower receptacle **30**) may be provided with one or more of the guides **69** for removing knockout portions.

Referring to FIG. **8**A, the second lower receptacle **52** may also include a pilot guide **64** similar to the pilot guide **38** described above extending partially or completely through the center of the plate section **62**, providing a pilot hole or divot to guide a drill bit to drill upwardly through the bottom side of the knockout portion to create an aperture of a desired size therein. The second lower receptacle **52** may further include a third lower receptacle **66** disposed at the center of the plate section **62**. The third lower receptacle **66** may be substantially similar in structure and/or size to the first lower receptacle **30**. That is, the third lower receptacle **66** may include an annular wall surrounding a removable circular knockout portion, and a cylindrical sidewall portion extending downwardly from a lower surface of the plate section **62** in a structure substantially similar to the lower receptacles **30**. The second lower receptacle **52** may have more knockout portions **65** disposed radially inward of the first knockout portion **58** and the second knockout portion **60**, as shown in FIG. **14**B. The differently sized knockout portions of the second lower receptacle allow for connection of differently sized pipes or hoses to the utility box **10**.

A pair of laterally offset first upper receptacles **68** may be disposed on the upper wall **24**, as shown in FIG. **6**. The first upper receptacles **68** may allow for pipes and valves to be connected to an upper side of the utility box **10**. The first upper receptacles **68** may have a similar configuration to the first lower receptacles **30**. In particular, each of the first upper receptacles **68** may include a knockout portion **70** substantially similar to the knockout portions **34** described above and two narrow bridge portions **72** extending radially inward from the upper wall **24** to the knockout portion **70**. The knockout portion **70** may include an outer portion **71** having a thickness less than the upper wall **24** and extending around the circumference of the knockout portion **70** between the bridge portions **72** and connecting the knockout portion to the upper wall **24**. The outer portion **71** may have a tapered or angular shape tapering radially inward toward an upper surface of the knockout portion **70**. In other embodiments, the outer portion **71** may be omitted and an air gap may separate the knockout portion **70** from the upper wall **24**. The center of the knockout portion **70** may include a pilot guide substantially similar to the pilot guide **38**. In some embodiments, the first upper receptacles may each include a cylindrical sidewall portion extending upwardly from the upper wall **24** around the connecting ring (or air gap) in a manner similar to the sidewall portion **40**.

A second upper receptacle **74** may be disposed on a central portion of the upper wall **24**. The second upper receptacle **74** may have a plurality of concentrically arranged knockout portions arranged in a "bullseye" configuration for connecting pipes and/or fixtures having different sizes at the upper wall **24**, as shown in FIGS. **6**, **8**A, and **12**. For example, the second upper receptacle **74** may include a first knockout portion **76** having a largest outer diameter, a second knockout portion **78** having an outer diameter positioned radially inward of an inner diameter of the first knockout portion, and a third knockout portion **80** having an outer diameter positioned radially inward of an the second knockout portion. The upper wall **24** is connected to the first knockout portion **76** by an outer portion **81** and a pair of narrow radially extending first bridge portions **82**, which are similar to the bridge portions **36** and located at 180° from one another around the outer circumference of the first knockout portion. The outer portion **81** has a thickness less than the first knockout portion **76** and extends circumferentially around the first knockout portion. The outer portion **81** may have a tapered or angular cross-sectional shape that tapers radially inward from lower surface to an upper surface of the knockout portion **76**.

Each of the plurality of concentrically arranged knockout portions may be connected by circumferentially offset bridge portions. The first knockout portion **76** is connected to the second knockout portion **78** by an outer portion **83** and a pair of second bridge portions **84** similar to the bridge portions **36**, but each of which are circumferentially offset relative to one of the first bridge portions **82** around at 120° (and conversely −60° to the other of the first bridge portions). The second knockout portion **78** is connected to the third knockout portion **80** by an outer portion **85** and a pair of third bridge portions **86** similar to the bridge portions **36**, but each of which are circumferentially offset relative to one of the second bridge portions **84** at 120°. The outer portions **83** and **85** have a structure similar to the outer portion **81** describe above, as shown in FIG. **12**.

Circumferentially offsetting the bridge portions **82**, **84**, **86** from one another allows a user to remove an inner knockout portion without removal of an adjacent outer knockout portion, thereby adjusting the circumference of an aperture of the second upper receptacle **74** for installation a pipe or fixture having approximately the same outer circumference. To remove the third knockout portion **80**, a user may sever the outer portion **85**, then grip the third knockout portion and sever or forcibly break the bridge portions **86**. A pipe or fixture having an outer circumference similar to the inner circumference of the second knockout portion **78** may be inserted through the aperture left by the removed third knockout portion **80**. An upper surface of the third knockout portion **80** may include a pilot guide substantially similar to the pilot guide **36** described above for drilling an aperture of a desired size in the second upper receptacle **74**.

The configuration of the lower and/or upper receptacles of the utility box **10** allow for attachment of different fixtures, valves and drains thereto, and to facilitate simple and secure connection of pipes and/or hoses to the different fixtures, valves and drains. Although three receptacles for attaching fixtures are provided on each of the upper wall **24** and lower wall **22** of the box main housing **12**, a different number of

receptacles may be provided in other embodiments. For example, a box main housing **13**A may be provided having four second lower receptacles **52**, as shown in FIG. **13**A. Accordingly, two separate drain assemblies and two separate water valve assemblies, described below, may be attached to the box main housing, allowing for greater variation in uses and configurations. For example, a dishwasher and ice maker, each using a single water supply assembly and a single drain assembly, may be attached at the same outlet box instead of having two separate outlet boxes. A different number of receptacles may be provided in other embodiments. For instance, a box main housing **13**B is shown in FIGS. **13**B and **13**C having three lower receptacles **52**. Each of the lower receptacles **52** may include one of the third lower receptacles **66** (see FIG. **13**C) for installing a pipe and/or a valve, as described below. Different configurations of drains and/or valves may be installed in the box main housing **13**B. A drain assembly may be installed in each of the leftmost one and center one of the receptacles **52** shown in FIG. **13**C, and a water supply valve may be installed in the rightmost one of the receptacles **52**, by way of non-limiting example. Therefore, a user may configure the box main housings **13**A and **13**B according to the application, or the most convenient access to the supply or drain pipe.

In one aspect, water supply valves **28** may be installed in the first lower receptacles **30**, as shown in FIGS. **1**, **31**, **48**, **49** and **50**. During installation of the utility box **10** in a building wall, the knockout portions **34** are removed leaving an aperture through which the pipe **35** may be inserted. Referring to FIGS. **2** and **50**, an upper end of the pipe **35** may be inserted through a metallic gripper ring **48** having circumferentially spaced axially and radially inwardly protruding teeth described in U.S. Pat. No. 6,464,266, which is incorporated herein in its entirety by reference. The upper end of the pipe **35** may then be inserted through the O-ring **46** and through the aperture of the lower first receptacle, positioning the upper end of the pipe **35** above the lower wall **22** within the cavity portion **14** of the housing main box **12**. The O-ring **46** is positioned within the cylindrical sidewall **40** near or against the lower surface **42** of the lower wall **22**. Thereafter, the valve assembly **28** may be installed over the upper end of the pipe **35** in the cavity portion **14**. The valve assemblies may be installed in the upper receptacles of the box main housing **12**, as shown in FIG. **48**, for example.

The valve assembly **28** is a "push-fit" assembly comprising components that lock into place when a male component is pushed or inserted into a female component without threaded attachment. The valve assembly **28** includes a substantially L-shaped hollow outlet **90** with a rearwardly extending receiving tube **90**T for sealably connecting with a push-fit tube **88**T of a manifold **88**, as shown in FIG. **2**, **3**, or **31**, or sealably connecting with a pipe **35**, as shown in FIGS. **48**, **49**, and **50**.

The manifold **88** may be a component of the valve assembly **28** comprising a substantially T-shaped or L-shaped hollow body having a lower connecting portion **88**L, as shown in FIGS. **16**A, **16**B, **17**. The manifold **88** and/or outlet **90** may be push-fit components that are monolithically formed by an injection molding process using a polymer material, such as chlorinated polyvinyl chloride (CPVC) or PVC. An upper end of the manifold **88** may include an upper connecting portion **88**U for threadably attaching a water arrestor assembly, as described below. The tube **88**T extends outwardly from a side of the manifold **88** providing a push-fit connection point for attaching the outlet **90**. The single-piece injection-molded manifold **88** eliminates joints or seams that may leak or fail in other devices, and provides a monolithic attachment point for connecting different outlets in a push-fit manner.

A manifold spacer **92** may be installed within the cavity portion **14** between the lower wall **22** and the lower connecting portion **88**L to space them apart at an appropriate distance according to the length of the end of the pipe **35**. As shown in FIGS. **18** and **19**, the manifold spacer **92** has an annular upper portion **92**U having an outer circumference sized to snuggly fit into the lower end of the lower connecting portion **88**L, and a cylindrical lower portion **92**L having a circumference larger than the upper portion **92**U and sized equal to or larger than the bottom of the lower connecting portion **88**L. An upwardly facing ledge **92**L of the manifold spacer **92** abuts a lower surface of the lower connecting portion **88**L of the manifold **88** when the upper portion **92**U is inserted therein. The cylindrical lower portion **92**L has a plurality of axially offset and radially inwardly extending guide ribs or ridges **92**R for guiding the end of the pipe **35** through the manifold spacer and into the manifold **88**.

A length of the tube **88**T of the manifold **88** may be inserted into a cavity **90**A of the receiving tube **90**T of the outlet **90** to connect the manifold **88** and the outlet **90**. A bushing assembly **93** may be nested or installed at least partially within the cavity **90**A of the receiving tube **90**T to facilitate water-tight fluid communication between the manifold **88** and the outlet **90**, as shown in FIG. **22**. The bushing assembly **93** allows for a push-fit assembly of the outlet **90** (or other similar outlet) to the manifold **88** (or the pipe **35**). The bushing assembly **93** may include one or more O-rings, one or more gripper rings, and an end bushing **94**. The end bushing **94** has a body portion **94**B sized and shaped to fit against inner surfaces within the cavity **90**A, an inner cavity extending axially through the end bushing **94**, and a rear flange portion **90**F that abuts a rearward surface of the receiving tube **90**T, as shown in FIGS. **23**, **24** and **25**. The flange portion **94**F may include a plurality of recesses **94**R axially offset and radially positioned along a rearward surface of the flange portion **90**F. One or more of the recesses **94**F may engage with a thin fin portion **88**F projecting forwardly from and extending vertically along a forward surface of the manifold **88** (see FIGS. **16**B and **17**) to allow secure rotational movement between the manifold **88** and the outlet **90** without failure of the fluid-tight seal therebetween. The end bushing **94** may further include a plurality of axially offset ridges or ribs **94**T projecting radially inward in the inner cavity **94**C to guide the tube **88**T within the cavity **90**A.

The outlet **90** has an elongated downwardly extending port **96** extending downwardly from the receiving tube **90**T, as shown in FIGS. **20**A, **20**B, and **21**, for sealably connecting and supplying water to a hose of an appliance. The port **96** has a substantially cylindrical shape extending in an axial direction, and an inner conduit portion in fluid communication with the receiving tube **90**T and terminating at the lower end, as shown in FIG. **26**. An upper portion **96**U of the port **96** may have a flared portion **96**F flaring outward circumferentially and upwardly. An exterior surface of the cylindrical shape of the port **96** may have one or more circumferentially extending grooves **96**G positioned axially along the length of the port **96** for receiving and retaining one or more O-rings. The grooves **96**G may have a square cross-sectional shape for securely retaining the O-ring. A lower end portion **96**L of the port **96** may include a tapered portion **97** narrowing or tapering inwardly toward the lower end of the port **96**. A lower groove or annular recess **96**R having a rounded concave cross-sectional shape is provided axially

below the grooves **96**G for receiving a C-shaped ring described below. The port **96** includes a center portion **96**C between the grooves **96**G and the recess **96**R, which narrows or tapers downwardly toward the lower end portion **96**L. In other embodiments, the exterior surface of the port **96** may include a threaded portion to facilitate direct connection of the hose of the appliance to the valve assembly **28**.

In one aspect, a port interface **98** may be provided for attaching to the hose of an appliance to the port **96**, as shown in FIGS. **22** and **27**. The port interface **98** may be positioned over the port **96** and attached thereto, allowing for attachment of the hose of the appliance to the valve assembly **28**. The port interface **98** has an inner conduit **98**C defined by downwardly extending sidewalls **98**S extending axially therethrough from an upper end **98**U to a lower end **98**L of the port interface, a threaded attachment portion **98**T for threadably attaching to the hose, and one or more rings **98**R projecting circumferentially from an exterior surface of the sidewalls **98**S at an axial position above the threaded portion **98**T. The inner conduit **98**C has a section with an inner contour sized and shaped to snuggly engage with the exterior surface shape of the port **96**. Specifically, the inner conduit **98**C includes an inwardly projecting annular portion **98**A projecting radially inwardly from the inner surfaces of the sidewall **98**S. The annular portion **98**A may have an angled or tapered upwardly facing surface configured to engage with a downwardly facing surface of the tapered portion **97** of the port **96** when inserted into the inner conduit **98**C. The bottom side of the annular portion **98**A may have a curved or flat shaped lower portion **99** for retaining a retaining ring, as described below. A resiliently compressible C-shaped clip or retaining ring **101** (see FIG. **29**) may be installed in the recess **96**R to supportably attach the port interface **98** the port **96**, as shown in FIG. **22**. Different port interfaces **98** having different outer sidewall diameters may be provided to allow for hoses of different sizes to the valve assembly **28**. Moreover, the port interface **98** helps to prevent over-torquing and/or cracking of the outlet **90** of the valve assembly **28**.

To attach the port **96** to the port interface **98**, the lower end of the port **96** is first inserted into the upper end of the inner conduit **98**C of the port interface. The port interface **98** is moved axially upward over the exterior surface of the sidewalls **98**S of the port **96** until the annular portion **98**A of the port interface **98** is positioned snuggly against a downwardly facing surface of the center portion **96**C. O-rings positioned in the grooves **96**G axially above center portion **96**C may compress against the inner surface of the sidewalls **98**S to seal the inner conduit **98**C against the outer diameter of the port **96** in a fluid-tight manner. The flared portion **96**F of the port fits snuggly against an outwardly opening portion **98**W at an upper end **98**U, thereby preventing further downward movement of the port **96** within the port interface **98**. The c-shaped ring **101** may then be inserted upwardly into the inner conduit **98**C of the port interface **98** and installed within the recess **96**R. The c-shaped retaining ring **101** installed within the recess **96**R abuts the lower portion **99** of the annular portion **98**A, preventing separation of the port interface **98** from the port **96**. After the port interface **98** is attached to the port **96** in the manner described above, water supplied from a water source attached to the pipe **35** may flow through the valve assembly **28**, out of the lower end of the port **96**, and through a hose attached to the lower end **98**L of the port interface **98**.

The valve assembly **28** may include other features, such as an arrestor assembly **102** at the upper connecting portion **88**U of the manifold **88**, and a push-pull liquid flow valve stem **104** at a front of the outlet **90**. The flow valve stem **104** may be user-actuated to a first position (e.g., rearward "on" position) that allows fluid flow through the second manifold body **88**, and a second position blocking fluid flow through the second manifold body **88** (e.g., forward "off" position). The arrestor assembly **102** is a dampening mechanism that absorbs kinetic energy of fluid flowing into the valve assembly **28** when the flow valve stem **104** is transitioned from the first position to the second position. Specifically, when the flow valve stem **104** is transitioned from the first position to the second position, a sudden pressure change of fluid flowing through the valve assembly may cause vibration in the valve assembly **28** or the pipes in the wall leading to the valve assembly due to overshoot in the system (i.e., "water hammer"). The arrestor assembly **102** has a sliding piston mechanism for absorbing the kinetic energy of the fluid during the transition between positions, thereby reducing or preventing vibration in the system. A cylindrical arrestor lower portion **102**L of the arrestor assembly **102** threadably engages with the upper connecting portion **88**U to allow fluid communication between the piston of the arrestor assembly **102** and the tube **88**T of the manifold **88**.

According to one aspect, the valve assembly **28** may further include a metallic manifold support ferrule **106** configured to fit over an outer cylindrical portion of the upper connecting portion **88**U of the manifold **88** to reduce hoop stresses on the manifold **88** and prevent over-torquing of the arrestor lower portion **102**L against the manifold **88**, as shown in FIGS. **2**, **3**, and **4**. The support ferrule **106** includes a cylindrical portion **106**C extending in an axial direction, and an upper annular portion **106**R extending radially inward from an upper end of the cylindrical portion **106**C, as shown in FIGS. **30**A and **30**B. The cylindrical portion **106**C has an outer cylindrical portion **106**C with an inner diameter slightly larger (~1.10") than an outer diameter of the upper connecting portion **88**U (~1.06"). The plastic or polymer material (e.g., PVC) of the manifold **88** may experience significant hoop or cylinder stresses induced by fluctuations of water pressure flowing therethrough to and from the arrestor assembly **102**, which may cause the manifold **88** to crack and/or fail over time. The metallic material (e.g., aluminum, copper, steel) of the support ferrule **106** has significantly higher tensile strength than the plastic or polymer material of the manifold **88**. The cylindrical portion **106**C absorbs at least some of the hoop or cylindrical stresses induced on the manifold **88** by pressure differentials of water flowing therethrough, thereby reducing cracks and/or failures in the manifold **88** and improving its longevity.

When the support ferrule **106** is assembled with the manifold **88**, the cylindrical portion **106**C of the support ferrule **106** is positioned over the cylindrical outer body of the upper connecting portion **88**U and the annular portion **106**R is positioned against the upper surface of the manifold **88**. The lower portion **102**L of the arrestor assembly **102** may then be inserted through the annular portion **106**R and threadably engaged with the upper connecting portion **88**U of the manifold **88**. The annular portion **106**R has an inner diameter approximately equal to or slightly larger than the diameter of an uppermost opening of the inner tube **88**T at the upper connecting portion **88**U. The arrestor assembly **102** may abut an upper surface of the annular portion **106**R when the lower portion **102**L is threadably engaged with the upper connecting portion **88**U of the manifold **88**. In some embodiments, an O-ring may be positioned between and abutting the upper surface of the annular portion **106**R and

the arrestor assembly **102** to help create a fluid-tight seal for fluid communication between the manifold **88** and the arrestor assembly **102**.

Fixtures other than the valve assembly **28** may be installed in the utility box **10**. In one embodiment, a drain assembly **108** is provided that may be installed in the utility box **10**, as shown in FIG. **31**. The drain assembly **108** includes a drain base **110** that may be installed in the second lower receptacle **52** of the box main housing **12** and a retaining member **112** for retaining a hose and/or funneling liquid into the drain base **110**. The drain base **110** includes a hollow cylindrical base portion **114** defining a drain channel, a curved rear wall portion **116** extending upwardly from the base portion **114**, and a pair of laterally offset attachment apertures **118** for removably attaching the retaining member **112** to the drain base **110**, as shown in FIGS. **32**, **33**, and **34**. A drain tube or hose, such as a condensation hose from an air conditioning unit, may be inserted through the first upper receptacle **68** or the second upper receptacle **74** and into the cavity portion **14**, where the drain tube may be attached to the retaining member **112** or inserted into the drain base **110**. Additionally, a drain tube from an appliance, such as a dishwasher or washing machine, may be inserted through the opening **18** of the box main housing **12** and into the drain base **110**.

The cylindrical base portion **114** is sized and shaped for insertion into the first knockout portion **58** of the second lower receptacle **52** after the second knockout portion **60** is removed, as described above. Specifically, a recess **120** extends upwardly from a bottom of the base portion **114** along a front side and a rear side thereof. The front and rear recesses **120** create laterally offset curved sidewalls **122** that may flex laterally or radially inward when the cylindrical base portion **114** is inserted into the second lower receptacle **52** to frictionally retain the drain base **110** therein. The cylindrical base portion **114** may have a tapered shape tapering radially inward from an upper end to a lower end thereof. The cylindrical base portion **114** has a diameter sufficient to allow for insertion of one or more drain tubes. A rim portion **124** may protrude radially outward from the outer circumference of the cylindrical base portion **114** and have an outer dimension or radius larger than the inner diameter of the first knockout portion **58**. The rim portion **124** may abut with an upper surface of the lower wall **22** when the cylindrical base portion **114** is inserted into the second lower receptacle **52**, preventing further insertion of the drain base **110** therein. One or more hoses or tubes may be inserted into the cylindrical base portion **114** for draining fluid into a pipe attached to a lower side of the second lower receptacle **52**.

Referring to FIG. **35**, the retaining member **112** is configured to retain a hose or tube thereto and drain fluids downwardly into the drain base **110** to which the retaining member is attached. The retaining member **112** includes a bracket portion **126** having bracket sidewalls **126**S extending forwardly from a bracket rear wall **126**R, a drain conduit **128** having a major surface extending downwardly at an angle from the bracket portion **126**, and a hose retention post **130** projecting upwardly from the drain conduit **128** for retaining a drain hose or tube to the retaining member **112**. A pair of laterally offset attachment members **132** each project from a rearward facing side of the bracket rear wall **126**R. The attachment members **132** may be inserted into corresponding ones of the attachment apertures **118** to removably attach the retaining member **112** to the rear wall portion **116** of the drain base **110**. The vertical position of the retention post **130** may be adjusted by moving the retaining member vertically along the rear wall portion **116** according to the length of the hose or tube extending downwardly into the cavity portion **14** from the upper wall **24** of the box main housing **12**. Specifically, the attachment apertures **118** may have an elongated shape extending downwardly along the rear wall portion **116** of the drain base **110**. The position of the attachment members **132** within the elongated attachment apertures **118** may be adjusted to select the vertical position of the retaining member **112** along the rear wall portion **116** and thereby select the vertical position of the retention post **130**. The attachment members **132** may each have a curved shape curving laterally outward toward left and right lateral sides of the retaining member **112**. The outwardly curved attachment members **132** press against the lateral outward sides of the attachment apertures **118** when the attachment members **132** are inserted therein to frictionally retain the vertical position of the retaining member **112** within the rear wall portion **116**.

The end of a drain hose or tube may be positioned around and snuggly fitted over the retention post **130** to attach the drain tube to the retaining member **112**. After the drain tube is attached to the retaining member **112** of the drain assembly **108**, liquid draining from the drain hose flows rearward along and drips from the drain conduit **128** onto the rear wall portion **116** and/or into the base portion **114** to drain from a drain pipe attached to the second lower receptacle **52**. The retention post **130** has a conical or tapered shape tapering inwardly and upwardly from the drain conduit **128** to allow for snug attachment of drain hoses having different inner diameters. The retention post **130** comprises a plurality of fin members **130**F (e.g., four) extending radially outward from a central portion **130**C of the retention post **130**, which allows liquid to flow freely from the attached drain hose onto the drain conduit **128**. The bracket sidewalls **126**S may extend downwardly along laterally sides of the drain conduit **128** to help guide liquid flow onto the rear wall portion **116** and/or into the base portion **114** and prevent liquid from spilling into the cavity portion **14**.

The utility box **10** may include several features for securely attaching the box main housing **12** within a building wall. For example, a support receptacle **134** on a rear side of the box main housing **12** is provided for supportably attaching the box main housing **12** to a pipe or tube **136**, as shown in FIGS. **8**, **9**, **10**, **11**, **36**, and **37**. The support receptacle **134** in the current embodiment is a rearwardly-opening channel or groove extending horizontally along the entire rear side of the box main housing **12**. The cross-sectional shape of the support receptacle **134** channel or groove may include opposing parallel upper and lower receptacle walls **134**U and **134**L leading to a semi-circular front wall portion **134**W centered about an axis **134**A, as shown in FIGS. **8**A and **9**. The cross-sectional shape of the support receptacle **134** is sized to receive a pipe **136** having an outer diameter equal to or less than a standard diameter, such as 0.675" (⅜") or less. A protuberance **134**P may protrude downwardly from the upper receptacle wall **134**U and/or protrude upwardly from the lower receptacle wall **134**L to help retain the pipe **136** inserted in the support receptacle **134**.

The pipe **136** to which the box main housing **12** attaches may be a pre-existing or previously installed pipe in the building wall. However, it is unlikely that a previously installed pipe in the building will be optimally positioned for attachment of the box main housing **12** thereto. A pair of mounting brackets **138** are therefore provided for optimally positioning and installing a length of pipe **136** between opposing wall studs **139** or other opposing surfaces of the

building wall, as shown in FIGS. **36** and **37**. After the mounting brackets **138** are attached to opposing studs with the length of pipe **136** extending therebetween, the box main housing **12** may be mounted in the wall studs by pressing the housing inward to insert the length of pipe **136** within the support receptacle **134**.

The mounting brackets **138** have a substantially flat bracket main body **140** having a first section **142** at a first end **144** of the bracket main body **140**, a second section **146** extending from a side of the first section **142** opposite to the first end **144** and terminating at a second end **148**, and a pipe retaining member **150** for mounting the pipe **136** to the mounting bracket **138**, as shown in FIGS. **38**, **39**, and **40**. The first section **142** is a rectangular portion extending in a width direction of the main body **140** and the second section **146** is a rectangular portion extending in a length direction of the bracket main body **140** from a central portion of the side of the first section **142**. The first end **144** of the bracket main body **140** has a substantially flat edge with a width wider than a substantially flat edge of the second end **148** opposite to the first end **144**. Holes **149** extend through the thickness of the bracket main body **140** for receiving screws or nails therein to supportably mount the bracket main body **140** to a stud. In the present embodiment, there is a pair of holes **149** positioned on lateral sides of the first section **142**; however, the position and/or number of holes **149** may vary in other embodiments, such as an additional hole positioned along the second section **146** or at the second end **148**.

The retaining member **150** is sized and shaped to be inserted into the open end of the length of pipe **136**. The length of pipe **136** extends between the pair of mounting brackets attached to the opposing faces of the two opposing wall studs **136** for supportably mounting the support receptacle **134** of the box main housing **12**, as shown in FIG. **40**. The retaining member **150** is a support projecting outward orthogonally from a first surface **140**F of the flat bracket main body **140**. The retaining member **150** in the present embodiment has a plurality of fin members **150**F (e.g., four) extending radially outward from a central portion **150**C. The cross-sectional area of the retaining member **150** is sized to snuggly fit a pipe **136** having a known inner diameter, such as 0.49 inches. The fin members **150**F may each have a tapered or angular shape tapering or angled inwardly from the first surface **140**F of the bracket main body **140** to a tip **150**T of the retaining member **150**. The tapered or angular shape may allow attachment of different sized pipes **136** to the mounting bracket **138**. In some embodiments, the retaining member **150** may instead have a cylindrical or conical shape without fin members **150**F.

The mounting brackets **138** are configured to allow the user to position the pipe **136** such that the front **21** of the box main housing **12** will be flush with the forward edge of the wall stud **139**. Specifically, affixing the mounting brackets **138** to the wall stud **139** in a certain orientation depending on the standard size of the wall stud will ensure that the front of the box main housing **12** will be flush with the forward edge of the wall stud **139**, without measuring the position of the mounting brackets **138** or box main housing **12**. According to construction industry standards, the dimensions of wall studs **139** dimensions are typically either approximately 1.5 inches thick by 3.5 inches wide (i.e., "2×4 size") or approximately 1.5 inches thick by 5.5 inches wide (i.e., "2×6 size"). A central axis C of the retaining member **150** is offset along a length of the mounting bracket **138** at a first distance D**1** from the first end **144** of the mounting bracket and at a second distance D**2** from the second end **148** of the mounting bracket, as shown in FIGS. **39** and **40**. In the current embodiment, for example, the first distance D**1** is approximately 0.315 inches and the second distance D**2** is approximately 2.315 inches (for a 0.63 inch outer diameter pipe). The mounting brackets **138** should be installed on the wall studs **139** in a first orientation if the wall stud **139** is of the 2×4 size and in a second orientation if the wall stud **139** is of the 2×6 size. In the first orientation, the first end **144** is positioned flush with the rearward side **139**R of the 2×4 size wall studs **139** and the second and **148** oriented facing forward toward the forward side **139**F of the wall studs **139** opposite to the rearward side **139**R, as shown in FIGS. **36** and **37**. In the second orientation, the second end **148** is positioned flush with the rearward side **139**R of the 2×6 size wall studs **139** and the first end **144** is oriented facing forward toward the forward side of the wall studs **139** opposite to the rearward side **139**R. In either case, the central axis C of the pipe **136** extending between the opposing wall studs **139** will be offset from the forward side of the wall studs **139** at approximately the same distance L. In this instance, the distance L is the distance between the front **21** of the box main housing **12** and the center axis **134**A of the support receptacle **134** (see FIGS. **8**A and **9**). The distance L in the current embodiment may be approximately 3.2 inches, for example.

The box main housing **12** may include flanges **151** projecting outwardly from lateral sides **26**L, **26**R of the box main housing, as shown in FIGS. **6**, **7**, and **11**. A front surface of the flanges **151** may be flush with the front **21** of the main box **12** for abutting inwardly facing surfaces of the building walls. The flanges **151** may have screw or nail holes extending therethrough for affixing the box main housing to the building walls. In some embodiments, the flanges **151** may be spaced at the distance L from the center axis **134**A of the support receptacle **134** and rearwardly offset from the front **21** of the box main housing **12**. Accordingly, when the box main housing **12** is installed and mounted using the mounting brackets **138** described above, the front **21** of the box main housing **12** may project through a hole in the building wall with the flanges **151** positioned flush against the inwardly facing surfaces of the building walls.

Mounting tabs **152** are disposed on box lateral sides **26**L and **26**R near or at the rear wall **20** for affixing the box main housing **12** to the wall studs **139**, as shown in FIGS. **6**, **11**, and **36**. The mounting tabs **152** are thin, flat portions having a mounting aperture **154** extending therethrough for receiving a fastener, such as a screw or a nail. The mounting apertures **154** in some embodiments may be elongated slots leading to a rearwardly opening mouth portion at a rear edge of the mounting tabs **152** for slideably receiving the shank of a fastener driven into the wall stud **139**. If desired, the box main housing **12** may be affixed to the wall studs by driving a fastener through the mounting apertures **154** and into the wall studs **139**, or by sliding the shank of a fastener into the rearwardly opening mouth portion of the elongated slot mounting apertures **154**. The rearward edge of the mounting tabs **152** may be flush with or may not extend beyond the back surface of the rear wall **20**, thereby reducing the amount of space required to affix the box main housing **12** to wall studs **139** within the building wall. A mounting recess **158** may be disposed in the rear wall **20** on an inwardly facing side of the mounting tab **152** for receiving the head and/or the shank of a fastener. The mounting tabs **152** are disposed at corners of the rear wall **20** in the present embodiment, although the mounting tabs may be disposed between corners on lateral sides of the rear wall **20** in other embodiments. The mounting recesses **156** may include a

mouth portion opening upwardly along the upper wall **24** or downwardly along the lower wall **22** to facilitate insertion of a fastener therein.

Pipe support brackets are provided for supportably attaching one pipe to another pipe. A pipe support bracket **160** includes a first collar **162** attachable to a first pipe **164**, and a brace **166** for attaching a second pipe **168** to the first collar **162**, as shown in FIG. **41**. The first collar **162** has a C-shaped or semi-circular collar body **170** with opposing ends **170**A and **170**B spaced apart by an opening **172**, as shown in FIG. **42**. The first collar **162** has first attachment portions **174**A and **174**B projecting in parallel away from the ends **170**A and **170**B, then inwardly toward each other. Each first attachment portion has a latch element **176** protruding from an outwardly facing surface thereof. The collar body **170** is comprised of a resilient material, such as metal, PVC or polymer, that is flexible to space the ends **170**A and **170**B further apart for inserting the first pipe **164** into the collar body though the opening **172**.

The brace **166** has an elongated U-shape comprising a pair of brackets **178** extending in parallel with each other outwardly from a base portion **180**, as shown in FIGS. **43** and **44**. Each of the brackets **178** has a semi-circular or C-shaped pipe receptacle **182** having an opening **184** for receiving the second pipe **168** therein. Both of the pipe receptacles **182** are aligned with each other along a first direction (e.g., length) of the base portion **180** to supportably and firmly retain a length of the second pipe **168** in an orientation along the first direction. The base portion has a pair of collar receptacles **186** each sized and shaped for receiving a corresponding one of the first attachment portions **174**A and **174**B therein. The collar receptacles **186** may be apertures or recesses disposed on sidewall portions **180**S of the base portion **180**. A catch **188** located outwardly adjacent to each of the collar receptacles **184** is provided for retaining the attachment portions **174**A and **1746** inserted in the adjacent collar receptacle. Specifically, the catch **188** is a resiliently flexible member configured to be flexed or bent outwardly by the latch element **176** when the first attachment portion **174**A and **174**B is inserted into the collar receptacle **186**. The catch **188** is configured to then rebound inwardly back to its original position when the latch element **176** is inserted beyond an inward edge of the catch **188**, thereby helping to block or prevent removal of the attachment portion **174**A and **1746** from the collar receptacle **186** when inserted therein.

In another embodiment, a second collar **190** having a different configuration than the first collar **162** is provided for attaching to the brace **166**, as shown in FIGS. **45**, **46**, and **47**. The second collar **190** is sized and shaped for attaching, in conjunction with the brace **166**, to a pipe **194** having a smaller diameter than the pipe **164**. The second collar **190** has a concave or U-shaped collar body **192** extending in an axial direction. The second collar body **192** has a curved or round rear wall **192**R, and may have sidewall portions **192**S extending in parallel with each other in a direction orthogonal to the axial direction. End portions **192**A and **192**B at ends of the second collar body **192** each flare outwardly away from each other. Attachment portions **196**A and **1966** project in parallel from the end portions **192**A and **1926**, then inwardly toward each other. The attachment portions **196**A and **1966** are spaced apart by an opening **198** for receiving the pipe **194** within the second collar body **192**. The second collar **190** is attachable to the brace **166** by engaging the attachment portions **196**A and **1966** with the openings **184** of the brace **166** in a manner substantially identical to the attachment portions **174**A and **174**B described above. The base portion **180** of the brace **166** attached to the second collar **192** opposes the rear wall **192**R and may abut a side of the second pipe **194** to help prevent or reduce movement or vibration of the second pipe therein.

FIGS. **51-93** illustrate additional embodiment of the utility box and its component parts similar to those shown in FIGS. **1-50** and described above.

Embodiments of the present disclosure can be described in view of the following clauses:

1. A utility box for mounting at least in part within a wall for use with a fluid carrying supply pipe, the box comprising:

a housing including a top wall, a bottom wall, a first side wall and a second side wall, a back wall and a front opening providing access into an interior of the housing defined by the top, bottom, first side, second side and back walls;

a bottom wall aperture in the bottom wall sized for extending the pipe through the bottom wall aperture with the pipe terminating in a free end portion positioned within the interior of the housing at a location above the bottom wall;

a valve attachable to the free end portion of the pipe, the junction of the valve and the pipe being within the interior of the housing above the bottom wall; and

a first seal positioned to provide a fluid-tight seal between the bottom wall and the pipe to prevent fluid within the interior of the housing from passing out of the interior of the housing through the bottom wall aperture.

2. A utility box mounted at least in part within a wall, the box comprising:

a housing including a top wall, a bottom wall, a first side wall and a second side wall, a back wall and a front opening providing access into an interior of the housing defined by the top, bottom, first side, second side and back walls;

a bottom wall aperture in the bottom wall;

a fluid carrying supply pipe extending through the bottom wall aperture and terminating in a free end portion within the interior of the housing at a location above the bottom wall;

a valve attached to the free end portion of the pipe, the junction of the valve and the pipe being within the interior of the housing above the bottom wall;

a first seal providing a fluid-tight seal between the bottom wall and the pipe to prevent fluid within the interior of the housing from passing out of the interior of the housing through the bottom wall aperture; and

a second seal providing a fluid-tight seal between the free end portion of the pipe and the valve.

3. The utility box of clauses 1 or 2, further comprising:

a manifold positioned to provide a fluid path between the free end portion of the pipe and the valve, the manifold having a lower connecting portion, an upper connecting portion and a side connecting portion positioned between the lower and upper connecting portions, with the lower connecting portion being connected in a fluid-tight arrangement to the free end portion of the pipe and one of the upper and side connecting portions being connected in a fluid-tight arrangement to the valve.

4. The utility box of any of clauses 1-3 for use with a fitting having a push-fit connector, wherein one of the upper and side connecting portions is a tube sized for having the push-fit connector pressed thereon.

5. The utility box of any of clauses 1-4, wherein the lower connecting portion comprises a push-fit connector sized for being pressed onto the free end portion of the pipe.

6. The utility box of any of clauses 1-5 for use with an arrestor assembly, wherein valve is connected to the side connecting portion and the upper connection portion is configured for connection to the arrestor assembly.

7. The utility box of any of clauses 1-6, further comprising:

a manifold positioned to provide a fluid path between the free end portion of the pipe and the valve, the manifold having a lower connecting portion and an upper connecting portion, with the lower connecting portion being connected in a fluid-tight arrangement to the free end portion of the pipe and the upper connecting portions being connected in a fluid-tight arrangement to the valve.

8. A utility box for mounting at least in part within a wall for use with an in-wall drain pipe and a drain-fluid source conduit transporting a drain fluid for entry into the drain pipe, the box comprising:

a housing including a top wall, a bottom wall, a first side wall and a second side wall, a back wall and a front opening providing access into an interior of the housing defined by the top, bottom, first side, second side and back walls;

a bottom wall aperture in the bottom wall sized to be placed in fluid communication with the drain pipe;

a drain including a drain base positioned within the bottom wall aperture and in fluid-tight communication with the drain pipe, and a retaining member for removable attachment to the drain base for retaining the drain-fluid source conduit in place relative to the drain base for communication of the drain fluid into the drain base.

9. A method of mounting a utility box at least in part within a wall, the method comprising:

providing a housing including a top wall, a bottom wall, a first side wall and a second side wall, a back wall and a front opening providing access into an interior of the housing defined by the top, bottom, first side, second side and back walls, the bottom wall having a bottom wall aperture;

extending a fluid carrying supply pipe through the bottom wall aperture and an positioning a free end portion of the pipe within the interior of the housing at a location above the bottom wall;

attaching a valve to the free end portion of the pipe with the junction of the valve and the pipe being within the interior of the housing above the bottom wall;

positioning a first seal between the bottom wall and the pipe to provide a fluid-tight seal prevent fluid therebetween to prevent fluid within the interior of the housing from passing out of the interior of the housing through the bottom wall aperture; and

positioning a second seal between the free end portion of the pipe and the valve to provide a fluid-tight seal therebetween.

The foregoing described embodiments depict different components contained within, or connected with, different other components. It is to be understood that such depicted architectures are merely exemplary, and that in fact many other architectures can be implemented which achieve the same functionality. In a conceptual sense, any arrangement of components to achieve the same functionality is effectively "associated" such that the desired functionality is achieved. Likewise, any two components so associated can also be viewed as being "operably connected," or "operably coupled," to each other to achieve the desired functionality.

While particular embodiments of the present invention have been shown and described, it will be obvious to those skilled in the art that, based upon the teachings herein, changes and modifications may be made without departing from this invention and its broader aspects and, therefore, the appended claims are to encompass within their scope all such changes and modifications as are within the true spirit and scope of this invention. Furthermore, it is to be understood that the invention is solely defined by the appended claims. It will be understood by those within the art that, in general, terms used herein, and especially in the appended claims (e.g., bodies of the appended claims) are generally intended as "open" terms (e.g., the term "including" should be interpreted as "including but not limited to," the term "having" should be interpreted as "having at least," the term "includes" should be interpreted as "includes but is not limited to," etc.).

The invention claimed is:

1. A utility box for mounting at least in part within a wall for use with a fluid carrying supply pipe having a smooth outer wall free end portion, the box comprising:

a housing including a top wall, a bottom wall, a first side wall and a second side wall, a back wall and a front opening providing access into an interior of the housing defined by the top, bottom, first side, second side and back walls;

a bottom wall aperture in the bottom wall sized for extending the pipe through the bottom wall aperture with the smooth outer wall free end portion of the pipe extending through the bottom wall aperture and into the interior of the housing and terminating at a location above the bottom wall;

a valve having a push-fit connector to receive therein and grip the smooth outer wall free end portion of the pipe to provide a direct attachment to the smooth outer wall free end portion of the pipe without use of any intermediate connection members, the junction of the valve and the pipe being within the interior of the housing above the bottom wall;

a ring seal positioned on and extending about the smooth outer wall free end portion of the pipe and in engagement with the bottom wall; and

a push-fit gripper ring positioned on the pipe and pressing the ring seal into fluid-tight sealing engagement with the smooth outer wall free end portion of the pipe and into fluid-tight sealing engagement with the bottom wall to prevent fluid within the interior of the housing from passing out of the interior of the housing through the bottom wall aperture.

2. The utility box of claim **1**, wherein the ring seal is positioned on and extending about the smooth outer wall free end portion of the pipe at a location below the bottom wall and in engagement with an underside of the bottom wall.

3. A utility box mounted at least in part within a wall, the box comprising:

a housing including a top wall, a bottom wall, a first side wall and a second side wall, a back wall and a front opening providing access into an interior of the housing defined by the top, bottom, first side, second side and back walls;

a bottom wall aperture in the bottom wall;

a fluid carrying supply pipe having a smooth outer wall free end portion extending through the bottom wall aperture and into the interior of the housing and terminating at a location above the bottom wall;

a valve having a push-fit connector to receive therein and grip the smooth outer wall free end portion of the pipe to provide a direct attachment to the smooth outer wall free end portion of the pipe without use of any intermediate connection members, the junction of the valve and the pipe being within the interior of the housing above the bottom wall;

a first ring seal positioned on and extending about the smooth outer wall free end portion of the pipe and in engagement with the bottom wall;

a push-fit gripper ring positioned on the pipe and pressing the first ring seal into fluid-tight sealing engagement with the smooth outer wall free end portion of the pipe and into fluid-tight sealing engagement with the bottom wall to prevent fluid within the interior of the housing from passing out of the interior of the housing through the bottom wall aperture; and

a second seal providing a fluid-tight seal between the smooth outer wall free end portion of the pipe and the valve.

4. A utility box mounted at least in part within a wall for use with a fluid carrying supply pipe having a smooth outer wall free end portion, the box comprising:

a housing including a top wall, a bottom wall, a first side wall and a second side wall, a back wall and a front opening providing access into an interior of the housing defined by the top, bottom, first side, second side and back walls;

a bottom wall aperture in the bottom wall sized for extending the pipe through the bottom wall aperture with the smooth outer wall free end portion of the pipe extending through the bottom wall aperture and into the interior of the housing and terminating at a location above the bottom wall;

a first ring seal positioned on and extending about the smooth outer wall free end portion of the pipe and in engagement with the bottom wall;

a first push-fit gripper ring positioned on the pipe and pressing the first ring seal into fluid-tight sealing engagement with the smooth outer wall free end portion of the pipe and into fluid-tight sealing engagement with the bottom wall to prevent fluid within the interior of the housing from passing out of the interior of the housing through the bottom wall aperture;

a fitting positioned within the interior of the housing;

a manifold positioned within the interior of the housing and above the bottom wall and providing a fluid path between the smooth outer wall free end portion of the pipe and the fitting, the manifold having a lower connecting portion, an upper connecting portion and a side connecting portion positioned between the lower and upper connecting portions, the lower connecting portion receiving the smooth outer wall free end portion of the pipe therein and one of the upper and side connecting portions being attached to the fitting above the bottom wall, the junction of the lower connecting portion and the free end portion of the pipe being within the interior of the housing and above the bottom wall;

a second seal positioned on and extending about the smooth outer wall free end portion of the pipe providing a fluid-tight seal between the lower connection portion and the smooth outer wall free end portion of the pipe;

a second push-fit gripper ring positioned on the smooth outer wall free end portion of the pipe within the interior of the housing and above the bottom wall and securely retaining the lower connecting portion on the smooth outer wall free end portion of the pipe; and

a third seal providing a fluid-tight seal between the fitting and the one of the upper and side connecting portions attached to the fitting.

5. The utility box of claim **4**, wherein the fitting has a push-fit connector, and the one of the upper and side connecting portions attached to the fitting has a tubular portion sized for having the push-fit connector pressed thereon, the push-fit connector including a third push-fit gripper ring positioned on the tubular portion and securely retaining the fitting on the tubular portion.

6. The utility box of claim **4**, wherein the fitting is a valve.

7. The utility box of claim **4** for use with an arrestor assembly, wherein the fitting is connected to the side connecting portion and the upper connection portion is configured for connection to the arrestor assembly.

8. A utility box mounted at least in part within a wall, the box comprising:

a housing including a top wall, a bottom wall, a first side wall and a second side wall, a back wall and a front opening providing access into an interior of the housing defined by the top, bottom, first side, second side and back walls;

a bottom wall aperture in the bottom wall;

a fluid carrying supply pipe having a smooth outer wall free end portion extending through the bottom wall aperture and into the interior of the housing and terminating at a location above the bottom wall;

a ring seal positioned on and extending about the smooth outer wall free end portion of the pipe and in engagement with the bottom wall;

a push-fit gripper ring positioned on the pipe and pressing the ring seal into fluid-tight sealing engagement with the smooth outer wall free end portion of the pipe and into fluid-tight sealing engagement with the bottom wall to prevent fluid within the interior of the housing from passing out of the interior of the housing through the bottom wall aperture;

a valve positioned within the interior of the housing; and

a manifold positioned within the interior of the housing and above the bottom wall and providing a fluid path between the smooth outer wall free end portion of the pipe and the valve, the manifold having a lower connecting portion and an upper connecting portion, the lower connecting portion being attached to the smooth outer wall free end portion of the pipe above the bottom wall and the upper connecting portions being attached in a fluid-tight arrangement to the valve above the bottom wall, the junction of the lower connecting portion and the smooth outer wall free end portion of the pipe being within the interior of the housing and above the bottom wall.

9. A utility box for mounting at least in part within a wall for use with an in-wall drain pipe, a first drain-fluid source conduit transporting a first drain fluid for entry into the drain pipe, and a second drain-fluid source conduit transporting a second drain fluid for entry into the drain pipe, the box comprising:

a housing including a top wall, a bottom wall, a first side wall and a second side wall, a back wall and a front opening providing access into an interior of the housing defined by the top, bottom, first side, second side and back walls;

a bottom wall aperture in the bottom wall sized to be placed in fluid communication with the drain pipe;

a drain including a drain base having an upwardly extending wall portion and a drain lower portion with a drain channel, the wall portion arranged to channel fluid engaging the wall portion downward into the drain channel, the drain base positioned within the bottom wall aperture with the drain channel in fluid communication with the drain pipe, the drain channel being sized to receive therein and retain a free-end portion of the first drain-fluid source conduit to direct the first drain fluid into the drain pipe; and

a retaining member attached to the wall portion for retaining a free-end portion of the second drain-fluid source conduit in place relative to the drain base for communication of at least a first portion of the second drain fluid against the wall portion for flow of the first portion of the second drain fluid downward along the wall portion into the drain channel for passage into the drain pipe.

10. The utility box of claim **9**, wherein the retaining member is removably attachable to the wall portion.

11. The utility box of claim **9**, wherein the wall portion is a forwardly curving rear wall portion of the drain base.

12. The utility box of claim **9**, wherein the retaining member has a downwardly and rearwardly sloping drain surface positioned to be below the free-end portion of the second drain-fluid source conduit and terminating in a rearwardly located terminal end adjacent to the wall portion to channel the second drain fluid rearwardly to communicate the first portion of the second drain fluid against the wall portion for flow downward into the drain channel for passage into the drain pipe.

13. A method of mounting a utility box at least in part within a wall, the method comprising:

providing a housing including a top wall, a bottom wall, a first side wall and a second side wall, a back wall and a front opening providing access into an interior of the housing defined by the top, bottom, first side, second side and back walls, the bottom wall having a bottom wall aperture;

extending a fluid carrying supply pipe having a smooth outer wall free end portion through the bottom wall aperture and positioning the smooth outer wall free end portion of the pipe within the interior of the housing and terminating at a location above the bottom wall;

providing a valve having a push-fit connector sized to receive therein and grip the smooth outer wall free end portion of the pipe;

directly attaching the valve to the pipe by inserting the smooth outer wall free end portion of the pipe into the push-fit connector and gripping the smooth outer wall free end portion of the pipe without the use of any intermediate connection members, with the junction of the valve and the pipe being within the interior of the housing above the bottom wall;

positioning a first ring seal on and about the smooth outer wall free end portion of the pipe and in engagement with the bottom wall and the pipe;

positioning a push-fit gripper ring on the pipe and pressing the first ring seal into fluid-tight sealing engagement with the smooth outer wall free end portion of the pipe and into fluid-tight sealing engagement with the bottom wall to prevent fluid within the interior of the housing from passing out of the interior of the housing through the bottom wall aperture; and

positioning a second ring seal on and about the smooth outer wall free end portion of the pipe and in engagement with the smooth outer wall free end portion of the pipe and the valve to provide a fluid-tight seal therebetween.

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