

(19) **DANMARK**

(10) **DK/EP 3377416 T3**



(12) **Oversættelse af
europæisk patentskrift**

Patent- og
Varemærkestyrelsen

-
- (51) Int.Cl.: **B 65 D 6/18 (2006.01)** **B 65 D 6/34 (2006.01)** **B 65 D 21/02 (2006.01)**
B 65 D 85/34 (2006.01)
- (45) Oversættelsen bekendtgjort den: **2020-10-19**
- (80) Dato for Den Europæiske Patentmyndigheds bekendtgørelse om meddelelse af patentet: **2020-07-15**
- (86) Europæisk ansøgning nr.: **16808925.8**
- (86) Europæisk indleveringsdag: **2016-11-17**
- (87) Den europæiske ansøgnings publiceringsdag: **2018-09-26**
- (86) International ansøgning nr.: **EP2016077965**
- (87) Internationalt publikationsnr.: **WO2017085171**
- (30) Prioritet: **2015-11-17 DE 202015106211 U**
- (84) Designerede stater: **AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR**
- (73) Patenthaver: **Euro Pool System International B.v., Laan van Vredenoord 8, 2289 DJ Rijswijk, Holland**
- (72) Opfinder: **ROELOFS, Christian, Schulweg 9, 49824 Ringe, Tyskland**
VAN DER KNAAP, Arthur F., Anthony Fokkersingel 14, 2497 BG Den Haag, Holland
- (74) Fuldmægtig i Danmark: **Plougmann Vingtoft A/S, Strandvejen 70, 2900 Hellerup, Danmark**
- (54) Benævnelse: **BEHOLDER AF KUNSTSTOF**
- (56) Fremdragne publikationer:
DE-U1- 20 114 888
DE-U1- 29 601 187
DE-U1-202014 101 556

Description:CONTAINER MADE OF PLASTIC

5 The invention relates to a container made of plastic, with a rectangular bottom and four side walls, wherein the bottom has a first stacking contour on the bottom side on its outer edge, wherein the side walls have a second stacking contour on their upper edge region, and wherein, when stacking containers above one another, the first stacking contour of an upper container and the second stacking contour of a lower container contact one another in a centring engagement.

10

From DE 20 201 4 101 556 U1 a container according to the preamble of claim 1 is known for transporting and storing goods, having a rectangular bottom and with four rigid or foldable side walls projecting from the bottom, wherein the bottom has stacking edges on the lower side and the side walls each have a stacking surface on the upper side, wherein the stacking edges and the stacking surfaces are designed so as to allow a stacking of multiple containers above one another.

15

In the case of containers for sensitive goods, such as fruits, the side walls should as far as possible be flexible to a certain extent in order to avoid pressure points on the goods. However, this flexibility of the side walls leads on the other hand to the problem of an increased risk of bulging of the upper edge of the side walls of lower, heavily loaded containers in a stack of loaded containers, which makes the stack unstable.

20

Containers with a reinforced upper edge region are also known already.

25

In the document DE 20 006 094 U1 a plastic container with a lockable lid is described, in which at least one reinforcing rib projecting radially inwards and/or outwards and extending at least over a partial circumference of the container is integrally formed on the container edge on the side of a catch for the lid facing the upper edge of the container. The upper edge of the container and thus the sealing region between container and lid are additionally stabilised by the reinforcing rib. Since the reinforcing rib is integrally formed on the side wall, it consists of the same material as the remaining side

30

wall, so that if the side wall consists of a plastic having a certain resilience or flexibility, the reinforcing effect of the reinforcing rib is only slight.

5 The document DE 296 01 187 U1 shows a load carrier made of foam, in particular of particle foam, with at least one stacking edge, and deals with the problem of increasing the load-bearing capacity. As a solution, a reinforcing profile is provided here on at least one part of the stack edge. The disadvantage is that load carriers made of foam material require relatively thick walls, although however only a low mechanical load-bearing capacity and a rather small useful volume relative to the external dimensions are
10 achieved. The use of such load carriers is limited to applications with only low mechanical and thermal loads.

In the document DE 297 10 185 U1 a stackable packaging, in particular made of foamed material, is described, which has an outer wall with an upper-side edge, and with
15 a lower-side support, in addition to which lateral stops are provided on the inside, wherein packagings stacked adjacently above one another lie with the upper edge of the lower packaging and the lower-side support of the upper packaging on one another and the lateral stops in this stacking position are located internally laterally next to the upper-side edge of the lower packaging. It is further provided that the bearing surface of the
20 upper-side edge is designed ascending at least over a partial region of its transverse extent with respect to the inner side stop side, and that the lower-side support has an approximately corresponding counter-shape. The outer wall can have a wall reinforcing profile on its upper edge, the upper side of which forms the bearing surface for supporting a stacked, adjacent packaging. In addition the wall reinforcing profile can be designed as
25 a profile which can be attached to the upper-side edge of the outer wall and preferably has an approximately U-shaped cross-section. Also, this known packaging made of foamed material requires relatively thick walls, wherein here too only a small mechanical load-bearing capacity and a rather small useful volume relative to the external dimensions can be achieved. The use of such packagings is also limited to applications with only low
30 mechanical and thermal loads.

The object of the present invention is therefore to provide containers of the type mentioned in the introduction, which have a high mechanical stability and load-bearing

capacity, which in this connection can have side walls with a certain flexibility in order to protect the goods in the container and ensure a secure stacking of loaded containers above one another.

5 A first solution of the object is achieved according to the invention with a container of the type mentioned in the introduction, which is characterised in that the upper edge region of at least two mutually opposite side walls is reinforced by in each case at least one reinforcing profile attached to the remaining side wall in a form-fitting and/or force-fitting manner, and that the/each reinforcing profile has on its upper side pointing away
10 from the container at least one reinforcing profile extending in the longitudinal direction of the reinforcing profile and forming a slide track for a further container to be placed thereon.

By means of the invention, which is defined by claim 1, two or more side walls of
15 the container are reinforced with a reinforcing profile, the material of which is different from that of the side wall. In this way a particularly large reinforcing effect can be achieved with a suitable selection of material for the reinforcing profiles. The side walls of the container, which are particularly loaded when containers are stacked on top of one another, can thus be stabilised with relatively little technical effort in such a way that a
20 bulging of the upper edge of loaded containers in the container stack can be precluded in the case of normal stack heights and loads. At the same time, in this connection the side walls can advantageously have a certain flexibility, which protects the goods in the container. In order to facilitate a manual stacking of the containers above one another, the/each reinforcing profile has on its upper side pointing away from the container at
25 least one profiled web extending in the longitudinal direction of the reinforcing profile and forming a slide track for a further container to be placed thereon. It is thus sufficient to place an upper container first of all so that it only partially covers a lower container, in order then to displace the upper container along the slide track of the lower container into its final stacking position.

30

As mentioned above, the reinforcing profile is attached to the remaining side wall in a form-fitting and/or force-fitting manner. For the specific arrangement of this connection, in a first embodiment it is envisaged that the/each reinforcing profile has in

a lower region facing the side wall a downwardly open groove or a downwardly pointing web, that an upwardly pointing web or an upwardly open groove is formed on the upper edge of the remaining side wall, and that the reinforcing profile is latched or clamped or inserted via its groove on the web of the side wall or is latched or clamped or inserted via its web into the groove of the side wall. The reinforcing profile is here thus connected to the associated side wall from above during the production of the container.

In order that the cohesion of side wall and reinforcing profile is reliably maintained even in the case of a rough use of the container, it is proposed that interacting latching elements are integrally formed on the side wall and on the associated reinforcing profile. These latching elements engage with one another on attachment of the reinforcing profile to the remaining side wall, so that an automatic release of the reinforcing profile from the side wall is precluded, although any desired non-destructive removal or replacement of the reinforcing profile remains possible.

Furthermore, as regards the container it is preferably envisaged that the upper edge region of two longer side walls lying opposite one another is reinforced by in each case a reinforcing profile extending along the length of the associated side wall. In this way, the risk of bulging, which is naturally greater in the case of the longer side walls, is effectively counteracted.

Furthermore, it is preferably envisaged that the side walls consist of an unreinforced thermoplastic material and that the/each reinforcing profile consists of a fibre-reinforced plastic or of metal. The side walls per se or the container per se can thus be produced from a relatively inexpensive material, in particular as injection-moulded parts. The reinforcing profiles can be produced from a more stable material. The fibre-reinforced plastic is in this connection preferably reinforced with glass, carbon or natural fibres, wherein the reinforcing profile can also advantageously be produced therefrom by injection moulding.

For the previously described containers with slide tracks, a further embodiment envisages that sections of the stacking contour of the base that lie below the side walls comprising the slide tracks are each designed having a groove, that the slide tracks and

grooves are in each case designed so that when an upper container is placed on a lower container in a staggered position relative to one another in the longitudinal direction of the slide tracks and grooves, the upper container displaceably stands in a raised position on the slide tracks of the lower container, and that when or after the upper container is moved to a position that is congruent with the lower container, the slide tracks enter the grooves on lowering the upper container into a stacking end position. This embodiment of the container offers several advantages. Firstly, it allows an upper container to be placed on a lower container with the containers being offset relative to one another, and allows a subsequent displacement of the upper container on the lower container into the congruent stacking position, which in particular facilitates a manual stacking of the containers, especially in their loaded state, by handling staff. On placing the upper container on the container arranged below it, the upper container first of all slides in a raised position on the slide tracks of the lower container and only descends into its stacking end position at the end of the displacement process. As a result, during the placement a higher or larger intermediate space between the two containers is advantageously achieved, specifically between the goods to be transported, such as fruits, in the lower container on the one hand and the lower side of the bottom of the upper container on the other hand. In this way sensitive goods in the lower container, in particular fruits, which project slightly above the container edge, are not damaged by rubbing or scratching.

For an impact-free transition of an upper container from an initially displaced, raised position into its lowered stacking end position, the invention envisages that each slide track is stepped or bevelled or rounded off at its end regions.

Slide tracks on two long side walls are convenient for the practical use of the containers. Alternatively, slide tracks can be provided on two short side walls.

In order to enable a reliable mixed stacking of the containers according to the invention with conventional containers of the same basic surface dimensions, it is envisaged that the two side walls that do not have the slide tracks in each case have on the upper side one or more protuberances spaced apart from one another in the longitudinal direction of these side walls, which ensure that a conventional container

placed on a container according to the invention cannot shift in the longitudinal direction of the slide tracks, the height of which protuberances corresponds to the height of the slide tracks.

5 Exemplary embodiments of the containers according to the invention are explained hereafter with reference to a drawing. The figures of the drawing show:

10 Fig. 1 a first container which is not part of the invention with in each case a reinforcing profile on two longer side walls lying opposite one another, in an oblique view from above,

Fig. 2 the container of Fig. 1 in a front view of one of the longer side walls with the reinforcing profile attached thereto,

15 Fig. 3 one of the longer side walls of the container of Fig. 1 and a reinforcing profile not yet attached thereto, in an oblique view from above,

20 Fig. 4 an enlarged detail view of a part of the longer side wall and the reinforcement profile of Fig. 3 connected thereto;

Fig. 5 an enlarged representation of part of the longer side wall and the reinforcing profile connected thereto of Fig. 3, partly in view and partly in a first vertical section,

25 Fig. 6 an enlarged representation of part of the longer side wall and the reinforcing profile connected thereto of Fig. 3, partly in view and partly in a second vertical section,

30 Fig. 7 a container with in each case a reinforcing profile on two longer side walls lying opposite one another, in a view of a shorter side wall,

Fig. 8 a further container which is not part of invention, with in each case a reinforcing profile on two longer side walls lying opposite one another, in an oblique view from above,

5 Fig. 9 one of the longer side walls of the container of Fig. 8 and a reinforcing profile not yet connected thereto, in an oblique view from above,

Fig. 10 the side wall of Fig. 9 with the reinforcing profile connected thereto, in an oblique view from above,

10

Fig. 11 one of the longer side walls of a container according to the invention and a reinforcing profile not yet connected thereto, in an oblique view from above,

Fig. 12 the side wall of Fig. 1 with the reinforcing profile connected thereto, in an oblique view from above, and

15

Fig.13 one of the longer side walls of a further container which is not part of the invention, and a reinforcing profile connected thereto, in an oblique view from above.

20 In the following description of the figures, identical parts in the various figures of the drawing are always provided with the same reference numerals, so that all reference numerals need not be explained again for each figure.

Fig. 1 of the drawing shows a container 1 with a bottom 2, with two first longer side walls 3 lying opposite one another, and with two second, shorter side walls 4 lying opposite one another, in an oblique view from above. The container 1 is designed here as a folding container, in which the side walls 3, 4 are connected in an articulated manner to the bottom 2, so that they can be moved between the upright use position illustrated in Fig. 1 and a rest position, in which the four side walls 3, 4 are folded inwards onto the

30

bottom 2.

Furthermore, the side walls 3, 4 are each provided in a manner known per se with a handle opening 31, 41 and also with releasable locking means 43 for the mutual locking of the side walls 3, 4 in their use position.

5 By means of a lower stacking contour 20 on the outer edge region of the base 2 and in each case an upper stacking contour 30, 40 on the upper edge of the side walls 3, 4, multiple containers 1 can be stacked above one another inter-engagingly in a centring manner.

10 The bottom 2 and the side walls 3, 4 are here injection-moulded parts made of a thermoplastic, wherein at least the side walls 3 have flexible wall regions 33 with a certain resilience in order to protect goods stored or transported in the container 1.

In order nevertheless to be able to stack such containers 1 above one another safely
15 and reliably without the upper edge of the side walls 3 bulging outwards, in particular in the case of lower containers 1 in a container stack of loaded containers 1, in this case a reinforcing profile 5 is attached in a form-fitting manner, here latched, to the two longer side walls 3 lying opposite one another. The reinforcing profiles 5 consist of a material, in particular of fibre-reinforced plastic or of metal, which is more stable than the material of
20 which the side walls 3 consist, usually a non-reinforced plastic. The reinforcing profiles 5 thus ensure that the side walls 3 have a particularly high stability in their upper edge region, whereby an undesired buckling of the upper edge of the side walls 3 in a container stack is avoided.

25 Each reinforcing profile 5 has on its upper side an upwardly pointing profiled web 50 extending in the longitudinal direction of the reinforcing profile 5 and associated side wall 3. The profiled webs 50 form on their upper side a slide track 11 on which an upper container 1 on a lower container 1 can be moved easily into its final stacking position on a lower container 1 after being placed only partially over it.

30

The end regions 12 of the slide track 11 are bevelled in order to displace the upper container 1 in a raised position relative to the lower container 1 and to lower the upper container 1 only immediately before or on reaching the congruent position of the upper

container 1 relative to the lower container 1. As a result, the material in the lower container 1 is protected from damage by the placement of the upper container 1.

In order that conventional containers with the same basic surface dimensions can also be securely stacked on the container 1, in each case two projecting protuberances 44 are formed spaced apart from one another on the upper edge of the shorter side walls 4 formed by the upper stacking contour 40. These protuberances 44 block a conventional container placed on the container 1 against an unintentional displacement along the slide tracks 11 beyond a congruent stacking position relative to the container 1 arranged at the bottom.

Fig. 2 shows the container 1 from Fig. 1 in a front view of one of the longer side walls 3 with the reinforcing profile 5 attached thereto. In Fig. 2, the bottom 2 with its stacking contour 20 is visible. On the upper edge of the side wall 3, the reinforcing profile 5 is connected to the side wall 3. A handle opening 31 is located in the side wall 3 below a central section of the reinforcing profile 5. A central surface region of the side wall 3 enclosed by the four edge regions of the side wall 3 forms the flexible wall region 33, which has a certain resilience. On the upper side of the reinforcing profile 5 its profiled web 50 is visible, which forms the stacking contour 30 of the side wall 3 and one of the slide tracks 11 with the bevelled sliding-path end regions 12.

Fig. 3 shows one of the longer side walls 3 and a reinforcing profile 5 not yet attached thereto, in an oblique view from above. The side wall 3 has at its upper edge an upwardly pointing web 35, on which latching elements 34 in the form of latching lugs projecting from the surface of the web are integrally formed at regular intervals. The reinforcing profile 5 illustrated above the side wall 3 and not yet connected thereto has on its lower side a groove 53, with which the reinforcing profile 5 can be inserted vertically from top to bottom onto the web 35 in a form-fitting manner. By means of latching elements 54 in the form of latching openings arranged in the correct position in the reinforcing profile 5, the latching profile 5 is thereby latched in an operationally reliable but if necessary releasable manner to the latching elements 34 on the side wall, as a result of which the desired reinforcement and stiffening of the upper edge region of the side wall 3 is achieved.

On the lower edge of the side wall 3 multiple hinges 32, in this case four, are visible in Fig. 3, by means of which the side wall 3 can be connected in an articulated manner known *per se* to the bottom 2 of the container 1, not shown here.

5

Fig. 4 shows an enlarged detail view of part of the longer side wall 3 and of the reinforcing profile 5 of Fig. 3, now connected to it. On the lower left-hand side in Fig. 4 a part of the side wall 3 is visible with the handle opening 31. The reinforcing profile 5 extends over this.

10

One of the pairs of latching elements 34, 54 can be seen on the right above the handle opening 31, wherein the latching element 34 of the side wall 3 has the shape of a latching lug which engages in the latching element 54 of the reinforcing profile 5 formed as a latching opening.

15

Furthermore, Fig. 4 illustrates that the reinforcing profile 5 has on its side pointing towards the interior of the container, multiple parallel laterally extending profiled wings 51, which make the reinforcing profile 5 particularly rigid with a relatively small amount of material.

20

On the upper side of the reinforcing profile runs its vertical profiled web 50, the upper side of which forms the slide track 11 of the side wall 3.

Fig. 5 shows a part of the longer side wall 3 and reinforcing profile 5 connected thereto in an enlarged representation, partly in view and partly in a first vertical section. On the sectional surface lying on the right in Fig. 5 it can be seen how the reinforcing profile 5 with its groove 53 is placed in a form-fitting manner on the web 35 on the upper edge of the side wall 3.

30

Furthermore, Fig. 5 shows that the reinforcing profile 5 also comprises on its surface facing away from the viewer and pointing towards the container interior, lateral profiled wings 51 extending parallel to one another in the longitudinal direction of the reinforcing profile 5 to provide effective stiffening.

Fig. 6 shows a part of the longer side wall 3 and of the reinforcing profile 5 connected thereto in an enlarged representation, partly in view and partly in a second vertical section. The section runs in this case through one of the pairs of latching elements 34, 54, so that their interaction is particularly clearly recognisable here.

Fig. 7 shows a container 1 with in each case a reinforcing profile 5 on two longer side walls 3 lying opposite one another, in a view of a shorter side wall 4. Accordingly one each of the two longer side walls 3 lies on the left and right in Fig. The bottom 2 lies with its lower side stacking contour 20 at the bottom in Fig. 7.

On the upper side the container 1 has, on the shorter side wall 4 facing the viewer, the stacking contour 40 forming its upper edge. At a distance from the upper edge and offset downwardly is a handle opening 41 in the transverse centre of the side wall 4. Above the handle opening 41 two springy locking means 43, displaceable in the horizontal direction, extend parallel to the surface of the side wall 42. Two upwardly projecting protuberances 44 are integrally formed spaced from one another on the upper edge of the side wall 4, which serve to secure a conventional container of the same basic surface dimensions placed on the container 1 in its congruent stacking position relative to the container 1 and to block a displacement of the upper, conventional container along the slide tracks 11 from the congruent stacking position.

The associated stacking contours 30 are visible on the left and right in Fig. 7 along the upper edge of the two side walls 3. The stacking contours 30 are here in each case formed by one of the reinforcing profiles 5 respectively engaged in a latching manner at the top on the remaining side wall 3, each profile having on the upper side a profiled web 50 running in the longitudinal direction, the upper side of which in each case forms a slide track 11.

The bottom 2 has on its longitudinal sides extending to the left and right of the plane of the drawing in Fig. 7, downwardly open grooves 21 which are arranged congruently with the profiled webs 50. If an identical further container 1 is first placed on the container 1 with an offset in the longitudinal direction of the slide tracks 11, the upper

container 1 can be displaced by means of its grooves 21 on the slide tracks 1 of the lower container 1 in a raised position during the displacement, to a stacking end position congruent with the lower container 1, in which the upper container 1 then sinks down into its final stacking position relative to the lower container 1 by interaction of the correspondingly designed slide tracks 1 and grooves 21.

Fig. 8 shows a further container 1 with in each case a reinforcing profile 5 on two longer side walls 3 lying opposite one another, in an oblique view from above. In contrast to the container according to Fig. 1, here the reinforcing profiles 5 are designed as insert parts, which during the production of the container 1 or of its side walls 3 are inserted as prefabricated parts into an injection mould in which the remaining side wall is then injection-moulded, whereby the reinforcing profiles 5 are securely connected to the respective remaining side wall 3.

The slide tracks 11 on the upper side of the stacking contours 30 of the longer side walls 3 are here not part of the reinforcing profiles 5, but are part of the remaining side walls 3 and are each formed on the upper side of a web 35 integral with the side wall 3.

With regard to the further parts and details of the container 1 illustrated in Fig. 8, reference is made to the preceding description.

Fig. 9 shows one of the longer side walls 3 of the container of Fig. 8 and separately therefrom an associated reinforcing profile 5, in an oblique view from above. As illustrated in Fig. 9, here the reinforcing profile 5 has two longitudinal webs 55 running parallel to one another and in the longitudinal direction of the reinforcing profile 5, as well as multiple transverse webs 56 spaced apart in the longitudinal direction and connecting these longitudinal webs to one another. In the finished state of the side wall 3 the plastic material of the remaining side wall 3 surrounds the transverse webs 56 of the reinforcing profile 5, as a result of which this is securely connected to the remaining side wall 3.

Furthermore, it can clearly be seen with the aid of Fig. 9 that here the slide track 11 is formed on the upper side of the web 35 of the stacking contour 30 of the side wall 3, i.e. in this case is not part of the reinforcing profile 5.

Fig. 10 shows the side wall of Fig. 9 with the reinforcing profile 5 connected thereto, again in an oblique view from above. Here, it is in particular visible that the reinforcing profile 5 extends below the slide track 11 and with its upper side together with the upper edge of the side wall 3, forms a part of the stacking contour 30.

Fig. 11 shows one of the longer side walls 3 of a further container 1 and a reinforcing profile 5 not yet connected thereto, in an oblique view from above. In this exemplary embodiment the reinforcing profile 5 can be latched to the remaining side wall by inserting it downwards from top to bottom, for which purpose the side wall 3 has latching elements 34 and the reinforcing profile 5 has latching elements 54 cooperating therewith.

At its end face the reinforcing profile 5 here has in each case one downwardly pointing guide pin 57, each of which can be received in a corresponding receptacle close to the side edges of the side wall 3. The guide pins 57 prevent in particular a tilting of the reinforcing profile 5, which here again has an upwardly pointing profiled web 50 with the upper slide track 11, onto which the weight of the respective upper container is loaded during its displacement into the congruent stacking position, when stacking containers 1

Fig. 12 shows the side wall 3 of Fig. 1 with the reinforcing profile 5 connected thereto, likewise in an oblique view from above. The latching elements 34 of the side wall 3 and the latching elements 54 of the reinforcing profile 5 are now in latching engagement with one another and secure the reinforcing profile 5 in its mounting position on the side wall 3. From the reinforcing profile 5 its profiled web 50 running in the longitudinal direction projects upwards, and its upper side forms the slide track 11 with its end regions 12 extending obliquely downwards.

Fig. 13 finally shows one of the longer side walls 3 of a further container 1 and a reinforcing profile 5 connected thereto, in an oblique view from above. It is characteristic of the exemplary embodiment illustrated here that the reinforcing profile 5 is welded to the remaining side wall 3, or that the side wall 3 including the reinforcing profile 5 is produced as a two-component injection-moulded part. In both embodiments, which do

not visibly differ externally as regards their appearance, the reinforcing profile 5 is connected particularly securely and permanently to the remaining side wall 3.

5 The slide track 11 is here formed on the upper side of a web 35 of the stacking contour 30 of the side wall 3, and thus in this exemplary embodiment is not part of the reinforcing profile 5.

List of Reference Numerals:

	<u>No.</u>	<u>Reference</u>
	1	Container
5	11	Slide track
	12	End regions of 11
	2	Floor of 1
	20	Stacking contour on 2
10	21	Grooves in 20
	3	First, longer side walls
	30	Stacking contour on 3
	31	Handle opening in 3
15	32	Hinges on 3
	33	flexible wall region of 3
	34	Latching elements on 3
	35	Web at the upper edge of 3
20	4	Second, shorter side walls
	40	Stacking contour/upper edge at 4
	41	Handle opening in 4
	43	Locking means
	44	Protuberance on 4
25	5	Reinforcing profiles
	50	Profiled web at the top of 5
	51	Profiled wings on the side of 5
	53	Groove at the bottom in 5 for 35
30	54	Latching elements on 5
	55	Longitudinal webs
	56	Transverse webs
	57	Guide pin

Patentkrav

1. Beholder (1) af kunststof med en rektangulær bund (2) og fire sidevægge (3, 4), idet bunden (2) på undersiden ved sin ydre rand har en første stabelkontur (20), idet sidevæggene (3, 4) ved deres øvre randområde har en anden stabelkontur (30, 40), og idet en øvre beholders (1) første stabelkontur (20) og en nedre beholders (1) anden stabelkontur (30, 40) ved stabling af beholdere (1) over hinanden går i centrerende indgreb med hinanden, idet beholderen er en sammenklappelig beholder (1), hvis sidevægge (3, 4) er ledforbundet med bunden (2), idet bunden (2) har nedadtil åbne noter (21), **kendetegnet ved, at** mindst to over for hinanden liggende sidevægges (3, 4) øvre randområde er forstærket med hver især mindst et form- og/eller kraftbetinget på den øvrige sidevæg (3, 4) anbragt forstærkningsprofil (5), idet forstærkningsprofilet (5) ikke består af det samme materiale som den øvrige sidevæg (3, 4), og at forstærkningsprofilet/hvert forstærkningsprofil (5) ved sin bort fra beholderen (1) vendende overside har mindst en i forstærkningsprofilets (5) længderetning forløbende profilribbe (50), der danner en glideflade (11) for en anden beholder (1), der skal sættes på, idet noterne (21) er anbragt sammenfaldende med profilribberne (50), idet mindst et af forstærkningsprofilerne kan gå i indgreb med den øvrige sidevæg (3, 4) ved indstikning oppefra og nedad, hvortil sidevæggen (3, 4) har gribeelementer (34), og forstærkningsprofilet (5) har dermed samvirkende gribeelementer (54), idet forstærkningsprofilet på hver af sine endeflader har en nedad vendende styretap (57), som kan optages i en tilsvarende udsparring nær ved sidevæggen (3, 4) sidekanter.

25

2. Beholder (1) ifølge krav 1, **kendetegnet ved, at** forstærkningsprofilet/hvert forstærkningsprofil (5) i et mod sidevæggen (3, 4) vendende nedre område har en nedadtil åben not (53) eller en nedad vendende ribbe, at der på den øvrige sidevæg (3, 4) øvre rand er dannet en opad vendende ribbe (35) eller en opad åben not, og at forstærkningsprofilet (5) med sin not (53) er hægtet på eller klemmt på eller skubbet på sidevæggen (3, 4) ribbe (35) eller med sin ribbe er i indgreb med eller klemmt ind i eller skudt ind i sidevæggen (3, 4) not.

30

3. Beholder (1) ifølge et af de foregående krav, **kendetegnet ved, at** de samvirkende gribeelementer (34, 54) er dannet i et stykke med sidevæggen (3, 4) og med det tilhørende forstærkningsprofil (5).
- 5 4. Beholder (1) ifølge et af de foregående krav, **kendetegnet ved, at** to over for hinanden liggende, længere sidevægges (3) øvre randområde hver især er forstærket med et over den tilhørende sidevægs (3) længde gennemgående forstærkningsprofil (5).
- 10 5. Beholder (1) ifølge et af de foregående krav, **kendetegnet ved, at** sidevæggene (3, 4) i sig selv består af et uforstærket termoplastisk kunststof, og at forstærkningsprofilet/hvert forstærkningsprofil (5) består af et fiberforstærket kunststof eller af metal.
- 15 6. Beholder (1) ifølge et af de foregående krav, **kendetegnet ved, at** der under de mod glidefladerne (11) vendende sidevægge (3, 4) er udført liggende afsnit af bundens (2) stabelkontur (20) med hver en af noterne (21), at glidefladerne (11) og noterne (21) hver især er udformet således, at der ved påsætning af en øvre beholder (1) på en nedre beholder (1) i en i glidefladernes (11) og noternes (21) 20 længderetning i forhold til hinanden forskudt stilling den øvre beholder (1) står forskydeligt op i en forhøjet stilling på den nedre beholders (1) glideflader (11), og at glidefladerne (11) ved eller efter forskydning af den øvre beholder (1) til en med den nedre beholder (1) sammenfaldende stilling indtræder i en stabelslutstilling i noterne (21) under sænkning af den øvre beholder (1).
- 25
7. Beholder (1) ifølge krav 6, **kendetegnet ved, at** glidefladerne (11) hver især er udført som lodret rettet, gennemgående eller afbrudt ribbe, og at hver glideflade (11) ved sine endeområder (12) er udformet i trin eller affaset eller afrundet.
- 30
8. Beholder (1) ifølge et af de foregående krav, **kendetegnet ved, at** de to sidevægge (3 eller 4), der ikke vender mod glidefladerne (11), på oversiden hver især har en eller flere pukler (44) i indbyrdes afstand i disse sidevægges (3 eller 4) længderetning, hvilke pukler sikrer en på en beholder (1) sat traditionel

beholder mod forskydning i glidefladernes (11) længderetning, og hvilke puklers højde svarer til glidefladernes (11) højde.

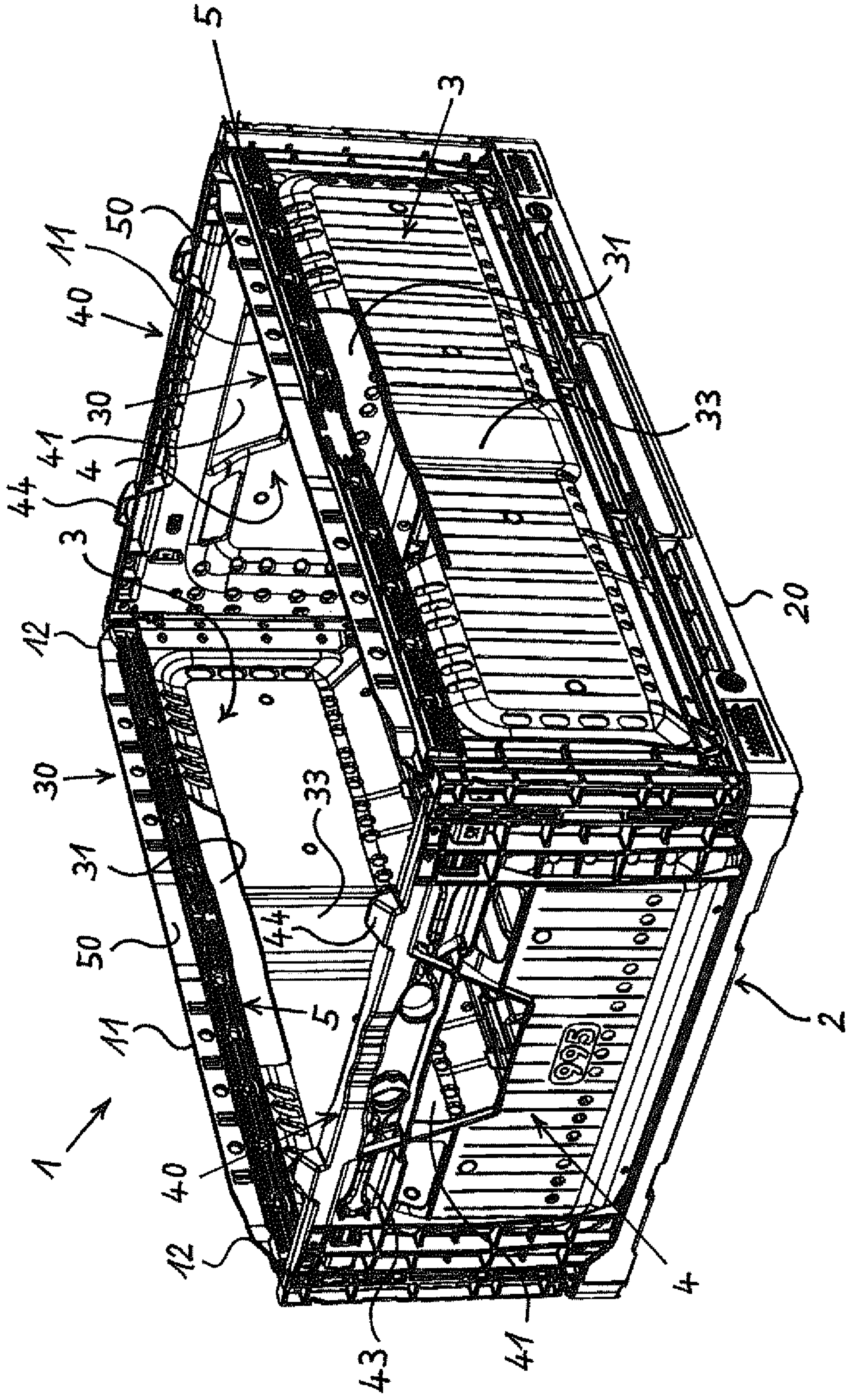


Fig. 1

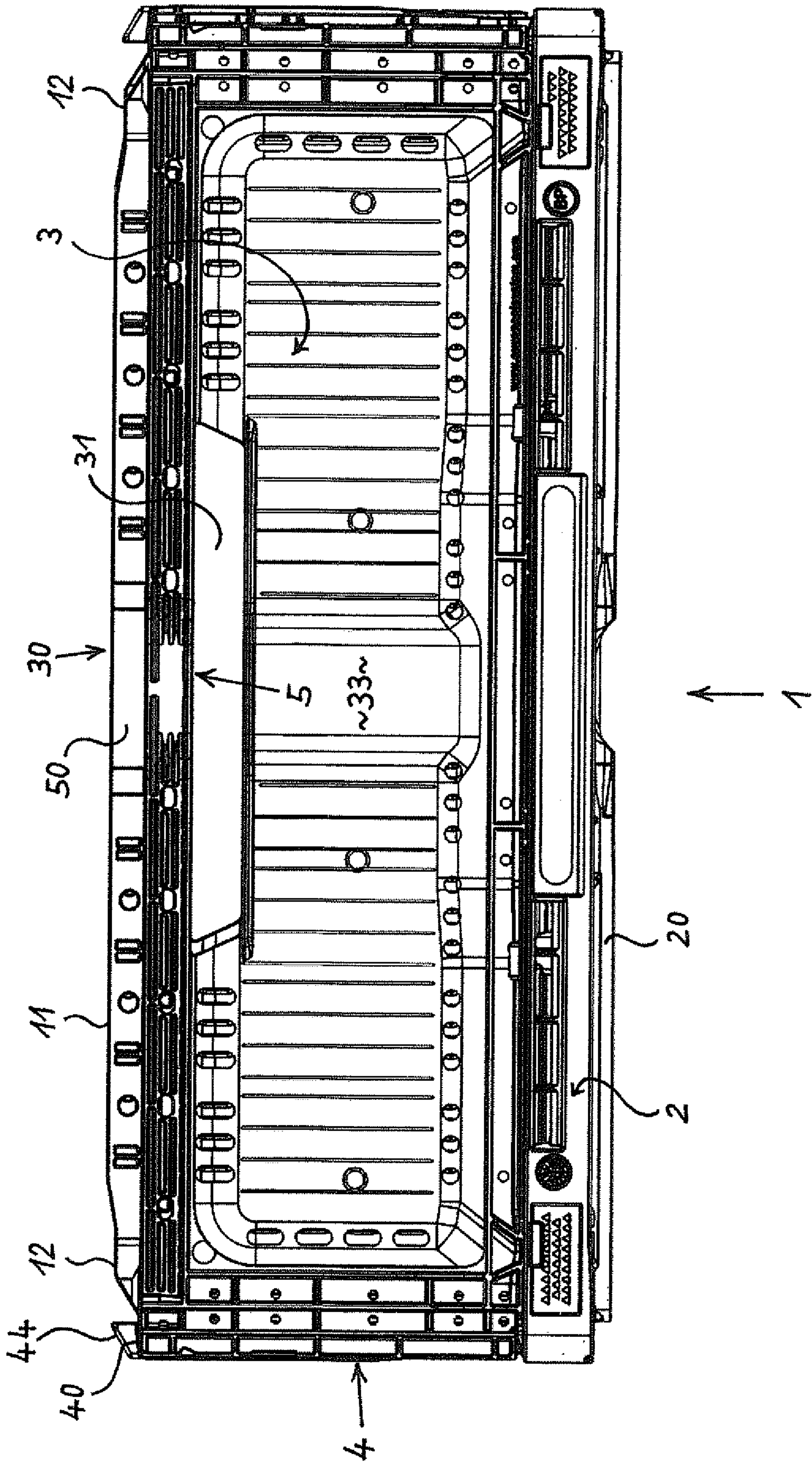


Fig. 2

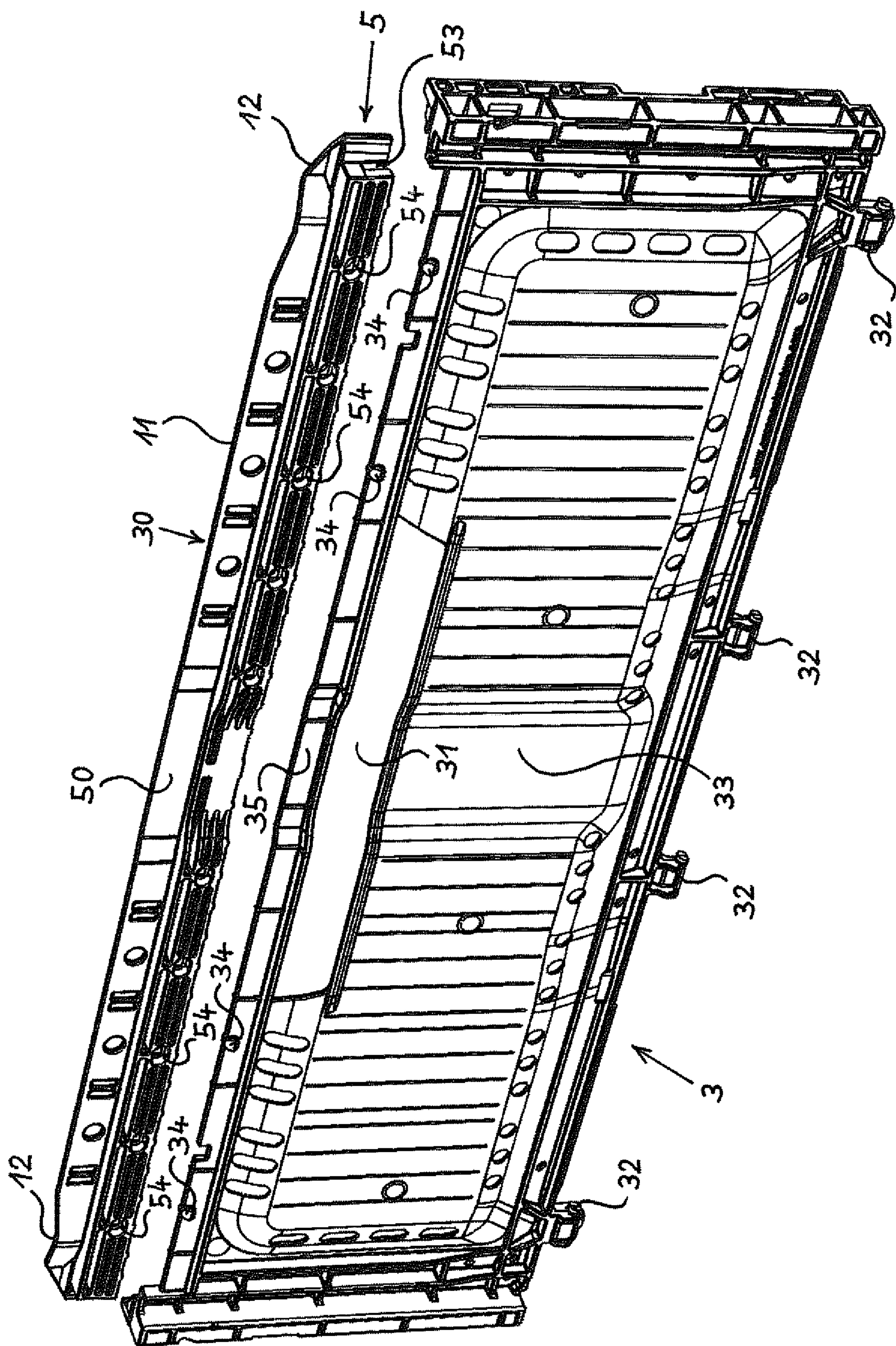


Fig. 3

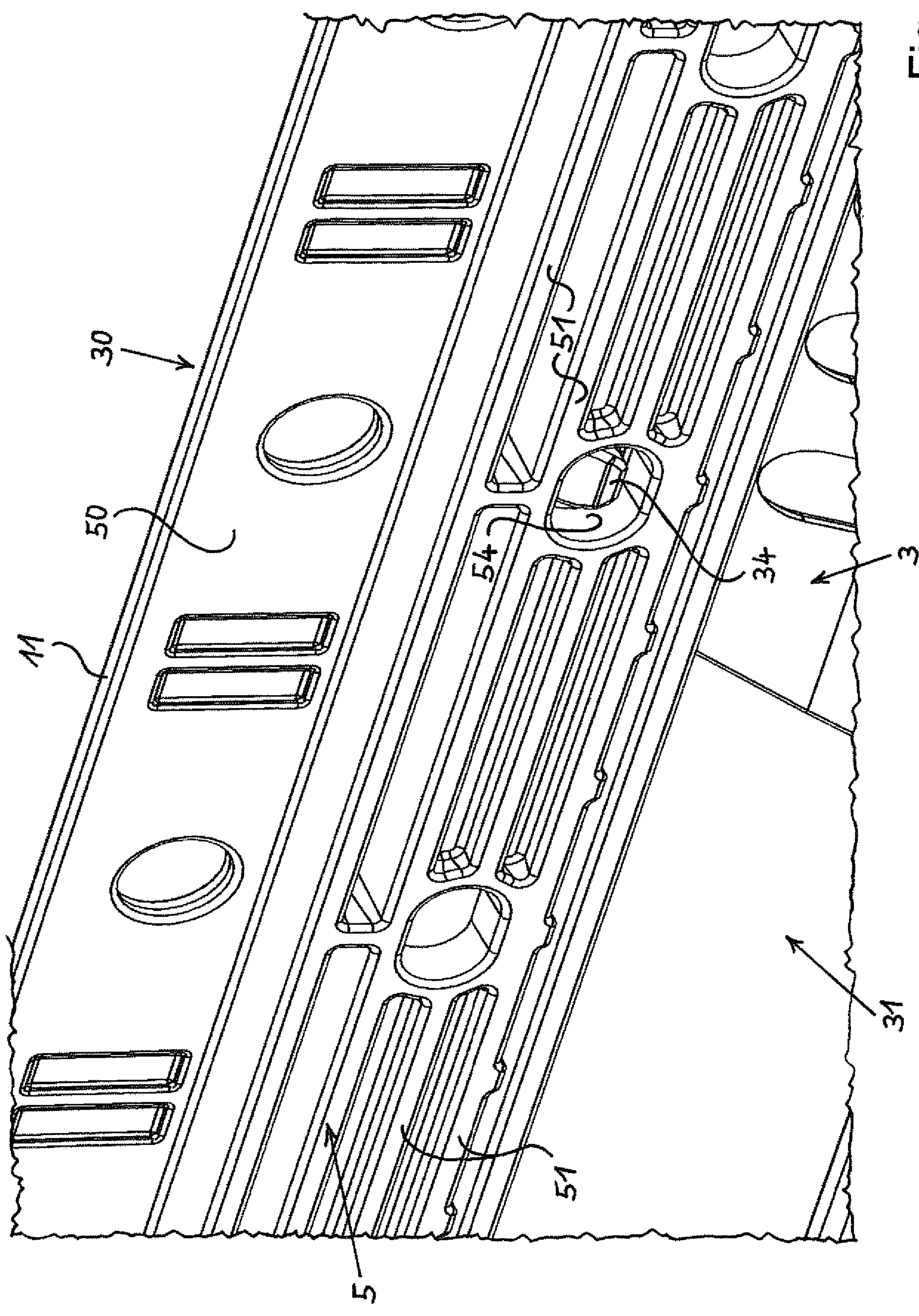


Fig. 4

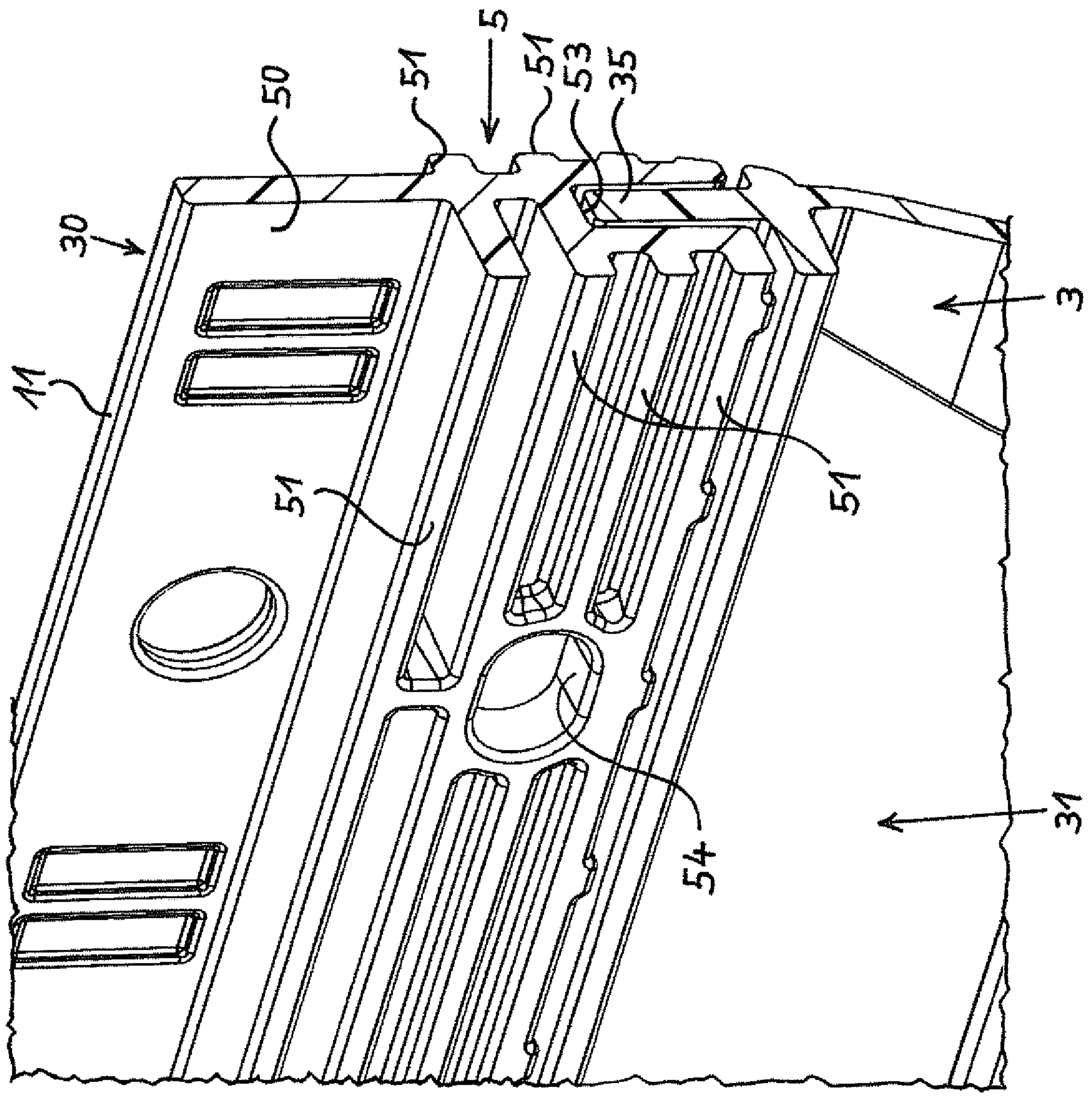


Fig. 5

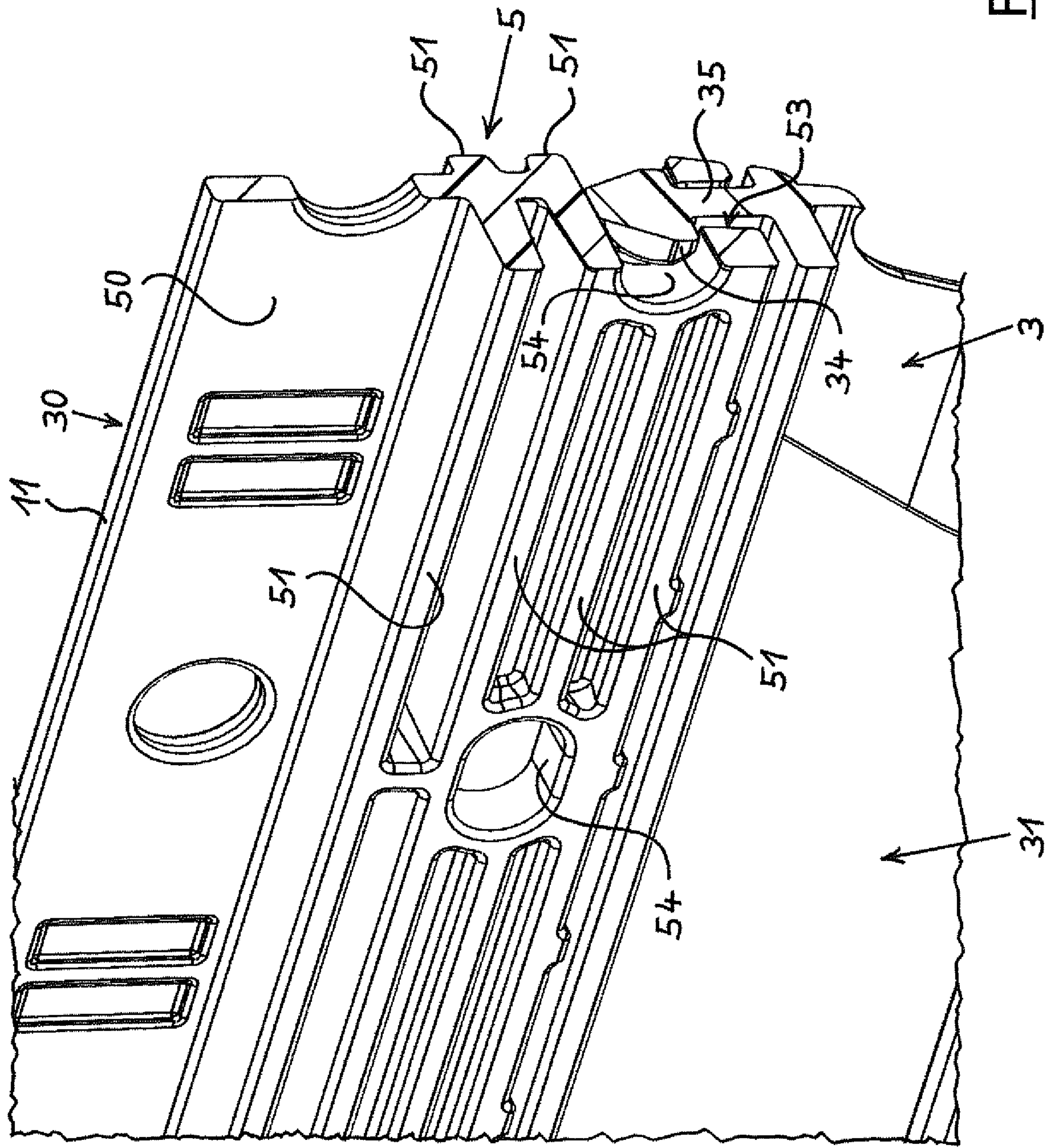


Fig. 6

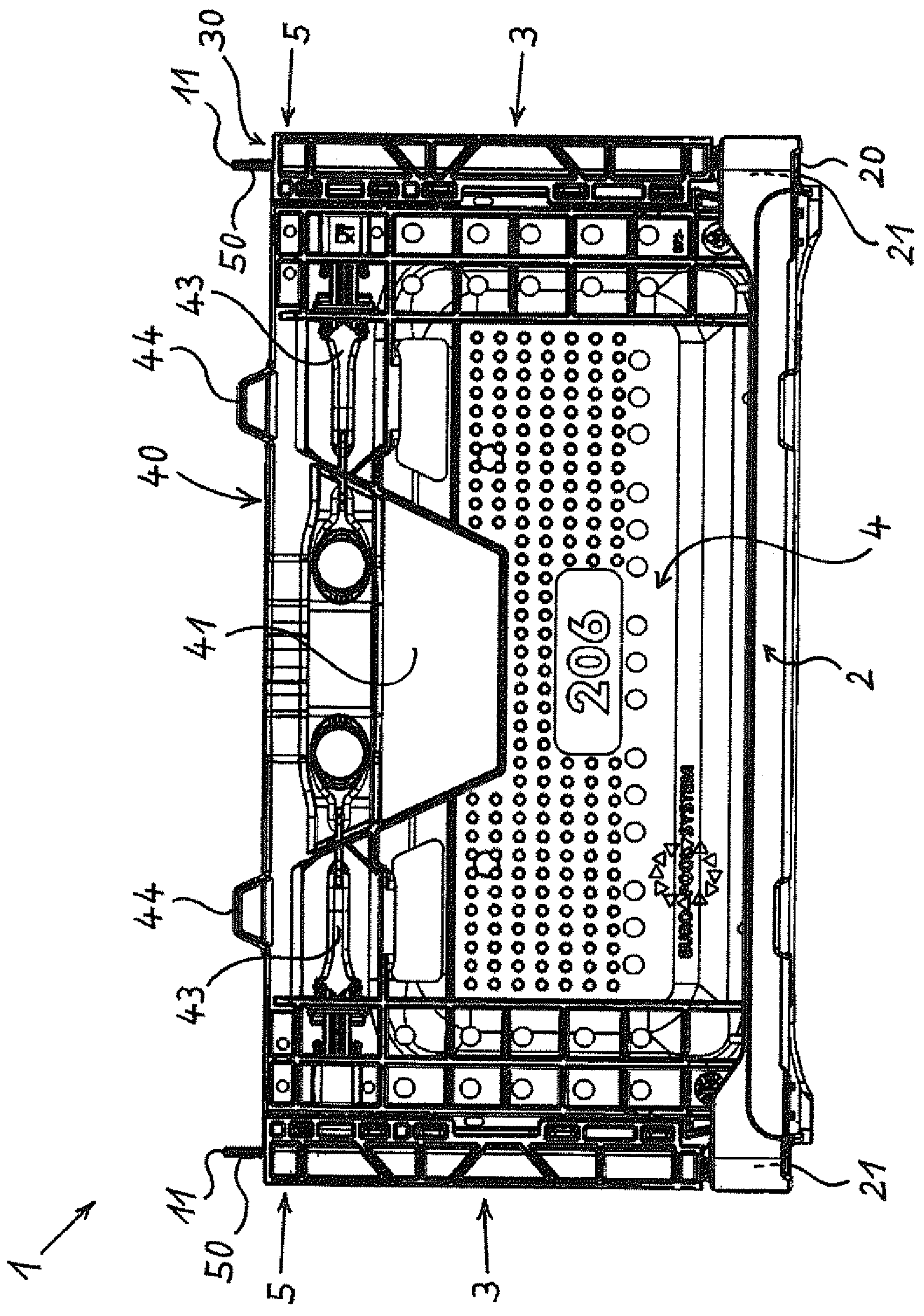


Fig. 7

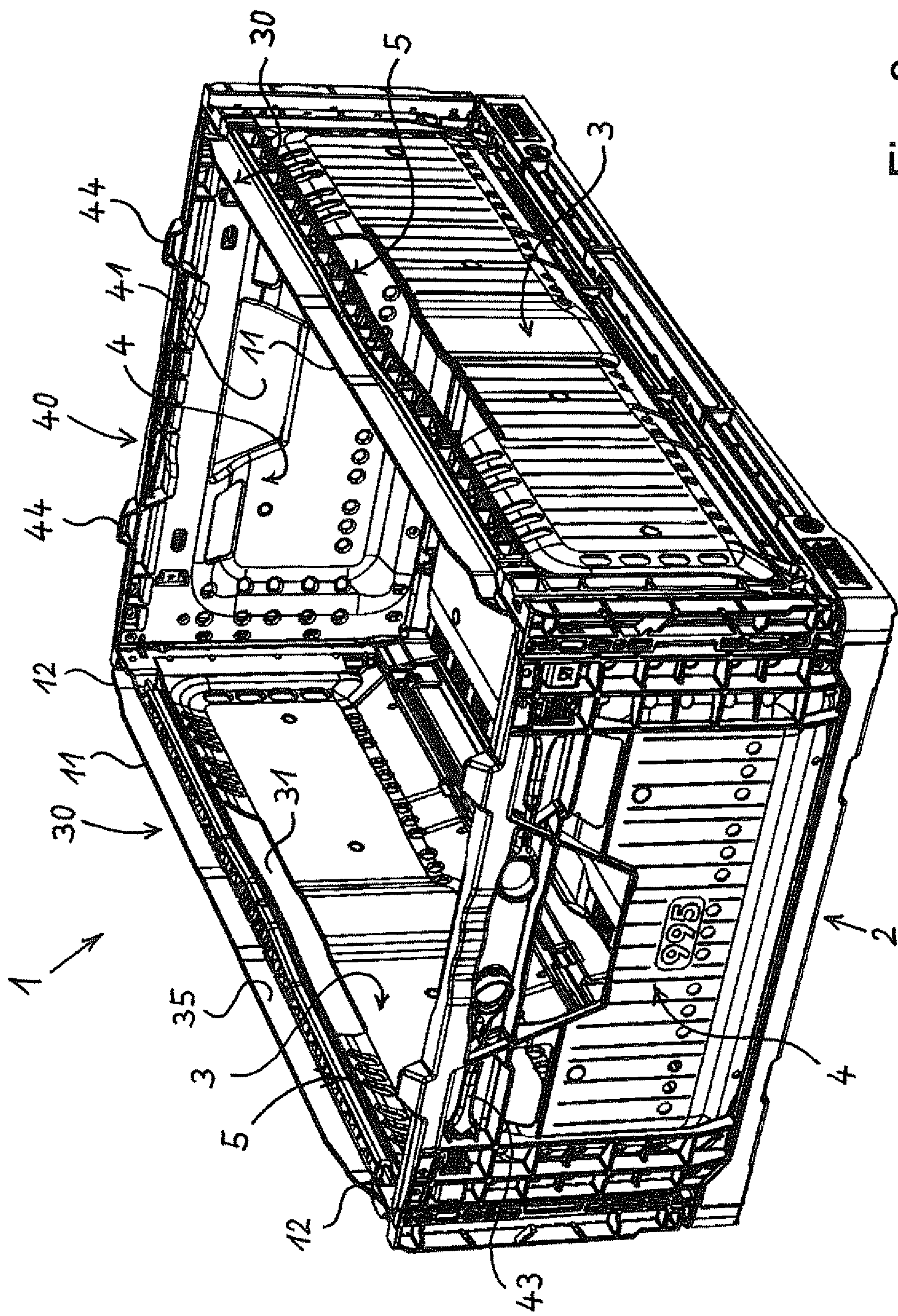


Fig. 8

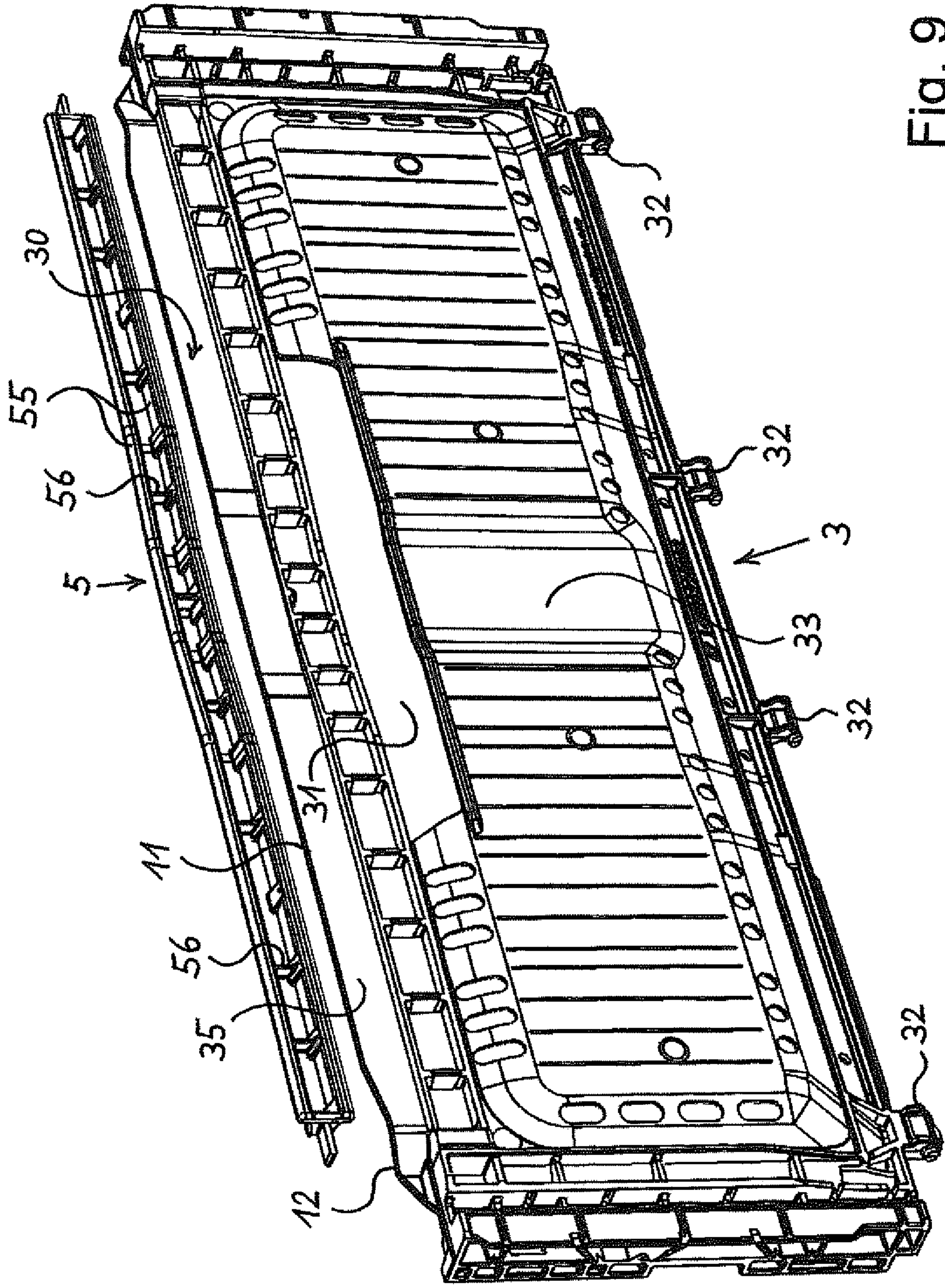


Fig. 9

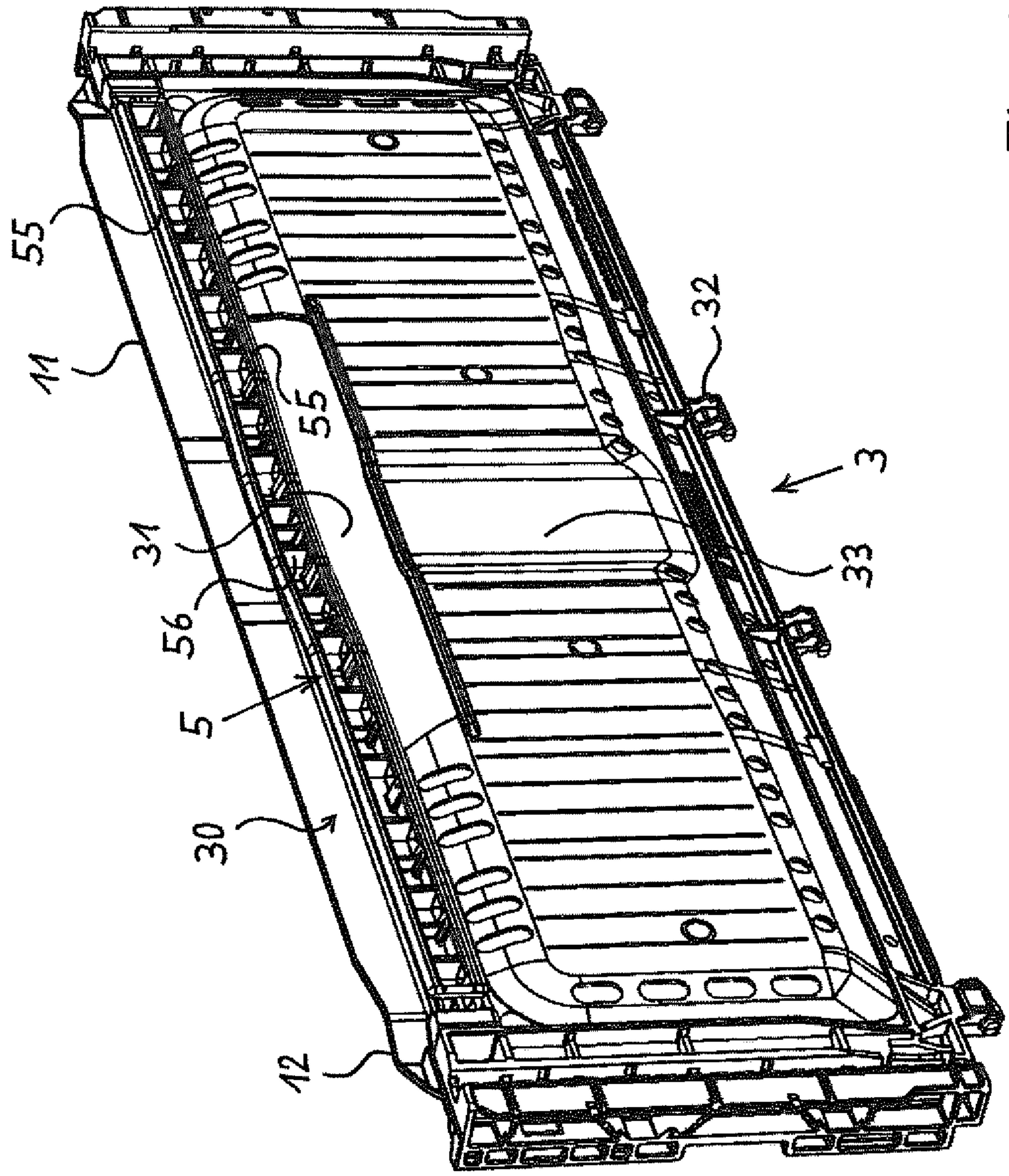


Fig. 10

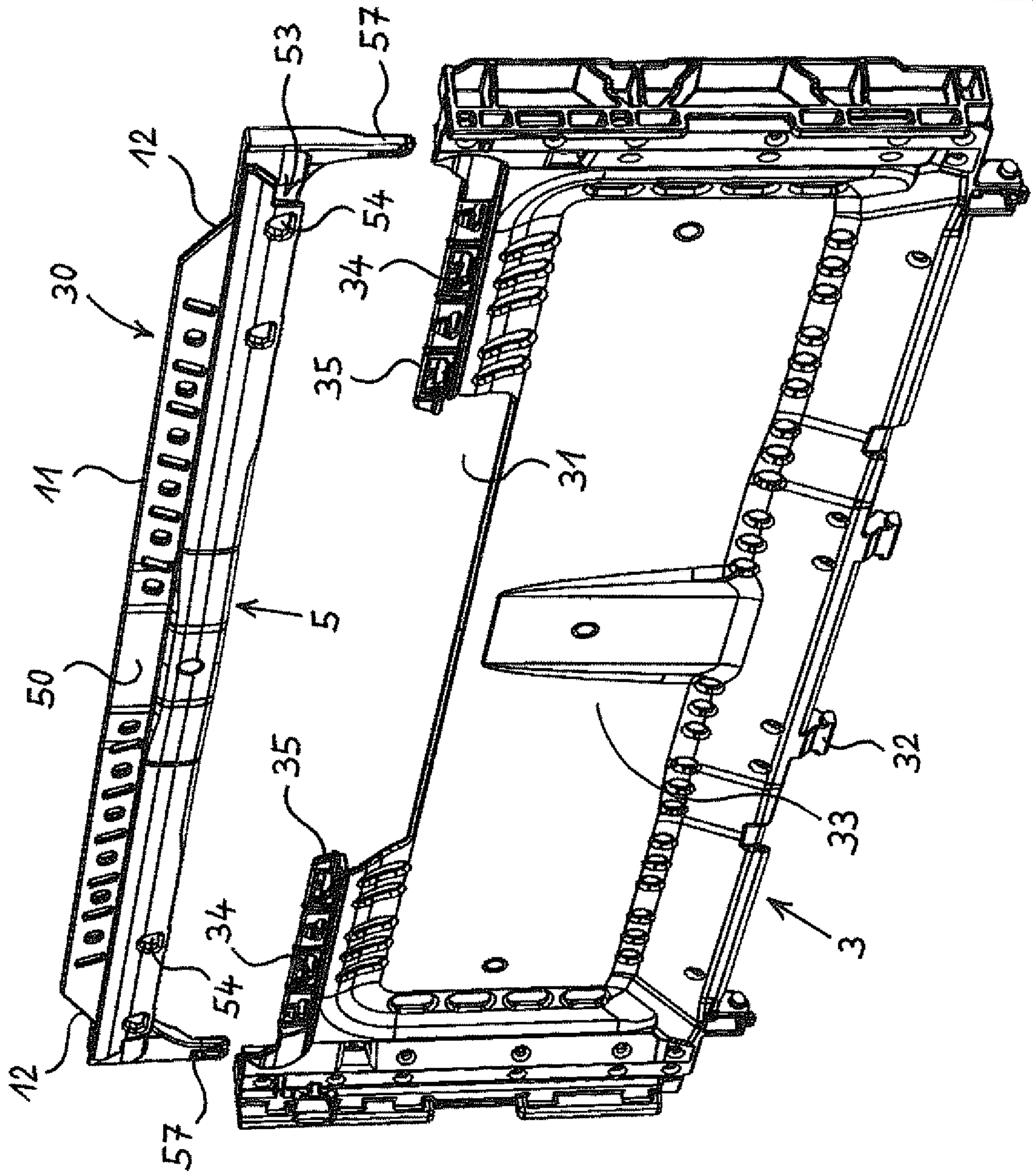


Fig. 11

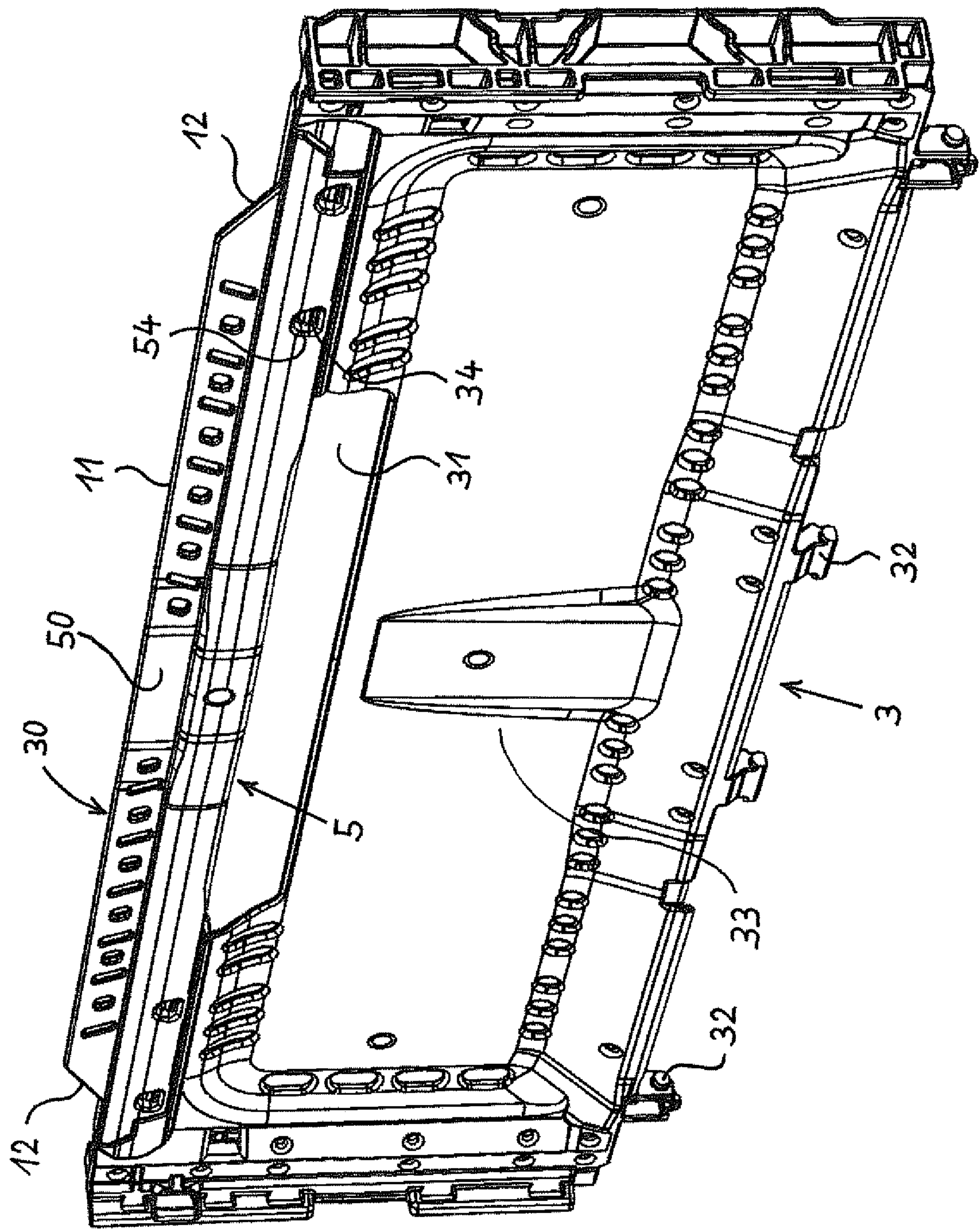


Fig. 12

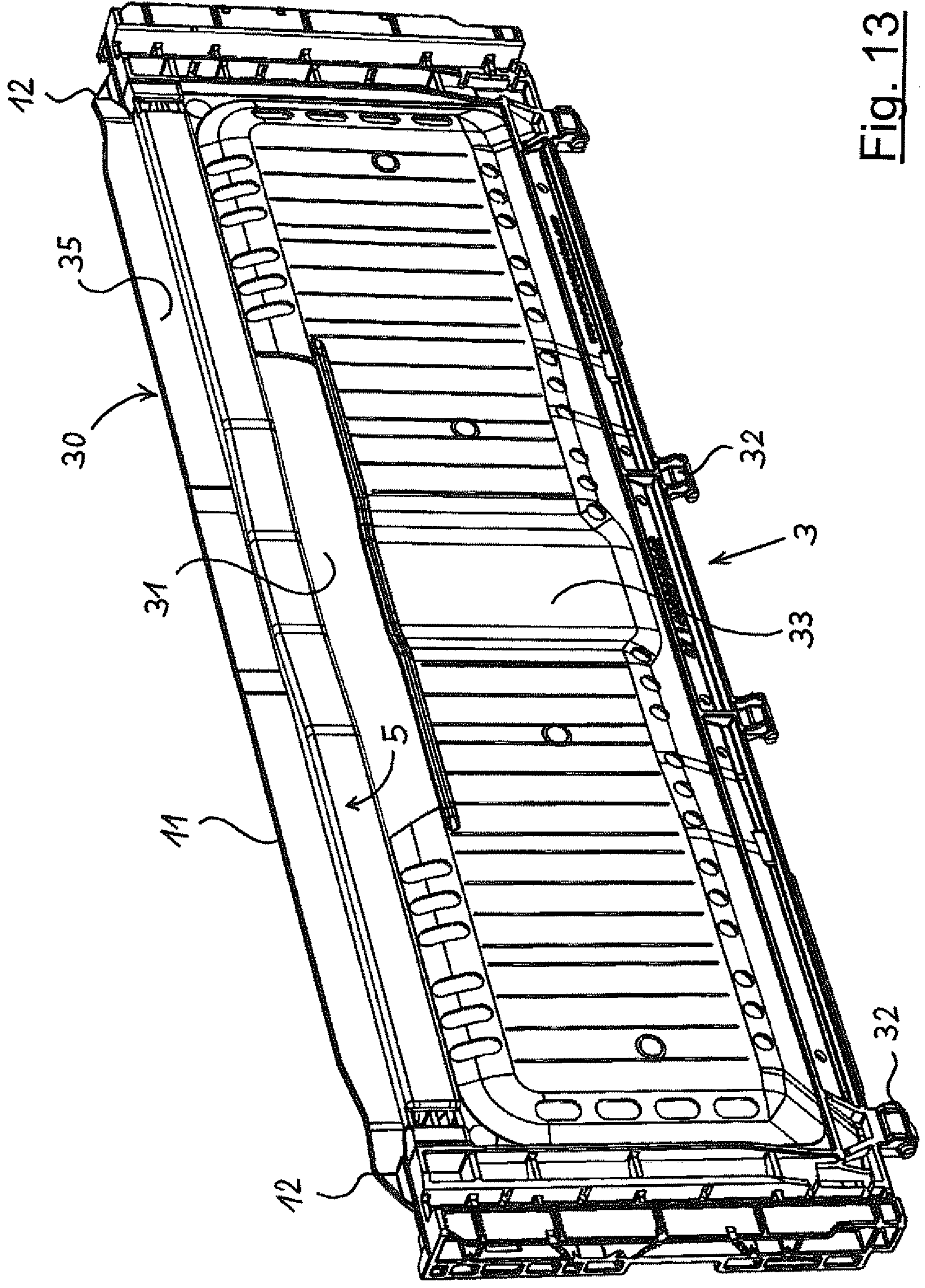


Fig. 13