



(86) Date de dépôt PCT/PCT Filing Date: 1994/01/18

(87) Date publication PCT/PCT Publication Date: 1994/08/04

(45) Date de délivrance/Issue Date: 2004/07/27

(85) Entrée phase nationale/National Entry: 1995/07/07

(86) N° demande PCT/PCT Application No.: US 1994/000504

(87) N° publication PCT/PCT Publication No.: 1994/016932

(30) Priorité/Priority: 1993/01/21 (007,336) US

(51) Cl.Int.⁶/Int.Cl.⁶ B62D 33/077

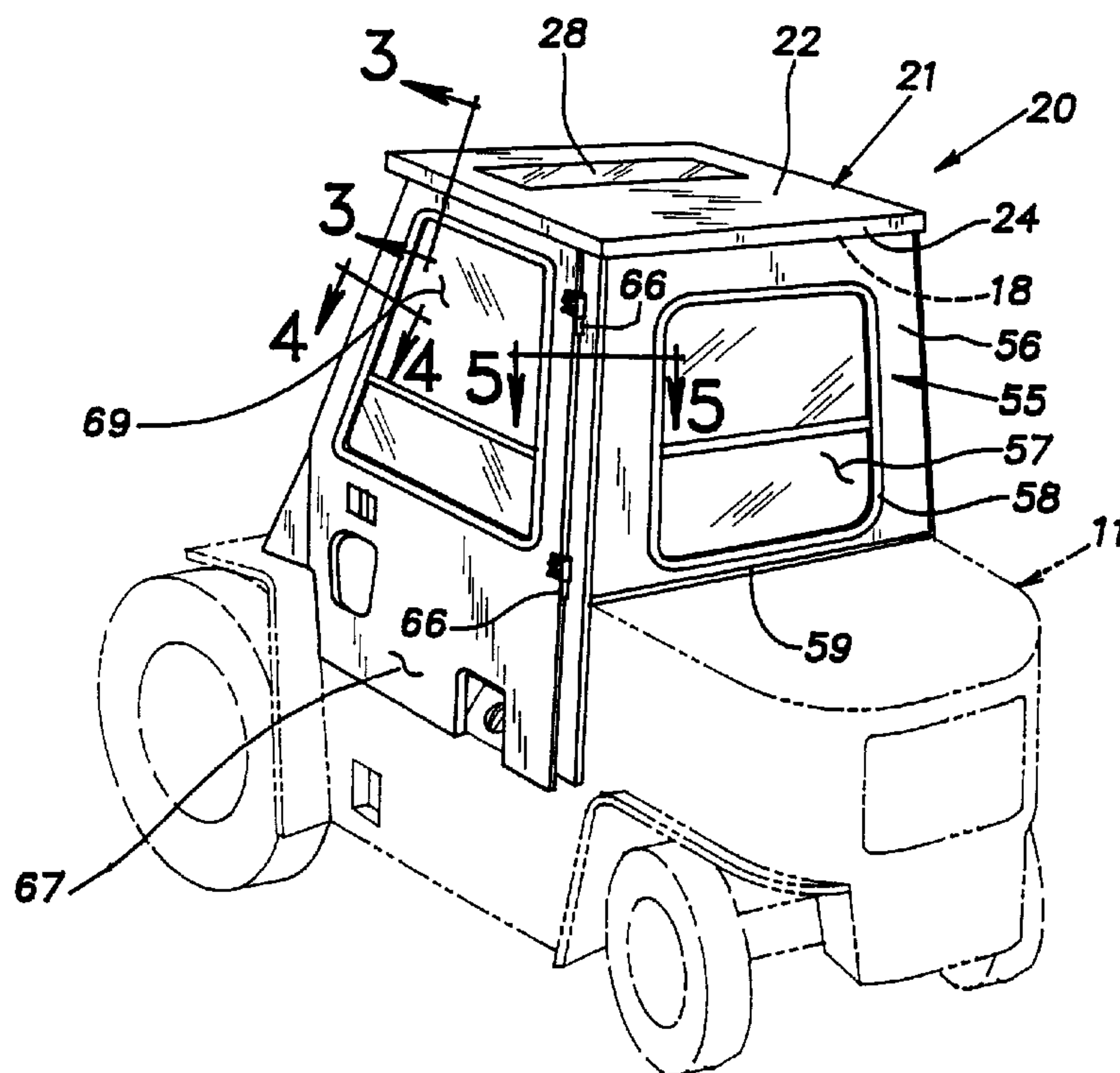
(72) Inventeur/Inventor:
MARTIN, ROBERT P., JR., US

(73) Propriétaire/Owner:
MARTIN SHEET METAL, INC., US

(74) Agent: MACRAE & CO.

(54) Titre : CABINE A PANNEAUX

(54) Title: PANEL CAB



(57) Abrégé/Abstract:

Cab panel structures (20) and methods for their assembly on an overhead guard of a land vehicle (11). A metal roof panel (22) can be used alone or with a metal frame windshield panel (38) for a partial enclosure. The metal roof (22) and windshield panels (38) can be used with complementary fabric panels (75) that afford a full enclosure or with complementary steel panels (68) that afford a full enclosure of high durability. The metal panels (68) are attached to the overhead guard posts in a clamp-on method.



PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification⁵:

B62D 33/06

A1

(11) International Publication Number:

WO 94/16932

(43) International Publication Date:

4 August 1994 (04.08.94)

(21) International Application Number: PCT/US94/00504

(22) International Filing Date: 18 January 1994 (18.01.94)

(30) Priority Data:

08/007,336

21 January 1993 (21.01.93)

US

(71) Applicant: MARTIN SHEET METAL, INC. [US/US]; 7108
Madison Avenue, Cleveland, OH 44102 (US).(72) Inventor: MARTIN, Robert, P., Jr.; 12576 Lake Avenue,
Cleveland, OH 44107 (US).(74) Agents: SHIMOLA, Howard, G. et al.; Pearne, Gordon, McCoy
& Granger, 1200 Leader Building, Cleveland, OH 44114
(US).(81) Designated States: AT, AU, BB, BG, BR, BY, CA, CH, CZ,
DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, MG,
MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA,
VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB,
GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ,
CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).

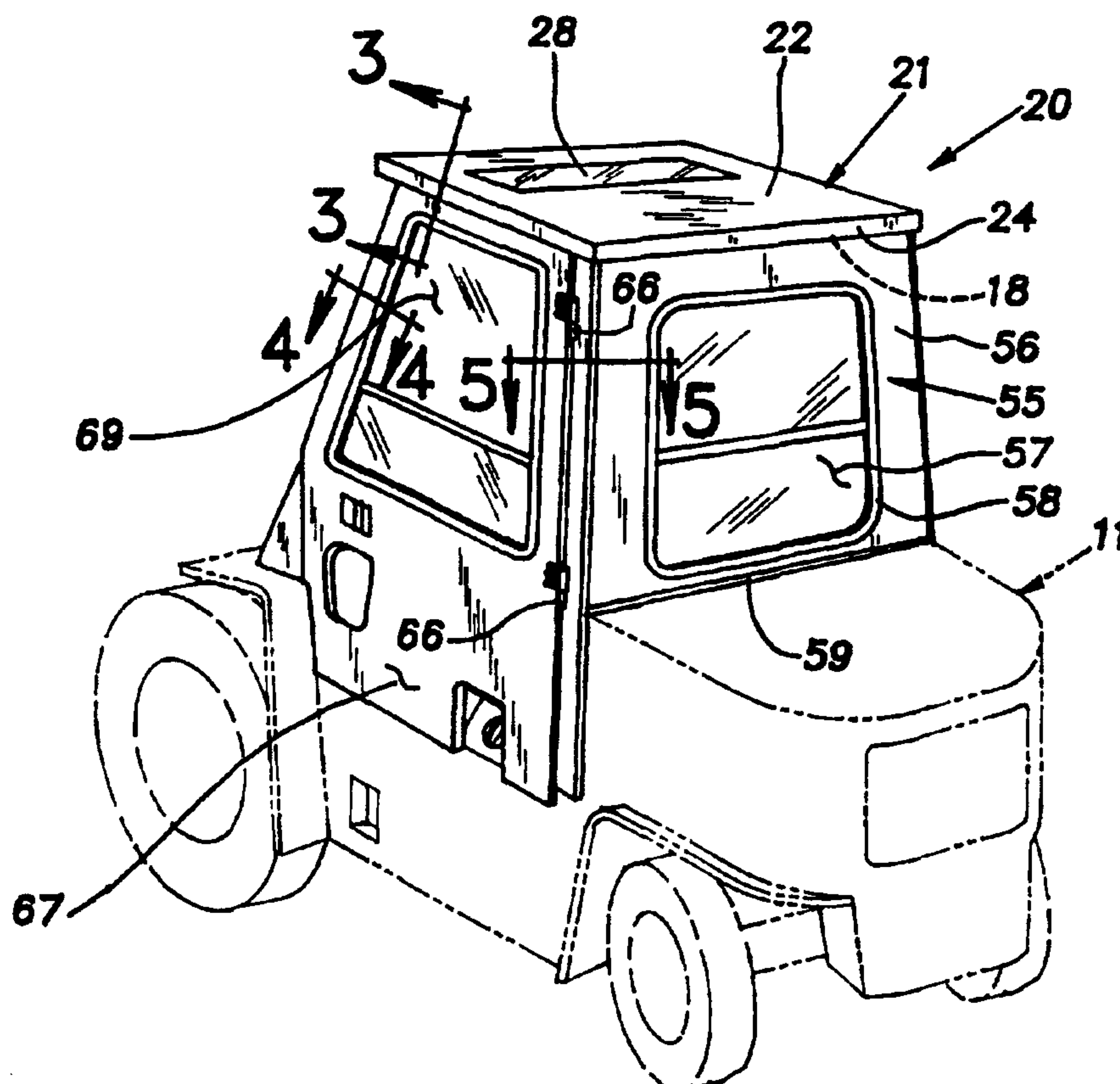
Published

With international search report.

(54) Title: PANEL CAB

(57) Abstract

Cab panel structures (20) and methods for their assembly on an overhead guard of a land vehicle (11). A metal roof panel (22) can be used alone or with a metal frame windshield panel (38) for a partial enclosure. The metal roof (22) and windshield panels (38) can be used with complementary fabric panels (75) that afford a full enclosure or with complementary steel panels (68) that afford a full enclosure of high durability. The metal panels (68) are attached to the overhead guard posts in a clamp-on method.



PANEL CAB

1 The invention relates to cabs for land
2 vehicles and, more particularly, pertains to
3 enclosures for such vehicles having overhead guards
4 for the operator.

BACKGROUND OF THE INVENTION

5 Lift trucks, construction equipment, farm
6 tractors, and similar vehicles frequently are
7 manufactured with overhead guard or cage-like
8 structures to protect the driver/operator from
9 injury from falling objects or overturning of the
10 vehicle. Typically, these guards are ruggedly
11 constructed and may be welded directly to the frame,
12 subframe or platform of the vehicle and in such
13 cases are not readily removable from the frame or
14 subframe. Often, a vehicle will be destined for use
15 in an environment that is hostile to the operator.
16 Adverse conditions for the operator include
17 operation in excessively warm or cold environments,
18 rain, dust and the like. In these and other
19 conditions, it is common to provide a cab or
20 enclosure on the vehicle to protect the driver from
21 exposure. The cabs, known in the prior art, can
22 range from simple weatherproof fabric and vinyl
23 covers attached to the overhead guard to
24 sophisticated sheet metal structures with safety
25 glass windshields, side lights and an overhead
26 light. In many instances, metal cabs have been
27 constructed with sufficient rigidity to serve for
28 overhead protection in place of an overhead guard
29 originally fitted or specified on the vehicle.
30 Where the overhead guard originally supplied on a
31 vehicle is fabricated as a weldment that is
32

1 integrated with the frame or platform of the vehicle
2 it may not be practical to remove the overhead guard
3 and replace it with a self-supporting cab. It is
4 known to construct a cab by assembling panels on an
5 overhead guard but as far as is known this approach
6 has had limited success because of the high labor
7 content that results from the effort and skill
8 required to produce prior art assemblies with
9 acceptable quality and finish.

10 SUMMARY OF THE INVENTION

11 The invention provides a panel-type cab
12 construction for a vehicle that assembles easily on
13 an overhead guard in a manner that avoids the need
14 for significant, if any, welding, drilling,
15 screwing, riveting or like direct fastening means to
16 the guard structure. In accordance with the
17 invention, rigid panels are arranged to interlock,
18 typically by encircling, wrapping or otherwise
19 embracing with abutting parts of the guard. The
20 panel construction can be supplied in one of several
21 distinct versions to satisfy a customer's
22 requirements and yield a corresponding economy.

23 A first version or stage of the cab is
24 represented by a roof plate unit that can be
25 assembled on the guard with a simple shackle
26 arrangement. As disclosed, the roof plate can be
27 provided with a resilient material such as a foam
28 sheet positioned between the roof plate and the
29 upper surfaces of the guard. The resilient material
30 serves to simplify the assembly of the roof plate
31 unit and the overhead guard, reduces the potential
32 for vibration therebetween and offers potential
33 noise abatement.

1 A second version or stage of the cab
2 includes a front panel unit that provides a safety
3 glass windshield. The front panel unit includes, at
4 its sides, elements that interlock with the front
5 posts of the overhead guard. In the disclosed
6 arrangement, the front panel unit includes, at both
7 vertical edges, channel elements assembled together
8 and substantially encircling the respective corner
9 posts. The assembly is accomplished with threaded
10 fasteners that are received substantially
11 exclusively in the panel elements themselves and
12 that do not require registration with holes or slots
13 in elements of the guard proper.

14 In a third version or stage, the cab
15 includes a fabric covering for its rear and side
16 faces. The sides includes door-like flaps
17 releasably closed with zippers or other retaining
18 means. As disclosed, the roof panel unit and front
19 windshield unit can be fitted with means for
20 convenient attachment of the fabric rear panel and
21 fabric side panels.

22 A fourth version or stage of the cab
23 affords an all metal enclosure supported on the
24 overhead guard. A rear panel unit is attached to a
25 pair of rear uprights of the overhead guard in a
26 manner similar to that by which the front panel unit
27 is attached to the front uprights. The rear panel
28 unit, in the disclosed manner, provides hinge mounts
29 for side doors. The side doors, spanning the area
30 between the front and rear posts, from the side
31 panels complete the enclosure of the cab.

32 The disclosed panel cab construction
33 offers numerous advantages over conventional
34 panelized cab construction. The metal cab
35 components are prefinished before assembly. Only a

2153493

1 limited number of assembly steps and operations are
2 necessary to complete an installation. Since the
3 cab can be fully assembled on an existing overhead
4 cab in a limited number of minutes, rather than
5 hours typical of the prior art, it is practical to
6 install it at an assembly line station of the
7 factory where the vehicle is being manufactured.
8 This allows a manufacturer to offer full flexibility
9 in marketing its vehicle with or without a cab. The
10 manufacturer can supply the same cab design to its
11 dealers to be installed by them without requiring
12 extensive time or skill on their part to perform the
13 installation. Similarly, a dealer can sell the cab
14 to a previous purchaser of the vehicle in instances
15 where the owner decides to retrofit the vehicle with
16 a cab. Since the various faces of the enclosure are
17 panel-like in their configuration, the cab can be
18 shipped in a relatively small container. The cab
19 construction and its assembly technique is tolerant
20 of dimensional variation in the overhead guard
21 thereby avoiding restrictions on the manufacturer of
22 the overhead guard itself. The various parts of the
23 cab are, for the most part, compatible from the
24 basic lower stage to the fully developed all metal
25 stage. This characteristic reduces the number of
26 components which the cab manufacturer must produce
27 and inventory and thereby leads to significant
28 savings in manufacturing costs.

29 **BRIEF DESCRIPTION OF THE DRAWINGS**

30 Fig. 1 is a rear perspective view of one
31 embodiment of a cab assembly constructed in
32 accordance with the invention;

33 Fig. 2 is a front perspective view of the
34 cab of Fig. 1;

1 Fig. 3 is a fragmentary cross-sectional
2 view of the cab taken in the plane indicated at 3-3
3 in Fig. 1;

4 Fig. 4 is a fragmentary cross-sectional
5 view of the cab taken in the plane indicated at 4-4
6 in Fig. 1;

7 Fig. 5 is a fragmentary cross-sectional
8 view of the cab taken in the plane indicated at 5-5
9 in Fig. 1;

10 Fig. 6 is a rear perspective view of
11 another embodiment of a cab assembly constructed in
12 accordance with the invention;

13 Fig. 7 is a fragmentary cross-sectional
14 view of the cab taken in the plane indicated at 7-7
15 in Fig. 6;

16 Fig. 8 is a fragmentary cross-sectional
17 view of the cab taken in the plane indicated at 8-8
18 in Fig. 6; and

19 Fig. 9 is a fragmentary cross-sectional
20 view of the cab taken in the plane indicated at 9-9
21 in Fig. 6.

22 DESCRIPTION OF THE PREFERRED EMBODIMENTS

23 Cab structures constructed in accordance
24 with the invention are installed on a work vehicle
25 shown in phantom at 11 in Figs. 1 and 2. The
26 illustrated vehicle 11 is a generally conventional
27 fork lift truck, supported on front and rear sets of
28 wheels and having a fork 12 at its front end. The
29 various cab structures overlies and protect the
30 station where the person operating the vehicle sits.
31 The disclosed cab structures are assembled on a
32 rigid space frame typically formed of rectangular
33 steel tubing or like material that is conventionally
34 supplied with the vehicle to guard the operator from

2153493

6

1 overhead falling objects. The overhead guard frame
2 is in the general configuration of the outline of a
3 box with rectangular or trapezoidal faces. The
4 overhead guard frame is welded, bolted or otherwise
5 secured to the frame or subframe of the vehicle 11.
6 The overhead guard frame typically is a weldment
7 that includes generally upright front and rear
8 corner posts 13, 14 and generally horizontal front,
9 side and rear header elements 16, 17 and 18. As
10 indicated, the corner posts 13, 14 can be formed of
11 rectangular or square steel tubing and their faces
12 are generally aligned with the faces of the
13 imaginary box outlined by the guard and by the cab
14 structures disclosed herein.

15 The upper or top face of the guard can
16 have a grate-like structure to provide both
17 protection from falling objects and a view of the
18 area above the guard and forward of the operator
19 station.

20 Figs. 1 - 5 illustrate an "all metal"
21 version of a cab 20 constructed in accordance with
22 the invention. Typically, the metal components of
23 the cab 20 are fabricated from steel sheet, plate,
24 tube and bar. The cab 20 includes a roof plate unit
25 21 that is primarily comprised of a generally flat
26 steel sheet 22. The edges of the steel sheet 22 are
27 broken down in the front and rear to form drip edges
28 or flanges 23, 24 and at the sides to form rain
29 gutters or flanges 26. The sheet 22 is proportioned
30 so that the drip edges 23, 24 overhang their
31 respective front and rear faces of the cab. The
32 side flanges or gutters 26 are spaced away from the
33 side faces of the overhead guard for purposes
34 discussed below. The roof sheet 22 can include a
35 rectangular hole covered by a transparent light 28

1 of durable plastic material such as polycarbonate,
2 to provide overhead forward vision. A layer of
3 resilient material 29 such as a sheet of elastomeric
4 foam is fixed to a lower face of the roof sheet 22
5 in areas surrounding the light 28. Adjacent each of
6 the four corners of the roof plate unit 21 a pair of
7 fastening tabs 31 are welded or otherwise affixed to
8 the lower face of the sheet 22. The tabs 31 depend
9 perpendicularly to the plane of the sheet 22. The
10 individual sets of tabs 31 are strategically located
11 on the roof sheet 22 so that when the roof plate
12 unit 21 is properly positioned on the overhead
13 guard, each pair of tabs straddles a bar 32 of the
14 overhead guard in the manner of a shackle. The
15 lower of distal ends of the tabs 31 have aligned
16 holes 33. The holes 33 are positioned so that when
17 cross bolts 34 are assembled in them, the bolts
18 reliably hold the roof plate unit 21 in place with
19 the resilient material 29 slightly compressed
20 between the sheet 22 and the top of the bars 32 of
21 the overhead guard. The bolts 34 are retained in
22 place by locknuts 36. The resilient material 29,
23 consequently, ensures that the roof plate unit 21
24 remains rattle free on the overhead guard and
25 affords the potential of sound abatement.

26 The cab 20 includes a front panel unit 37
27 comprised of a sheet metal framework that supports a
28 bay windshield 38, side lights 39 and a lower light
29 41. The profile of the framework, designated 43, of
30 the front panel unit 37 generally corresponds to the
31 profile of the front face of the overhead guard.
32 The framework 43 is preferably a weldment that
33 provides a rigid sheet steel frame that supports the
34 peripheral edges of each of the bay windshield 38
35 and lights 39, 41. The windshield 38, ideally, is

2153493

8

1 laminated safety glass glazed with conventional
2 extruded rubber stock 42. The side and lower lights
3 39 and 41 can be transparent plastic such as
4 polycarbonate and can be glazed by adhesively
5 securing their perimeters to the framework 43. The
6 projecting or bay windshield design offers a high
7 degree of visibility through the side and bottom
8 lights 39, 41. Where this high visibility is not
9 necessary or physical constraints exist, the
10 windshield can be enlarged or otherwise configured
11 and the side and bottom lights can be eliminated to
12 provide a relatively flat front panel unit. The
13 windshield framework 43 includes at its sides a pair
14 of edge flange members 44 that are arranged to
15 extend along the front generally upright posts 13 of
16 the overhead guard. More specifically, the
17 illustrated edge flange members 44 are sheet metal
18 elements having a right angle cross section adapted
19 to overly the front and side faces of the respective
20 rectangular tube corner posts 13 as shown in Fig. 4.
21 At each vertical edge of the framework 43 is an
22 elongated sheet metal cap 46 having, in the
23 illustrated case, a J-shape in cross-section. At
24 each side of the cab 20, the edge flange member 44
25 and cap 46, when assembled, envelope and interlock
26 with the respective front generally upright post 13
27 of the overhead guard. In the illustrated case, the
28 edge flange members 44 and caps 46 are proportioned
29 oversize of the post 13. The cap includes an
30 elastomeric foam spacer along its length
31 proportioned to abut a rear face of a front post 13
32 and hold a face of the flange member against a front
33 face of a post 13. The edge flange member 44 and
34 cap 46, at each edge of the front panel unit 37, are
35 held in assembled relation on a post 13, in the

1 illustrated case, with a plurality of fastening
2 screws 48 spaced along the length of each post 13.
3 The screws 48 are assembled through holes in the
4 flange members 44 and are received into aligned
5 holes in confronting lips 49 of the caps 46 and into
6 prepositioned caged nuts 51 or other fastening means
7 on the lips. The caps 46, preferably, extend along
8 substantially the full length of the flange members
9 44 forming the vertical edges of the front panel
10 unit 37 and, more particularly, along substantially
11 the full length of the associated post 13.

12 A rear panel unit 55 of the cab 20
13 includes a generally flat steel sheet 56 that has a
14 profile generally corresponding to the rear profile
15 of the overhead guard. A rectangular rear light or
16 window 57 is mounted in the rear sheet 56 by a frame
17 58. The rear window 57 is a double-hung unit that
18 has its lower pane slidable upwardly in a known
19 manner for clearance when the operator's seat is
20 tilted backward for service of the vehicle. A lower
21 edge of the sheet or panel 56 is bent out to form a
22 flange on which a weather seal 59 is attached. The
23 rear panel unit 55 includes a flanged J-channel cap
24 61 associated with each generally vertical edge of
25 the steel panel 56. The caps 61 are assembled to
26 the rear panel sheet 56 with screws 62. In
27 particular, a plurality of screws 62 spaced
28 vertically along the cap 61 are assembled through
29 aligned horizontal slots or holes in the panel 56
30 and holes in an abutting flange 63 of the cab 61.
31 The threaded screws 62 are received in internally
32 threaded nuts 64 on the flanges 63.

33 When the rear panel 56 and J-channel caps
34 61 are assembled together over the respective rear
35 posts 14 of the overhead guard, the rear panel unit

1 55 is mechanically interlocked in place on the
2 overhead guard. Together, on the right and left
3 side of the cab, portions of the rear panel sheet 56
4 and J-caps 61 encircle or envelope a major portion
5 of the circumference of an associated post 14. The
6 J-channel caps 61 have a length substantially equal
7 to the length of the rear posts 14 and their flanges
8 63 substantially continuously abut the full height
9 of the rear panel sheet 56. A pair of spaced
10 coaxial hinge tubes or sockets 66 are welded on the
11 outer or side faces of the J-channel caps 61.

12 It will be seen from the foregoing
13 discussion that both the front panel unit 37 and the
14 rear panel unit 55 can be assembled on their
15 respective corner posts 13 or 14 without the
16 requirement of securing these units by direct
17 fastening means such as screws into the posts or
18 welding directly onto the posts. The construction
19 of the front and rear panel units allows these units
20 to be reliably held in place on their respective
21 posts 13 or 14 with the disclosed fastening screws
22 that avoid direct contact with these posts. As a
23 result, these panel units 37 and 55 can be installed
24 on the overhead guard with minimal labor and time
25 and such units do not require a high degree of
26 dimensional accuracy in the fabrication of the
27 overhead guard or in their own fabrication. In
28 fact, it can be seen that as the sheet metal caps 46
29 or 61 are drawn tight by the respective fastening
30 screws 48 or 62, these caps and the mating
31 components of their respective panel units 37 or 55
32 are drawn into close alignment with the overhead
33 guard posts.

1 A door or panel 67, 68 fabricated
2 primarily from sheet steel is provided on each side
3 of the cab 20. Each door includes a window or a
4 side light 69, 71. A door, 67, 68 includes a pair
5 of depending hinge pins 72 that are received in the
6 hinge tubes 66 for pivotal support of the door 67,
7 68 on the cab. The doors 67, 68 form the side
8 panels of the cab 20. Suitable latches, known in
9 the art, are provided to selectively maintain the
10 doors closed on the cab. An elastomeric seal can be
11 provided on the periphery of each door 67, 68 to
12 provide a tight seal with the side faces of the cab
13 20.

14 In circumstances when the durability of a
15 full metal cab is not required but when it is
16 desired to provide a full closure for the operator,
17 the described roof plate unit 21 and front panel
18 unit 37 can be complemented with fabric rear and
19 side cab panels. Such a partial fabric cab 75 is
20 illustrated in Figs. 6 - 9. A rear fabric cover or
21 panel 76 of suitable waterproof material, fabricated
22 by sewing, includes a flexible transparent window
23 area 77 of clear vinyl or similar material.
24 Waterproof fabric strips 78, 79 are sewn to the top
25 and bottom edges of the window 77. The vertical
26 edges of the window 77 are releasably attached to
27 waterproof fabric portions 81 by zippers 82 that
28 release from the bottom to the top of the rear panel
29 construction. Straps (not shown) can be used to
30 hold the window, rolled up, adjacent the drip edge
31 24. The zippers 82 can be deployed to release the
32 lower fabric strip 79 and vinyl window 77 for
33 clearance of the operator's seat when it is tilted
34 backward or for ventilating the cab interior. As
35 shown in Fig. 7 the vertical fabric portions 81 of

1 the rear panel are secured to the rear faces of the
2 rear posts 14 by associated sheet metal angle caps
3 83. The angle caps 83 can be held in place by
4 screws 84 threaded into the rear posts. The upper
5 edge of the rear fabric panel 76 is supported on the
6 cab in an extruded channel secured to the underside
7 of the drip flange 24 of the roof plate unit. The
8 channel (not shown), the manner by which it is
9 secured to the drip flange 24, and the manner of
10 securing the fabric in the channel, is the same as
11 described below in connection with a like channel 98
12 in Fig. 8.

13 Fabric side panels 91 of the cab 75 are
14 generally symmetrical and, like the rear panel 76,
15 are fabricated by sewing waterproof opaque fabric
16 and clear transparent vinyl fabric pieces together.
17 A main part of a side panel 91 is comprised of clear
18 vinyl portions 92, 93 that are secured to vertical
19 sections 94, 96 by generally vertical zippers 97.
20 The zippers 97, opening from the bottom of the side
21 panel 91, allow the clear vinyl sections 92 and 93
22 to be used as a door and be rolled up for
23 ventilation purposes. Straps (not shown) can be
24 used to temporarily hold the door panels 92, 93 up
25 adjacent the rain gutter 26 when desired. The front
26 vertical section 94 of the side panel can include a
27 clear vinyl insert if desired.

28 As shown in Fig. 8, the upper edge of the
29 fabric side panel 91 is supported on the adjacent
30 rain gutter 26 with an extruded channel 98. The
31 channel 98 has a slot opening into a circular
32 interior and the top edge of the fabric panel 91 is
33 sewn around a cord in the manner of a binding and is
34 slipped endwise into the channel. Similarly, the
35 front generally vertical edge of the fabric side

1 panel 91 is supported in a channel 99 secured to the
2 respective edge flange member 44 of the front panel
3 unit 37 by the screws 48 as shown in Fig. 9. The
4 rear generally vertical edge of the fabric side
5 panel 91 is retained to the rear post 14 by the
6 sheet metal angle cap 83 in essentially the same
7 manner as the rear fabric panel 75 as shown in Fig.
8 7.

9 There are situations in work environments
10 where a full enclosure for the operator is not
11 necessary. In such circumstances, the front
12 windshield panel unit 37 can be used with the roof
13 plate unit 21 and neither side panels nor a rear
14 panel need be provided. In still other situations,
15 the roof panel unit 21 can be used alone without the
16 windshield panel unit to provide moderate protection
17 against sun and rain. It will be appreciated from
18 the foregoing descriptions that the same roof plate
19 unit 21 and front windshield panel unit 37 can be
20 used with either the all metal cab 20 or with the
21 part metal and part fabric cab 75. This versatility
22 of these components is of great advantage to the
23 manufacturer and the installer of these products
24 since economies of scale are achieved and reductions
25 in inventory are realized.

26 It should be evident that this disclosure
27 is by way of example and that various changes may be
28 made by adding, modifying or eliminating details
29 without departing from the fair scope of the
30 teaching contained in this disclosure. The
31 invention is therefore not limited to particular
32 details of this disclosure except to the extent that
33 the following claims are necessarily so limited.

CLAIMS:

1 1. A cab enclosure for a land vehicle
2 having an open cage-like overhead guard including
3 generally vertical corner posts comprising a
4 generally horizontal roof panel and at least one
5 generally vertical face panel adapted to be fixed to
6 the overhead guard, said one panel being a rigid
7 body having generally vertical edges each extending
8 along an associated generally vertical post of the
9 overhead guard, cap means and fastener means for
10 securing said cap means and said face panel together
11 in assembled relation, said cap means and face panel
12 in assembled relation embracing a sufficient
13 circumferential extent of a post to securely retain
14 said face panel on said associated posts, said
15 fastener means being capable of holding said face
16 panel on said associated posts during ordinary
17 service of said vehicle without direct fastening
18 between said cap means or said face panel and the
19 associated posts.

1 2. A cab enclosure as set forth in claim
2 1, wherein said posts define a face of a cab and the
3 posts have surfaces at their defined face, said
4 edges of said face panel each overlying an adjacent
5 surface of one of said posts, said cap means
6 comprising an elongated channel-like element
7 fastened to the face panel, the channel-like
8 elements having a length that is at least equal to a
9 majority of the height of the face panel.

1 3. A cab enclosure as set forth in claim 1, wherein
2 the assembled face panel and cap means provides spaced hinge
3 mounting means on a side of the overhead guard adapted to
4 support a door thereon.

5 4. A method of constructing an enclosure on a
6 vehicle having an overhead guard that includes generally
7 upright support posts comprising the steps of forming a rigid
8 panel adapted to span the area between the posts, the panel
9 being formed with marginal areas proportioned to extend along
10 the upright posts, forming post cap elements, aligning the
11 panel with the posts, assembling the post cap elements with the
12 marginal areas of the panel in a manner by which the posts are
13 wrapped to a degree sufficient to secure the panel on the
14 posts, the assembling of the panel and post cap elements being
15 accomplished by such wrapping in a manner that avoids the need
16 for any significant direct fastening of the panel to the posts.

17 5. A method as set forth in claim 4, wherein the
18 assembling of the panel and post cap elements is accomplished
19 with screws passing through both said panel and said cap
20 elements.

21 6. A cab kit for assembly with an overhead guard of
22 a land vehicle, comprising a plurality of rigid roof plate
23 units, a plurality of rigid front windshield panel units, a
24 plurality of rigid rear panel units, a plurality of pairs of
25 rigid right and left side doors, a plurality of fabric rear
26 panels and a plurality of pairs of fabric right and left side
27 panels, each roof plate unit being arranged to be used
28 separately or with the front windshield panel unit alone or in
29 combination with a rigid rear panel unit and a pair of rigid

1 doors in combination with a fabric rear panel and a pair of
2 fabric side panels, each front windshield unit being arranged
3 to be used with a roof plate unit separately or in combination
4 with a rigid rear panel unit and a pair of rigid side doors or
5 in combination with a fabric rear panel and a pair of fabric
6 side panels.

7 7. A cab kit as set forth in claim 6, wherein each
8 roof panel unit has peripheral depending flanges adapted to be
9 used to secure an upper margin of a fabric rear panel and a
10 pair of fabric side panels, and the front windshield unit is
11 adapted to be used to secure front margins of the pair of
12 fabric side panels.

13 8. A roof plate unit for covering an upper face of
14 an overhead guard comprising a generally rectangular flat steel
15 body, a resilient material on a lower surface of the steel
16 body, retaining means on the body at spaced locations, the
17 retaining means being arranged to interlock on portions of the
18 overhead guard, the retaining means being proportioned to hold
19 the resilient material in compression against the top of the
20 overhead guard when fully interlocked with the same.

Fig. 1

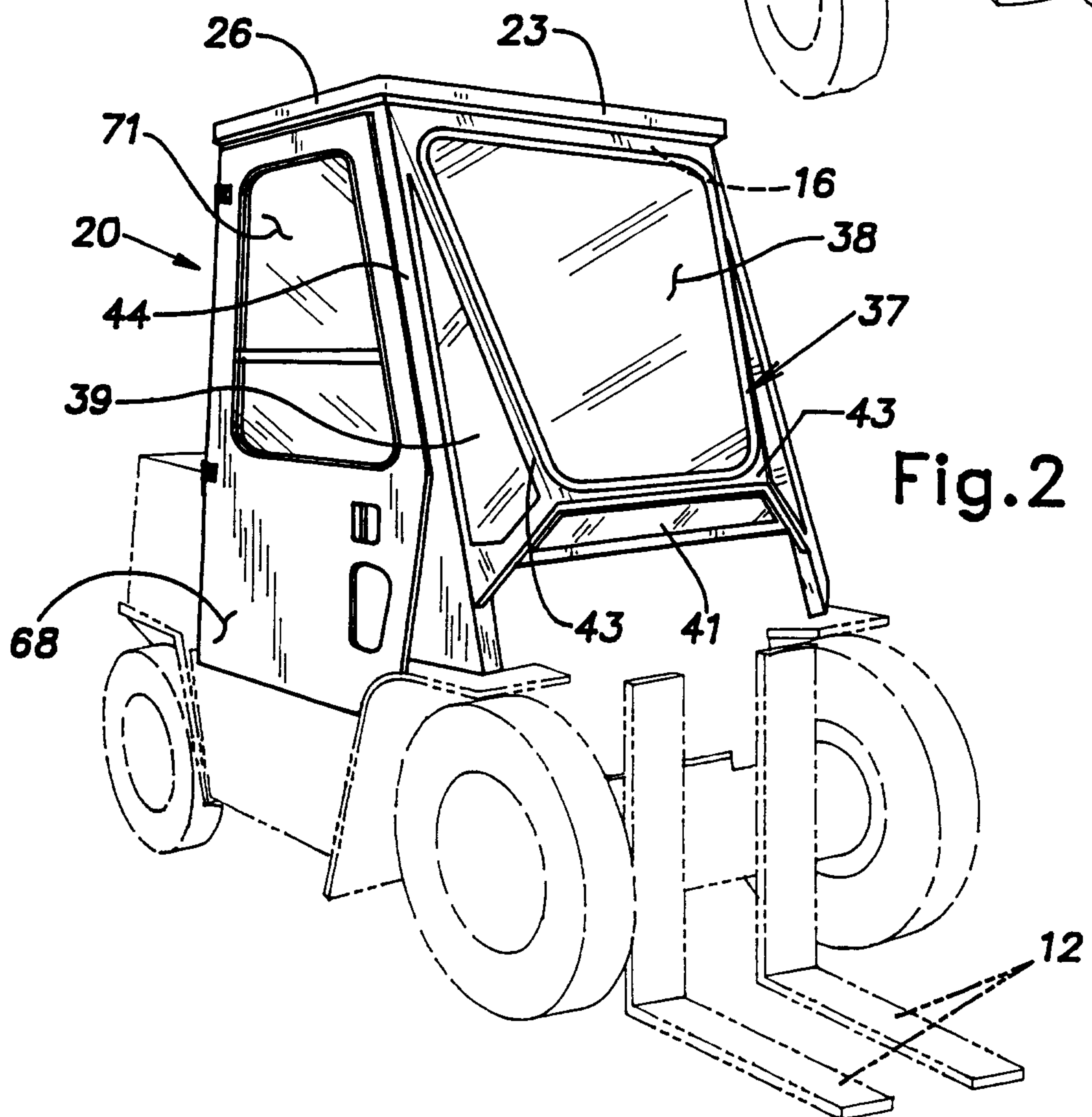
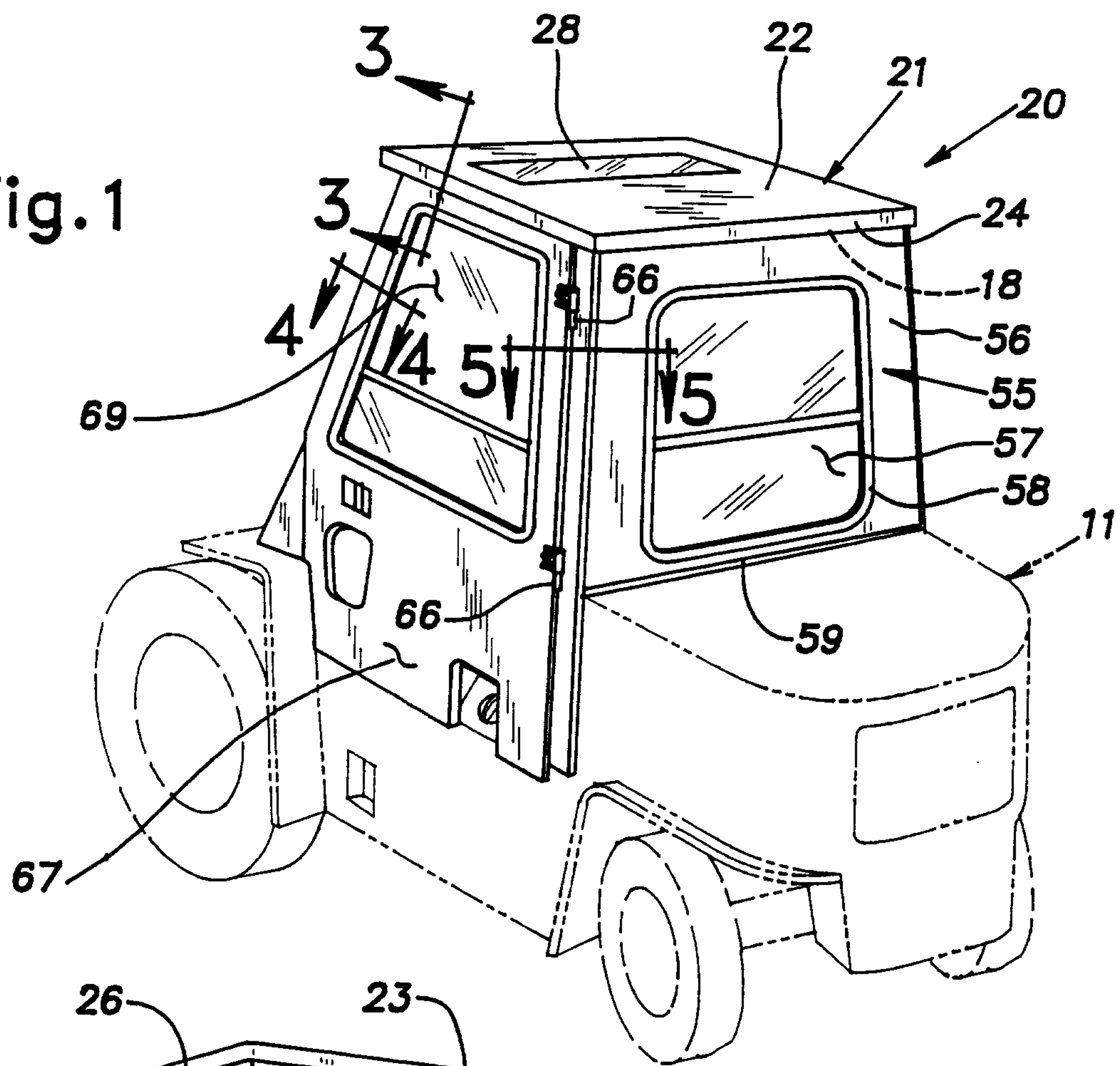


Fig.3

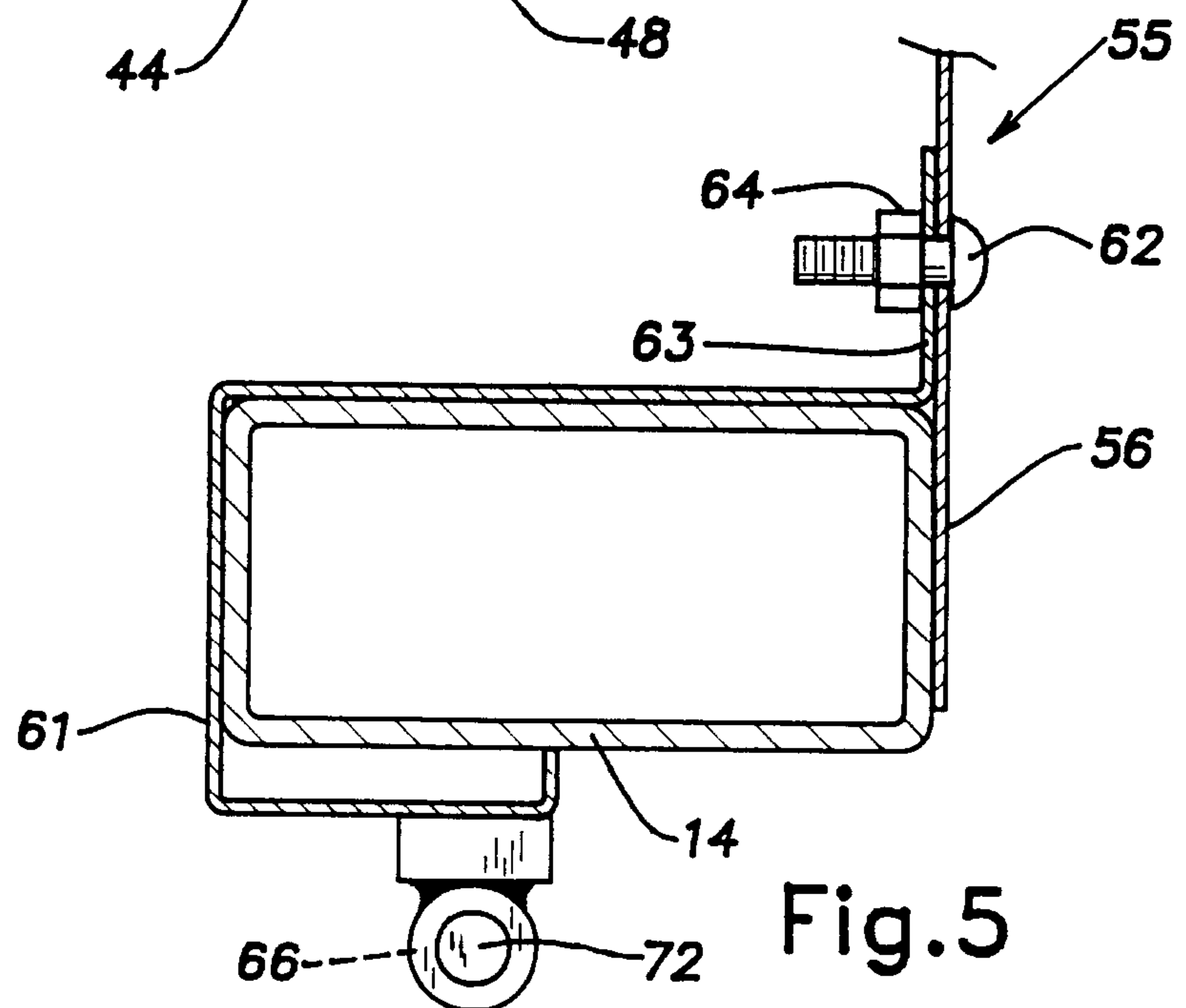
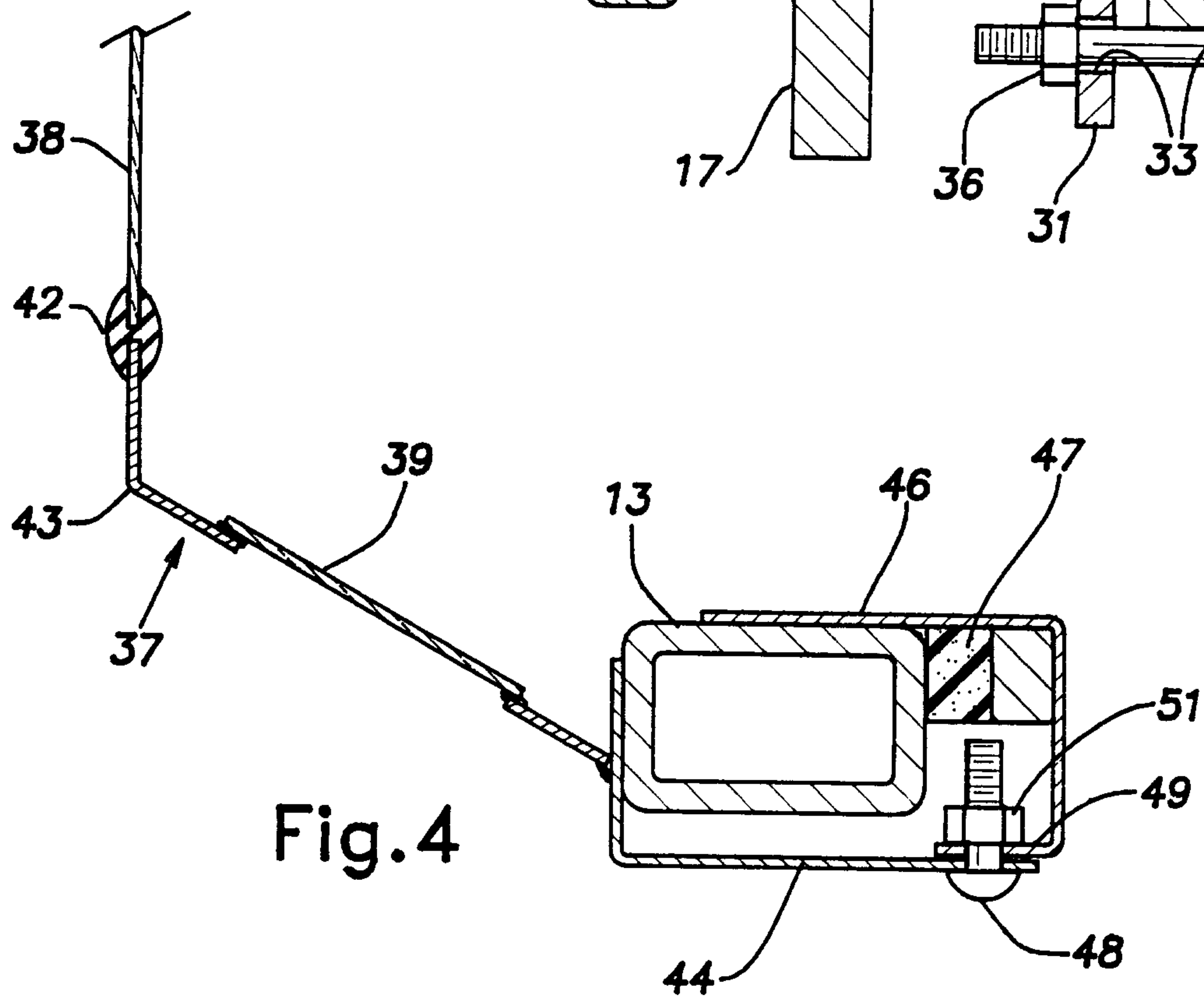
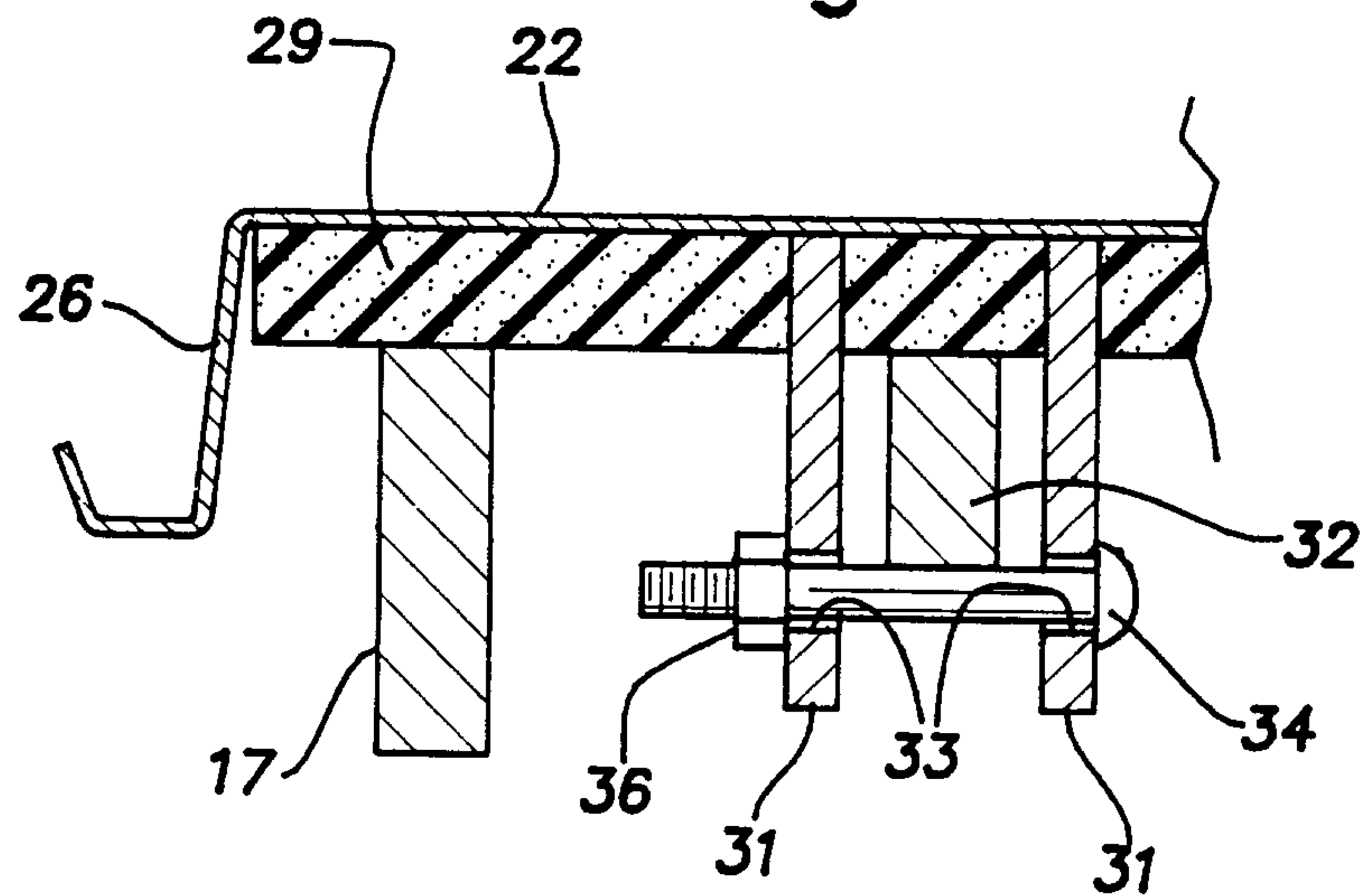


Fig.7

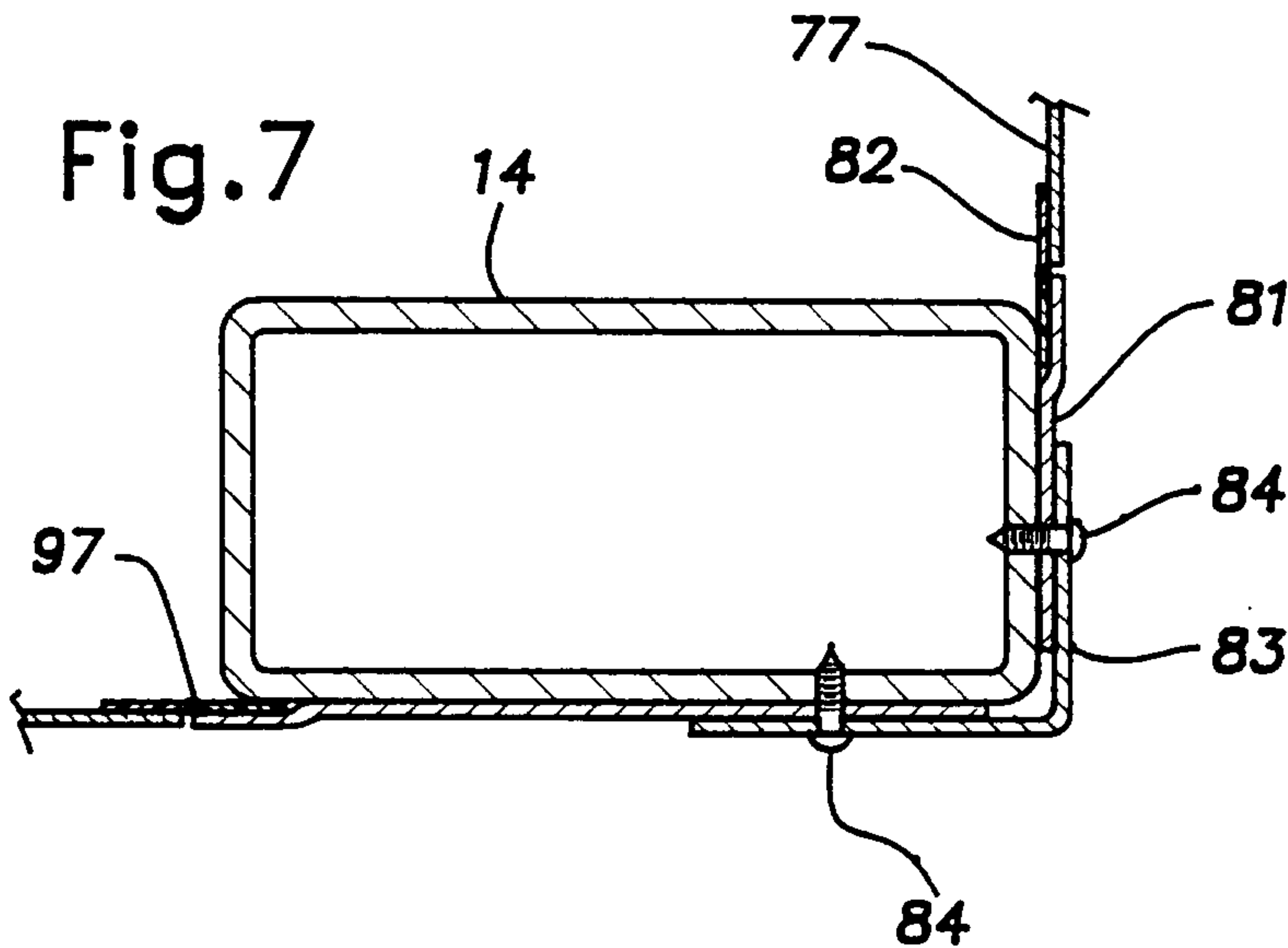


Fig.8

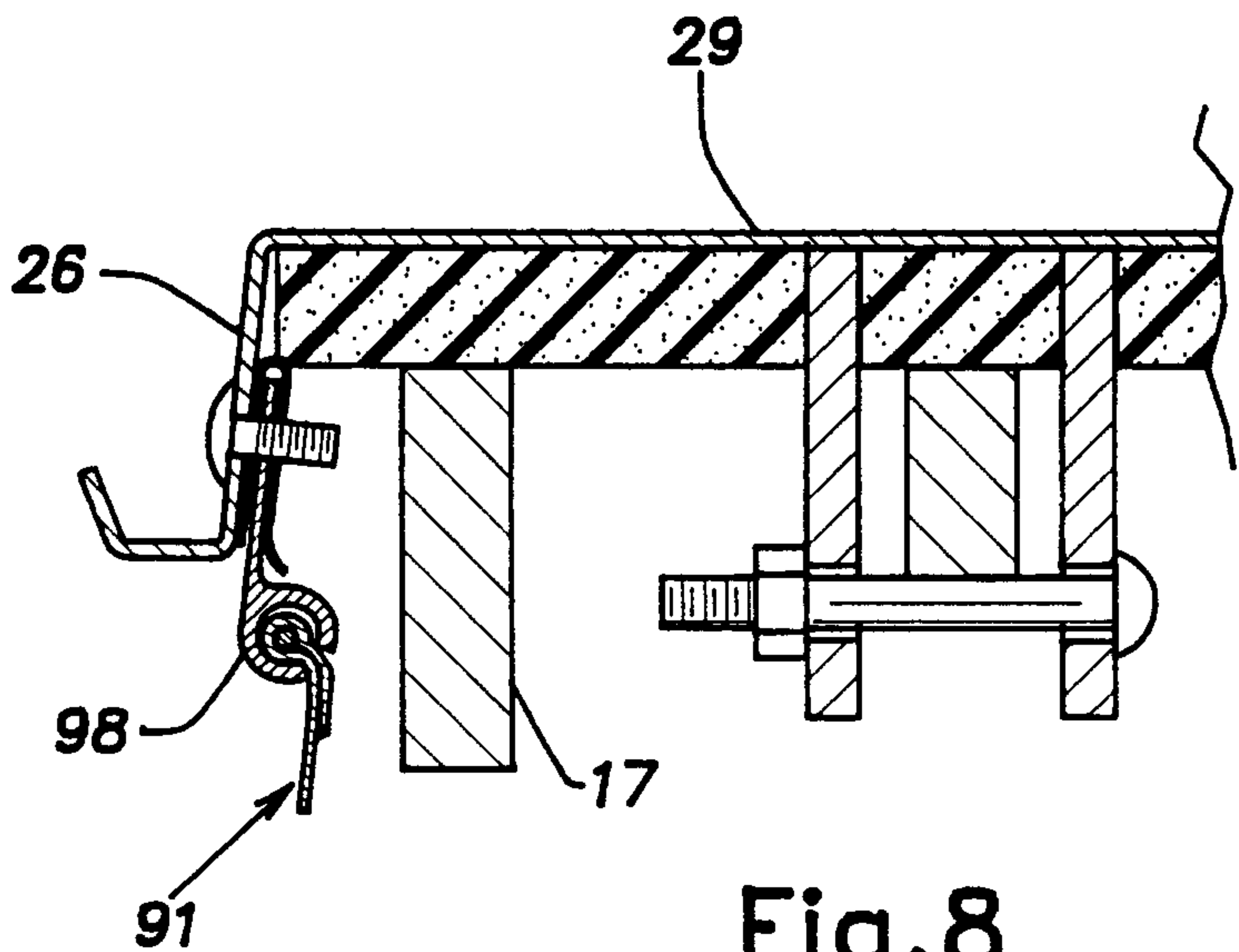


Fig.9

