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An agency of Industry Canada

CA 2461863 C 2008/04/29

(11)(21) 2 461 863

(12) BREVET CANADIEN
CANADIAN PATENT

(13) C

(22) Date de dépôt/Filing Date: 2004/03/24

(41) Mise à la disp. pub./Open to Public Insp.: 2004/10/04

(45) Date de délivrance/Issue Date: 2008/04/29

(30) Priorités/Priorities: 2003/04/04 (JP2003-102129);
2004/03/08 (JP2004-064196)

(51) Cl.Int./Int.Cl. *B60R 7/04* (2006.01),
B62K 19/46 (2006.01)

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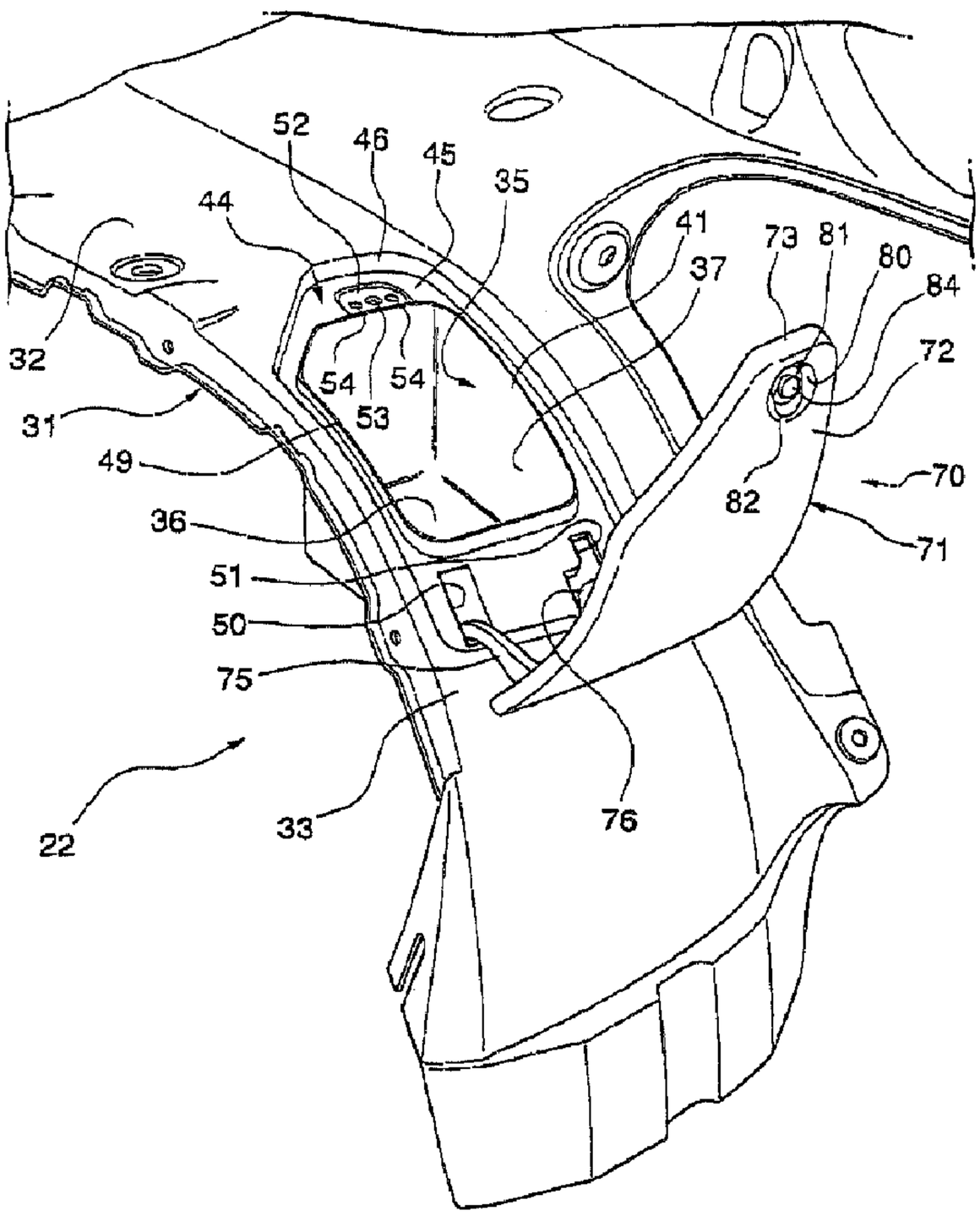
(54) Titre : COMPARTIMENT DE RANGEMENT POUR VEHICULE A SIEGE
(54) Title: STRUCTURE OF STORAGE SECTION FOR SADDLE-RIDDEN TYPE VEHICLE



(57) Abrégé/Abstract:
To provide a storage section structure of a saddle-ridden type vehicle that makes it possible to ensure adequate storage capacity and allows the storage workability to be increased, while making it possible to improve the external appearance. A storage indent

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(57) Abrégé(suite)/Abstract(continued):
35 that is indented downwards is provided on an inclined plane portion 33 of a fender 31 that covers a wheel, and a lid 70 that opens and closes an opening 41 of the storage indent 35 is also swingably provided on the inclined plane portion 33 of the fender. In this way, it is possible to prevent sticking out from the outer surface of the fender 31, it is also possible to widen the storage space above the fender and widen the opening section.

ABSTRACT OF THE DISCLOSURE

To provide a storage section structure of a saddle-ridden type vehicle that makes it possible to ensure adequate storage capacity and allows the storage workability to be increased, while making it possible to improve the external appearance. A storage indent 35 that is indented downwards is provided on an inclined plane portion 33 of a fender 31 that covers a wheel, and a lid 70 that opens and closes an opening 41 of the storage indent 35 is also swingably provided on the inclined plane portion 33 of the fender. In this way, it is possible to prevent sticking out from the outer surface of the fender 31, it is also possible to widen the storage space above the fender and widen the opening section.

STRUCTURE OF STORAGE SECTION FOR SADDLE-RIDDEN TYPE VEHICLE

FIELD OF THE INVENTION

The present invention relates to a structure of a storage section for a saddle-ridden type vehicle.

BACKGROUND OF THE INVENTION

With respect to a storage structure for a saddle ridden type vehicle, a box-type storage unit is attached to an outer surface of a fender using bolts (refer, for example, Japanese Utility Model laid-open No. Sho. 60-158984). The disclosure of the patent document has a box-type storage unit attached to an outer surface of a fender, and so the storage unit sticks out from the outer surface of the fender, which does not give a good external appearance. Also, if the extent of sticking out is reduced so that the storage unit is inconspicuous, storage space is made narrow and it is not possible to ensure adequate storage capacity. Further, if the extent of sticking out is reduced, and the opening section is narrowed in the attachment direction, and it is difficult to take things out.

SUMMARY OF THE INVENTION

Therefore, the object of the present invention is to provide a storage section structure of a saddle-ridden type vehicle that makes it possible to ensure adequate storage capacity and allows the storage workability to be increased, while making it possible to improve the external appearance.

To attain the above-mentioned objective, the present invention is characterized in that it is comprised of a storage indent that is indented

downward formed on an inclined plane portion of a fender that covers a wheel, and a lid that opens and closes an opening of the storage indent is swingably provided on the inclined plane portion of the fender.

An aspect of the invention is characterized in that the storage indent is integrally molded with the fender in the invention described above.

Another aspect of the invention is characterized in that a peripheral indent that is shallower than the storage indent is formed throughout the entire periphery at the periphery of the storage indent, and a sealing member is installed on the rear surface of the lid, which makes contact with the peripheral indent throughout the entire periphery in the closed state.

A further aspect of the invention is characterized in that a dividing wall portion that protrudes on the upper side is formed along the entire periphery of the border edge on the storage indent side of the peripheral indent.

According to yet another aspect of the invention, in the invention described above, a storage indent body having the storage indent is separate from the fender, with the storage indent body being provided on the fender, and provided with a support section for pivoting the lid.

Another aspect of the invention is characterized in that a coupling arm portion that extends out from the rear surface of the lid passes through a penetrating hole formed at a lower part of the peripheral indent, and is rotatably coupled to a swinging movement support portion on the rear surface of the fender.

Yet another aspect of the invention is characterized in that a spring that biases the lid in the open direction is installed on the swinging movement support portion.

A further aspect of the invention is characterized in that the wheel is the left front wheel.

BRIEF DESCRIPTION OF THE DRAWINGS

Preferred embodiments of the invention are shown in the drawings, wherein:

Fig. 1 is a perspective view showing a saddle-ridden type vehicle to which the storage section structure of a saddle-ridden type vehicle according to a first embodiment of the present invention has been applied.

Fig. 2 is a perspective view of the storage section structure of a saddle-ridden type vehicle according to the first embodiment of the present invention, viewed from the upper side and rear side of the left side of the vehicle body, showing the open state of the lid.

Fig. 3 is a perspective view of the storage section structure of a saddle-ridden type vehicle according to the first embodiment of the present invention viewed from the upper side and substantially front side of the left side of the vehicle body, showing the open state of the lid.

Fig. 4 is a perspective view of the storage section structure of a saddle-ridden type vehicle according to one embodiment of the present invention, viewed from lower side and substantially front side of the left side of the vehicle body, showing the open state of the lid.

Fig. 5 is a perspective view of the storage section structure of a saddle-ridden type vehicle according to one embodiment of the present invention, viewed from the upper side and rear side of the left side of the vehicle body, showing the closed state of the lid.

Fig. 6 is a cross-sectional view showing the locking mechanism of the lid of the storage section structure of a saddle-ridden type vehicle according to a first embodiment of the present invention.

Fig. 7 is a perspective dismantled view of the storage section structure of a saddle-ridden type vehicle according to a second embodiment of the present invention, viewed from the upper side and rear side of the left side of the vehicle body, with the lid removed.

Fig. 8 is a perspective view of the storage section structure of a saddle-ridden type vehicle according to a second embodiment of the present invention, viewed from the upper side and rear side of the left side of the vehicle body, with the lid removed.

Fig. 9 is a perspective view of the storage section structure of a saddle-ridden type vehicle according to the second embodiment of the present invention viewed from the upper side of the left side of the vehicle body, showing the open state of the lid.

Fig. 10 is a cross sectional view showing the storage section structure of a saddle-ridden type vehicle according to the second embodiment of the present invention, showing the open state of the lid.

Fig. 11 is a cross sectional view showing the storage section structure of a saddle-ridden type vehicle according to the second embodiment of the present invention, showing the closed state of the lid.

Fig. 12 is an enlarged cross sectional view showing an engagement structure of the storage section structure of a saddle-ridden type vehicle according to the second embodiment of the present invention, showing the closed state of the lid.

Fig. 13 is a rear surface side perspective view showing lid of the storage section structure of a saddle-ridden type vehicle according to a second embodiment of the present invention.

Fig. 14 is an enlarged cross sectional view showing a support structure of the storage section structure of a saddle-ridden type vehicle according to the second embodiment of the present invention, showing the closed state of the lid.

Fig. 15 is a perspective view of the storage section structure of a saddle-ridden type vehicle according to a second embodiment of the present invention, viewed from the upper side and rear side of the left side of the vehicle body, showing the closed state of the lid.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

A first embodiment of a storage section structure of a saddle-ridden type vehicle of the present invention will be described below with reference to Fig. 1 to Fig. 6. In addition, front, back, left and right in the description below are front, back, left and right in the direction of progression when the vehicle advances.

Fig. 1 is a perspective view showing a saddle-ridden type vehicle having driving on uneven ground as the main purpose (so-called buggy vehicles).

This saddle-ridden type vehicle 11 has wheels 12 placed at the front, back, left and right 4 corners of the vehicle body, a power unit 15 having an engine 13 and a transmission 14 mounted at an approximately center position of the vehicle body, a handle bar 16 for input of steering for the front wheels 12 installed so as to extend in the left-right direction over the front upper portion of the vehicle body, a headlight unit 17 supported by the handle bar 16, a fuel tank 18 installed at the back of the handle bar 16, a seat 19 installed at the back of the fuel tank 18 and a resin-molded vehicle body cover 20. In addition, this saddle-ridden type vehicle 11 is meant to be of so-called transverse type, wherein a crankshaft, not shown, extends from the engine 13 in the front-to rear direction.

The vehicle body cover 20 has a front cover 22 that covers the front portion of the vehicle body containing the front wheels 12, a front mud guard 23 that is installed on both left and right sides of the front cover 22 and covers the side portions of the front cover 22 together with the upper portions of the front wheels, left and right sub-fenders 24 that are installed at the back of the front cover 22 and the front mud guard 23 and cover the back portion of the front wheels 12, a center cover 25 that is present at the back of the front cover 22 and covers from the fuel tank 18 to the left and right side portions of the vehicle body, a rear cover 26 that is at the back of the center cover 25 and covers the back portion of the vehicle body, left and right center mud guards 27 that are installed at the back of the sub-fenders 24 and cover the side portions of the vehicle body, and left and right engine sub-covers 28 that are installed between the back end side of the center cover 25 and the center mud guard 27 and cover the side portions of the vehicle body.

The storage section structure of the present invention is applied on a left front fender portion (fender) 31 of the front cover 22 that covers the left front wheel 12 (12a).

The left front fender portion 31 has an upper face portion 32 that covers the upper portion of the left front wheel 12 (12a) approximately horizontally, and an inclined plane portion 33 that is installed on the rear side of this upper face portion 32 and is inclined with respect to the horizontal in such a way that while being curved along the back upper part of the left front wheel 12 (12a) it is positioned lower down moving towards the rear side, and a vertical storage indent that is indented downward 35 is integrally molded in this inclined plane portion 33, as shown in Fig. 2, at the time of molding the front cover 22 made of resin containing the left front fender portion 31.

The storage indent 35 has a bottom surface portion 36 that is inclined so that the back portion is located slightly on the lower side with respect to the horizontal, and adopts an approximately rectangular shape, which is elongated in the front-back direction and has a chamfer formed on the left side front portion. A side wall portion 37 is formed, standing up from the entire periphery of the peripheral edge portion of the bottom surface portion 36 in the vertical direction. In addition, as shown in Fig. 3, at the back portion of the bottom surface portion 36, a water drain indent 38 that is indented downward is formed, a penetrating hole 39 that passes through vertically is formed at the bottom portion of this water drain indent 39, and this penetrating hole 39 is closed by a detachable plug member 40. This water drain indent 38 and plug member 40 are installed so as to drain water through the penetrating hole 39 by taking out the plug member 40, for instance when washing the storage indent 35.

At the periphery of aperture 41 on the upper part of the storage indent 35, a peripheral indent 44 that is indented downward shallower than the storage indent 35 while being curved from the inclined plane portion 33 of the left front fender portion 31 matching the curve of the inclined plane portion 33 is formed throughout the entire periphery. That is to say, two stages of indents 35, 44 are formed. This peripheral indent 44 also has a

bottom surface portion 45 wherein the shape of its planar view being approximately rectangular, which is elongated in the front-back direction and in which a chamfer is formed on the left side front portion similarly to the storage indent 35, and a side wall portion 46 is formed, standing up from the entire periphery of the peripheral edge portion of the bottom surface portion 45 in the vertical direction, this side wall portion 46 being connected to the inclined plane portion 33 of the left front fender portion 31.A dividing wall portion 49 protruding upward is formed along the entire periphery of the border edge on the storage indent 35 side of this peripheral indent 44. This dividing wall portion 49 is formed continuously with the side wall portion 37 on the upper side of the side wall portion 37 of the storage indent 35, protruding in a range that is on a lower side than the inclined plane portion 33 of the left front fender portion 31.

Penetrating holes 50, 51 are formed in the vertical direction at two locations on the left and right in the back portion of the peripheral indent 44, that is, at the lower position. On one hand, specifically, the left side penetrating hole 50 adopts a square long hole shape, which is elongated in the front-back direction. On the other hand, specifically, the right side penetrating hole 51 adopts a shape that extends partially from the lower part of a similar long hole in the direction of the penetrating hole 50.

In addition, at the side of the peripheral indent 44 that is more to the front than the storage indent 35, an escape indent 52 that is indented downward slightly more than the peripheral indent 44 is formed, and on the bottom portion of this escape indent 52, an insertion hole 53 and mounting holes 54 on both of its sides are punched in the vertical direction, as shown in Fig. 2. On the rear side of the escape indent 52 a catch holding portion 56 shown in Fig. 4 is affixed by screws 55 shown in Fig. 3, which are inserted from the front side through the mounting holes 54. The peripheral indent 44 such as the one above is obviously also integrally molded at the time of molding the front cover 22.

On the rear surface of the inclined plane portion 33 of the left front fender portion 31, swinging movement support portions 58, 59 are formed respectively contiguous to the back of each penetrating hole 50, 51. On the

one hand, specifically the left side swinging movement support portion 58 has one pair of left and right support segment portions 60, 61 that extend out downward from the inclined plane portion, specifically, a support hole 62 that passes through in the left-right direction is formed in the left side support segment portion 60, and specifically, a support groove 63 having a shape that, at the same time as passing through in the left-right direction is also opened downwards, is formed in the right side support segment portion 61. On the other hand, specifically, the right side swinging movement support portion 59 has one pair of left and right support segment portions 64, 65 that extend out downward from the inclined plane portion 33, specifically, a support groove 67 having a shape that, at the same time as passing through in the left-right direction is also opened downwards, is formed in the left side support segment portion 64, and specifically, a support hole that passes through in the left-right direction, not shown, is formed in the right side support segment portion 65. These swinging movement support portions 58, 59 installed spaced from the storage indent 35 are also integrally molded at the time of molding the front cover 22.

Then, as shown in Fig. 2 and Fig. 3, a lid 70 that opens and closes the aperture 41 on the upper part of the storage indent 35 formed so as to be indented downward on the inclined plane portion 33 of the left front fender portion 31 is swingably coupled to the left front fender portion 31. This lid 70 has a plate-shaped lid main body portion 71 that is curved in the same way as the peripheral indent 44 to close the storage indent 35 by fitting into the interior of the peripheral indent 44, and this lid main body portion 71 adopts a shape that is one size smaller than the peripheral side wall portion 46 of the indent 44. That is to say, the lid main body portion 71 has an upper face portion 72 whose shape in planar view in the state where it is fitted into the peripheral indent 44 adopts an approximately rectangular shape, which is elongated in the front-back direction and in which a chamfer is formed in the left side front portion in the same way as the peripheral indent 44, and a protrusion wall portion 73 that protrudes slightly from the entire periphery of the peripheral edge portion of the upper face portion 72 towards the peripheral indent 44 side.

The lid 70 has one pair of left and right J-shaped coupling arm portions 75, 76 that extend out from the rear surface of the upper face portion 72, pass through the penetrating holes 50, 51 formed in the peripheral indent 44, and are rotatably coupled to the swinging movement support portion 58, 59 on the rear surface of the inclined plane portion 33. As shown in Fig. 4, the left side coupling arm portion 75 has an axial portion 77 that protrudes in the left-right direction at the protruding tip, this axial portion 77 having to be fitted to the support hole 62 and the support groove 63 of the left side swinging movement support portion 58, the right side coupling arm portion 76 also has an axial portion 78 that protrudes in the left-right direction at the protruding tip, this axial portion 78 having to be fitted to the support hole, not shown, and the support groove 67 of the right side swinging movement support portion 59.

The lid 70 supported by the left front fender portion 31 at the coupling arm portions 75, 76 as mentioned above is swung between the closed state as shown in Fig. 5, where the lid main body portion 71 is fitted into the interior of the peripheral indent 44 to close the storage indent 35, and the open state as shown in Fig. 2 to Fig. 4, where the lid main body portion 71 is rotated on the upper side to be opened so as to adopt an obtuse angle with respect to the aperture 41 of the storage indent 35 at a location spaced from the side that is more to the back than the storage indent 35. Here, in the above-mentioned closed state, the upper face portion 72 of the lid 70 and the inclined plane portion 33 of the left front fender portion 31 become one single surface. In addition, in the above-mentioned open state, the swing of the lid 70 in the open direction reaches a limit position, for instance, by the lid main body portion 71 coming into contact with the inclined plane portion 33 of the left front fender portion 31.

Here, a indent 80 that is indented in the direction of the peripheral indent 44 is formed at the front edge side of the upper face portion 72 of the lid main body portion 71, and an open-close latching body 81 is installed in this indent 80. As shown in Fig. 6, this open-close latching body 81 has a D-shaped ring member 82 and a stud member 84 that couples to this ring member 82 at a head portion 84a with a large diameter on one extremity side, and by having a washer 85 latched onto the stud member 84 on the rear side of the indent 80, is rotatably installed on the lid main body

portion 71 by the washer 85 and the head portion 84a of the stud member 84. In addition, when the lid 70 is in the above-mentioned closed state, the stud member 84 passes through the insertion hole 53 of the peripheral indent 44 and is held by the catch holding portion 56 on the below side.

Specifically, the catch holding portion 56, as also shown in Fig. 4, is comprised of a spring material having a mounting portion 88 that is mounted onto the left front fender portion 31 with screws 55, a retention segment portion 86 that extends out curving from the mounting portion 88 and spaced from the lid main body portion 71, and a control segment portion 87 that can control the deformation of this retention segment portion 86. An insertion hole 100 and an insertion hole 101 shown in Fig. 6, into which the stud member 84 can be inserted, are formed in the mounting portion 88 and the retention segment portion 86, several protruding portions 102 that protrude inwards in the radial direction being formed in the insertion hole 101 of the retention segment portion 86. In accordance with these, several inclined grooves 103 are formed on the peripheral surface of the stud member 84 in such a way that the more the location is offset in the circumference direction, the more they incline toward the tip side in the axial direction. In addition, although illustration is omitted, the thickness of the tip of the stud member 84 is thickest where the inclined groove 103 is farthest from the tip.

Then, when the stud member 84 is being inserted into the insertion holes 53, 100, 101 between the protruding portions 102 of the insertion hole 53 on the side where the thickness is thin, if rotated 90 degrees, while the protruding portions 102 are caught inside the inclined groove 103 by the fact that the thickness between the protruding portion 102 becomes thick, the protruding portions 102 are pulled toward the mounting portion 88 side by the inclination of the inclined groove 103 to elastically deform the retention segment portion 86 toward the mounting portion 88 side (state shown in Fig. 6).Owing to this elastic deformation, a biasing force is generated on the stud member 84 that is the lid main body 71 in the direction of close contact with the left front fender portion 31. In this state, the lid 70 is in the above-mentioned closed state.

Although illustration is omitted, the ring member 82 is made to maintain a collapsed state with its own elastic force by offsetting the mounting location on both sides onto the stud member 84, and in this state fits into the inside of the indent 80. Then, by raising up the ring member 82 and by rotating 90 degrees in a direction opposite to that mentioned above, the protruding portions 102 are made to escape from the interior of the inclined grooves 103 to release the catch with the retention segment portion 86, and if the ring member 82 is pulled further, the stud member 84 disengages from the insertion holes 53, 100, 101. In this way, the lid 70 becomes swingable in the direction that opens the storage indent 35.

In addition, as shown in Fig. 3, a ring-shaped sealing member 89 consisting of an elastic material is pasted on the rear surface of the lid main body portion 71, and comes into contact with the dividing wall portion 49 of the peripheral indent 44 throughout its entire periphery when the lid 70 is in the above-mentioned closed state. Here, when the lid 70 is in the closed state, the sealing member 89 is elastically deformed by the height of the dividing wall portion 49 and comes in close contact with the dividing wall portion 49 throughout its entire periphery. In addition, at this time, penetrating holes 50, 51 are placed in the peripheral indent 44, which becomes the outer side of the sealing member 89 with respect to the storage indent 35.

As shown in Fig. 4, on the axial portion 78 of the right side coupling arm portion 76 of the lid 70, a rotating bias spring (spring) 91 is installed so as to insert the axial portion 78 into its coil portion 92. This rotating bias spring 91 has a latch arm portion 93 that extends in the radial direction on the outer side at one extremity side being latched onto the latch portion 94 on the rear surface of the inclined plane portion 33 of the left front fender portion 31, and a latch arm portion 95 that extends in radial direction on the outer side at the other extremity side being latched by the latch segment portion 96 of the coupling arm portion 76, to bias the lid 70 in the open direction, which opens the storage indent 35.

According to structure of a storage section for a saddle-ridden type vehicle 11 of the first embodiment described above, since a storage indent 35 that is indented downwards is provided on an inclined plane portion 33 of a left

front fender 31, and since a lid that opens and closes an opening 41 of this storage indent 35 is also swingably provided, it is possible to prevent sticking out from the outer surface of the left front fender 31. It is therefore possible to improve the external appearance. Also, since the storage indent 35 that is indented downwards is provided on an inclined plane part 33 of the left front fender 31, as well as preventing sticking out, it is also possible to widen the storage space and widen the opening section 41. Therefore, it is possible to ensure adequate storage capacity and storage workability can be improved.

Further, due to the fact that a storage indent 35 that is indented downward is formed in the inclined plane portion 33 of the left front fender portion 31, even if, in order to improve storage workability, the lid 70 that opens and closes the aperture 41 of this storage indent 35 is widely opened so as to be spaced from the storage indent 35 as mentioned above, storage objects do not drop from the storage indent 35. Therefore, the ability to place in and take out a storage object, without a storage object being dropped, that is, the storage workability, can be improved. Furthermore, from the fact that the storage indent 35 is formed on the inclined plane portion 33, the open area of the aperture 41 becomes larger than the horizontal cross section of the storage indent 35, and as a result, the storage workability can be further improved.

In addition, since the storage indent 35 is integrally molded within the front cover 22 that contains the left front fender portion 31, increase in cost can be suppressed at the same time as increase in the number of parts can be suppressed.

Furthermore, since at the periphery of the storage indent 35 a peripheral indent 44 that is shallower than this storage indent 35 is formed throughout the entire periphery, the lid 70 in the closed state can be fitted into this peripheral indent 44, and it is possible for the left front fender portion 31 and the lid 70 in the closed state to form one single surface. Therefore, the external appearance is improved. Furthermore, since the sealing member 89 installed on the rear surface makes contact with the peripheral indent 44 throughout the entire periphery when the lid 70 is in the closed state, rain water and the like can be prevented from entering in

the interior of the storage indent 35. Therefore, waterproofing of the storage indent 35 can be ensured. Furthermore, since it is possible to bias the lid 70 in the open direction when in the closed state, using the sealing member 89, it is possible to restrict rattling due to play of the lid 70 in the closed state. Therefore, it is possible to prevent abnormal noises from occurring due to rattling of the lid during a ride.

In addition, since the dividing wall portion 49 protrudes on the upper side along the entire periphery of the border edge on the storage indent 35 side of the peripheral indent 44, it is possible, by the dividing wall portion 49, to ensure that rain water and the like is prevented from entering the interior of the storage indent 35. Therefore, waterproofing of the storage indent 35 can be ensured. In addition, since if the sealing member 89 of the lid 70 in the closed state is brought into contact with this dividing wall portion 49 as mentioned above, the sealing member 89 can be widely deformed, and as a result, the sealing member 89 is brought into close contact with the dividing wall portion 49, making it possible to increase seal effectiveness. Therefore, also from this point, waterproofing of the storage indent 35 can be ensured. Furthermore, the protrusion wall portion 73 of the lid 70 in the closed state and the side wall portion 46 of the peripheral indent 44 overlap in the vertical direction, making it possible to ensure waterproofing of the storage indent 35. In addition, since if the sealing member 89 of the lid 70 in the closed state is brought into contact with this dividing wall portion 49, the sealing member 89 can be widely deformed making it possible to strongly bias in the open direction the lid 70 in the closed state with the seal member 89, it is possible to ensure that rattling due to play of the lid 70 in the closed state is restricted. Therefore, it is possible to prevent abnormal noises from occurring due to rattling of the lid 70 during a ride.

Furthermore, in order to widely open the storage indent 35 by widely swinging the lid 70, coupling arm portions 75, 76 of the lid 70 must be supported by the swinging movement support portions 58, 59 on the rear surface of the left front fender portion 31 through the penetrating holes 50, 51 formed in the peripheral indent 44 more on the outside than the storage indent 35, and by forming these penetrating holes 50, 51 at the lower part location of the peripheral indent 44, rain water that infiltrates

in the peripheral indent 44 can be guided with the peripheral indent 44 on the outside of the sealing member 89 and eliminated satisfactorily through the penetrating holes 50, 51. Therefore, pooling of rainwater in the peripheral indent 44 can be prevented.

In addition, since the lid 70 in the closed state is biased in the open direction with the biasing force of the rotating bias spring 91 from the swinging movement support portion 59 in addition to the biasing force of the sealing member 89 installed on the rear surface of the lid 70, it is possible to ensure that the rattling due to play of the lid 70 in the closed state be restricted. Therefore, it is possible to prevent abnormal noises from occurring due to rattling of the lid 70 during a ride. Furthermore, since the open operation of the lid 70 is helped by the biasing force of the rotating bias spring 91, a smooth opening operation is possible.

Furthermore, since the storage indent 35 is installed on the left front fender portion 31, for instance when parked, the occupant in the saddled state while maintaining the right hand break lever in the held state can open and close the lid 70 satisfactory without forcing only with the left hand to place in and take out a storage object. In addition, obviously, installation is not limited to the left front fender portion 31, and it can be on the right front fender portion, and also on the rear fender, as required.

Next, a second embodiment of a storage section structure for a saddle-ridden type vehicle of the present invention will be described below with reference to Fig. 7 to Fig. 15, centering on sections that are different from the first embodiment.

In the first embodiment, the storage indent is integrally formed with the front cover 22, but with the second embodiment the main point of difference is that the storage indent 35 is separate from the front cover 22.

In the second embodiment, as shown in Fig. 7, an insertion hole 111 is formed in the inclined surface section 33 of the left front fender 31 of the front cover, passing through in a vertical direction. The insertion hole 111 is a substantially rectangular shape that is long in the longitudinal direction and with a chamfer formed at a left front side part. An outer side

indent 112 that is indented downward while being curved from the inclined plane portion 33 of the left front fender portion 31 matching the curve of the inclined plane portion 33, and a n inner side indent 113 indented further than the outer side indent 112 at an inner side of the outer side indent 112 are formed at a front side and both left and right sides of the insertion hole 111. Also, a rear side indent 114 that is more deeply indented than the inner side indent 113 is formed a rear section of the insertion hole 111, and the entire periphery of the insertion hole 111 is surrounded by the outer side indent 112, inner side indent 113 and rear side indent 114. Here, attachment seats 116 having attachment holes 115 formed therein are respectively provided sticking out on left and right side sections of the rear side indent 114, and attachment holes are also formed in a front part of the inner side indent 113. Attachment holes 54 that are the same as those in the first embodiment are formed in a front part of the inner side section 113, and a slit 53B is formed between these attachment holes.

A storage indent 35 is then formed in the storage indent body 118 that is separate from the front cover 22, and this storage indent body is inserted into the insertion hole 111 and mounted on the inner side indent 113. The storage indent body 118 has the indent section 35 and a flange section 120 projecting sideways from an edge section of an opening 41 side of this indent section 35, and as shown by the state before attachment in Fig. 7 and the state after attachment in Fig. 8, the indent section 35 is fitted into the insertion hole 111, and mounted on the inner indent 113 and the attachment seats 116 at the flange section 120. The storage indent 35 is a substantially rectangular shape that is long in the longitudinal direction and with a chamfer formed at a left front side part, corresponding to the insertion hole 111. Attachment holes 121 are formed in the flange section 120 at both rear sides, and also in the front part, and the storage indent body 118, that is, the storage indent 35, is attached to the left front fender 31 by fitting resin clips 22 inserted into these attachment holes 121 into the attachment hole 115.

A dividing wall portion 49 that is the same as that in the first embodiment projecting slightly to an upper side is formed at an inner edge section of the storage indent 35 side stretching completely around, and a dividing

wall portion 125 projecting slightly upwards is also formed outside of this dividing wall portion 49 more towards the storage indent 35 than the attachment hole 121. In this way, a surround indent section 44 indented slightly downwards so as to completely surround the storage indent 35 is formed between the dividing wall portion 49 and the dividing wall portion 125. Here, the inner dividing wall portion 49 protruding upward is formed so as to project upwards to the entire periphery of the border edge on the storage indent 35 side of the peripheral indent 44. Also, the peripheral indent 44 is shallower than the storage indent 35, and is elongated in the longitudinal direction the same in plane view as the indent section 35, being substantially rectangular shape having a chamfer formed at a left side section.

Attachment holes 54A connecting with the attachment holes 54 of the front cover 22 are formed in a part of the flange section 120 further forward than the peripheral indent 44, and an insertion hole 53A is formed between these attachment holes 54A.

On the rear side of the flange section 120 a catch holding portion 56 that is the same as the first embodiment shown in Fig. 10 to Fig. 12 is attached using screws 55 shown in Fig. 9, which are inserted through the attachment holes 54A and the attachment holes 54. The insertion hole 53A is formed in a boss section 126 projecting downwards, and this boss section 126 is fitted into the slit 53B of the front cover 22.

Also, as shown in Fig. 7 and Fig. 8, a rear section of the flange section 120 of the indent body 118 is made into attachment hole formation sections 127 having attachment holes 121 formed therein and mounted on the attachment seat 116, and a support section 128 is formed at a position between the attachment hole formation sections 127, extending outwards to further than the attachment hole formation sections 127, and defining gaps between itself and the attachment hole formation sections 127.A support shaft 129 is formed on left and right sides of the rear end of the support section 128, so as to project outwards to the left and right. The indent body 118 above is integrally formed of resin.

As described above, by attaching the indent body 118 to the left front fender 31, the storage indent 35 is provided so as to be indented downwards to an inclined surface 33 of the left front fender 31. Then, as shown in Fig. 2 and Fig. 3, a lid 70 that opens and closes the aperture 41 on the upper part of the storage indent 35 is swingably coupled to the left front fender portion 31.

As shown in Fig. 13, two lid connection parts 131 are formed in the lid 70 projecting slightly from the rear surface of the upper surface part 72 of the lid body 71, and connection holes 132 that are coaxial with each other are respectively formed in each lid connection part 131. As shown in Fig. 9, with the support section 128 for the storage indent body arranged between these lid connection parts 131, the support shaft 129 is clipped into the connection holes 132, as shown in Fig. 10, Fig. 11 and Fig. 14, to hold the lid 70 so as to be swingable about the support shaft 129 on the left front fender 31 with the support indent body 118, namely this, attached.

The lid 70 supported in the storage indent body 118 of the left front fender at the lid connection parts 131, as described above, is then swung between a state where the storage indent 35 is fitted into the outer indent 112 and closed, as shown in Fig. 11 and Fig. 15, and a state where it is swung upwards as shown in Fig. 9 and Fig. 10 further back than the storage indent 35 so as to be open.

Here, as with the first embodiment, an open-close latching body 81 that is the same as the first embodiment engaging with the catch holding portion 56, as shown in Fig. 11 and Fig. 12, is formed at the front edge side of the upper face portion 72 of the lid main body portion 71.

Also, a supporting wall section 134 projecting to form a ring, and a supporting wall section 135 projecting so as to form a ring at an inner side of this supporting wall section 134 are formed on a rear surface of the lid body 71, and a ring-shaped seal member 136 is fitted between these supporting wall sections 134 and 135.A seal member 136 projecting in a direction apart from the rear surface of the lid body 71 while widening from an inner edge to the outside is formed on the seal member 136 all the way around, and if the lid 70 is closed the seal member 136 comes into

contact with the seal member 137 all around the peripheral indent 44, and seals the storage indent 35 to the outside.

As has been described above, according to the storage structure for a saddle ridden type vehicle of the second embodiment, the same effects as for the first embodiment are achieved. Also, since a support section 128 for pivoting the lid 70 is provided in the storage indent body 118 having the storage indent 35 formed separately from the left front fender 31, it is possible to make the structure compact compared to the case where the lid 70 is pivoted at the left front fender 31 side. It is also easy to take out the position of the storage indent 35 and the support section 128.

According to the present invention, a structure of a storage section for a saddle-ridden type vehicle is provided with a storage indent that is indented downwards on an inclined plane portion of a fender, and since a lid that opens and closes an opening of this storage indent is also swingably provided it is possible to prevent sticking out from the outer surface of the fender. It is therefore possible to improve the external appearance. Also, since the storage indent that is indented downwards is provided on an inclined plane part of the fender, as well as preventing sticking out, it is also possible to widen the storage space and widen the opening section. Therefore, it is possible to ensure adequate storage capacity and storage workability can be improved. Further, from the fact that the storage indent that is indented downward is provided on the inclined plane portion of the fender, even if the lid that opens and closes the opening of the storage indent is made to open widely in order to improve storage workability, the storage object does not drop from the storage indent. Therefore, storage workability can be improved without storage objects being dropped. Furthermore, since the open area of the aperture becomes larger than the horizontal cross section of the storage indent due to the fact that the storage indent is formed on the inclined plane portion, storage workability can be further improved.

According to an embodiment of the invention, since the storage indent is integrally molded within the fender, increase in cost can be suppressed at the same time as increase in the number of parts can be suppressed.

According to another embodiment of the invention, since at the periphery of the storage indent a peripheral indent that is shallower than this storage indent is formed throughout the entire periphery, a lid in the closed state can be fitted into this peripheral indent, making it possible for the fender and the lid in the closed state to form one single surface. Therefore, the external appearance is improved. In addition, since the sealing member installed on the rear surface makes contact with the peripheral indent throughout the entire periphery when the lid is in the closed state, rain water and the like can be prevented from entering into the interior of the storage indent. Therefore, waterproofing of the storage indent can be ensured. Furthermore, since it is possible to bias the lid in the open direction when in the closed state, with the seal member, it is possible to restrict rattling due to play of the lid in the closed state. Therefore, it is possible to prevent abnormal noises from occurring due to rattling of the lid during a ride.

According to a further embodiment of the invention, since a dividing wall portion protrudes on the upper side along the entire periphery of the border edge on the storage indent side of the peripheral indent, it is possible, by the dividing wall portion, to ensure that rain water and the like be prevented from entering the interior of the storage indent. Therefore, waterproofing of the storage indent can be ensured. In addition, since if the sealing member of the lid in the closed state is brought in contact with this dividing wall portion, the sealing member can be widely deformed, making it possible to strongly bias the lid in the open direction when in the closed state, using the seal member, it is possible to restrict rattling due to play of the lid in the closed state. Therefore, it is possible to prevent abnormal noises from occurring due to rattling of the lid during a ride.

According to yet another embodiment of the invention, since a support section for pivoting the lid is provided in the storage indent formed separately from the fender, it is possible to make the structure compact compared to the case where the lid is pivoted at the fender side. It is also easy to take out the position of the storage indent and the support section.

According to a further embodiment of the invention, in the event where a structure is adopted in order to widely open the storage indent by widely swinging the lid wherein the coupling arm portion of the lid is supported by a swinging movement support portion on the rear surface of the fender through a penetrating hole formed in a peripheral indent more on the outside than the storage indent, by forming the penetrating hole formed at this time at a lower part of the peripheral indent, rain water that infiltrates into the peripheral indent can be guided with the peripheral indent on the outside of the sealing member and eliminated satisfactorily through the penetrating hole. Therefore, pooling of rainwater in the peripheral indent can be prevented.

According to another embodiment of the invention, since the lid in the closed state is biased in the open direction with the biasing force of the spring from the swinging movement support portion in addition to the biasing force of the sealing member installed on the rear surface of the lid, it is possible to ensure that rattling due to play of the lid in the closed state is restricted. Therefore, it is possible to prevent abnormal noises from occurring due to rattling of the lid during a ride. Furthermore, since the opening operation of the lid is helped by the biasing force of the rotating bias spring, a smooth opening operation is possible.

According to yet another embodiment of the invention, since the storage indent is installed on the fender of the left front wheel, for instance when parked, the occupant in the saddled state while maintaining the right hand break lever in the held state can open and close the lid satisfactorily with only the left hand, to place in and take out a storage object.

Although various preferred embodiments of the present invention have been described herein in detail, it will be appreciated by those skilled in the art, that variations may be made thereto without departing from the spirit of the invention or the scope of the appended claims.

THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. A structure of a storage section for a saddle-ridden type vehicle comprising: a storage indent extending downwardly from an opening and provided on an inclined plane portion of a fender that covers a wheel, a lid that opens and closes the opening of the storage indent and is swingably provided on the inclined plane portion of the fender, and a supporting portion for swingably mounting the lid, wherein the storage indent extends below the supporting portion with reference to a horizontal.

2. The structure of a storage section for a saddle-ridden type vehicle as disclosed in Claim 1, wherein the storage indent is integrally molded with the fender.

3. The structure of a storage section for a saddle-ridden type vehicle as disclosed in Claim 1 or 2, wherein a peripheral indent that is shallower than said storage indent is formed throughout the entire periphery at the periphery of the storage indent, and a sealing member is installed on the rear surface of the lid, making contact with the peripheral indent throughout the entire periphery in a closed state.

4. The structure of a storage section for a saddle-ridden type vehicle as disclosed in Claim 3, wherein a dividing wall portion that protrudes on an upper side is formed along the entire periphery of the border edge on the storage indent side of the peripheral indent.

5. The structure of a storage section for a saddle-ridden type vehicle as disclosed in Claim 1, wherein a storage indent body having the storage indent is separate from the fender, with the storage indent body being provided on the fender, and provided with a support section for pivoting the lid.

6. The structure of a storage section for a saddle-ridden type vehicle as disclosed in Claim 3 or 4, wherein a coupling arm portion that extends out from the rear side of the lid passes through a penetrating hole formed at a lower part of the peripheral indent, and is rotatably coupled to a swinging movement support portion on the rear side of the fender.

7. The structure of a storage section for saddle-ridden type vehicle as disclosed in Claim 6, wherein a spring that biases the lid in the open direction is installed on the swinging movement support portion.

8. The structure of a storage section for a saddle-ridden type vehicle as recited in any of Claims 1 to 7, wherein the wheel is the left front wheel.

9. A structure of a storage section for a saddle-ridden type vehicle as claimed in Claim 1 including a peripheral indent that is shallower than said storage indent and formed at a periphery of the opening of the storage indent; and an opening and closing mechanism disposed in the peripheral indent and on an inner side of an outer peripheral edge of the lid.

(name of document)

Fig. 1

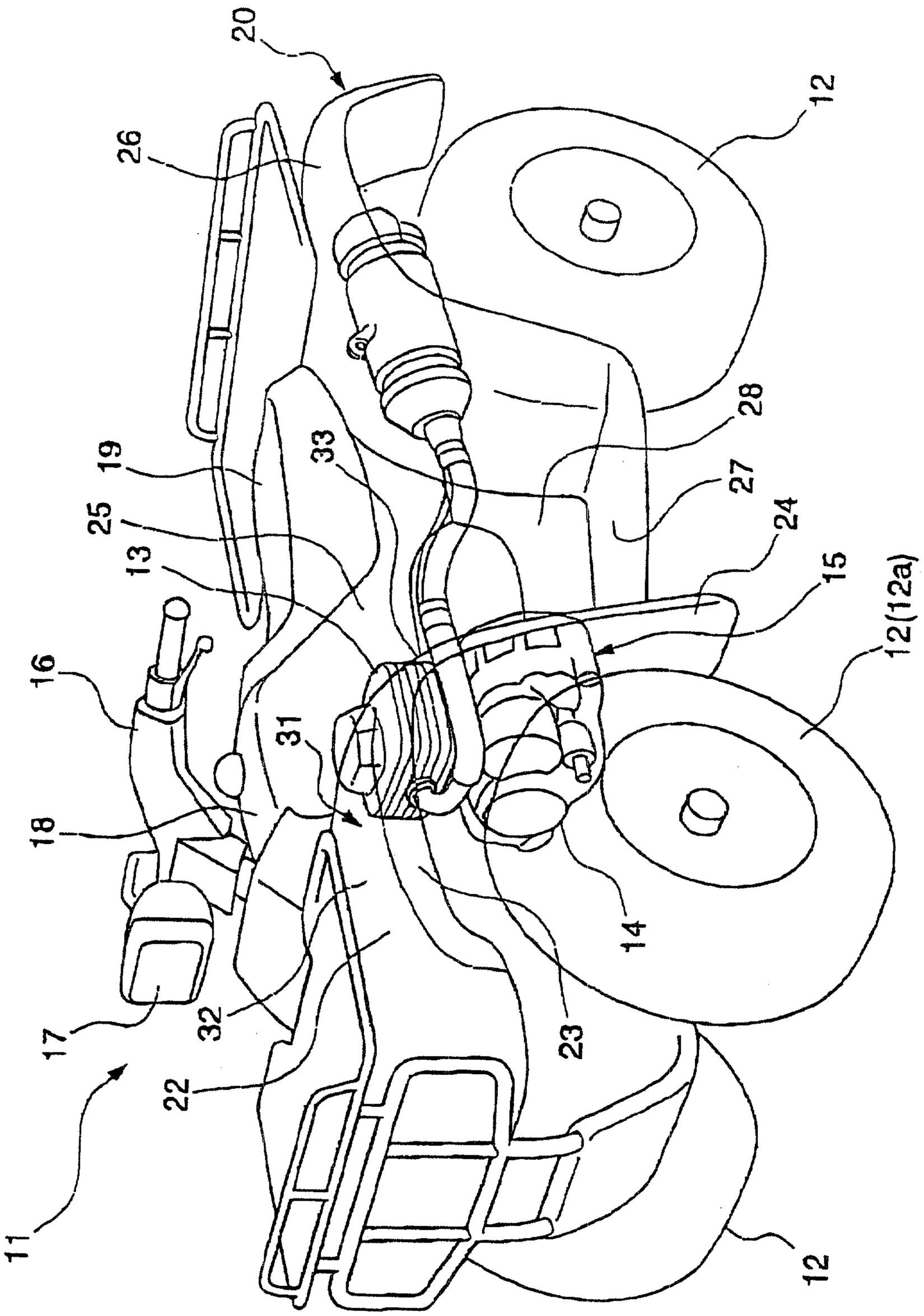

Fig. 2

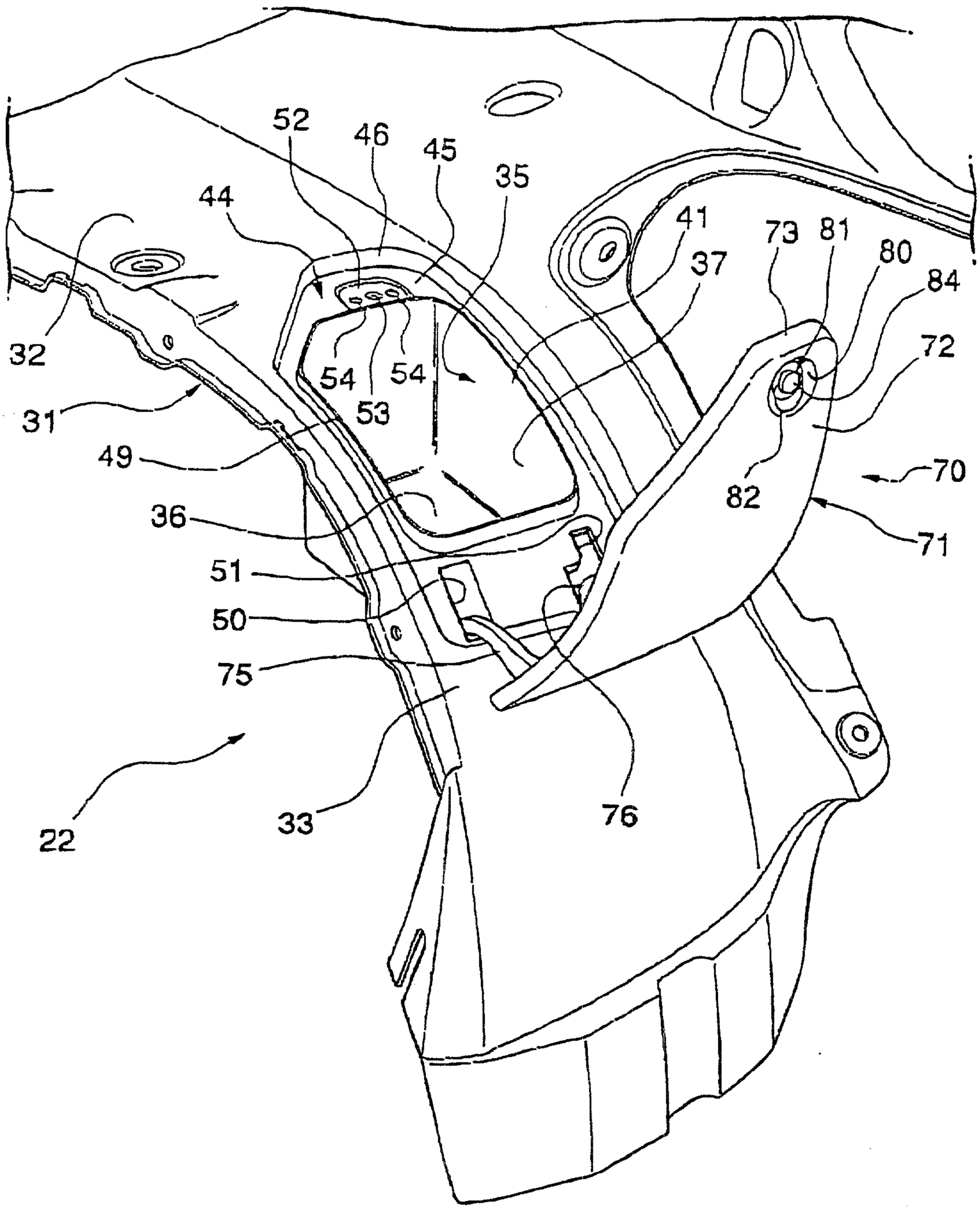
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Fig. 3

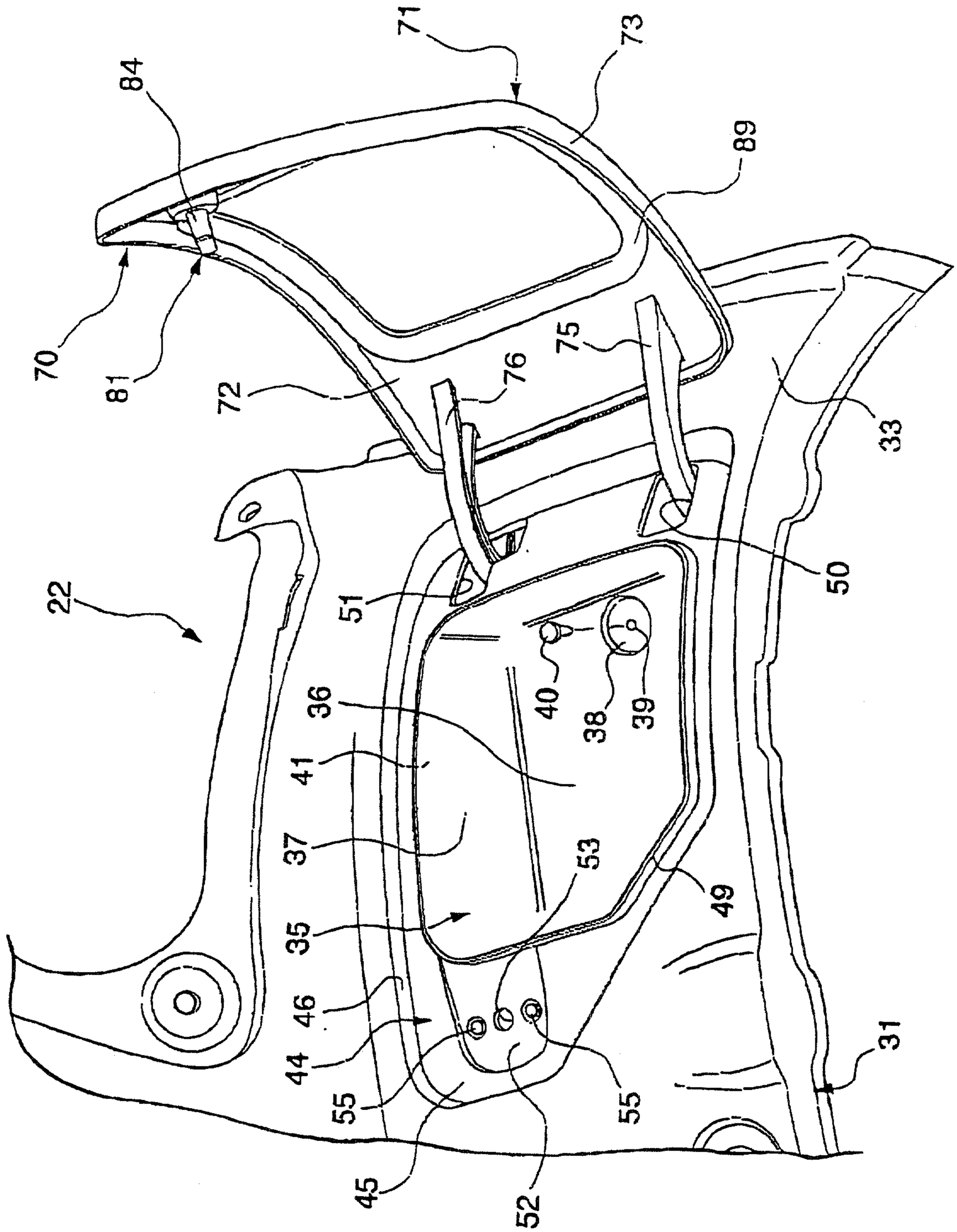
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Fig. 4

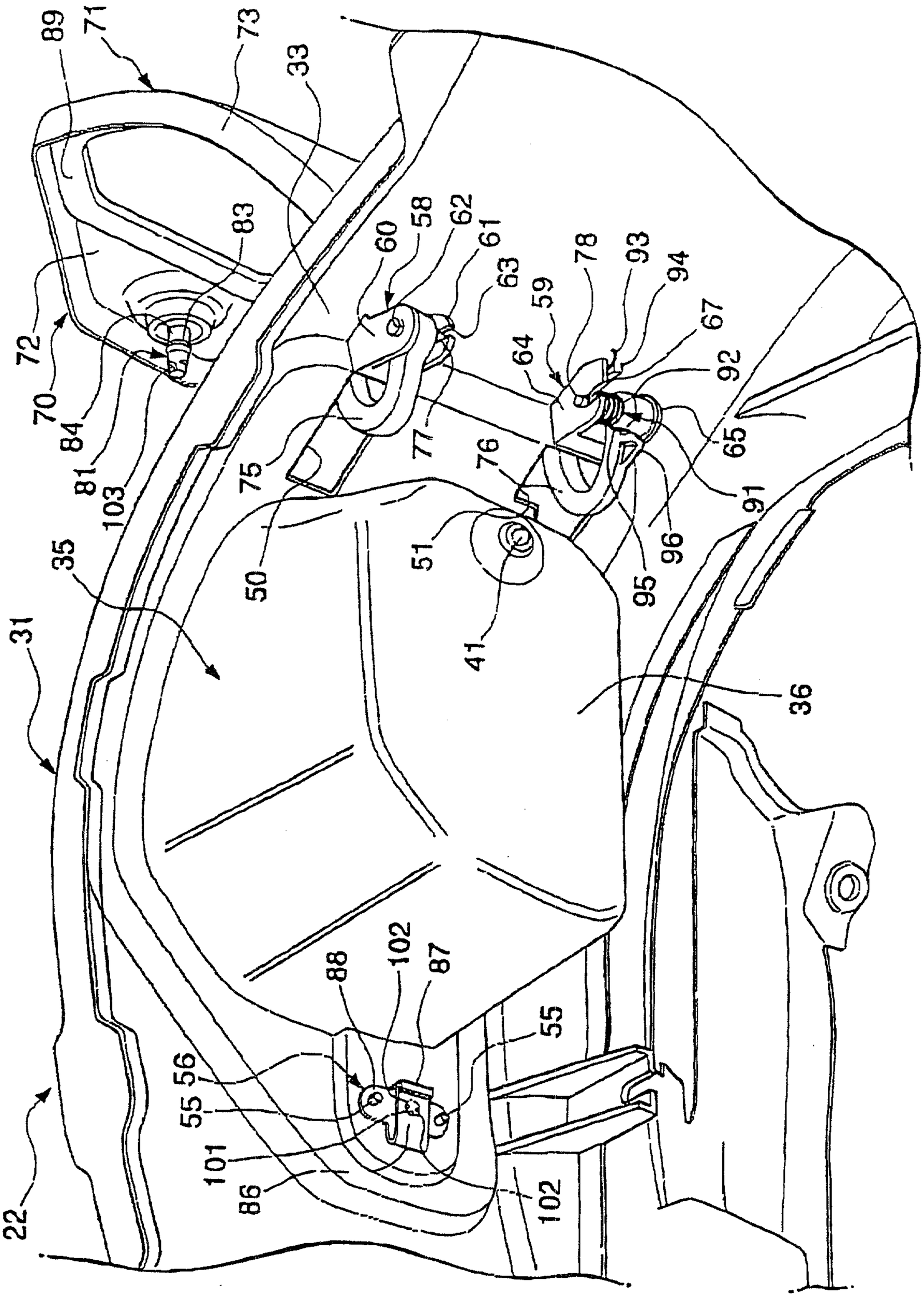
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Fig. 5

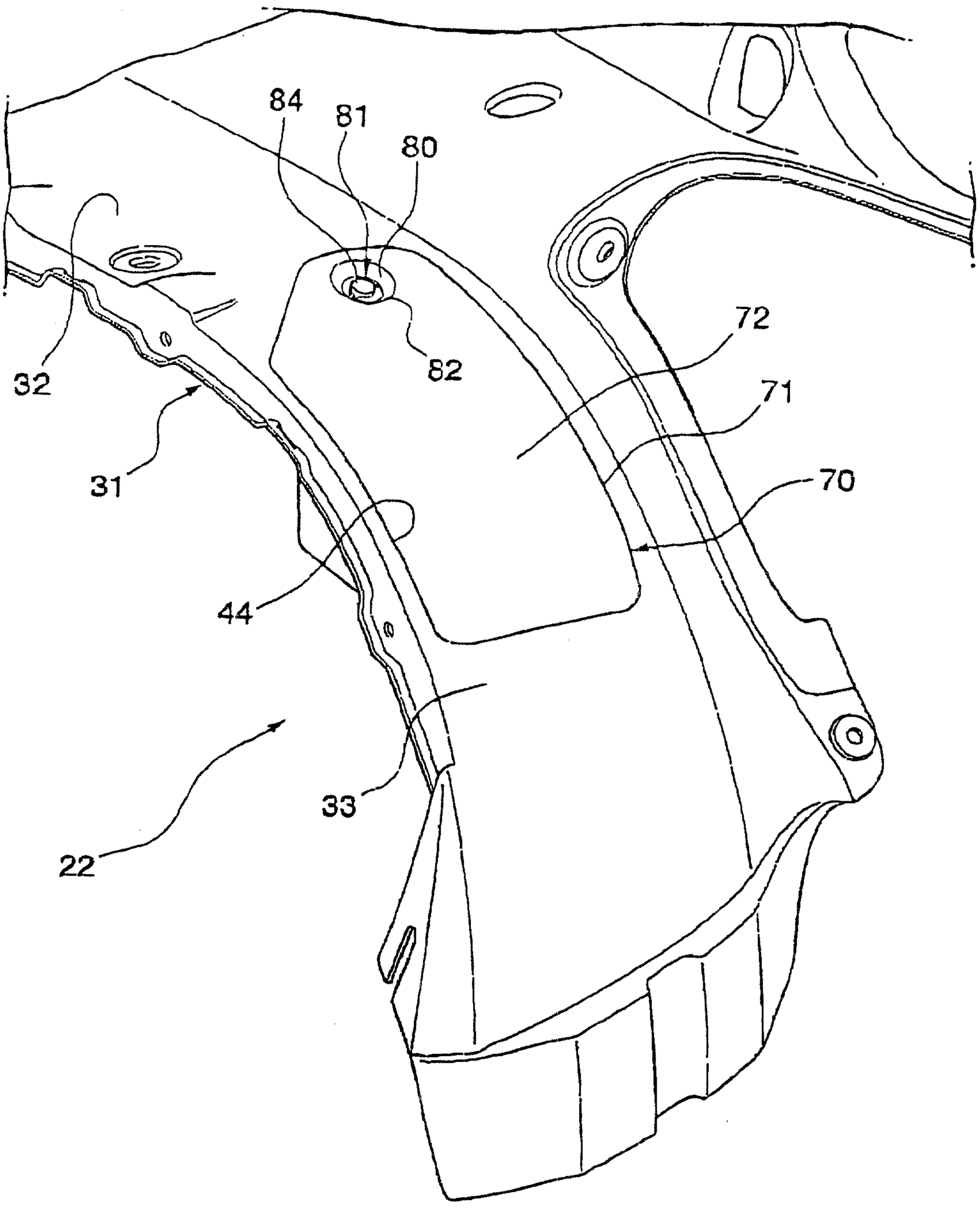

Fig. 6

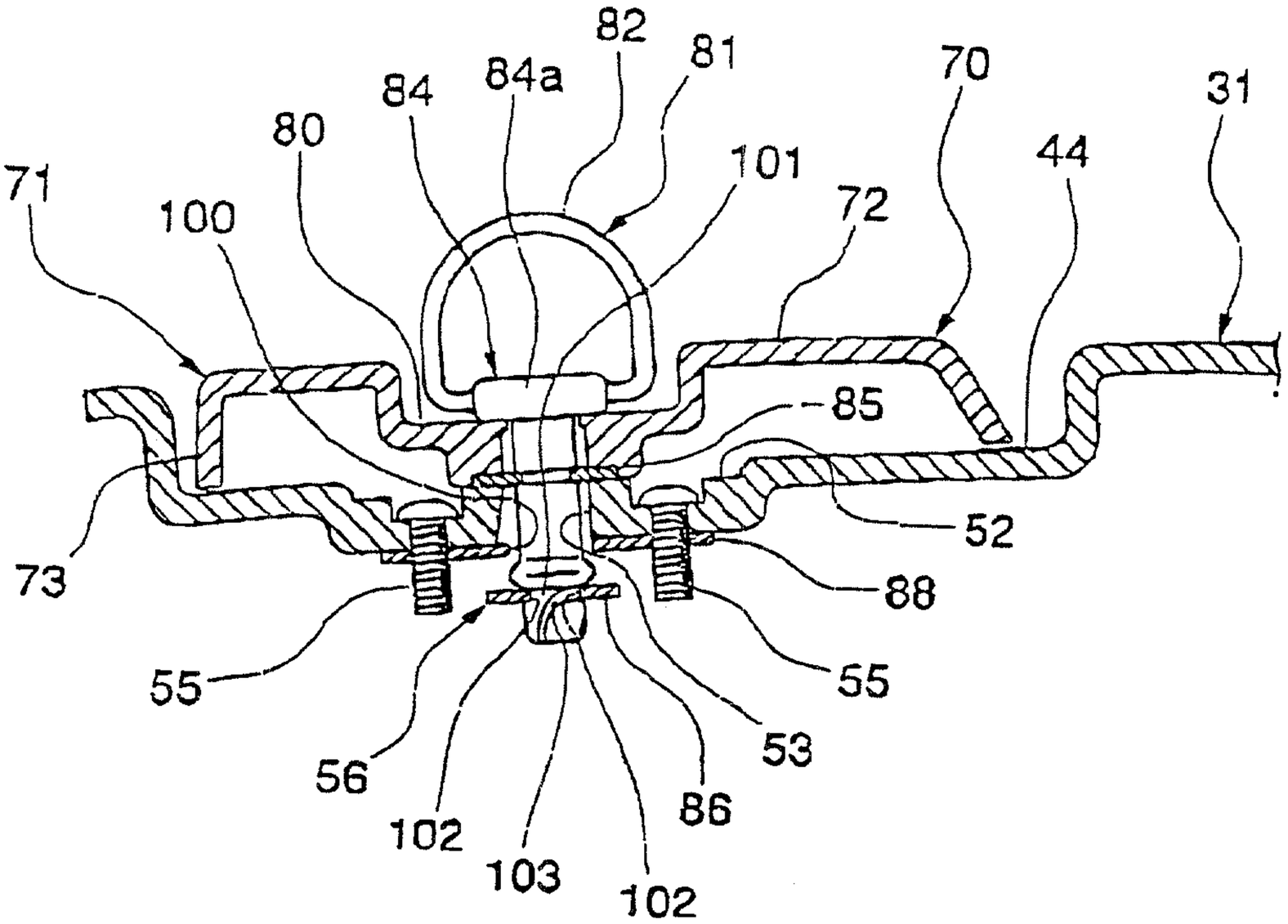
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Fig. 7

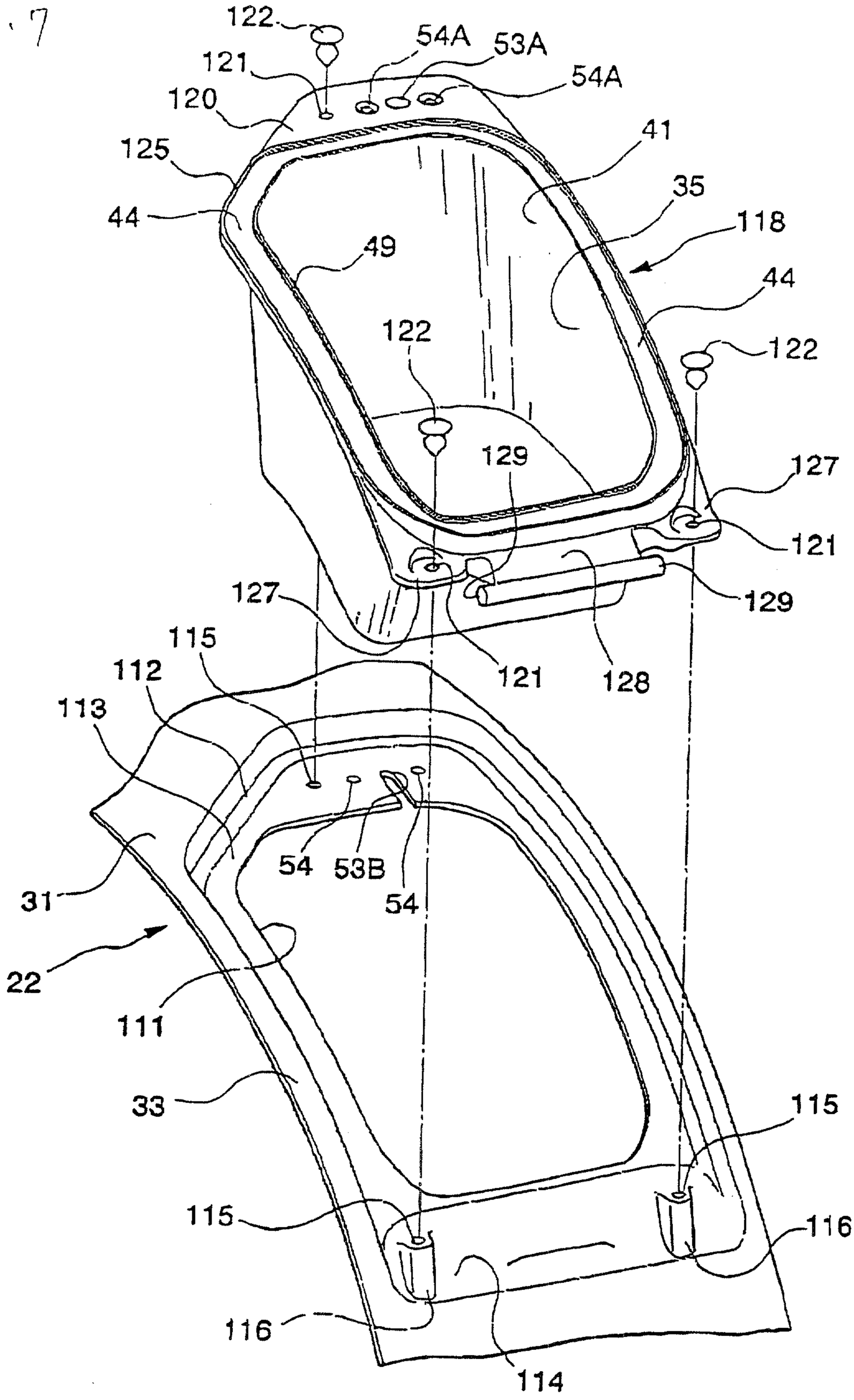
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Fig. 8

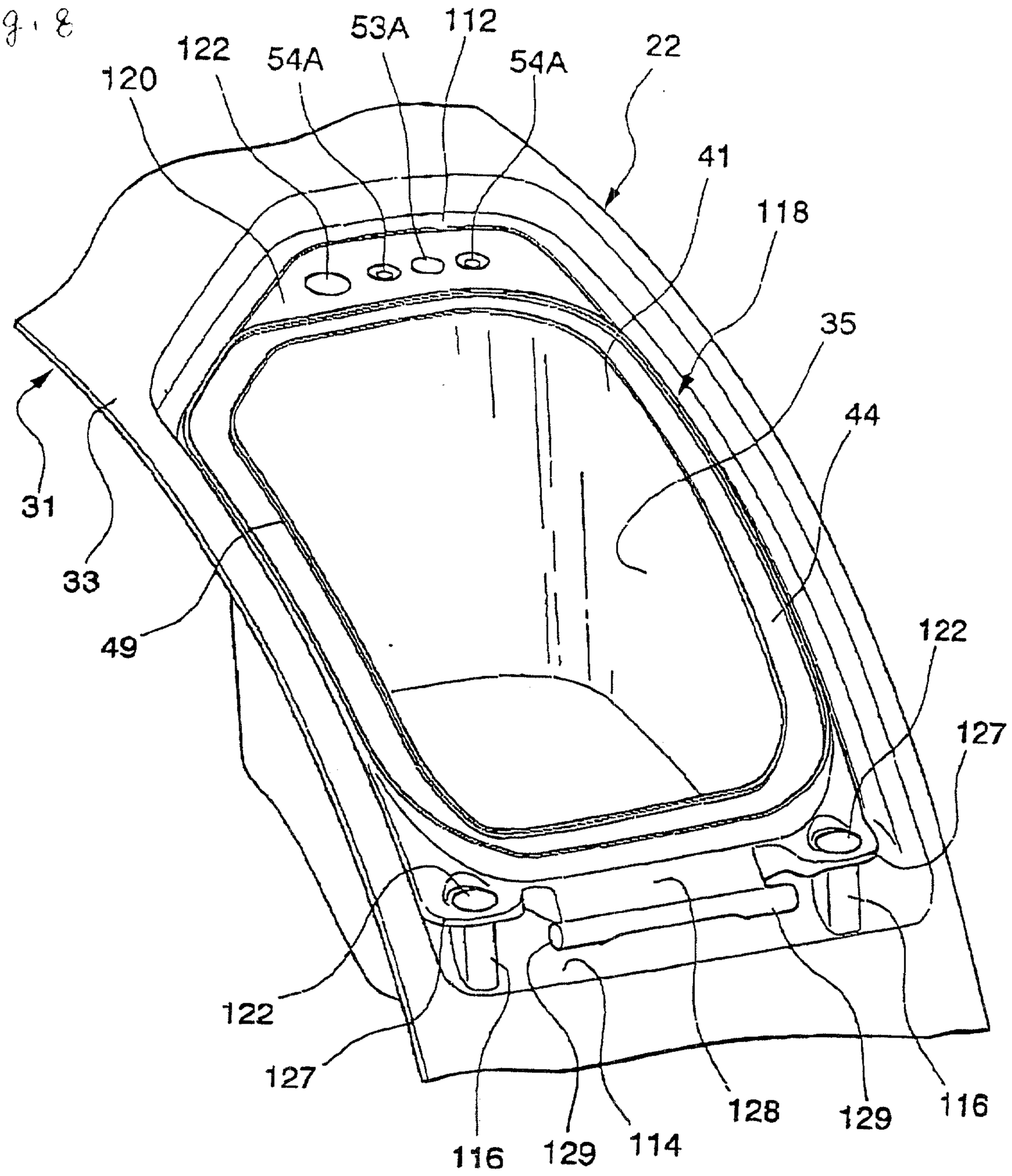
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Fig. 9

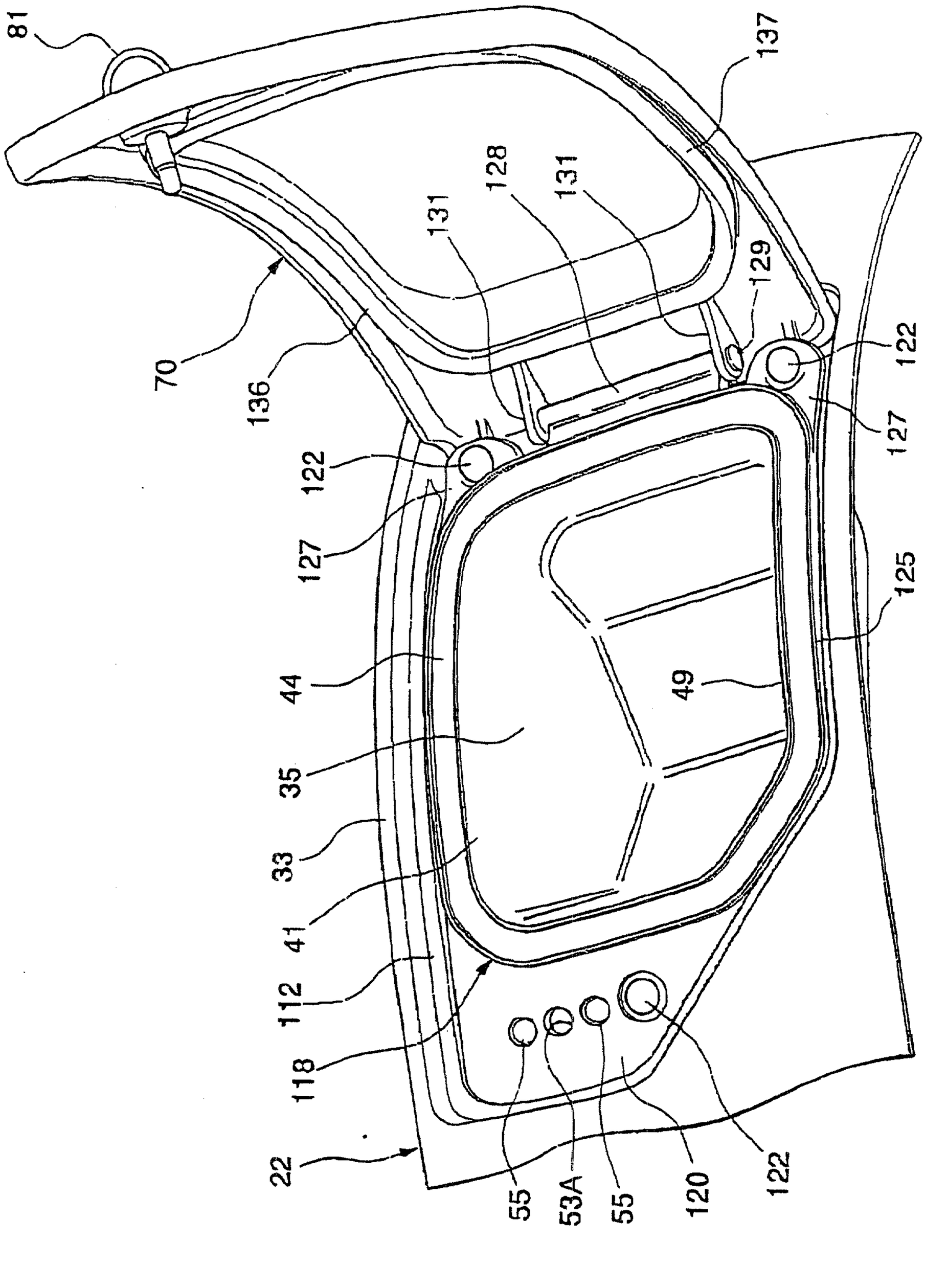
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Fig. 10

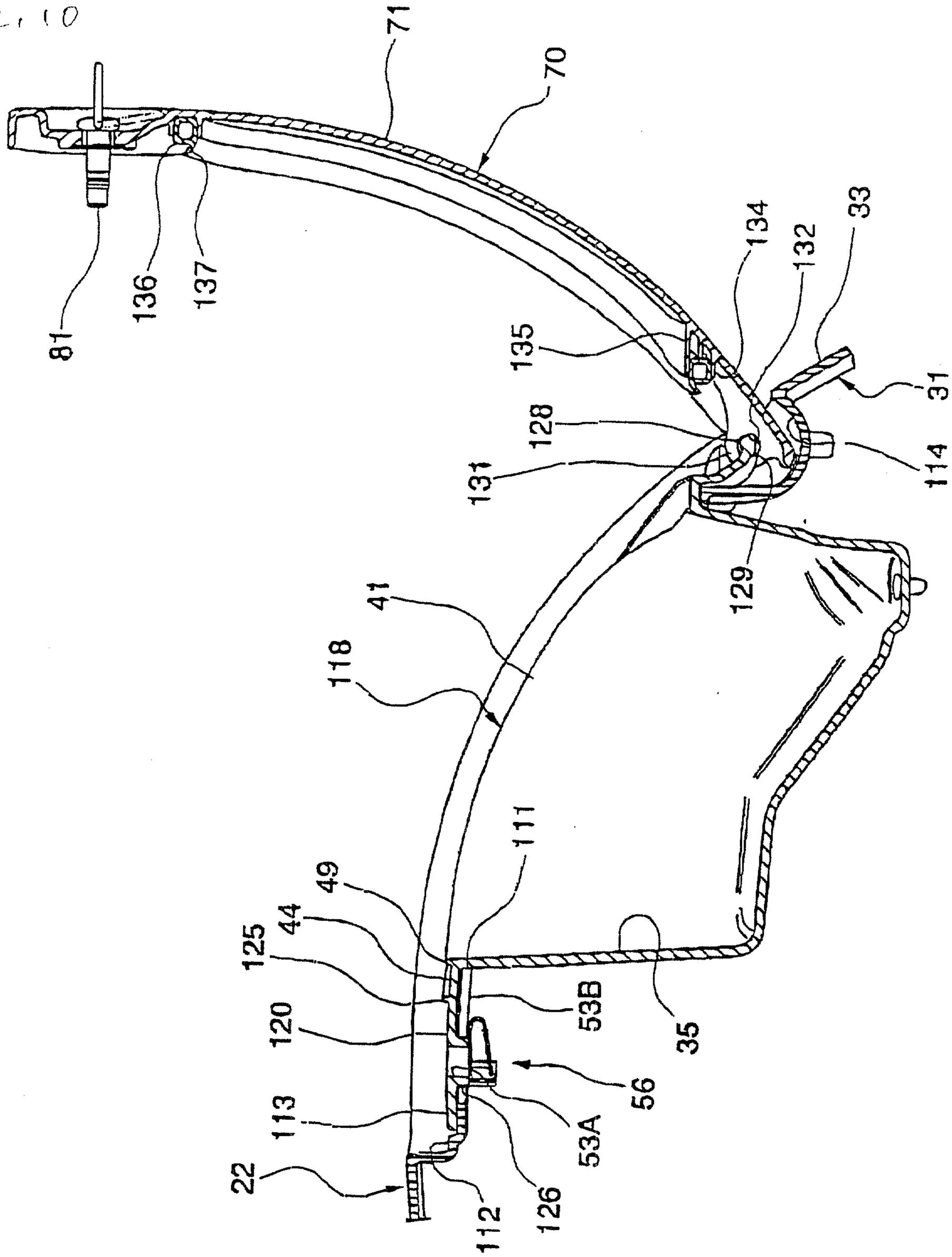
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Fig. 11

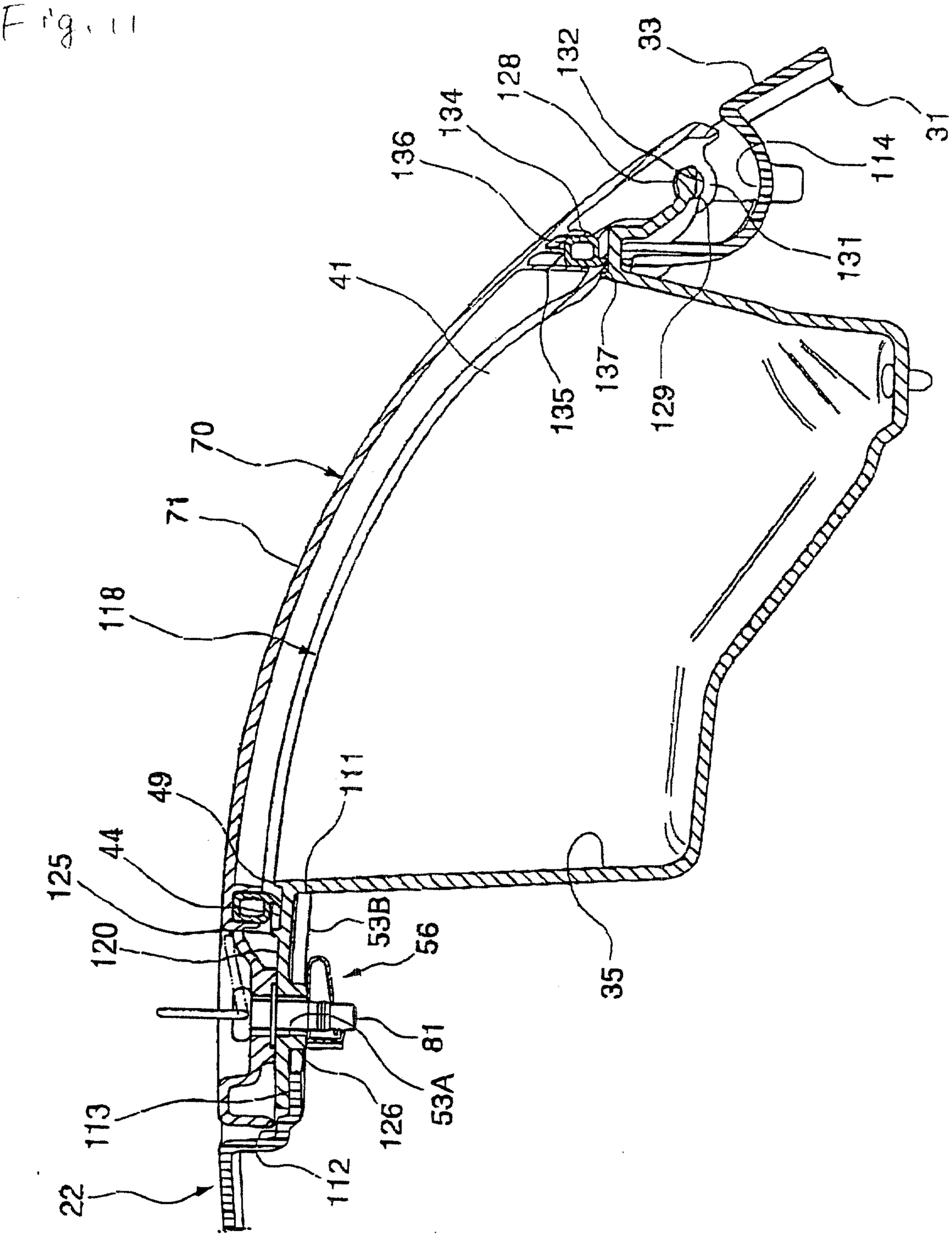
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Fig. 12

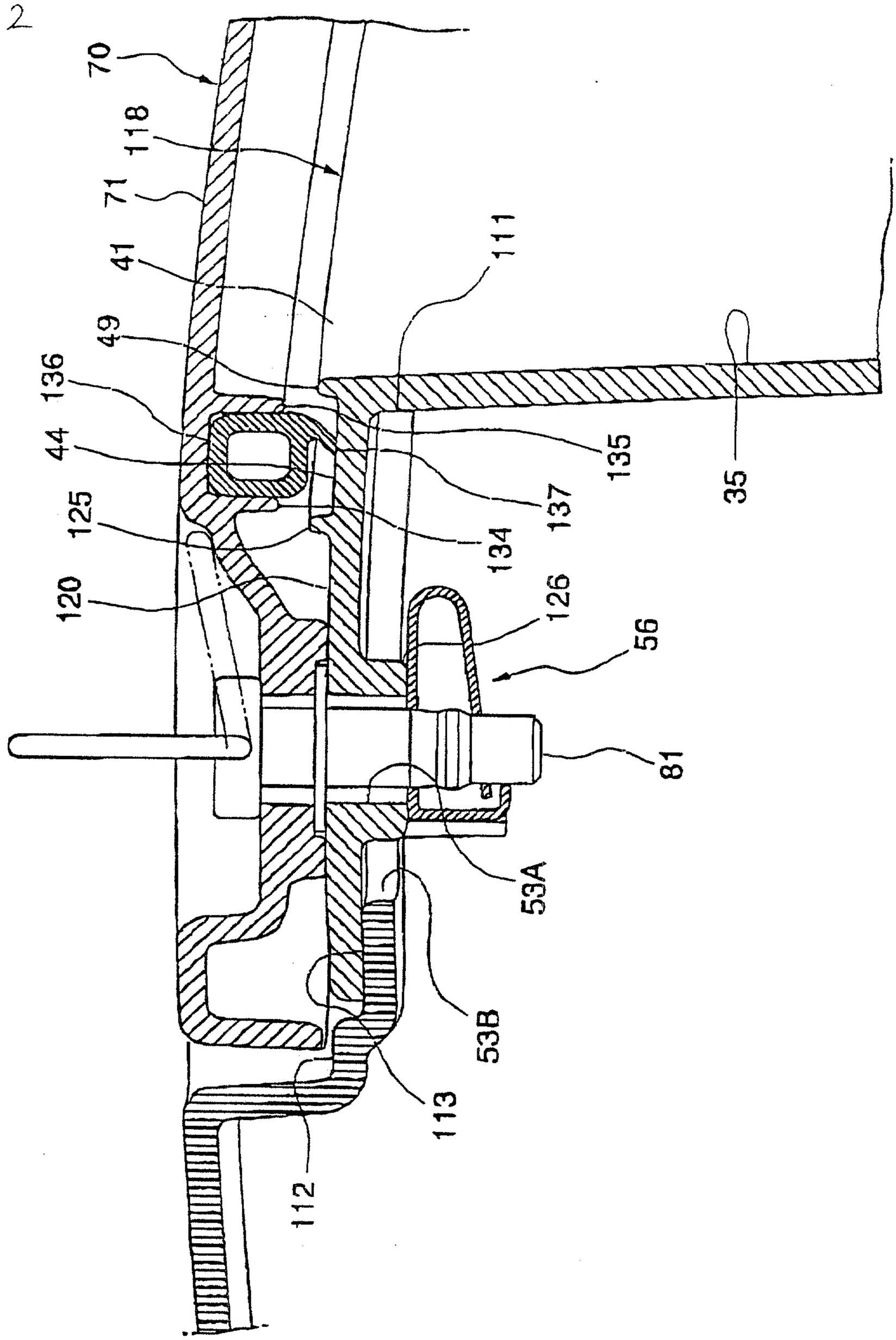
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Fig. 13

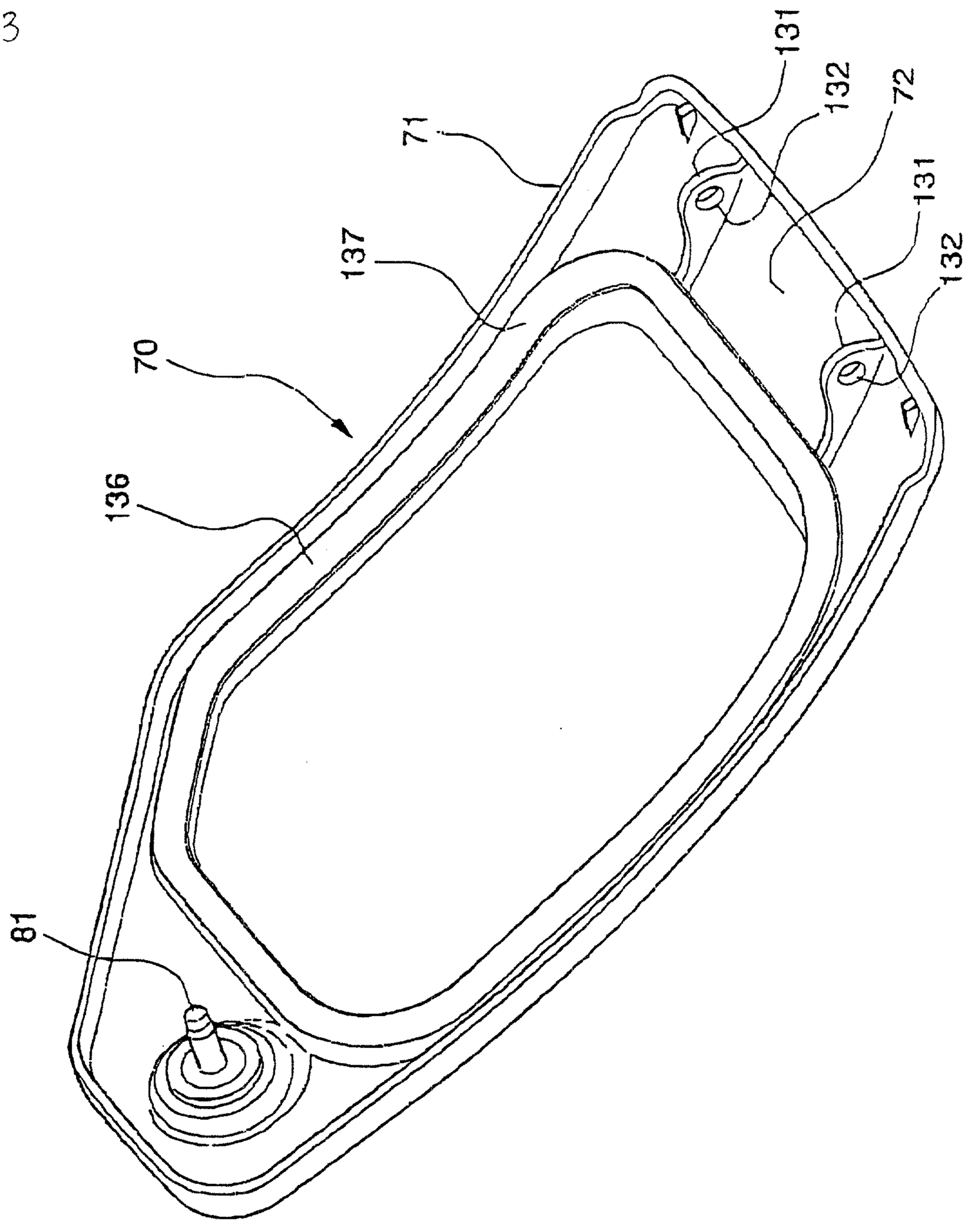


Fig. 14

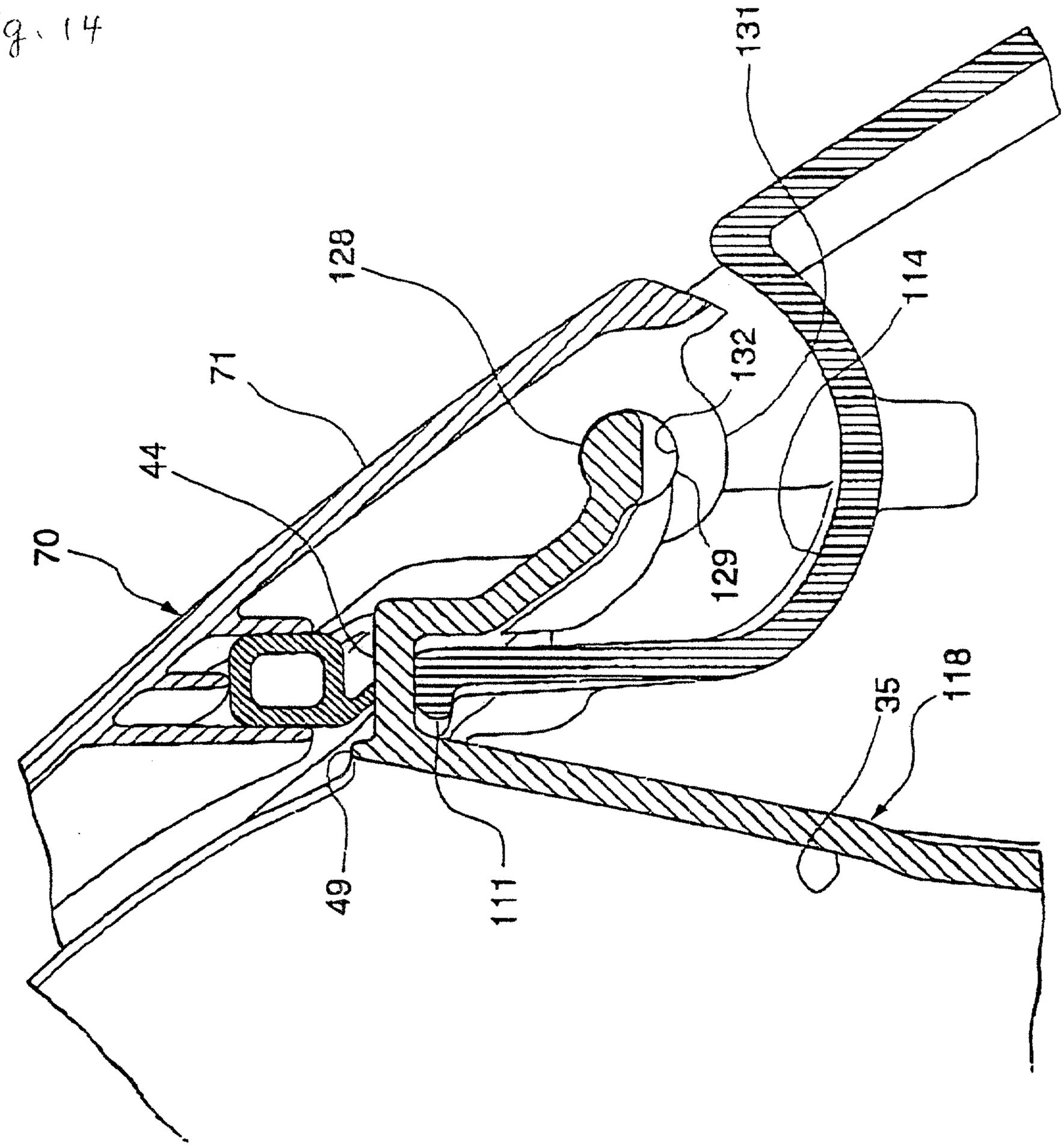
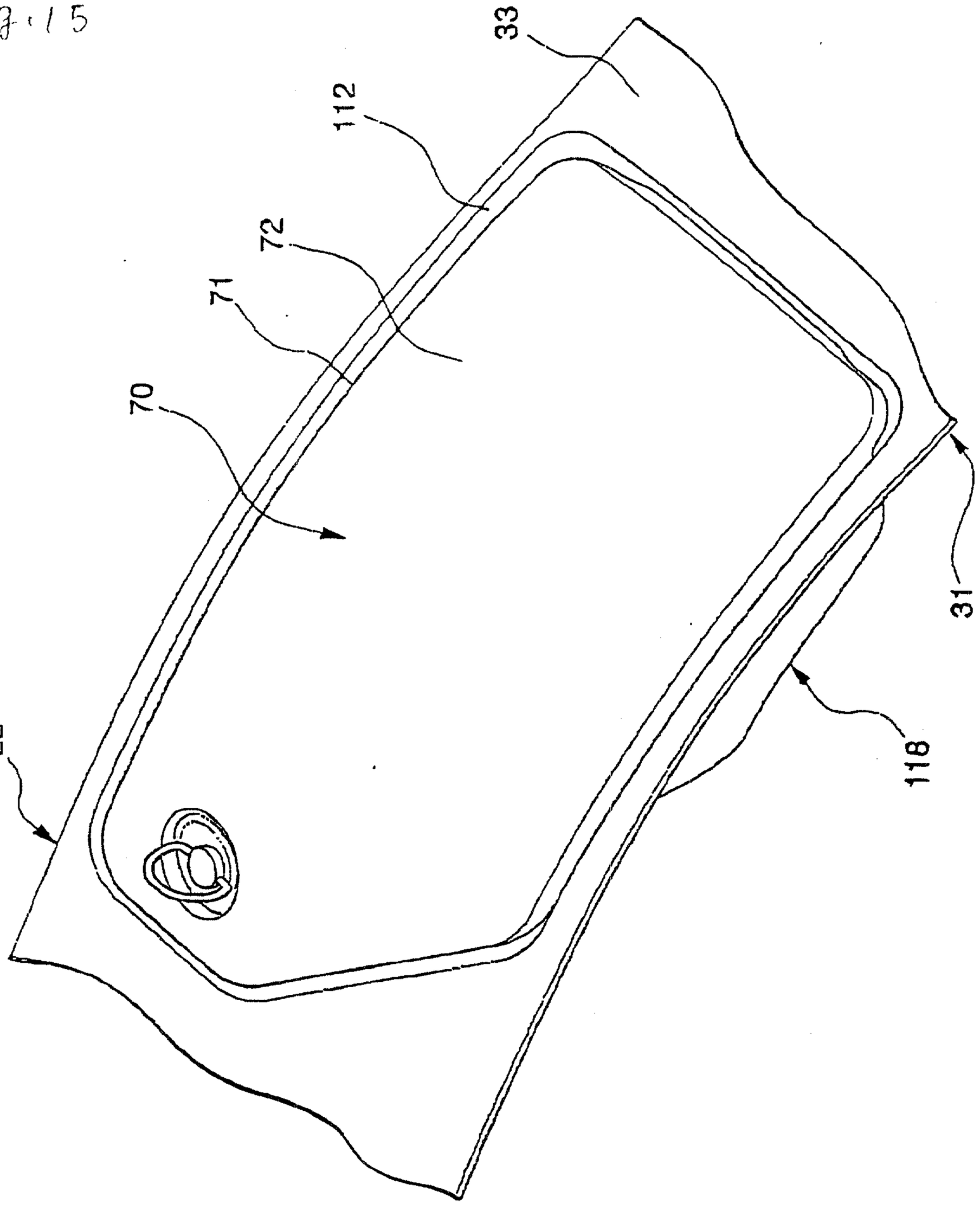
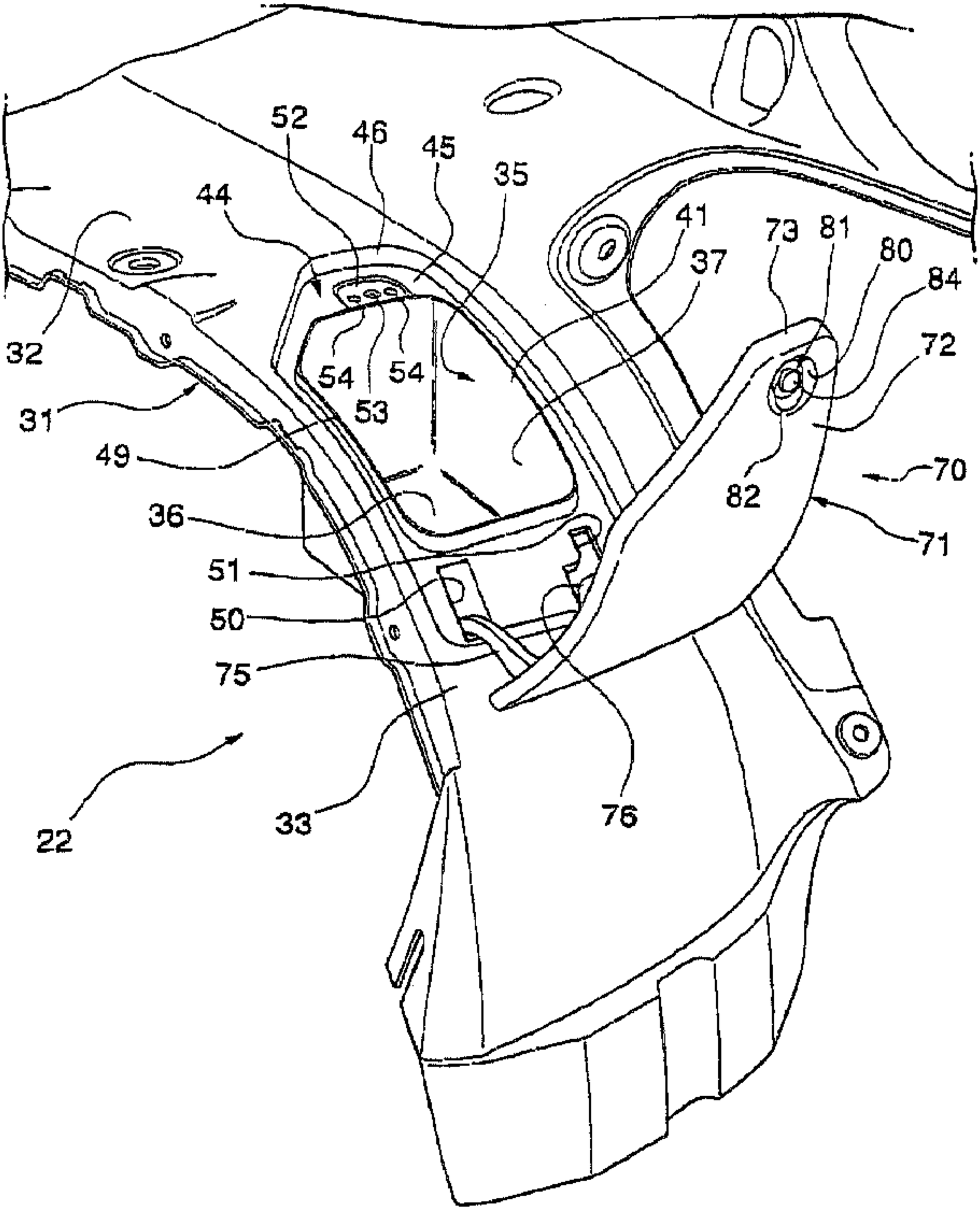


Fig. 15

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