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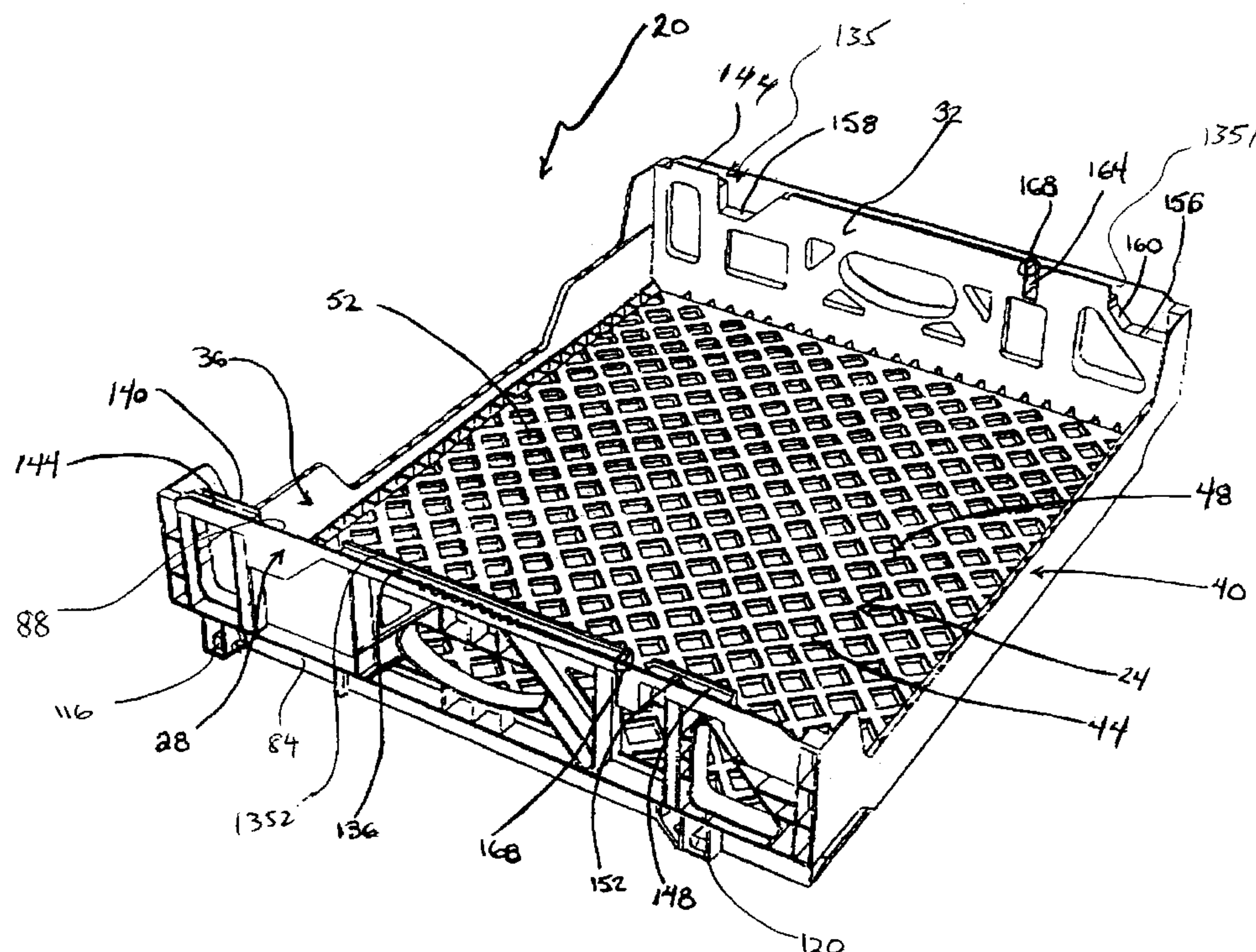
(71) Demandeur/Applicant:
NORSEMAN PLASTICS LIMITED, CA

(72) Inventeur/Inventor:
STAHL, EDWARD L., US

(74) Agent: GOWLING LAFLEUR HENDERSON LLP

(54) Titre : CONTENEUR

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(57) Abrégé/Abstract:

A novel container (20) for transport or storage of products such as bread, buns, or other goods. In one embodiment, there is provided a nestable container with a base (24) and sidewalls (28, 32) that can be stacked in two positions for different products and can be nested when empty for compact storage. The container has levered positions for lifting out of each stacking position and into a corresponding sliding position. The sliding positions can be used to offset the container or containers from the stack and reduce the strain on the operator when lifting for destacking. Alternatively, the container can slide in the opposite direction for stacking in either position. Thus the operator can set the container down, offset from the stack, in the sliding position and slide into stacking position. Back strain can be reduced during stacking and destacking as the operator does not have to extend or lean over the stack to pick up or set down the containers.



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(71) Applicant (for all designated States except US): **NORSEMAN PLASTICS LIMITED** [CA/CA]; 39 Westmore Drive, Rexdale, Ontario M9V 3Y6 (CA).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **STAHL, Edward, L.** [US/US]; 274 North Bay Drive, Smith County, Bullard, TX 75757 (US).

(74) Agents: **NASSIF, Omar, A.** et al.; Gowling Lafleur Henderson LLP, Commerce Court West, Suite 4900, Toronto, Ontario_MsL 1J3 (CA).

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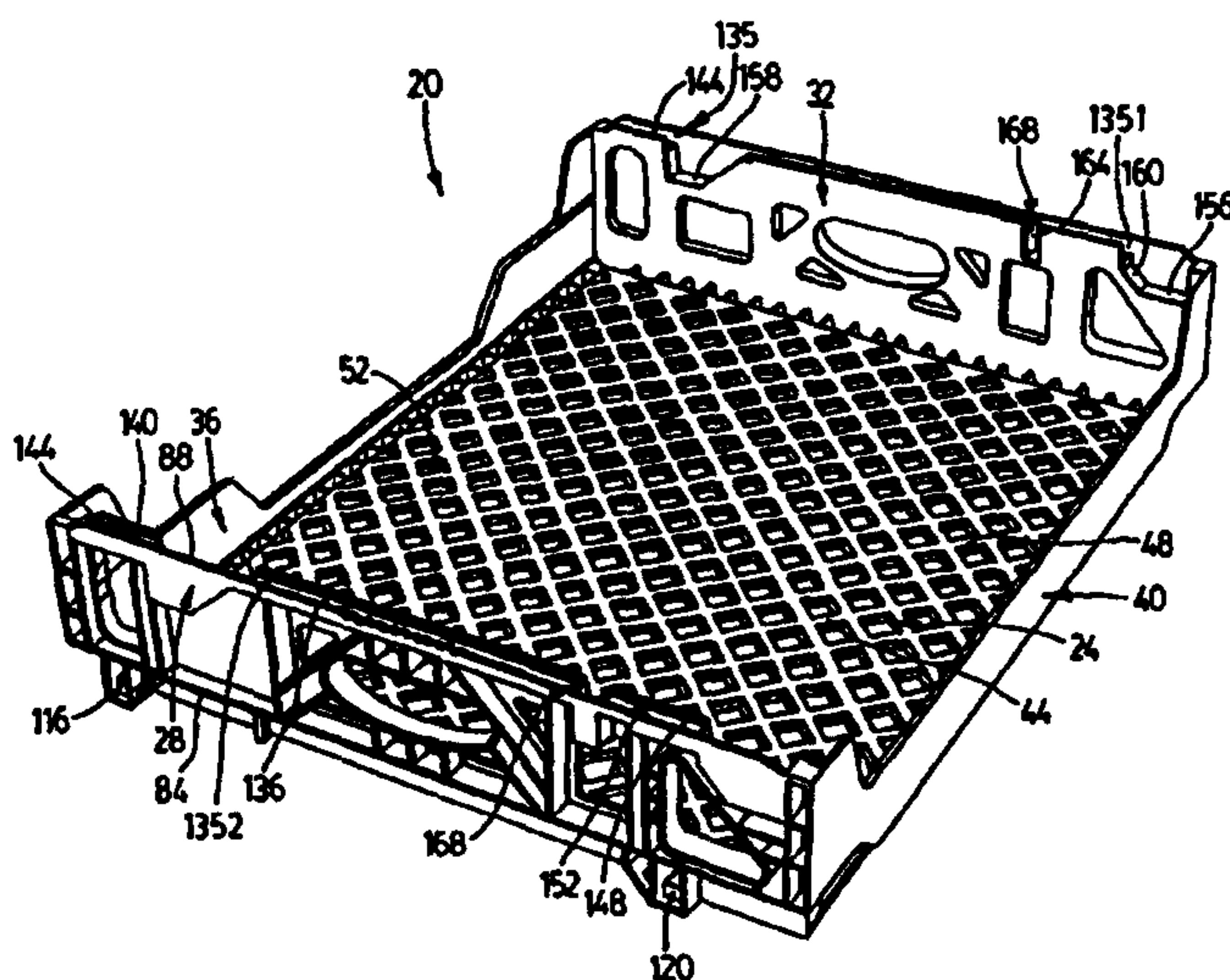
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(54) Title: MULTI-LEVEL STACKING/NESTING TRAY



(57) Abstract: A novel container (20) for transport or storage of products such as bread, buns, or other goods. In one embodiment, there is provided a nestable container with a base (24) and sidewalls (28, 32) that can be stacked in two positions for different products and can be nested when empty for compact storage. The container has levered positions for lifting out of each stacking position and into a corresponding sliding position. The sliding positions can be used to offset the container or containers from the stack and reduce the strain on the operator when lifting for destacking. Alternatively, the container can slide in the opposite direction for stacking in either position. Thus the operator can set

the container down, offset from the stack, in the sliding position and slide into stacking position. Back strain can be reduced during stacking and destacking as the operator does not have to extend or lean over the stack to pick up or set down the containers.

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MULTI-LEVEL STACKING/NESTING TRAY

FIELD OF THE INVENTION

5 The present invention relates to injection molded containers. In particular, the present invention relates to a transport and storage container.

BACKGROUND OF THE INVENTION

10 Many transport and storage containers are known. Certain containers are used to transport and store goods such as bread or buns and other foods. Containers are typically injection molded plastic and rectangular in shape.

 Containers for transportation and storage of bread products commonly have a base with a protruding base edge, a pair of opposing long sidewalls, and a pair of opposing short sidewalls. The sidewalls protrude in the opposite direction of the base edge. The opposing long sidewalls generally do not protrude as far from the base as the short sidewalls and may have a merchandiser or open section for viewing the contents held therein. The containers are stackable such that the base edge of one container is typically received by a complimentary configuration on the opposing short sidewalls of a second container. The base of the container can have a plurality of apertures for material and weight reduction. Similarly, each short sidewall commonly has a plurality of apertures and a handle in the centre for gripping the container.

 When stacking, the container is gripped by placing one hand on each handle. The container is centred above a second container and placed directly down such that the base edge of the first container is received by the footprint of the second container. Similarly, when removing one container from a stack, the container is gripped by placing one hand on each handle. The container is then lifted away from and in a direction normal to the complimentary container. Because of the configuration of the container, stacking and destacking can be awkward and ergonomically unsafe as the person lifting the container can experience lower back strain. The operator carries the load with extended arms to place the container into a stack or when removing from a stack. The container is even more awkward to destack when full. If the operator removes more than one container when destacking, the potential for back strain is

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further increased.

When moving many containers at one time, a two wheeled cart is typically used. In order to slide the blade edge of the cart under the container it is generally preferred to tilt the stack of containers so that the blade will run under the stack. A stack of containers can be difficult to tilt forward while manoeuvring a two wheeled cart into place. It can be even more difficult to tilt the stack of containers due to lack of space in a packed truck. The cart also applies pressure to the base of the bottom container of the stack. This causes flexing of the base of the container thus crushing the contents of the bottom container. Overall, using a two wheeled cart to lift a stack of containers can be awkward and / or can damage the container.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a novel container that obviates or mitigates at least one of the disadvantages of the prior art.

In one aspect of the invention there is provided a container with a base and at least one pair of opposing sidewalls. The sidewalls have a rail edge distal from the base and a plurality of receptacles. The sidewalls have runners complementary to the receptacles that project from an edge adjacent the base. The sidewalls also have a fulcrum at the junction of a rail edge and one of the receptacles. The container has a stacked position with an identical container when the runners are received in complementary receptacles of the identical container. The container has a sliding position when the runners abut a rail edge of the identical container. The container has a levered position intermediate the stacked and sliding positions when the runner respective to a fulcrum of the identical container is pivoted thereon. In a preferred embodiment of the first aspect, there are two outer runners, or feet, and a central runner respective to the fulcrum.

In a second aspect of the invention there is provided a container with a base and at least one pair of opposing sidewalls projecting normally from the base. The sidewalls have a base edge proximal to the base and a distal edge opposite the base edge. One of the base edge and the distal edge has a plurality of receptacles and the opposite one has a plurality of runners complementary to the receptacles. The sidewalls also have a fulcrum at a junction of one of the receptacles and the respective edge. The container has a stacked position with an identical container when the runners are received in complementary receptacles of the identical container.

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The container has a sliding position when the runners abut the opposite edge of the identical container. The container has a levered position intermediate the stacked and sliding positions when the runner respective to the fulcrum of the identical container is pivoted thereon.

In a third aspect of the invention there is provided a container with a base and a pair of
5 opposing sidewalls projecting normally from the base. A pair of opposing long walls project normally from the base and extend between the pair of opposing sidewalls. A skirt around the periphery of the base interconnects the base with the sidewalls and the base with the long walls. The skirt is further defined by an outward taper and a pair of notches between each of the long sides and the base. The base comprises a grid of interconnected, inverted u-shaped channels.
10 The u-shaped channels have at least one closed end and two opposing sides. The sidewalls have a rail and a rail edge distal from the base. The rail edge has a plurality of foot receptacles with a bevelled edge and at least one runner receptacle. The sidewalls have feet with a bevelled edge that are complementary to the foot receptacles and project from an edge proximal to the base. The sidewalls have at least one runner complementary to the runner receptacle that projects from
15 the edge proximal to the base. Each of the opposing sidewalls have at least one handle with finger grips on one of the opposing sidewalls. One of the opposing sidewalls also has a serrated edge distal from the base and adjacent to the rail. The container has a fulcrum at a junction of the rail edge and the runner receptacle. The container has a first stacked position with an identical container when the feet are received in complementary foot receptacles of the identical
20 container and the runner is received in complementary runner receptacle of the identical container. The container has a first sliding position, in relation to a second identical container, when the runner abuts the rail edge of the identical container. The container also has a first levered position, in relation to a second identical container, that is intermediate the first stacked and first sliding positions and the runner respective to a fulcrum of the identical container is
25 pivoted thereon. The container has a second stacking position when the feet are received in complementary foot receptacles of an opposite sidewall of the identical container. The container has a second sliding position when the feet abut the rail on the opposite sidewall of the identical container. The container also has a second levered position intermediate the second stacked and second sliding positions when one of the feet respective to one foot receptacle on the opposite
30 sidewall of the second container is pivoted thereon.

In another aspect of the invention there is provided a container comprising a base, a

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sidewall projecting from the base and comprising an upper edge, a recess, and a fulcrum disposed between the upper edge and the recess, a foot depending from the sidewall, wherein the foot is configured to reside in the recess of an identical container and to be pivotable against the fulcrum of the identical container.

5 In a further aspect of the invention there is provided a container comprising a base, including a locator hole, a sidewall, including a locator pin depending therefrom, wherein the locator pin is configured to be received within the locator hole in an identical container.

10 In yet another aspect of the invention, there is provided a container comprising a base, first and second opposed sidewalls projecting from the base, each of the first and second sidewalls including a recessed channel, and a foot depending therefrom, wherein the foot is configured to reside in the channel of an identical container, and a third sidewall projecting from the base and extending between the first and second sidewalls comprising a second foot depending from the third sidewall, a support surface including a floor, and an upstanding wall extending from the floor and presenting a surface substantially parallel with the third sidewall, 15 wherein the support surface is configured to support the second foot of an identical container.

A novel container for transport or storage of products such as bread, buns, or other goods. In one embodiment, there is provided a nestable container with a base and sidewalls that can be stacked in two positions for different products and can be nested when empty for compact storage. The container has levered positions for lifting out of each stacking position and into a corresponding sliding position. The sliding positions can be used to offset the container or 20 containers from the stack and reduce the strain on the operator when lifting for destacking. Alternatively, the container can slide in the opposite direction for stacking. Thus the operator can set the container down (offset from the stack) in the sliding position and then slide into stacking position. Back strain can be reduced during stacking and destacking as the operator does not have to extend or lean over the stack to pick up or set down the containers. 25

BRIEF DESCRIPTION OF THE DRAWINGS

Preferred embodiments of the present invention will now be described, by way of example only, with reference to the attached Figures, wherein: 30

Figure 1 is a top perspective view of the container, in accordance with a first embodiment

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of the invention;

Figure 2 is a sectional view of the u-shaped channel of the base of the container of Figure 1;

Figure 3 is a bottom perspective view of the container of Figure 1;

5 Figure 4 is a rear view of the container of Figure 1;

Figure 5 is a front view of the container of Figure 1;

Figure 6 is a right side view of the container of Figure 1;

Figure 7 is a left side view of the container of Figure 1;

Figure 8 is a top view of the container of Figure 1;

10 Figure 9a is a partial perspective view of two of the containers of Figure 1, stacked in first stacking position;

Figure 9b is a side view of two of the containers stacked in a first stacking position;

Figure 9c is a side view, opposite the side view opposite the side view of Figure 9b, of two of the containers stacked in the first stacking position;

15 Figure 9d is a partial sectional side view of two of the containers stacked in the first stacking position shown in Figure 9c;

Figure 10 is the partial sectional side view of Figure 9c showing the first container in a first levered position with respect to the second container;

20 Figure 11 is the partial sectional side view of Figure 9c showing the first container in a first sliding position with respect to the second container;

Figure 12a is a top perspective view of two of the containers of Figure 9a stacked in a second stacking position;

Figure 12b is a side view of two of the containers stacked in the second stacking position;

25 Figure 12c is a side view of two of the containers, opposite the side view of Figure 12b, stacked in the second stacking position;

Figure 12d is a partial sectional side view of two of the containers stacked in the second stacking position shown in Figure 12b;

Figure 13 is the partial sectional side view of Figure 12d showing the first container in a second levered position with respect to the second container;

30 Figure 14 is the partial sectional side view of Figure 12d showing the first container in a first sliding position with respect to the second container;

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Figure 15a is a top perspective view of the containers of Figure 13d in a nested position;
Figure 15b is a sectional side view of the containers of Figure 15a in the nested position;
Figure 16 is a top perspective view of a container of another embodiment of the present invention;

5 Figure 17 is a top plan view of the container shown in Figure 16;

Figure 18 is a detailed view of the junction between;

Figure 19 is a second detailed view of the junction between;

Figure 20 is a side elevation view of two containers, identical to the container illustrated in Figure 16, stacked in a stacking position; and

10 Figure 21 is a top perspective view of two containers, identical to the container illustrated in Figure 16, stacked in a nested position.

DETAILED DESCRIPTION OF THE INVENTION

15 Referring to Figure 1, a container in one embodiment of the invention is indicated generally at 20. Container 20 is preferably used to transport and / or store products such as bread or buns. In a present embodiment, container 20 is an injection-molded polymer such as high-density polyethylene but other materials and forming processes can be used. Container 20 comprises a substantially rectangular base 24 and two sidewalls 28, 32 that project substantially
20 normal to base 24. Opposing long sides 36, 40 extend between sidewalls 28, 32 and project substantially normal to base 24.

Base 24 is slightly bowed such that it has a convex side 44 towards the interior of container 20. Base 24 is comprised of a grid of interconnected inverted u-shaped channels 48. The grid of u-shaped channels 48 forms a plurality of apertures 52 in base 24. As best seen in
25 Figure 2, u-shaped channels 48 have a closed end 56 and two opposing sides 60 extending therefrom. Closed end 56 and opposing sides 60 form channel opening 62. Channel 48 is tapered such that each of opposing sides 60 is at an obtuse angle with end 56. It is believed that the angle can be from about one degree to about fifteen degrees with respect to the normal from closed end 56. Preferably, the angle is from about two degrees to about ten degrees with respect
30 to the normal from closed end 56. More preferably, the angle is about three degrees with respect to the normal from closed end 56.

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Referring to Figure 3, a skirt 64 runs along the periphery of base 24 and interconnects base 24 with sidewalls 28, 32 and long sides 36, 40. There are two notches 68 in skirt 64 between each of long sides 36, 40 and base 24.

Referring now to Figures 4 and 5, long side 40 is substantially rectangular with a flange 76 on each end adjoining sidewalls 28, 32. Similarly, long side 36 has flange 76 on each end adjoining sidewall 28, 32. A substantially rectangular merchandiser window 80 is framed by long side 36 and flanges 76. Skirt 64 is further defined by an outward taper 72 that runs adjacent to long sides 36, 40 and is for slideably receiving the blade of a two-wheeled cart.

Referring to Figures 6 and 7, sidewalls 28, 32 are substantially rectangular with a base edge 84 and a first rail edge 88 opposite base edge 84. Sidewall 28 has a central handle 92 substantially centred on sidewall 28. Also, sidewall 28 has a rectangular end handle 96 at one end and a triangular end handle 100 at the opposite end. Similarly, sidewall 32 has a central handle 94 substantially centred on sidewall 32. Also, sidewall 32 has a rectangular end handle 98 at one end and a triangular end handle 102 at the opposite end. Each sidewall 28, 32 has ribs 104 proximal to each handle 92, 96, 100, 94, 98, 102 for supporting sidewalls 28, 32 and handles 92, 96, 100, 94, 98, 102. Sidewall 28 is substantially the mirror-image of sidewall 32. However, sidewall 28 has finger grips 108 respective to each handle 92, 96, 100, and a serrated edge 112, each of which can be used to identify sides 28, 32.

Referring to Figures 4, 5, 6 and 7, a first guide foot 116 extends from base edge 84 of each sidewall 28, 32 and is substantially aligned with rectangular handle 96, 98. Guide foot 116 is substantially rectangular with an inwardly facing bevelled edge 124. A second guide foot 120 extends from base edge 84 of each sidewall 28, 32 and is closer to central handle 92 than first guide foot 116. Each guide foot 120 is substantially rectangular with an inwardly facing bevelled edge 126. Each foot 116, 120 has a groove 128 between its extremity and skirt 64.

As best seen in Figure 6, a substantially rectangular runner 132 is integral with skirt 64 and projects from base side 84. Runner 132 is substantially centred between central handle 92 and rectangular end handle 96. As best seen in Figure 7, sidewall 28 and its respective guide feet 116, 120 and runner 132 are substantially the mirror image of sidewall 32.

As best seen in Figures 1 and 8, a channel 135 is recessed from first rail edge 88 and extends substantially along the inner length of each sidewall 28, 32. Each channel 135 includes inwardly facing sidewalls 1351 and 1352 extending from track 1353. Sidewall 1351 includes

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an upper edge, defining first rail edge 88. Similarly, sidewall 1352 includes an upper edge, defining second rail edge 140. Each channel 135 includes a rail 136, a first depression 144, a second depression 148, a first foot receptacle 156, second foot receptacle 158, and runner receptacle 164. First depression 144 is aligned with guide foot 116 on each of sidewalls 28, 32. Second depression 148 is aligned with second guide foot 120 on each of sidewalls 28, 32. Second depression 148 has an inwardly bevelled edge 152 between depression 148 and rail 136. First foot receptacle 156 is proximal to long side 40 with an inwardly bevelled edge 160. First foot receptacle 158 is configured to received guide foot 116 and permit pivotal rotation of guided foot 116 therein about end of sidewall 28 nearest rectangular handle 96, and also permit pivotal rotation of guide foot 116 about fulcrum 168, as will be further described hereafter. Second foot receptacle 158 includes an inwardly facing bevelled edge 162. Second foot receptacle 158 is closer to central handle 92 than first foot receptacle 156. Runner receptacle 164 is disposed between rail 136 and second depression 148. A fulcrum 168 intersects receptacle 164 and rail edge 140 on the side of receptacle 164 nearest to central handle 92 on each sidewall 28, 32.

The positions for transportation and storage of container 20 will now be described with reference to the foregoing and the attached Figures. Container 20 has two stacked positions shown in Figures 9a to 9d and Figures 12a to 12d, two levered positions for destacking shown in Figures 10 and 13, two sliding positions for stacking and destacking shown in Figures 11 and 14, and a nested position for storage shown in Figure 15. In each of the above listed positions, container 20 is positioned with an identical container 20b. Note that all parts of container 20b are given the same number designations as that of container 20 but are succeeded by the label "b".

In the first stacked position, shown in Figures 9a to 9d, container 20 is stacked with container 20b such that side 28 is aligned with side 32b. Likewise, side 32 is aligned with side 28b. Each guide foot 116, 120 is received by complimentary foot receptacle 156b, 158b. Bevelled edge 124 of each guide foot 116 is adjacent to bevelled edge 160b of complimentary foot receptacle 156b. Similarly, bevelled edge 126 of each guide foot 120 is adjacent to bevelled edge 162b of complimentary foot receptacle 158b. Each runner 132 is received by complimentary runner receptacle 164b. In this configuration, central handle 92 is aligned with central handle 94b. End handles 96, 96b, 100, 100b, 98, 98b, 102, 102b are oppositely aligned such that rectangular handle 96 is aligned with triangular handle 102b and triangular handle 100

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is aligned with rectangular handle 98b. Similarly, central handle 94 is aligned with central handle 92b. Triangular handle 102 is aligned with rectangular handle 96b and rectangular handle 98 is aligned with triangular handle 100b. Serrated edges 112 and 112b are on opposing sides of stacked containers 20, 20b. As will now be apparent to those of skill in the art, a plurality of substantially identical containers 20 can be stacked together in the first stacked position.

Container 20 can be levered out of the first stacked position and into the first sliding position when destacking. From the first stacked position as shown in Figure 9d, triangular handles 100, 102 of container 20 are grasped and container 20 is urged in the direction of arrow A. The opposing ends of sidewalls 28, 32, nearest rectangular handles 96, 98 maintains contact with respective ends of sidewalls 32b and 28b of container 20b. Referring to Figure 10, container 20 is advanced in the direction of arrow B until guide foot 116 contacts rail edge 140b. Container 20 is then lowered in the direction of arrow C such that runner 132 contacts fulcrum 168b. Container 20 is urged in the direction of arrow C while a force is applied in the direction of arrow B, thereby maintaining contact between runner 132 and fulcrum 168b and lifting each first guide foot 116 out of respective receptacles 156b. When container 20 is seated again on container 20b, runner 132 is seated on rail 136b and skirt 64 is seated on flanges 76b of long side 40b, as best seen in Figure 11. This is the first sliding position.

Referring to Figure 11, container 20 is in the first sliding position with runner 132 seated on rail 136b and skirt 64 seated on flanges 76b. Container 20 can be urged in the direction of arrow A, for destacking or arrow B for stacking, sliding runner 132 along rail 136b and skirt 64 along flanges 76b. With a plurality of substantially identical containers 20 in a stack, container 20 can be destacked by sliding in the direction of arrow A. Container 20 is thus offset from the stack and the operator can lift container 20 by grasping central handles 92, 94. Offsetting container 20 from the stack before lifting can allow the operator to remain substantially upright, without bending, when lifting the container. Alternatively, container 20 can be seated in the sliding position and then urged in the direction of arrow B for stacking, again allowing the operator to remain substantially upright.

In the second stacked position, shown in Figures 12a to 12d, container 20 is stacked with container 20b such that sidewall 28 is aligned with sidewall 28b. Likewise, sidewall 32 is aligned with sidewall 32b. On each of sidewall pairs 28, 28b and 32, 32b, guide foot 116 is seated on complimentary rail depression 144b. Guide foot 120 is seated on complimentary rail depression 148b. Bevelled edge 126 of guide foot 120 is adjacent to bevelled edge 152b of

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depression 148b. Runner 132 is adjacent rail edge 140b. Guide foot 116 is aligned with guide foot 116b and guide foot 120 is aligned with guide foot 120b. Runner 132 is aligned with runner 132b. In this configuration, central handle 92 is aligned with central handle 92b. Rectangular end handles 96 and 96b are aligned, triangular end handles 100 and 100b are aligned, and serrated edges 112 and 112b are aligned. Similarly, central handles 94 and 94b are aligned, rectangular handles 98 and 98b are aligned, and triangular handles 102 and 102b are aligned. The distance between base 24 and base 24b is greater in the second stacked position than in the first stacked position. As will now be apparent to those of skill in the art, a plurality of substantially identical containers 20 can be stacked together in the second stacked position.

Container 20 can be levered out of the second stacked position when destacking. From the second stacked position as shown in Figure 12d, rectangular end handles 96, 98 are grasped and container 20 is urged in the direction of arrow A. On each of sidewall pairs 28, 28b and 32, 32b, second guide foot 120 maintains contact with depression 148b while first guide foot 116 is urged out of depression 144b. Referring to Figure 13, container 20 is advanced in the direction of arrow B causing bevelled edge 124 of guide foot 120 to slide against bevelled edge 152b of depression 148b, thereby urging guide foot 120 out of depression 144b and onto rail 136b. Container 20 is then moved in the direction of arrow C. When container 20 is seated on container 20b, guide foot 120 is seated on rail 136b and skirt 64 is seated on flanges 76b, as best seen in Figure 14. This is the second sliding position.

Referring now to Figure 14, container 20 is in the second sliding position with guide foot 120 seated on rail 136b and skirt 64 seated on flanges 76b. Container 20 can be urged in the direction of arrow D for destacking or arrow E for stacking, by sliding guide foot 120 on rail 136b and skirt 64 on flanges 76b. With a stack of substantially identical containers 20, container 20 can be destacked by sliding in the direction of arrow D. Container 20 is thus offset from the stack and the operator can lift container 20 by grasping central handles 92, 94. Offsetting container 20 from the stack before lifting can allow the operator to remain substantially upright, without bending, when lifting the container. Alternatively, container 20 can be seated in the sliding position and then urged in the direction of arrow E for stacking. Seating the container in the sliding position before stacking, again, can allow the operator to remain substantially upright.

In the nested position, shown in Figures 15a and 15b, container 20 is seated perpendicular to container 20b. Long sides 36b, 40b of container 20b are received by notches 68 of container 20. A stack of containers 20 in either stacked position can be lifted and moved using, for

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example, a two-wheeled cart. The blade of the cart is slideably received under skirt 64 of container 20 at taper 72. Tilting the cart thus lifts the stack of containers as base 24 and skirt 64 are in contact with the cart blade.

The stacking configuration of a plurality of containers 20 and the orientation of a container can be determined by the operator by using tactile or visual means. The operator can recognize sidewall 28 of container 20 by touching any of serrated edge 112 or finger grips 108 on each handle 92, 96, 100. Alternatively, the operator can recognize sidewall 28 of container 20 by visual recognition of the above mentioned features.

Figure 16 illustrates another embodiment of the container of the present invention, and is generally indicated at 200. Container 200 is similar to container 20. Like container 20, container 200 includes a substantially rectangular base 224, a pair of opposed sidewalls 228, 232 that project normally to base 224 and a pair of opposed long sidewalls 236, 240 that also project substantially normal to base 224. Opposed long sidewalls 236, 240 extend between and merge with sidewalls 228, 232. Base 224 includes a plurality of apertures 252, one of which is relatively oversized to define a locator hole 253 (see Figure 17).

Referring to Figure 16, a skirt 264 runs along and extends from the periphery of base 224 and interconnects base 224 with sidewalls 228, 232 and long sidewalls 236, 240. Skirt 264 includes a first skirt section 2641, a second skirt section 2642, a third skirt section 2643, and a fourth skirt section 2644. Skirt section 2641 runs along sidewall 228 and interconnects sidewall 228 to base 224. Skirt section 2642 runs along long side 236 and interconnects sidewall 236 to base 224. Skirt section 2643 runs along sidewall 232 and interconnects sidewall 232 to base 224. Skirt section 2644 runs along long side 240 and interconnects sidewall 240 to base 224. Two notches 268 are formed along the bottom edge of skirt sections 2642 and 2644. Skirt 264 further includes an outward taper 272 that runs adjacent to long sides 236 and 240 and is provided for engaging the blade of a two-wheeled cart.

Sidewall 228 is formed with handles 292, 296, and 308. Similarly, sidewall 232 is formed with handles 294, 298, and 302.

Each of sidewalls 228 and 232 includes a base edge 284 and a first rail edge 288 opposite base edge 284. A first guide foot 316, a second guide foot 320, and a runner 332 are provided extending from base edge 284 of each sidewall 228 and 232. Runner 332 is disposed between first guide foot 316 and second guide foot 320. Sidewall 228 is substantially the mirror-image of sidewall 232.

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A channel 335 is recessed from first rail edge 288 and extends substantially along the inner length of each sidewall 228 and 232. Each channel 335 includes inwardly facing sidewalls 3351 and 3352 extending from a track 3353. Each sidewall 3351 includes an upper edge, defining first rail edge 288. Similarly, each sidewall 3352 includes an upper edge, defining second rail edge 340. Each track 3353 includes a track surface 336, a first depression 344, a second depression 348, a first foot receptacle 356, a second foot receptacle 358, and a runner receptacle 364. First depression 344 is aligned with first guide foot 316. Second depression 348 is aligned with second guide foot 320. First foot receptacle 356 is proximal to long side 240, and is configured to receive first foot 316 of a second identical container 200. Second foot receptacle 358 is closer to central handle 292 or 294 than first foot receptacle 356, and is configured to receive second foot 320 of a second identical container 200. Runner receptacle 364 is configured to receive runner 332 of a second identical container 200. A fulcrum 368 is defined by the intersection of receptacle 364 and rail edge 340 on the side of receptacle 364 nearest central handle 292 or 294.

Long sidewall 236 includes an upper edge 402 and a lower edge 404. First foot 406 and second foot 408 extend from lower edge 404 at either end of long sidewall 236.

Referring to Figures 16, 18 and 19, long sidewall 240 includes a first support surface 410 and a second support surface 412, both disposed above base 224. Support surfaces 410, 412 are configured to provide seating and support for first foot 406 and second foot 408, respectively, of a second identical container 200. Each of support surfaces 410, 412 includes a floor 414 and an upstanding wall 416 extending from floor 414 and presenting a surface substantially parallel to that of long side 240. In this respect, wall 416 functions as a stop, for blocking lateral movement of first foot 406 or second foot 408. Spaced inwardly from and opposing wall 416, inclined surface or ramp 418 extends from floor 414, thereby impeding travel of first foot 406 or second foot 408 in the direction of inclined surface 418 and mitigating untimely unseating of first foot 406 or second foot 408 from support surfaces 410 and 412, respectively. Inclined surface 418 also facilitates seating and unseating of first foot 406 or second foot 408 with relative little difficulty.

Long sidewall 240 also includes a locator pin 2401, extending from upper edge 402 proximate to sidewall 228. Locator pin 2401 is trapezoidal-shaped and is configured to restrict the stacking of identical containers 200 to a single desired directional orientation. In this respect, of all the apertures 252, locator hole 253 is the only aperture 252 capable of receiving locator pin

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2401. Referring to Figure 17, locator hole 253 is disposed in base 224 of container 200, and configured to be located over locator pin 2401 of an identical container 200b to effect stacking of containers 200 and 200b in a desired directional orientation.

The positions for storage and transportation of container 200 will now be described. Container 200 is shown positioned with identical containers 200b and 200c. Note that all parts of containers 200b and 200c are given the same number designations as that of container 200 but are succeeded by the reference characters "b" and "c" respectively.

Referring to Figure 20, in a stacked position, container 200 is stacked with container 200b such that sidewall 228 is aligned with sidewall 228b. Likewise, sidewall 232 is aligned with sidewall 232b. This configuration is very similar to that illustrated in Figures 12a to 12d with the exception that first foot 404b and second foot 406b of second container 200b are seated upon support surfaces 410, 412, respectively, in the Figure 20 embodiment.

In the nested position, shown in Figure 21, container 200b is seated perpendicular to and upon container 200. In this respect, skirt section 2641 hangs over long sidewall 240, and sidewall 218 is substantially parallel with long sidewall 240. Similarly, skirt section 2642 hangs over long sidewall 236, and sidewall 232 is substantially parallel with long sidewall 236. Long sidewalls 236, 240 of container 200 are received by notches 268b of container 200b to stabilize the stacked/nested configuration. Locator pin 2401 is received by locator hole 253b to effect the above described orientation of container 200b relative to container 200. A third container 200c can then be seated perpendicular to container 200b, in a manner similar to that described above with respect to containers 200 and 200b, by positioning locator hole 253c over locator pin 2401 and receiving long sidewalls 236b and 240b within notches 268c. The resultant orientation of container 200c relative to container 200 dictates that first foot 316c is received by first foot receptacle 356, second foot 320c is received by second foot receptacle 358, and runner 332 is received by runner receptacle 364. Similarly, first foot 404c and second foot 406c are seated upon support surfaces 410 and 412 respectively. Such configuration minimizes stacking height of containers 200, 200b, and 200c.

Containers 200, stacked in this manner, can be lifted and moved using, for example, a two-wheeled cart. The blade of the cart is slideably received under skirt 64 of container 200 at taper 72, and particularly under the section of skirt 264 running adjacent to long side 236. Tilting the cart thus lifts the stack of containers as base 224 and skirt 264 are in contact with the cart blade. Interaction between first foot 404 and second foot 406 with support surfaces 410 and 412

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mitigate the possibility of containers 200 losing their stacking relationship with one another as the cart is tilted.

In a presently preferred embodiment, the first stacking position can be used for transportation and storage of buns such as hot dog or hamburger buns. The second stacking position can be used for the transportation and storage of loaves of bread. Alternatively, the container can be used for the storage and transportation of other goods such as produce or sweet goods eg. cakes.

While the embodiments discussed herein are directed to particular implementations of the present invention, it will be apparent that the subsets and variations to these embodiments are within the scope of the invention. For example, the size of the sidewalls or long sides can differ from above or may all be equal in length. Alternatively, the feet and runner positions may be interchanged with the rail, rail edge and receptacles such that the feet and runner are on the edge of the sidewall distal to the base and the rail, rail edge and receptacles may be on the edge of the sidewall adjacent the base. The container may have only one stacking position when stacked with an identical container. Also, the container may or may not have a merchandiser window on either or both of the long sides. The container may have a logotype on one side and not the other for easy identification of the stacking position. Other ribs may be added or a different arrangement of ribs may be present on the sides of the container for additional strength and rigidity. The shape of any of the features can differ while still performing the same function. Furthermore, collectively, runner 132 and feet 116, 120 can be considered to be a plurality of runners.

The present invention provides a novel container for transport or storage of products such as bread, buns, or other goods. In one embodiment, there is provided a nestable container with a base and sidewalls that can be stacked in two positions for different products and can be nested when empty for compact storage. The container has levered positions for lifting out of each stacking position and into a corresponding sliding position. The sliding positions can be used to offset the container or containers from the stack and can allow the operator to remain substantially upright, without bending, and can thus reduce the back strain on the operator when lifting for destacking. Alternatively, the container can slide in the opposite direction for stacking in either position. Thus the operator can set the container down (on the uppermost container of the stack, and offset therefrom) into the sliding position and then slide the container into the stacking position. Back strain can be reduced during stacking and destacking as the operator

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does not have to extend or lean over the stack to pick up or set down the containers. The container has a serrated edge on one sidewall and finger grips on each handle of the same sidewall. Thus, the orientation of the container or stacking configuration of a plurality of containers is easily recognized by either tactile or visual means. The container has a skirt with
5 a tapered section around the periphery of the base for slideably receiving a cart when moving containers. Thus the stack of containers does not require awkward tilting and manoeuvring of the cart. Also, the front of the containers is not damaged from frequent impact with the edge of a two-wheeled cart. The base of the container is slightly bowed so that the interior is convex and is comprised of many interconnected tapered u-shaped channels. The bowed base and the tapered
10 channels increase the strength and resistance to deformation of the base. When lifting these containers with a two-wheeled cart, pressure is applied to the base of the container. The increased strength of the base can reduce damage to the contained goods.

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We claim:

1. A container comprising:

a base;

at least one pair of opposing sidewalls projecting normally from said base;
said sidewalls having a rail edge distal from said base and having a plurality of receptacles;

said sidewalls having runners complementary to said receptacles and projecting from an edge adjacent said base; and

a fulcrum at a junction of said rail edge and one of said receptacles such that said container has a stacked position with an identical container when said runners are received in complementary receptacles of said identical container, a sliding position when said runners abut a rail edge of said identical container and a levered position intermediate said stacked and sliding positions when said runner respective to a fulcrum of said identical container is pivoted thereon.

2. The container according to claim 1 having a second stacked position with said identical container wherein said runners are received in complementary receptacles of an opposite one of said sidewalls of said identical container.

3. The container according to claim 2 wherein said first stacked position has a different height between said base and a base of said identical container than said second stacked position.

4. The container according to claim 3 wherein said first stacked position is for transportation and storage of buns and said second stacked position is for transportation and storage of bread.

5. The container according to claim 2 wherein said container has a second sliding position when said runners abut said rail edge on said opposite one of said sidewalls of said identical container.

6. The container according to claim 5 wherein said container has a second levered position intermediate said second stacked and said second sliding position when one of said runners

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respective to one of said receptacles on said opposite one of said sidewalls of said second container is pivoted thereon.

7. The container according to claim 1 wherein said container further comprises;
5 a skirt around the periphery of said base, interconnecting said base with said sidewalls

8. The container according to claim 1 wherein said container further comprises;
a pair of long walls projecting normally from said base, extending between said one pair
of said opposing sidewalls; and

10 a skirt around the periphery of said base, interconnecting said base with said sidewalls
and said base with said long walls;

said skirt having a plurality of notches for receiving said long walls of said second
container when said container is seated perpendicular said second container.

15 9. The container according to claim 1 wherein said base is comprised of a grid of
interconnected, inverted u-shaped channels, said u-shaped channels having at least one closed
end and two opposing sides.

20 10. The container according to claim 2 wherein said u-shaped channels are tapered such that
each of said opposing sides form an angle of from about one degree to about fifteen degrees from
the normal of said closed end.

25 11. The container according to claim 2 wherein said u-shaped channels are tapered such that
each of said opposing sides form an angle of from about two degrees to about ten degrees from
the normal of said closed end.

12. The container according to claim 2 wherein said u-shaped channels are tapered such that
each of said opposing sides form an angle of about three degrees from the normal of said closed
end.

30 13. The container according to claim 2 wherein each of said opposing sidewalls has at least
one handle, said handle having finger grips on one of said opposing sidewalls for determining

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orientation of said container when stacked with said second identical container.

14. The container according to claim 2 wherein one of said opposing sidewalls has a serrated edge, said serrated edge for determining orientation of said container when stacked with said
5 second identical container.

15. The container according to claim 7 wherein said skirt has an outward taper for slideably receiving the lifting edge of a cart when moving said container.

10 16. The container according to claim 8 wherein at least one of said long walls frames a merchandiser window.

17. A container comprising:

a base;

15 a sidewall projecting from the base and comprising an upper edge, a recess, and a fulcrum disposed between the upper edge and the recess;

a foot depending from the sidewall, wherein the foot is configured to reside in the recess of an identical container and to be pivotable against the fulcrum of the identical container.

20 18. A container comprising:

a base, including a locator hole;

a sidewall, including a locator pin depending therefrom;

wherein the locator pin is configured to be received within the locator hole in an identical container.

25 19. A container comprising:

a base;

first and second opposed sidewalls projecting from the base, each of the first and second sidewalls including a recessed channel, and a foot depending therefrom, wherein the foot is
30 configured to reside in the channel of an identical container;

a third sidewall projecting from the base and extending between the first and second sidewalls comprising a second foot depending from the third sidewall, a support surface

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including a floor, and an upstanding wall extending from the floor and presenting a surface substantially parallel with the third sidewall, wherein the support surface is configured to support the second foot of an identical container.

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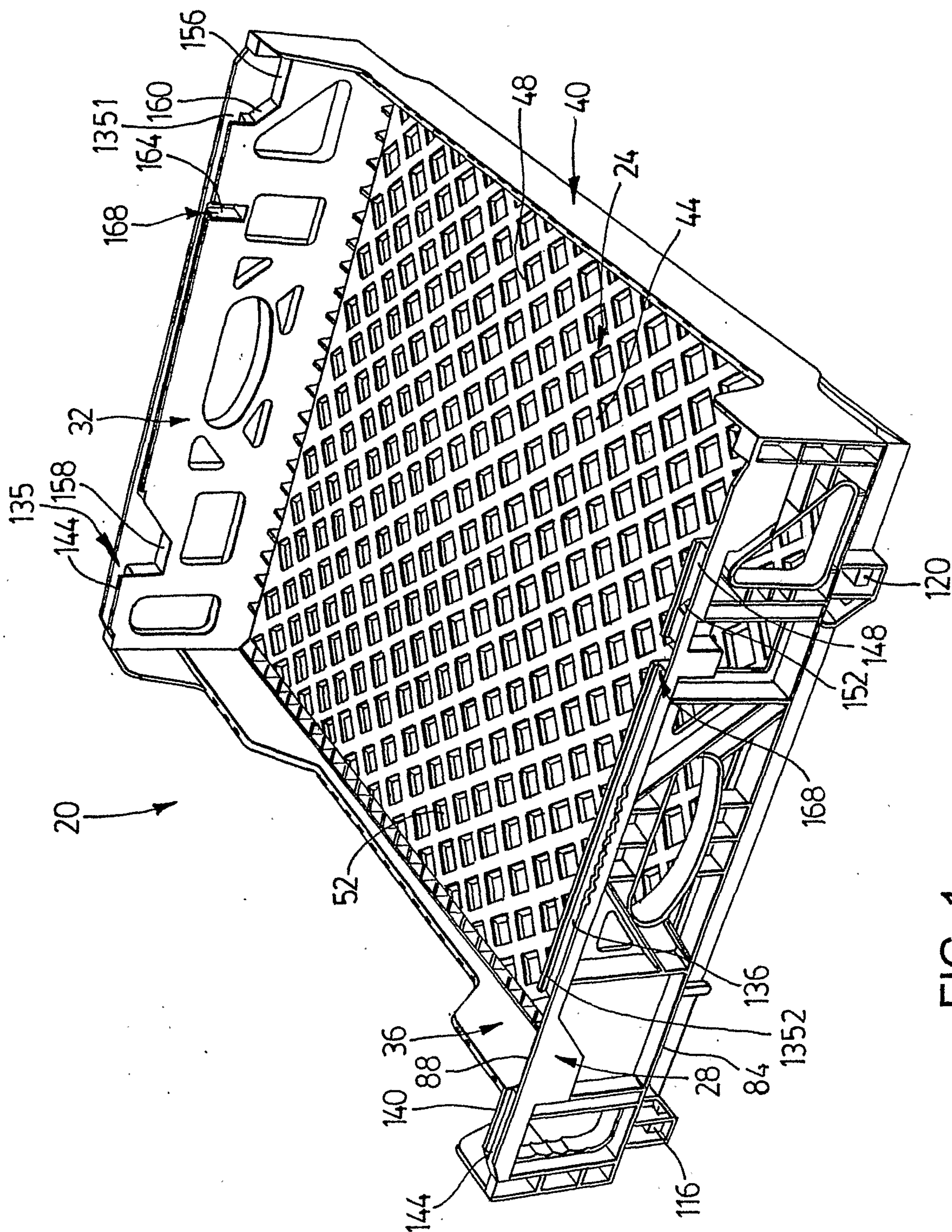
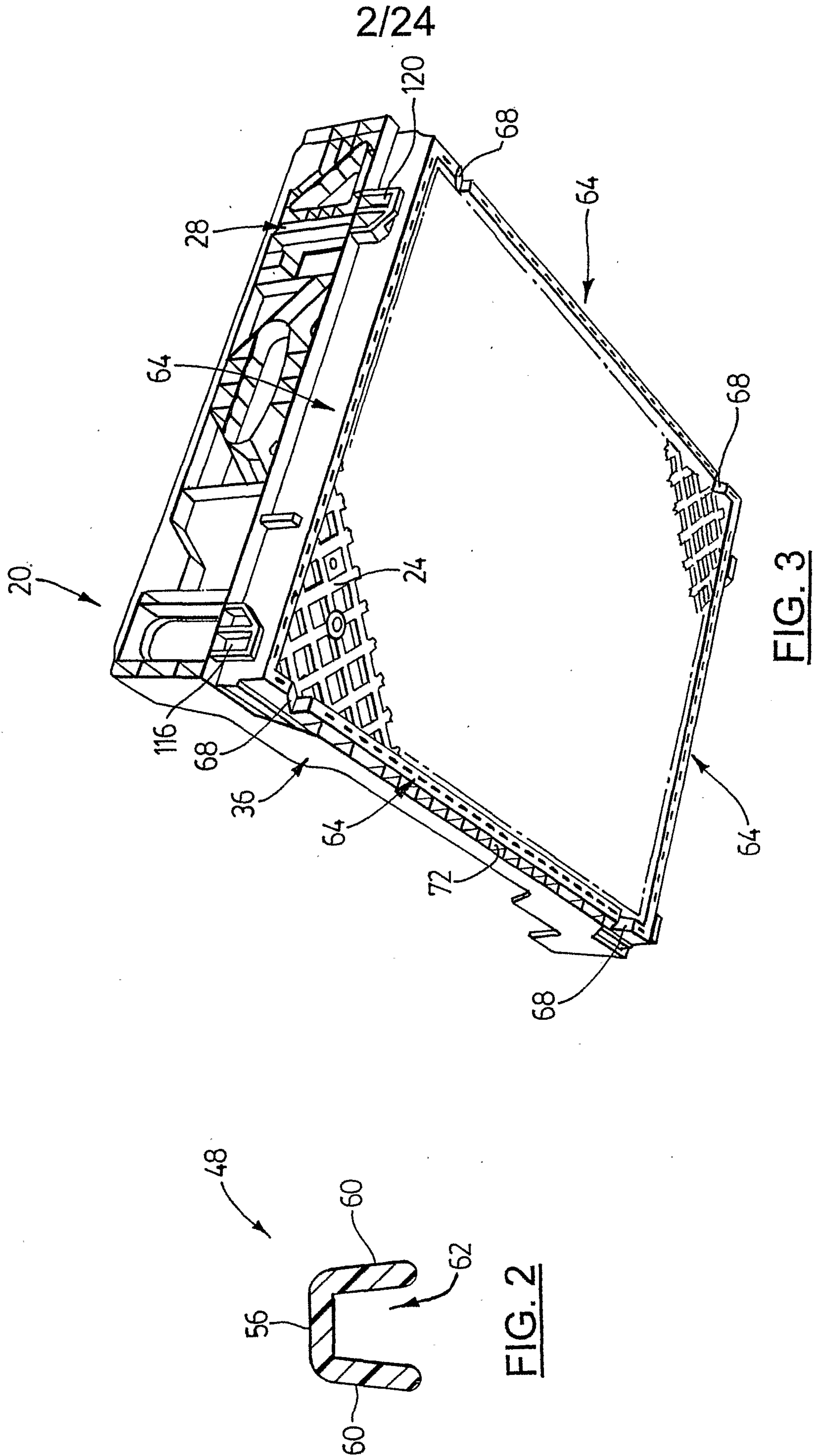
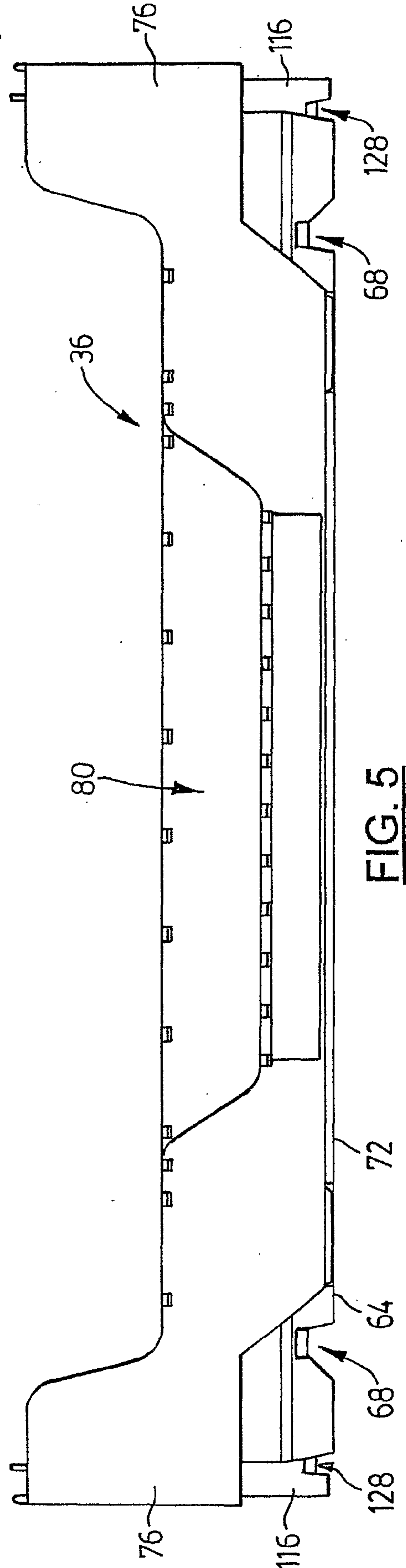
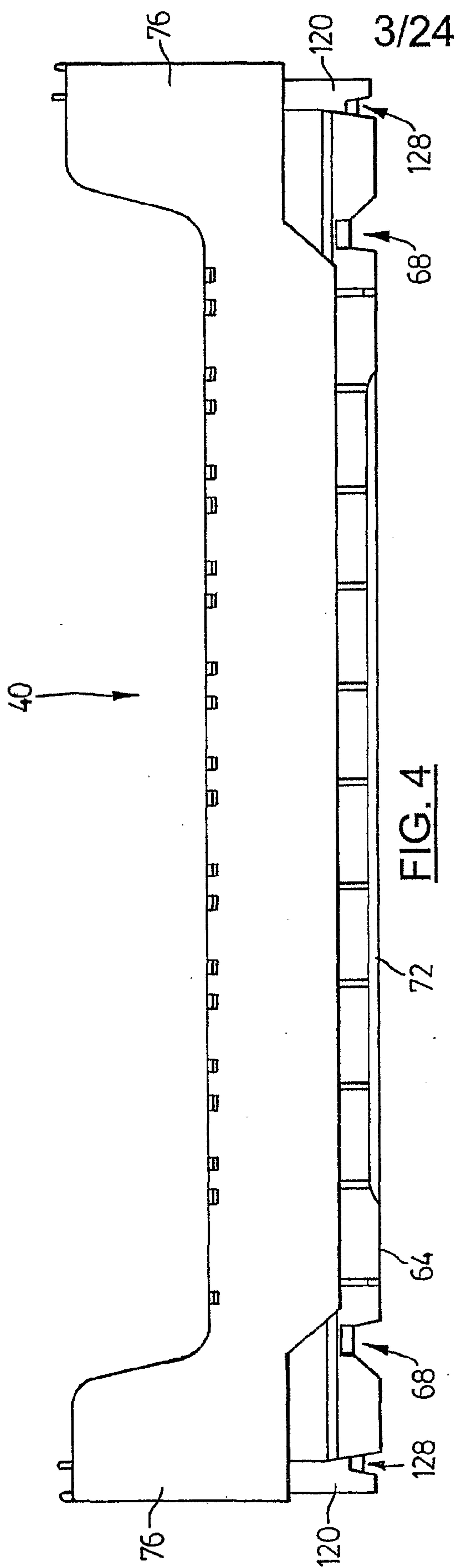


FIG. 1





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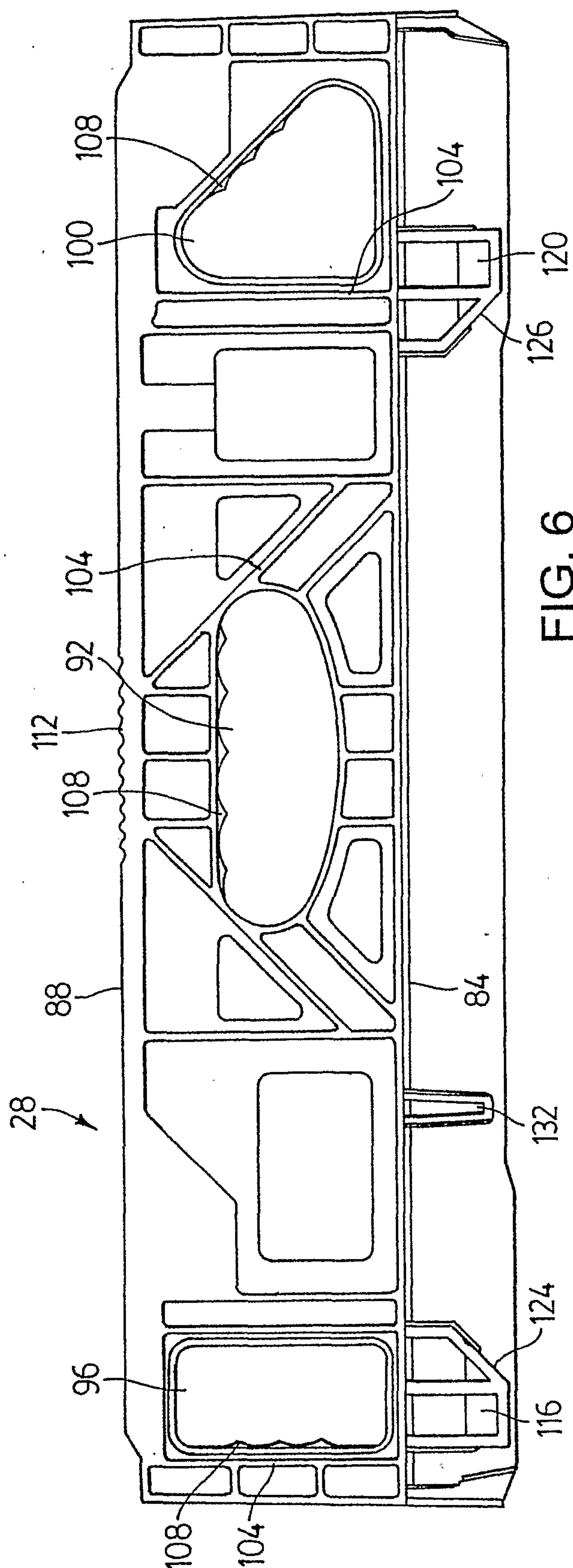


FIG. 6

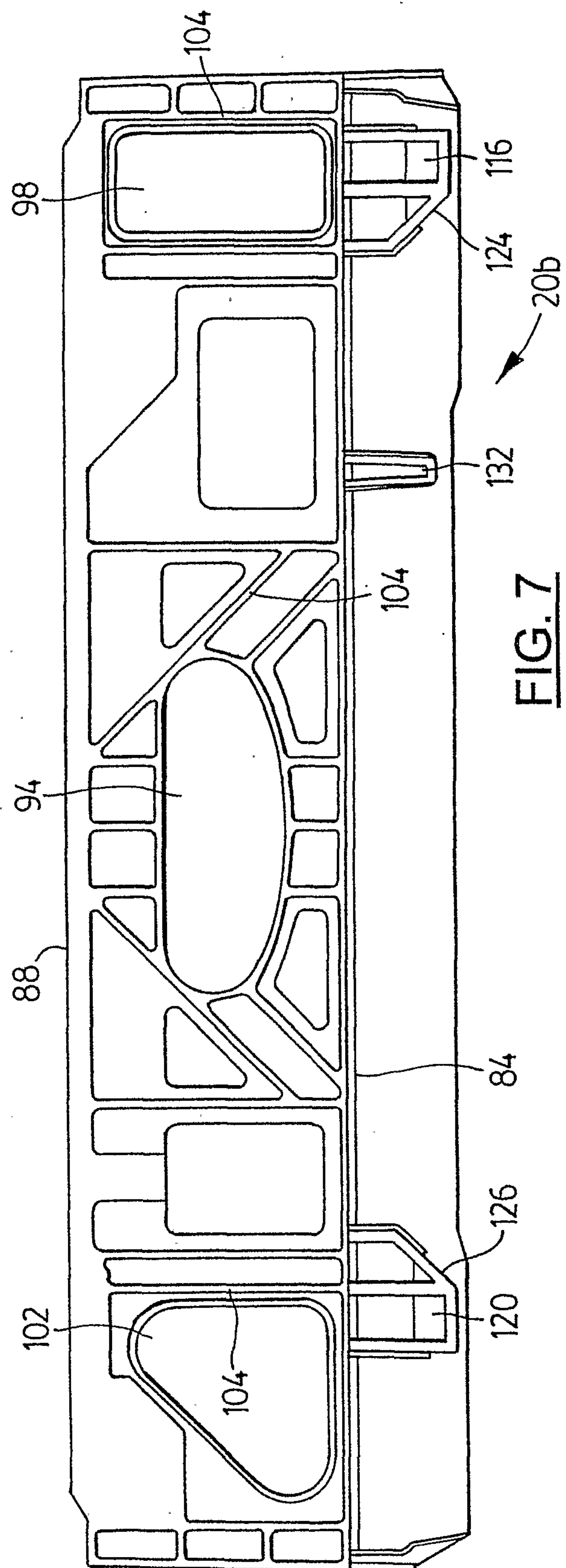


FIG. 7

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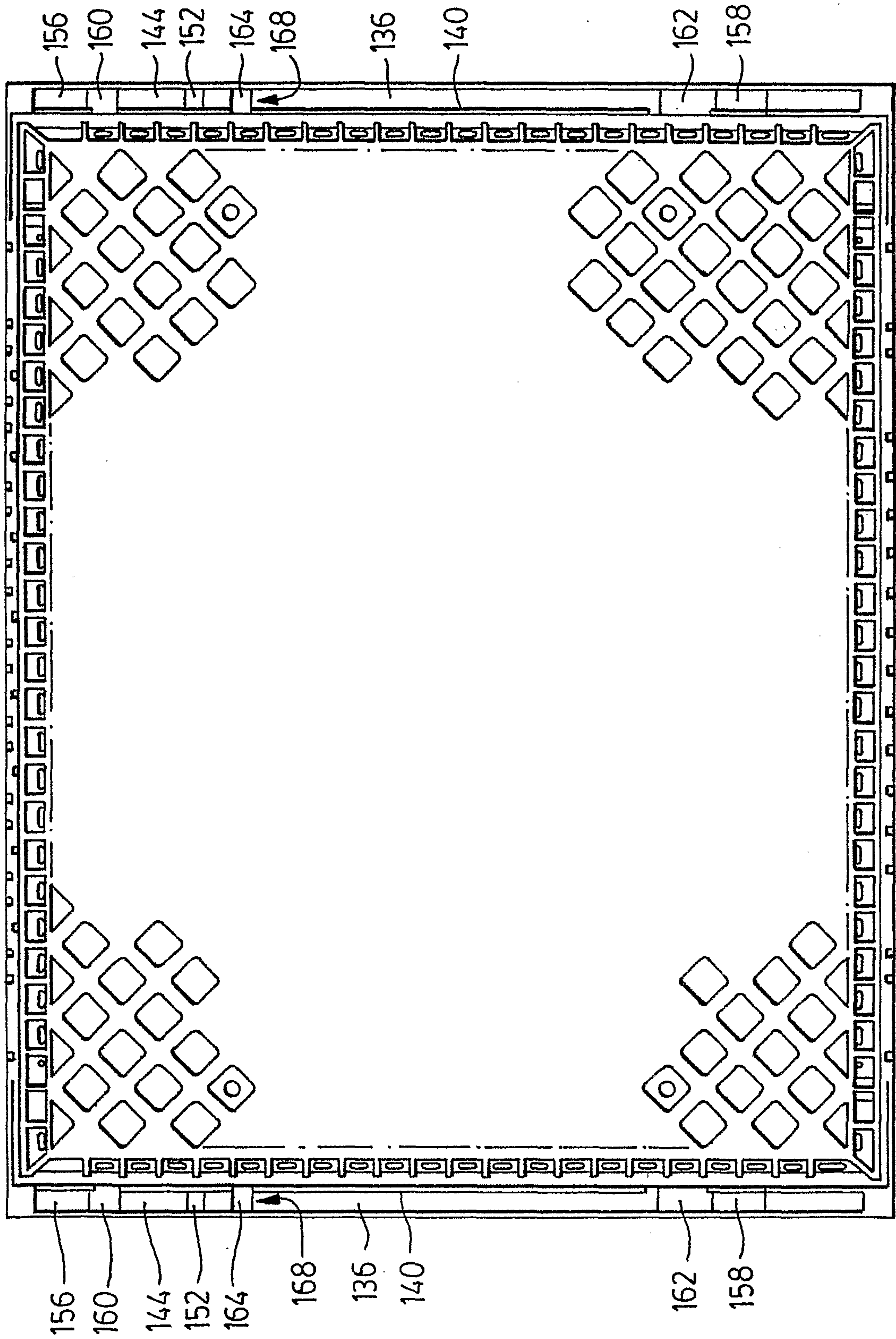
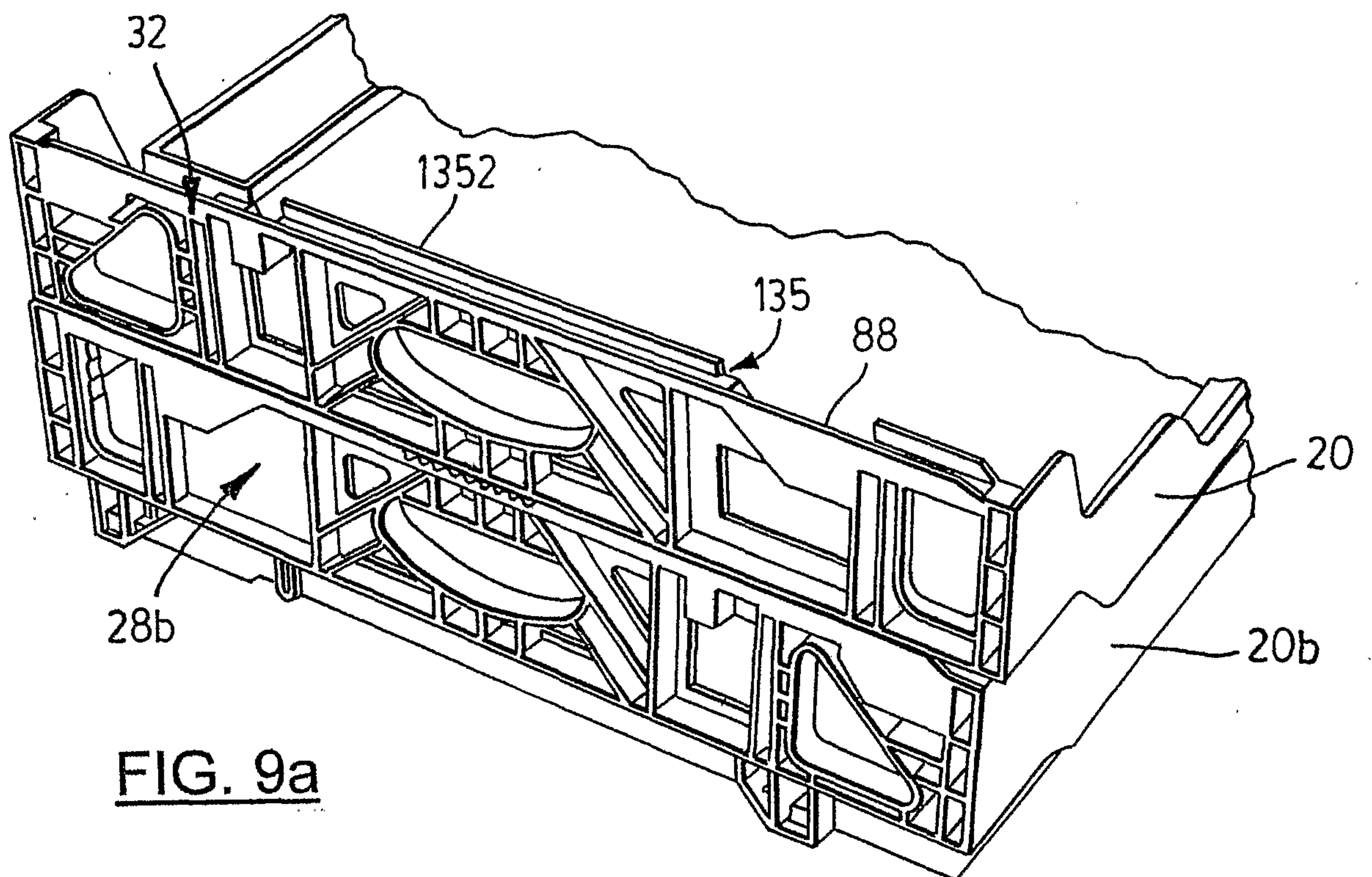


FIG. 8

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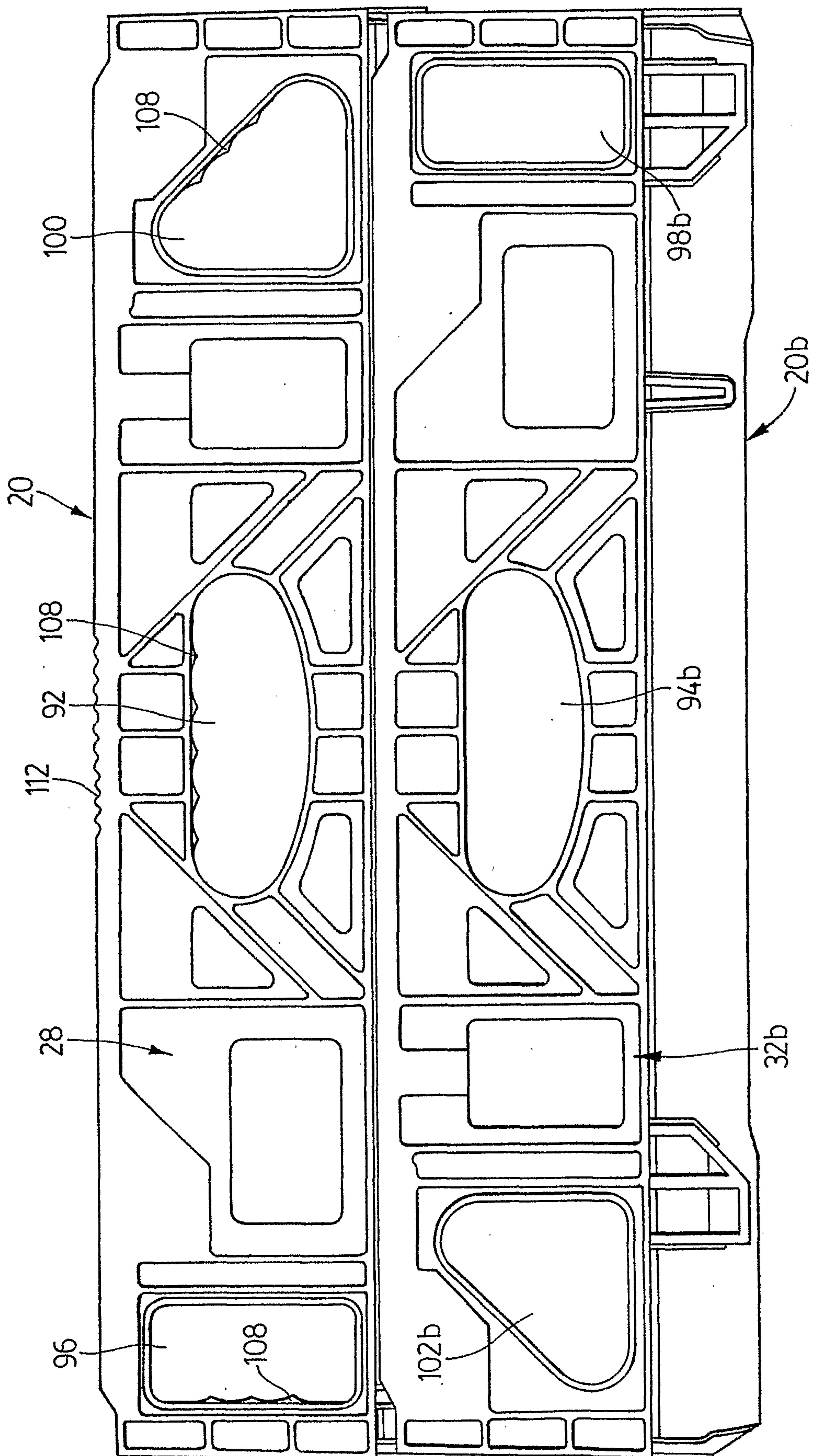


FIG. 9b

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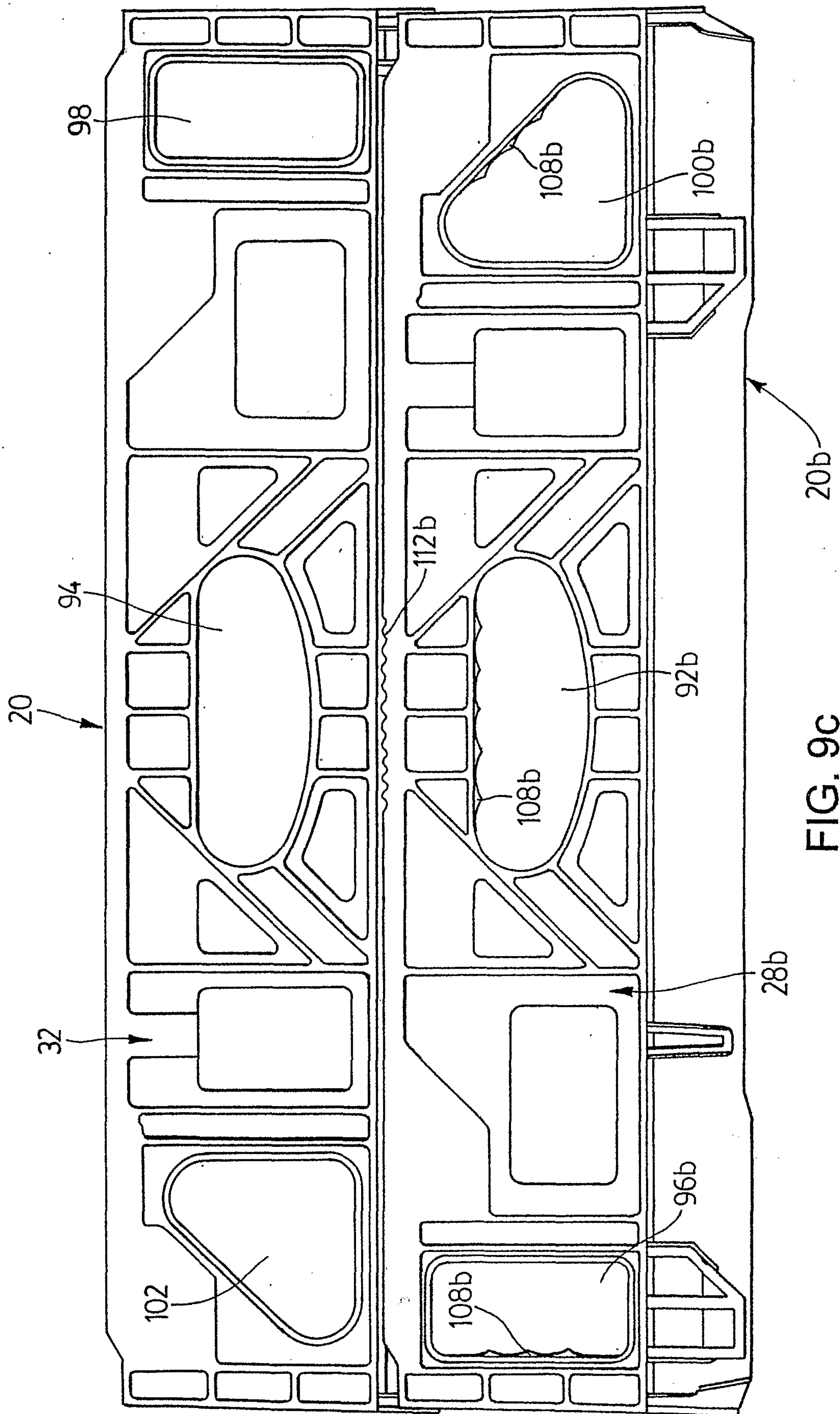
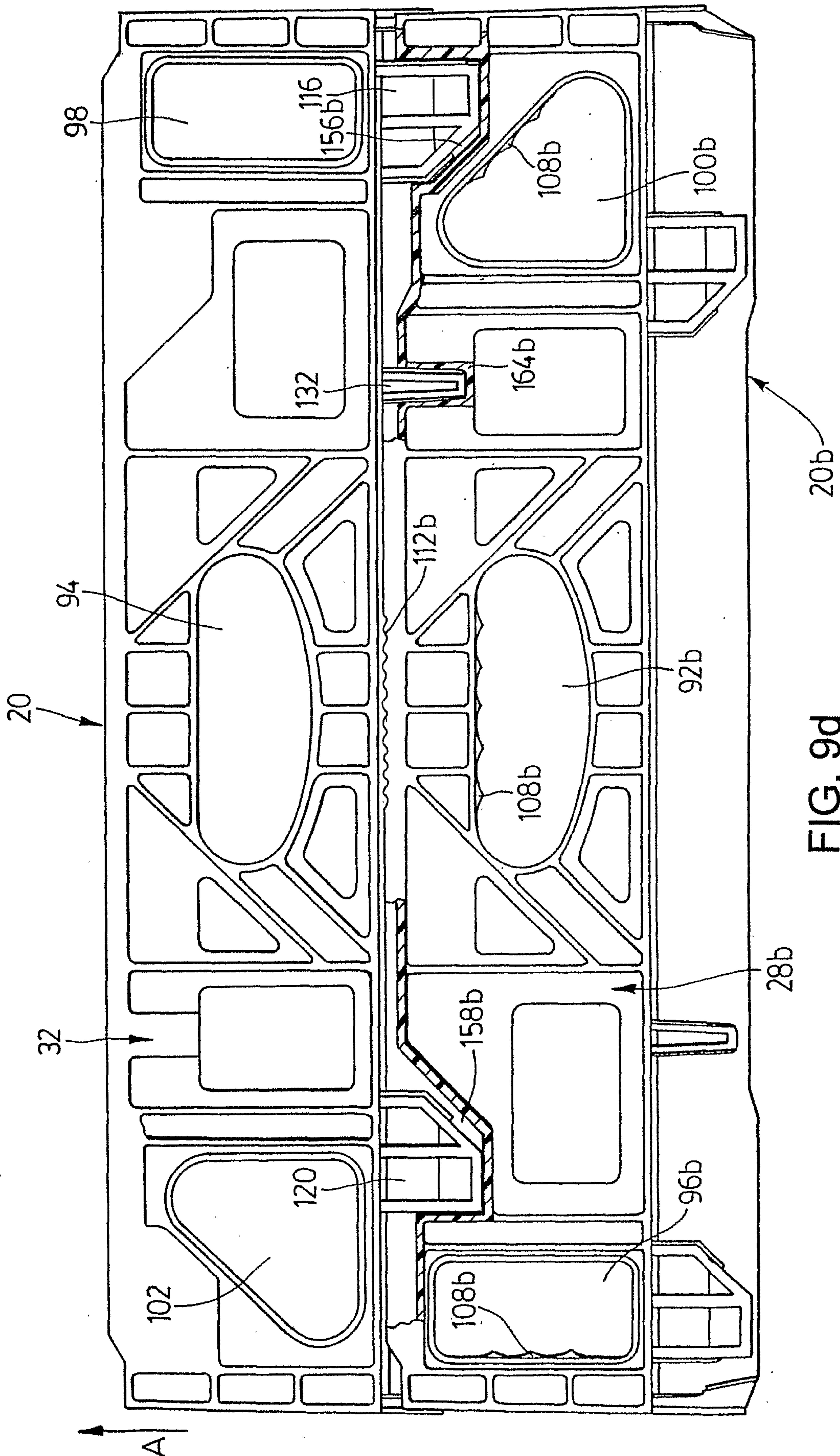
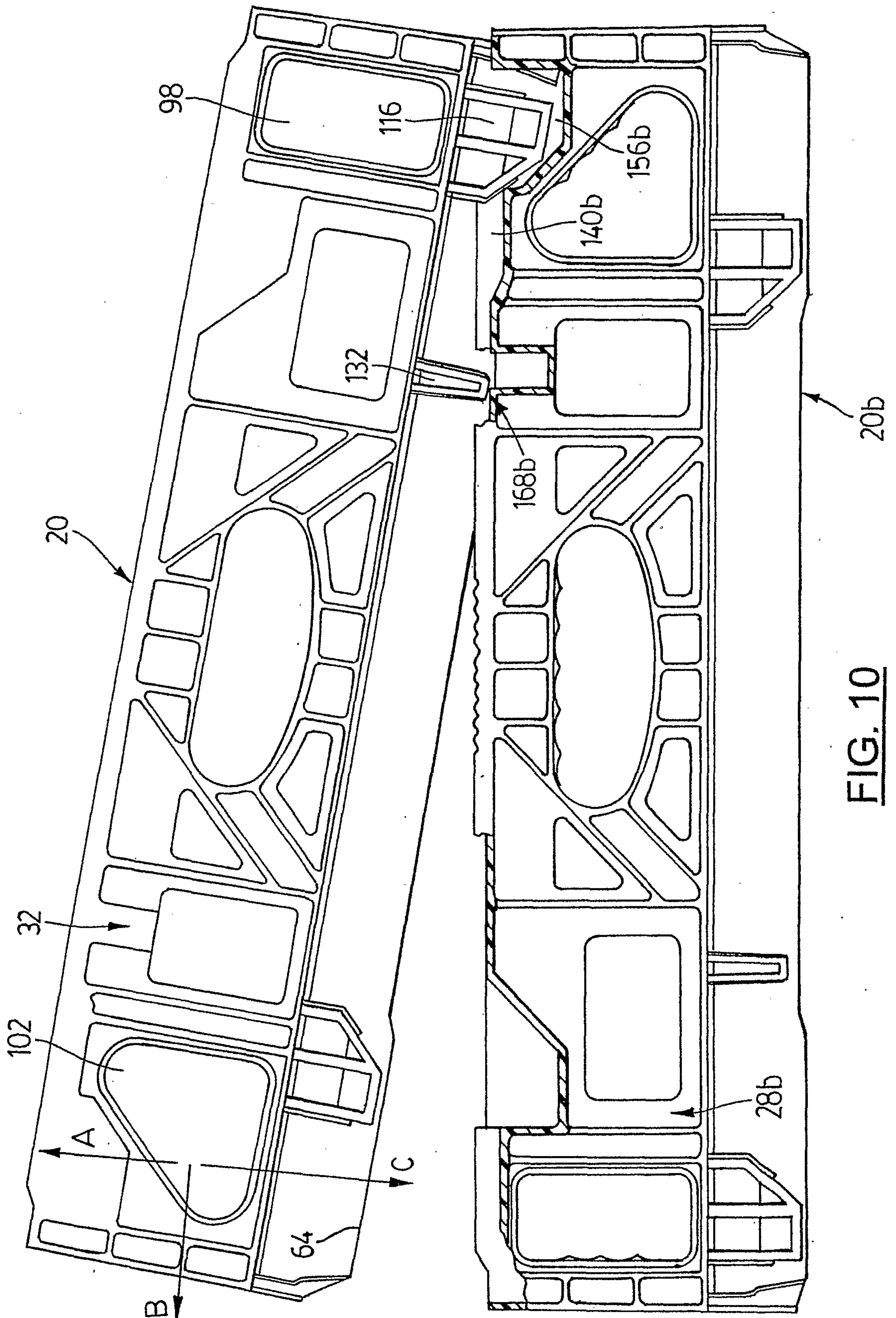


FIG. 9C

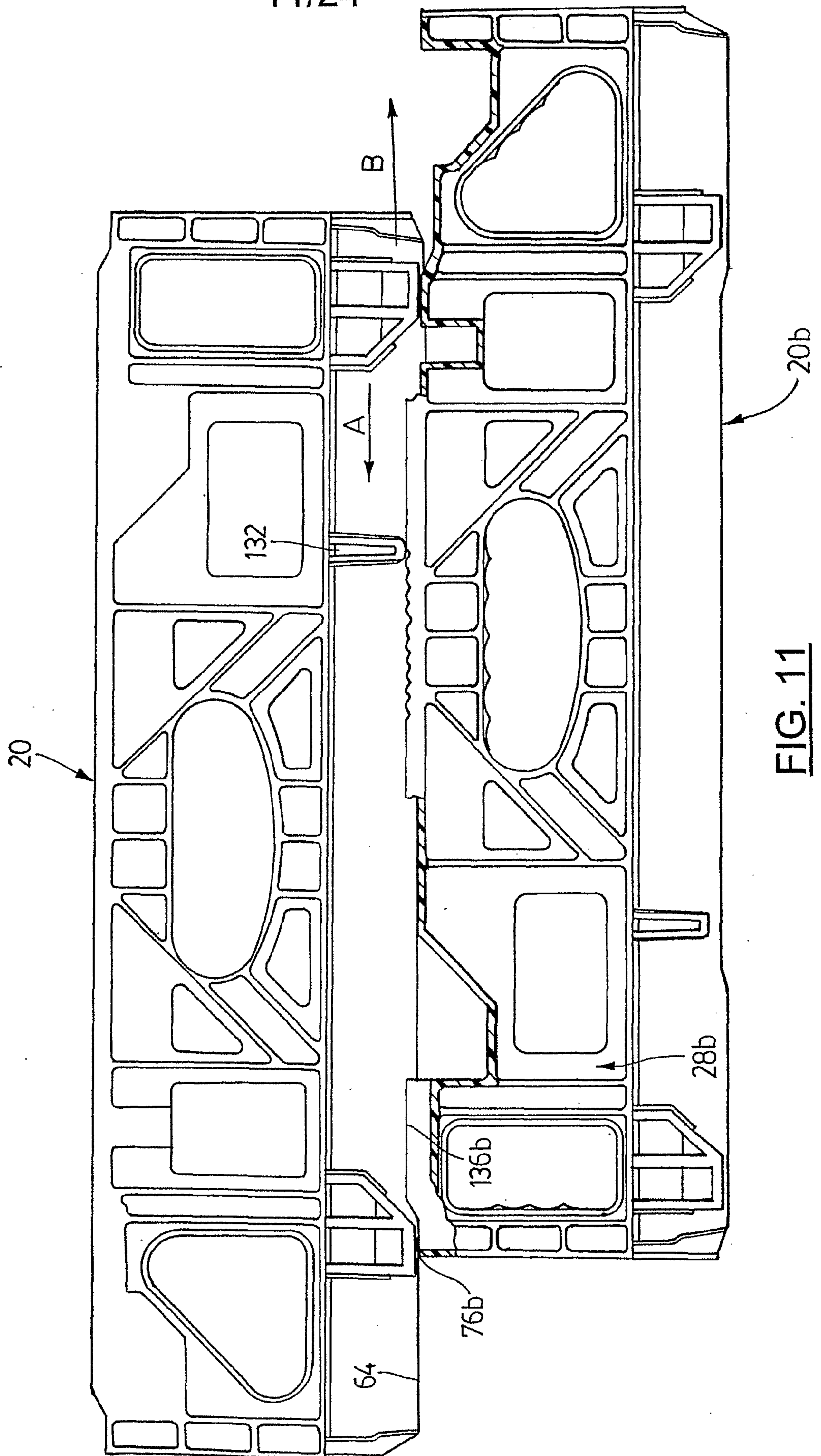
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FIG. 9d

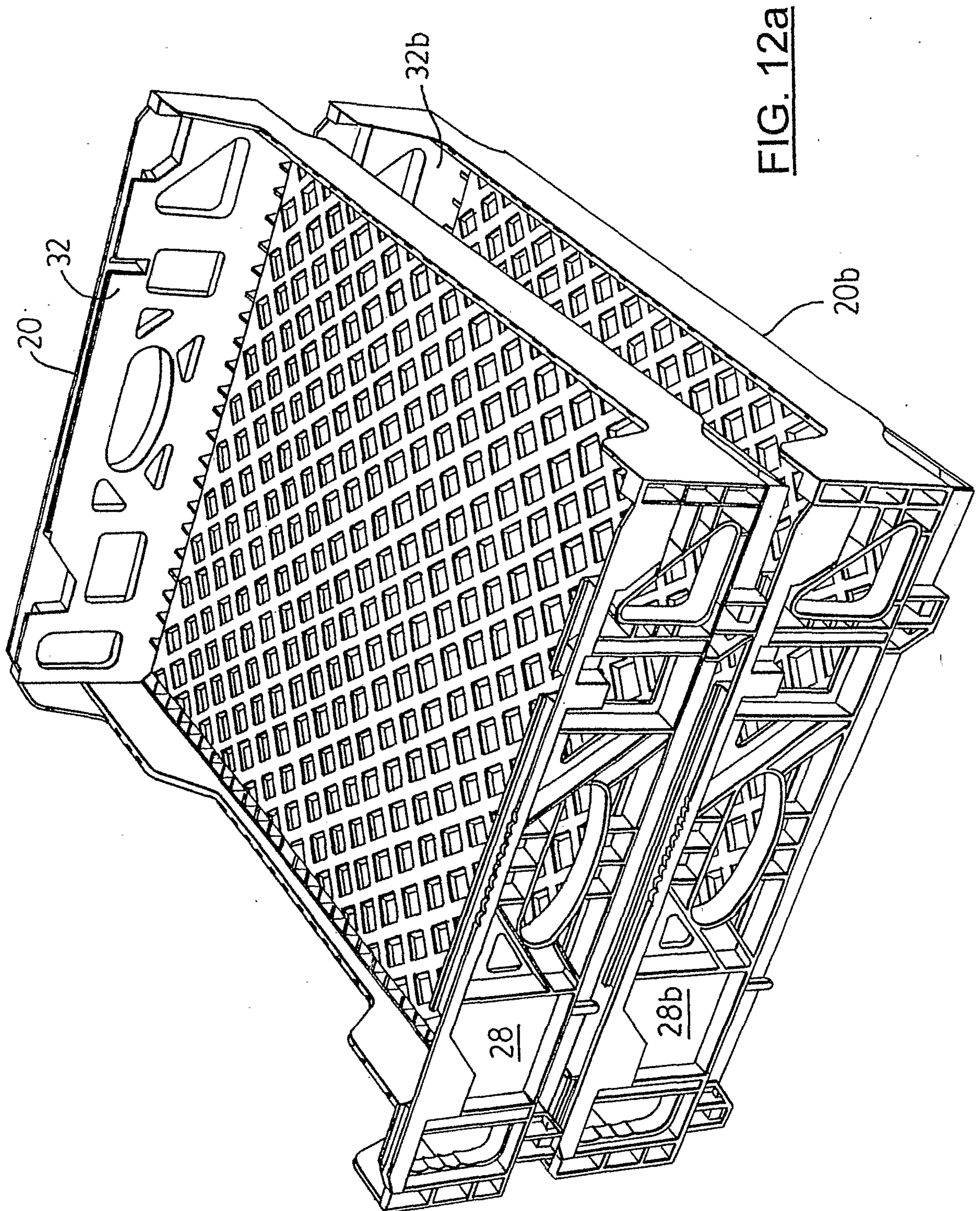
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FIG. 10

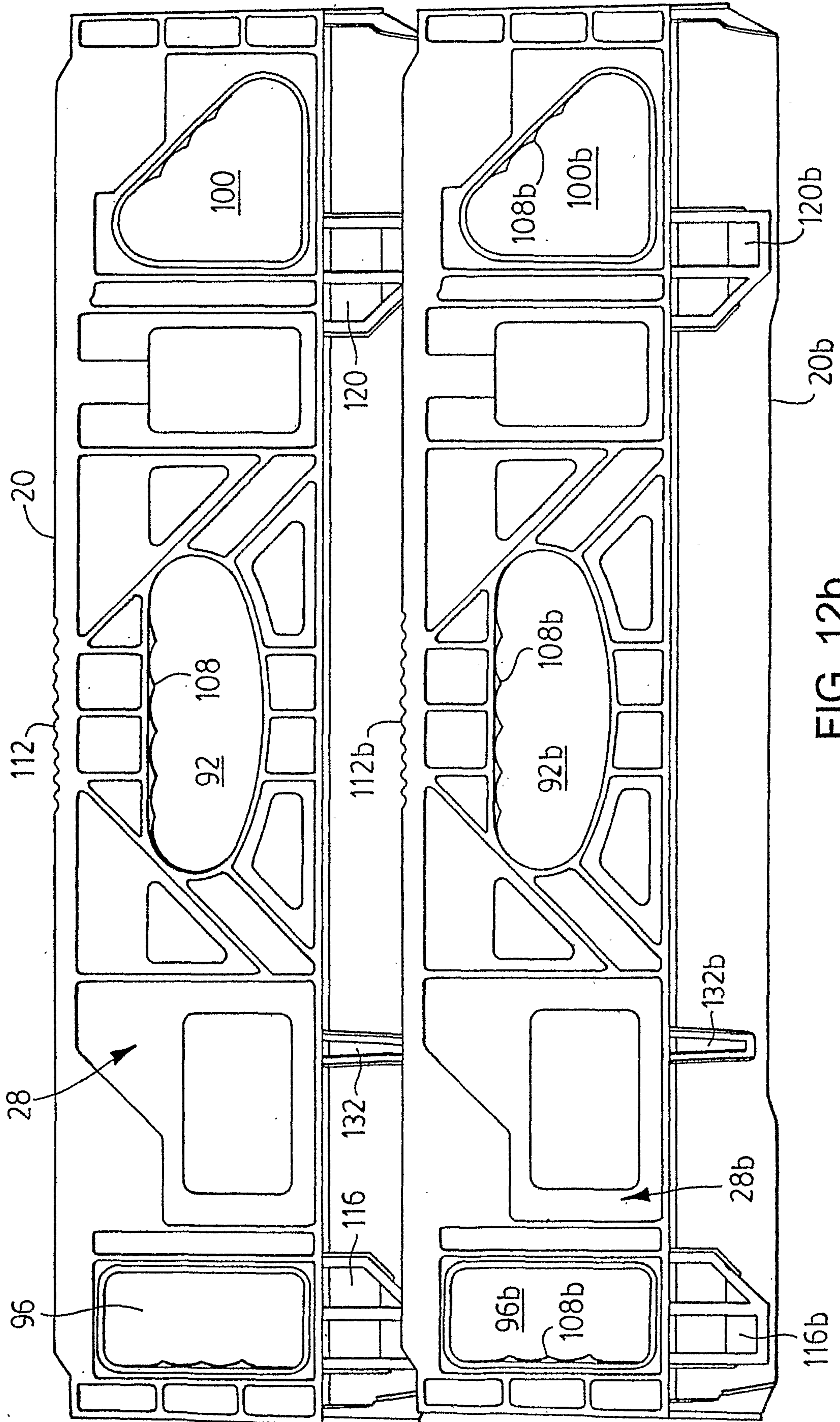
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FIG. 11

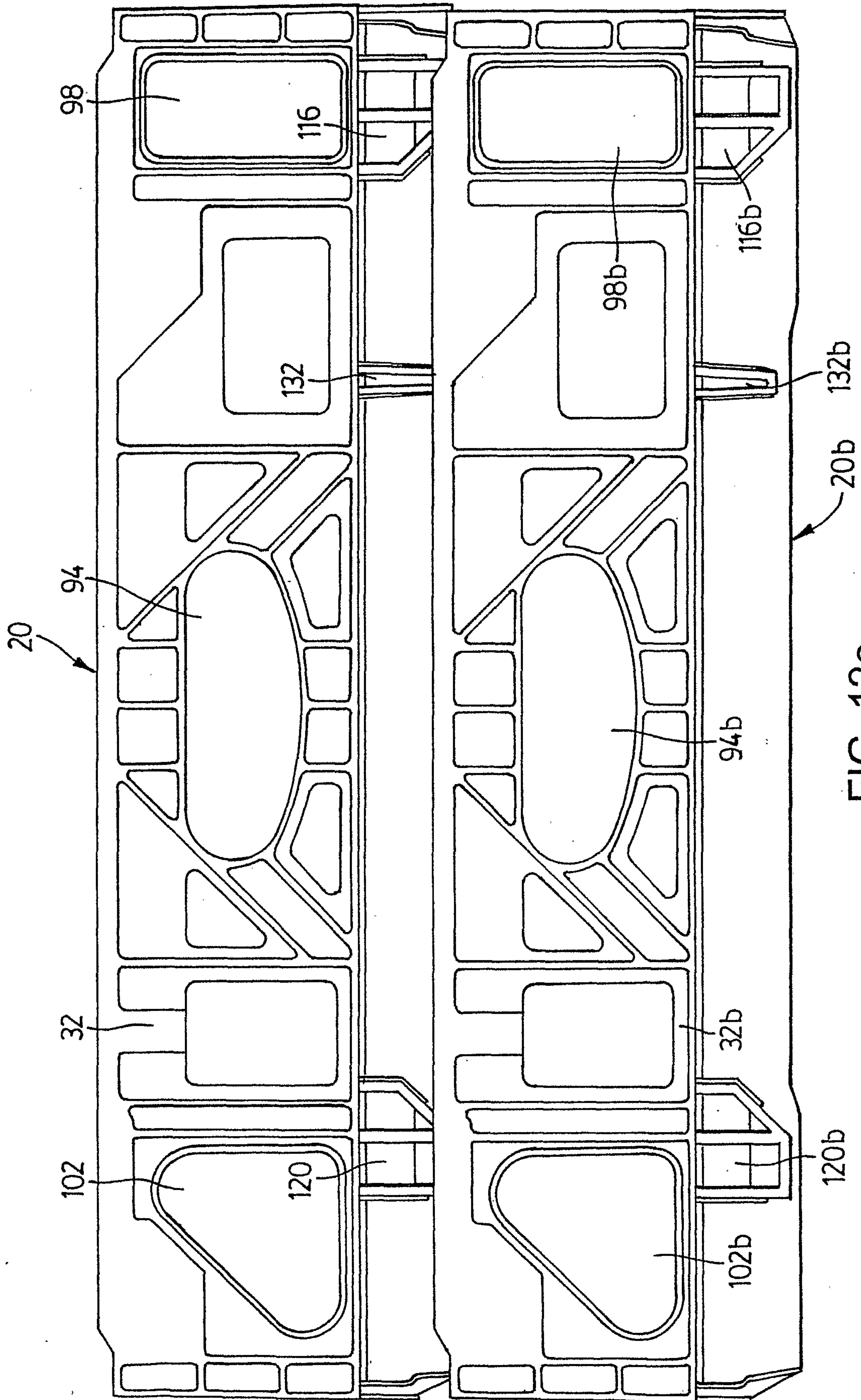
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FIG. 12b

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FIG. 12c

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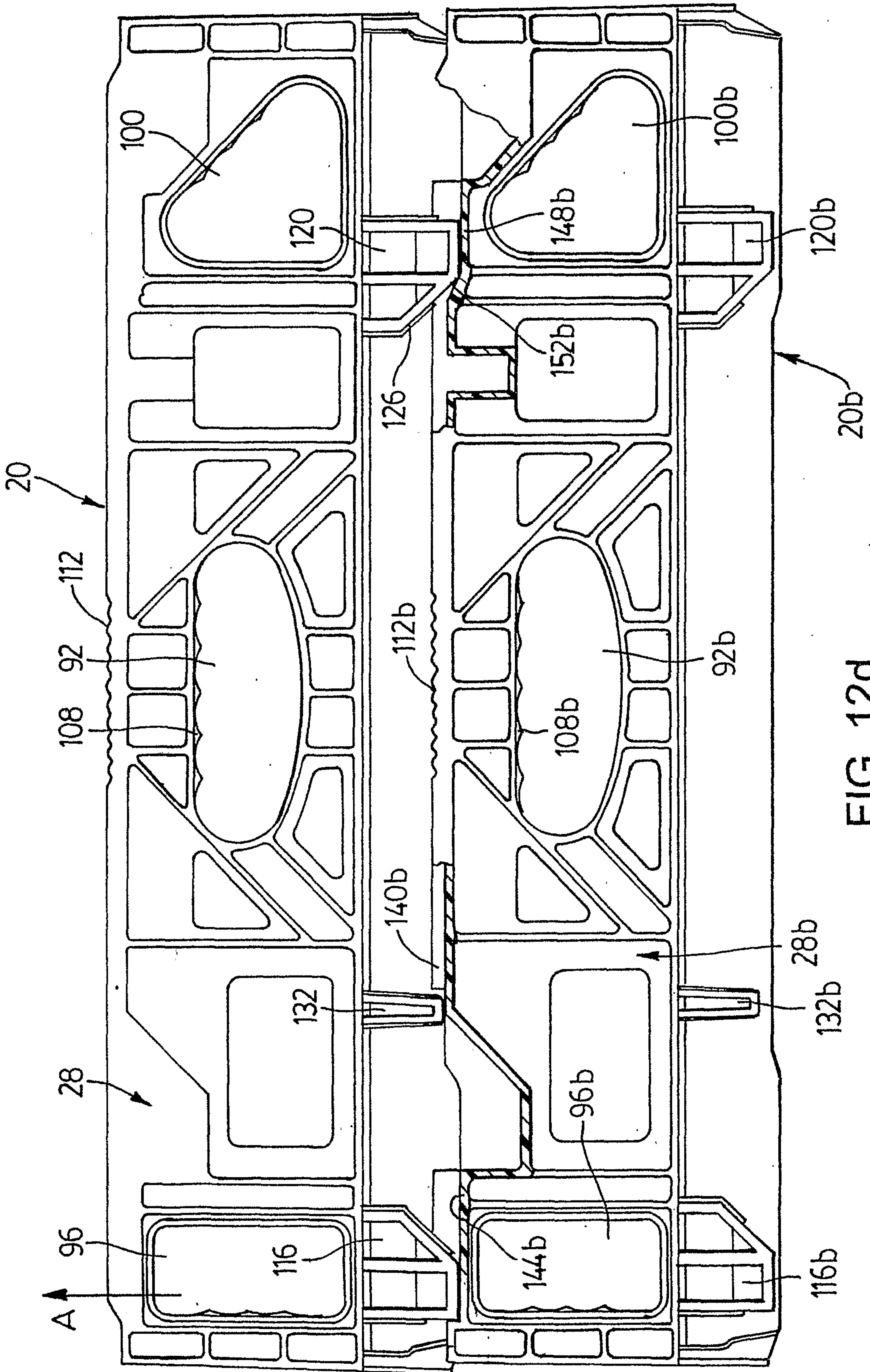


FIG. 12d

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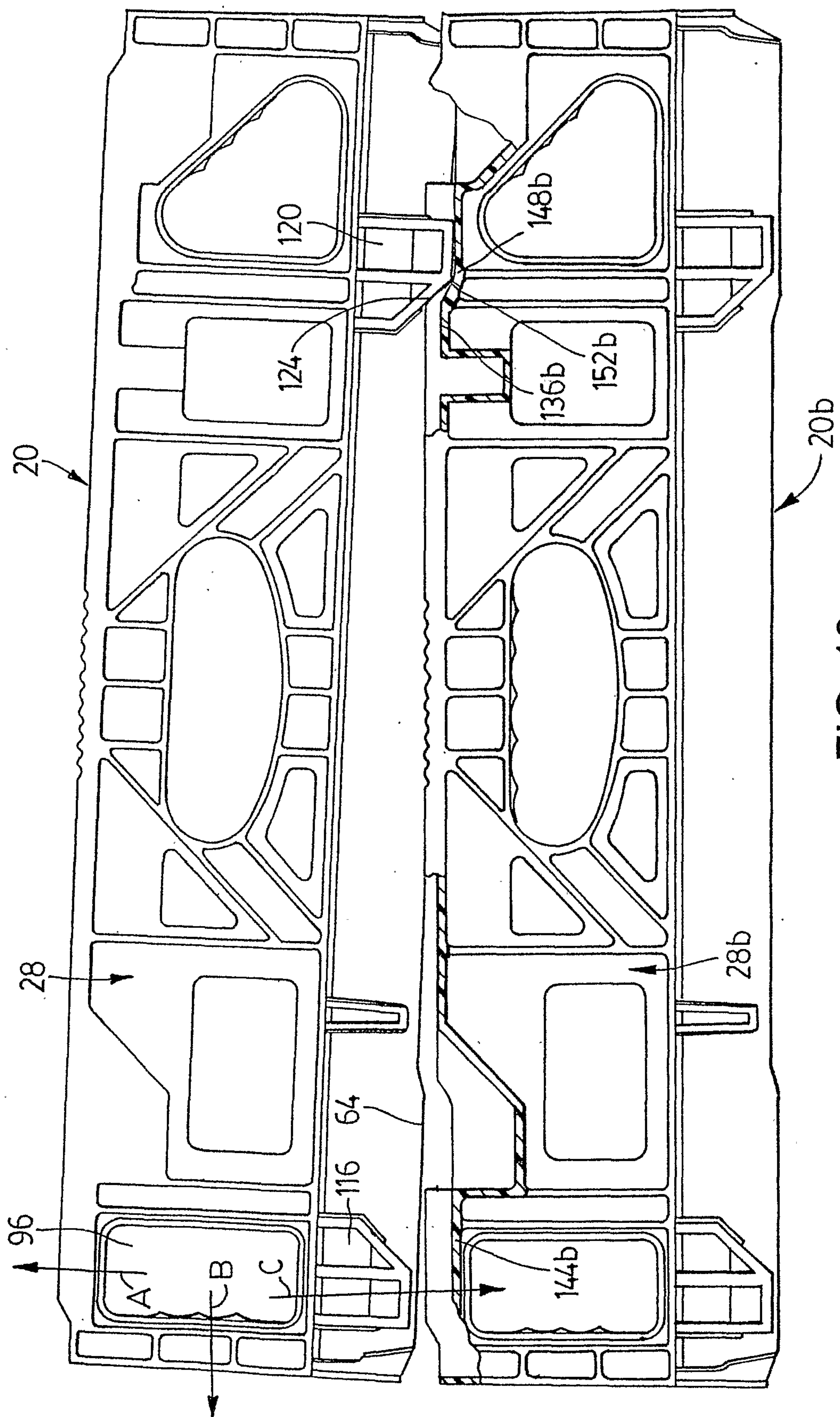
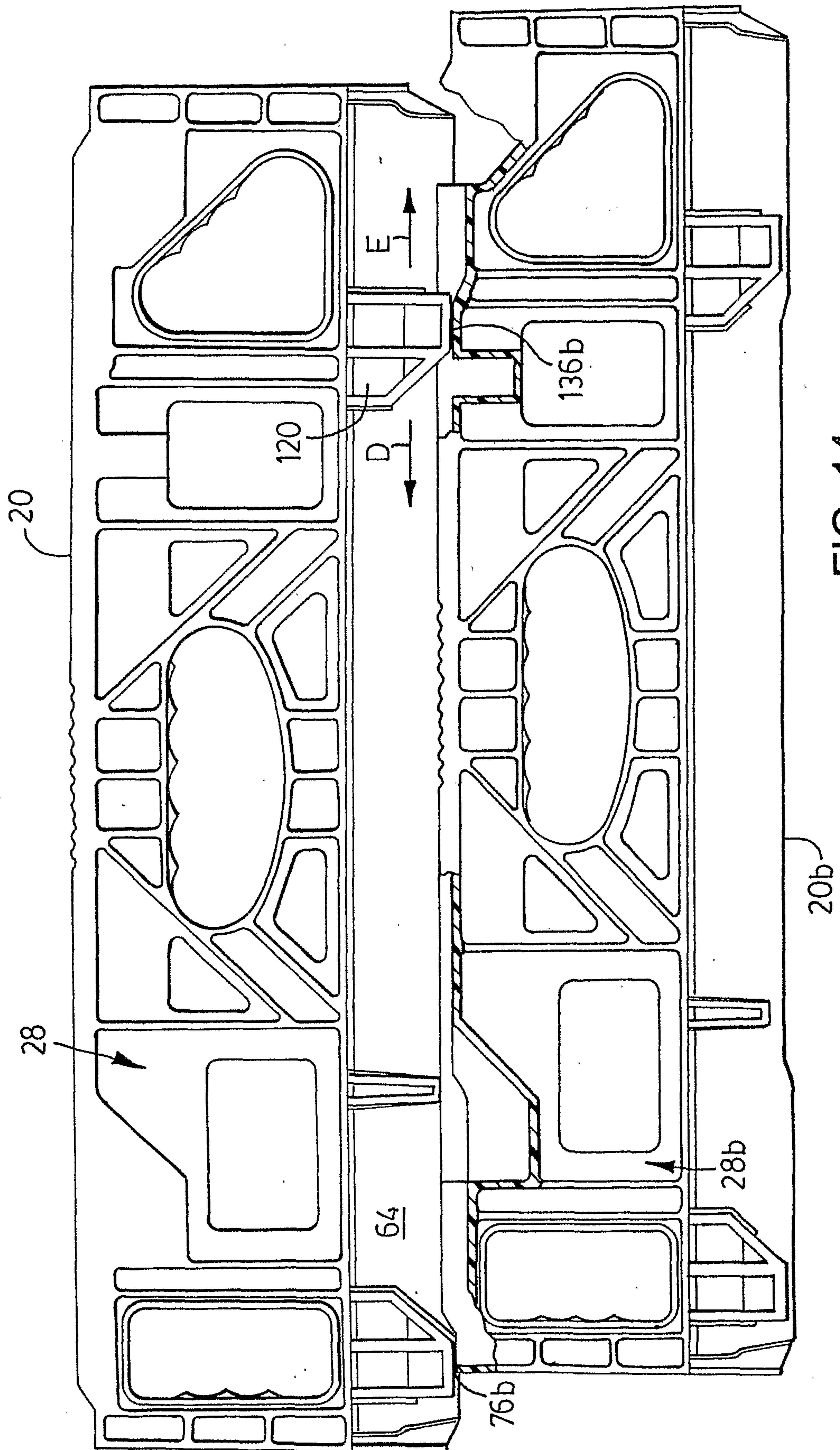
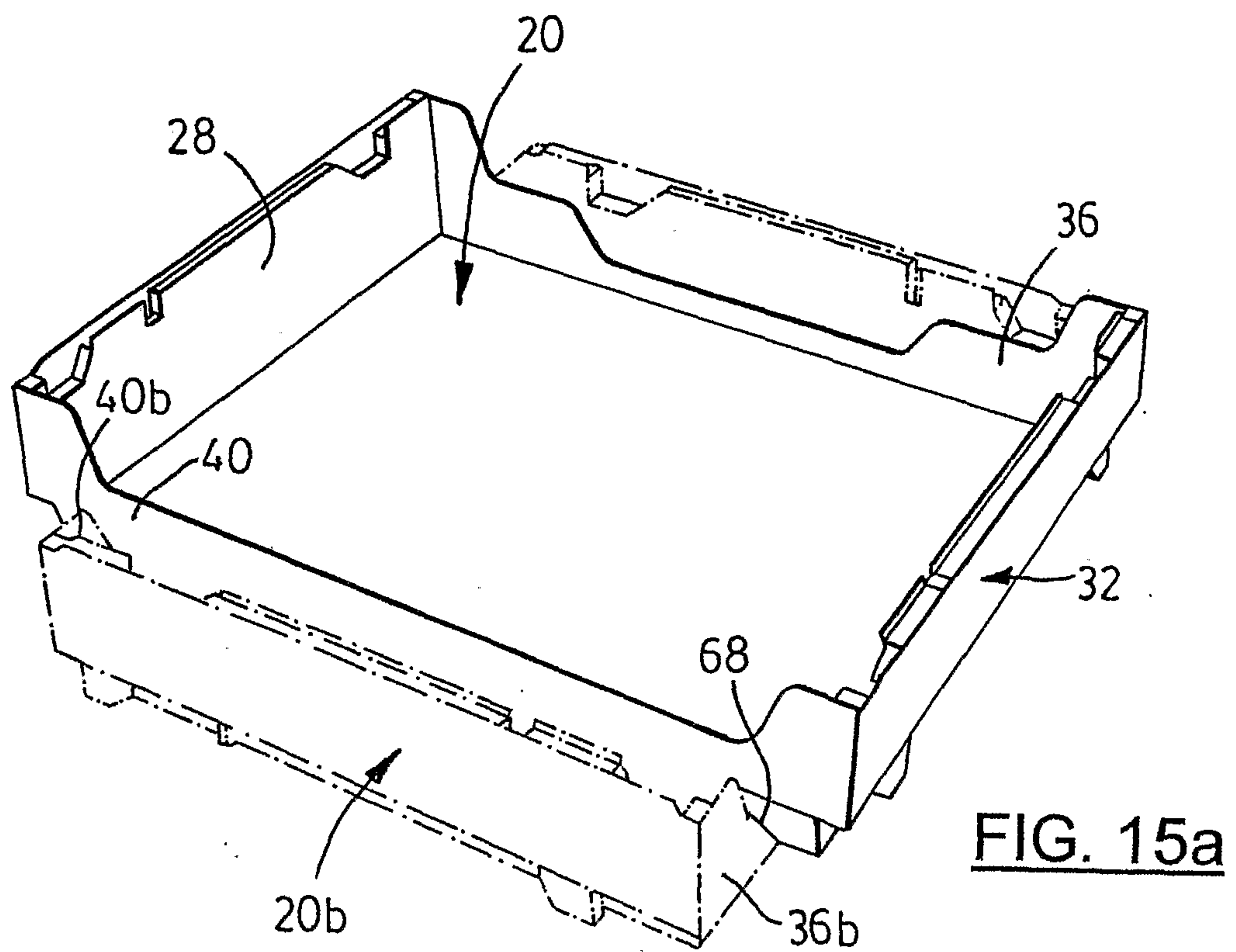


FIG. 13

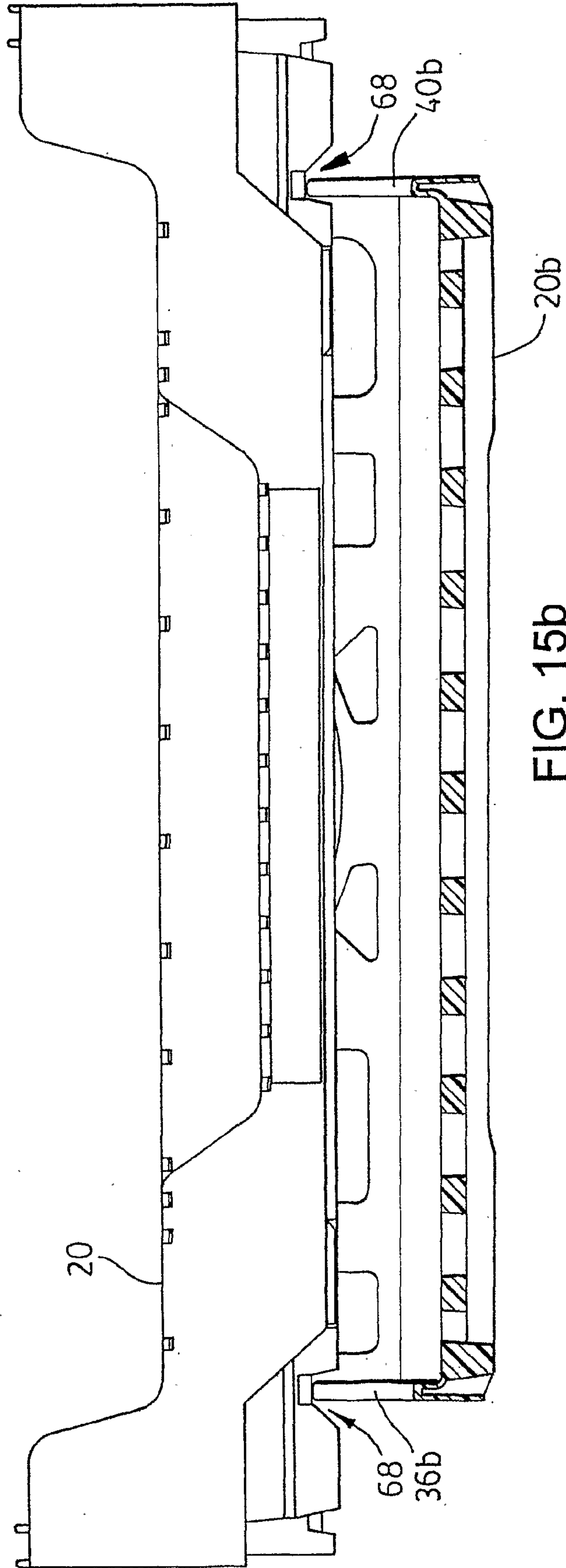
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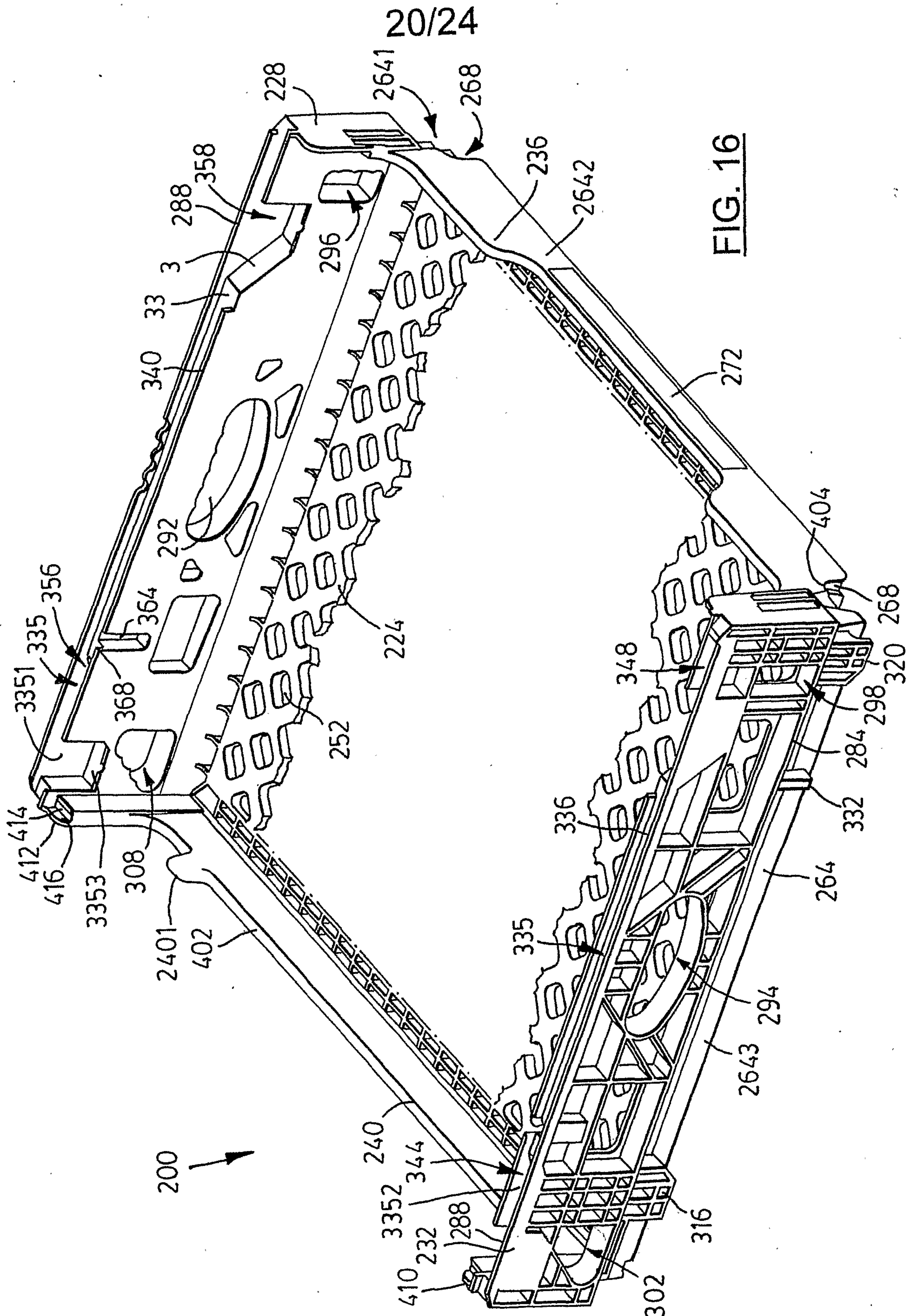
FIG. 14

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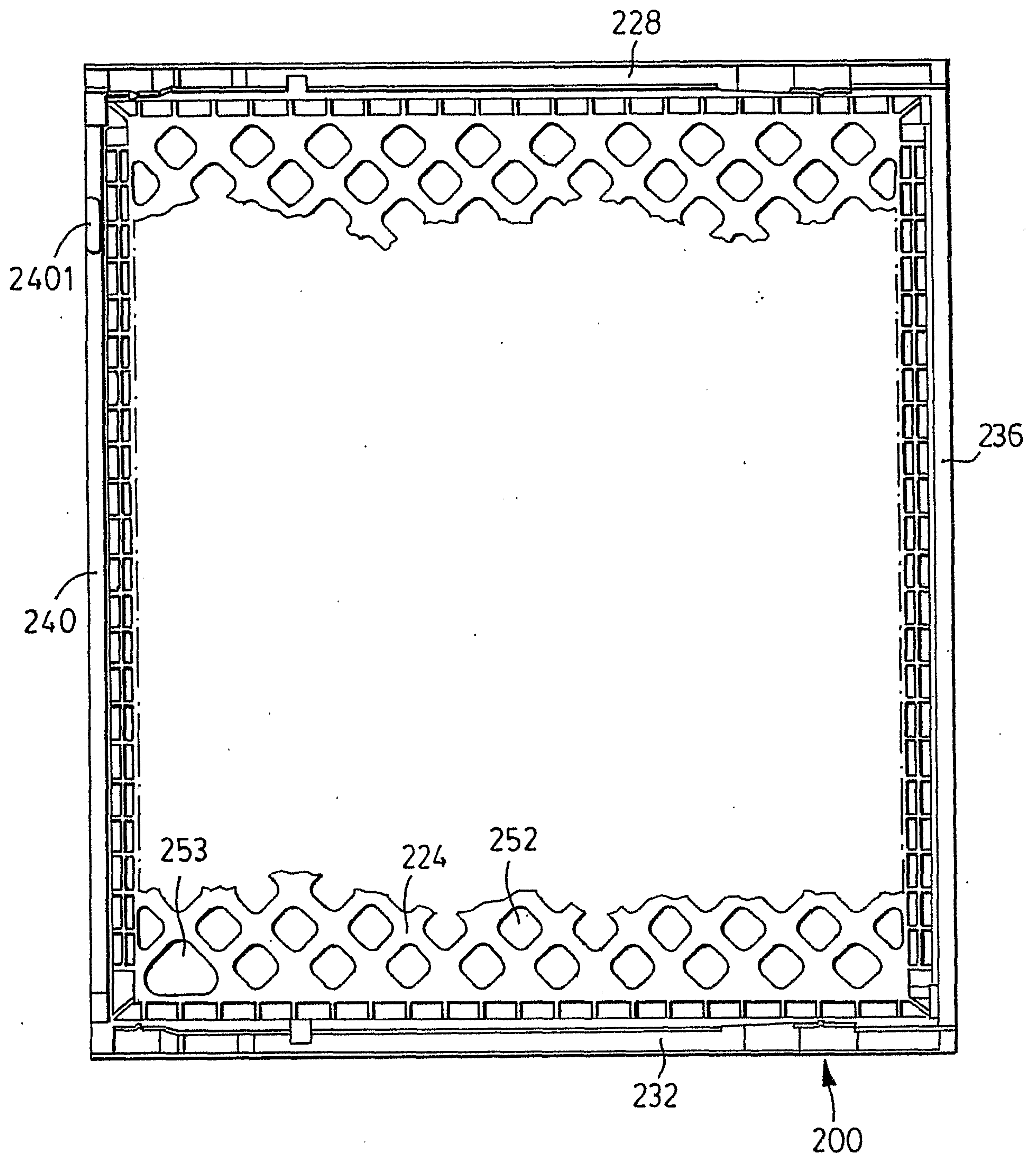
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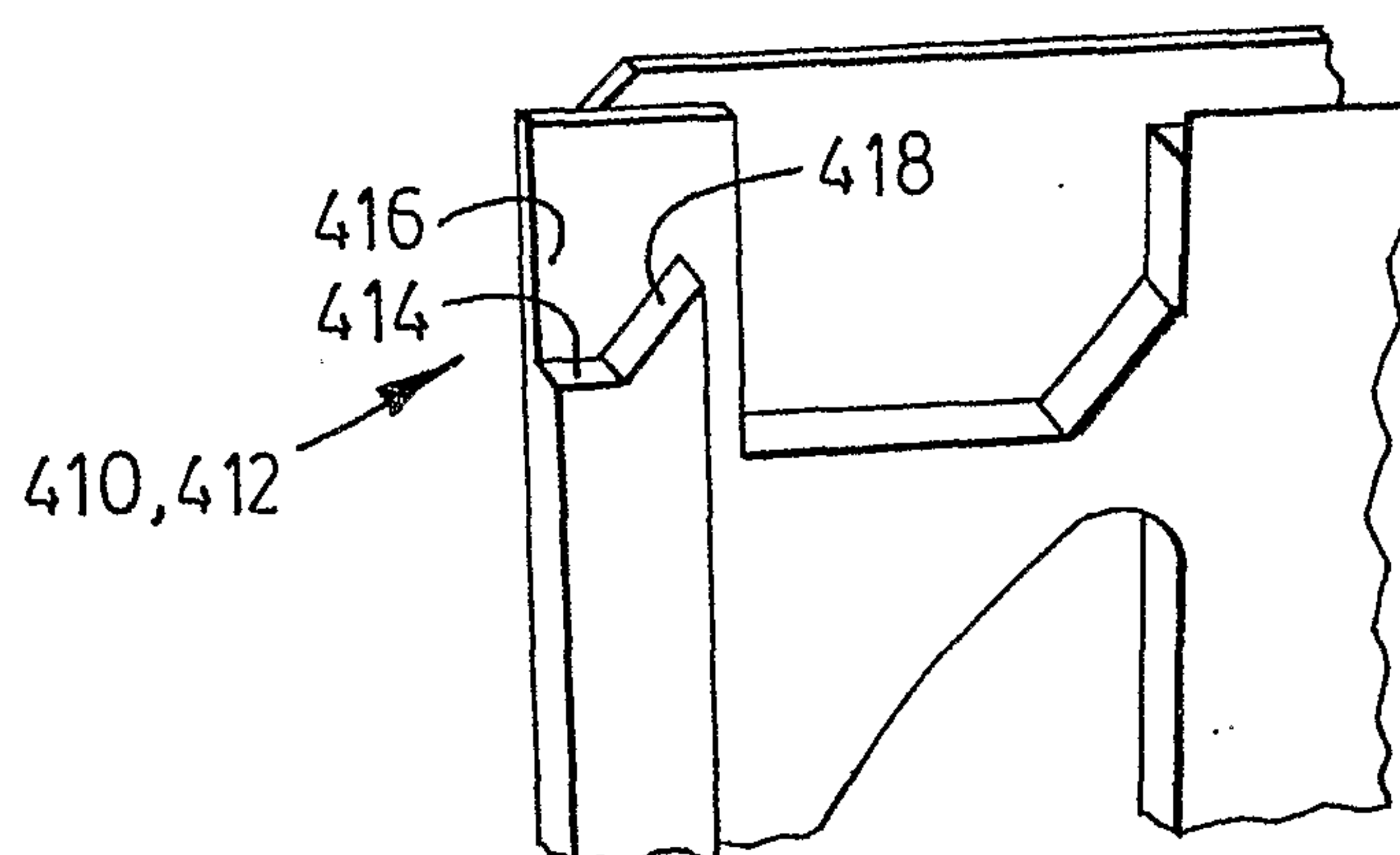
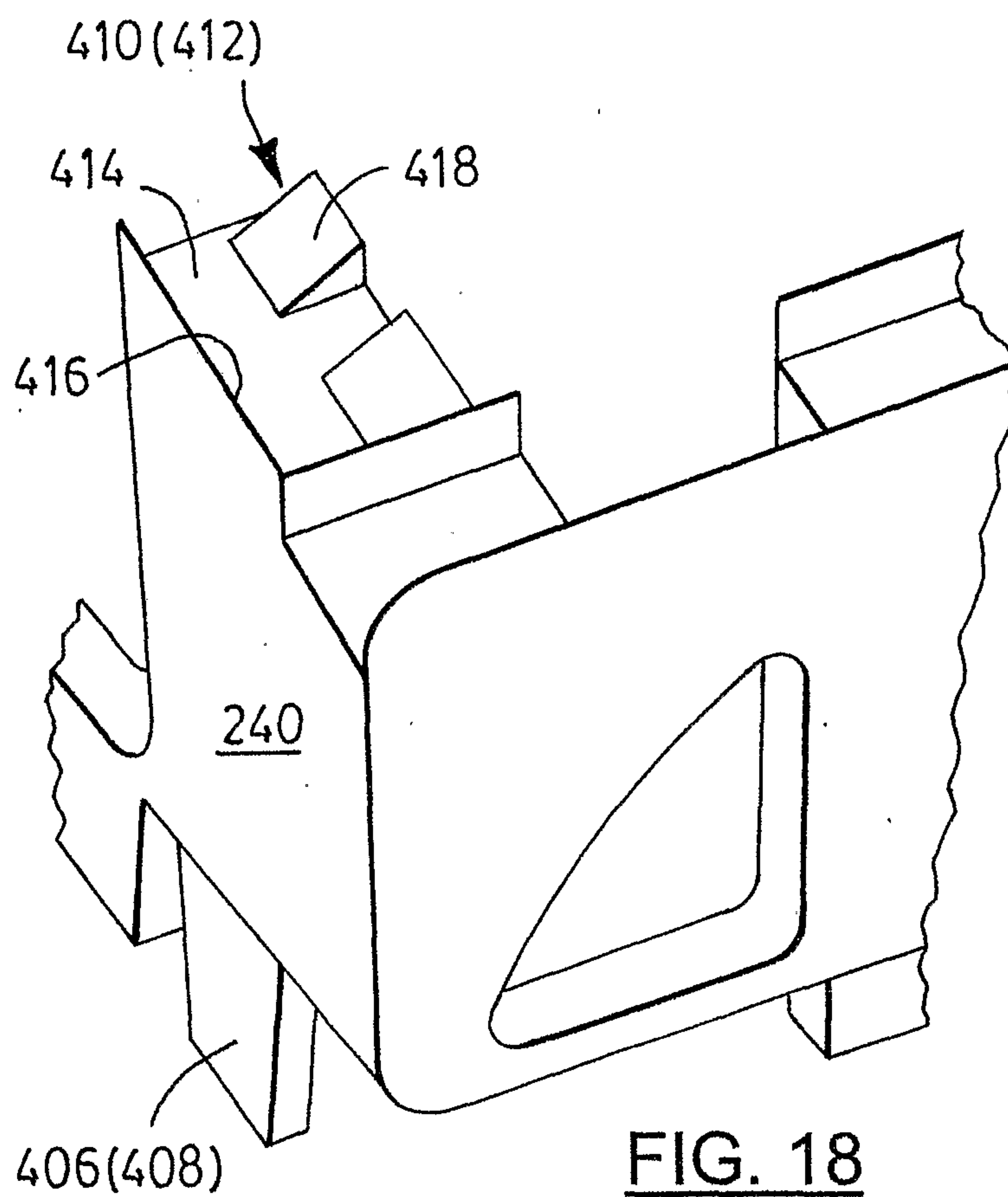


SUBSTITUTE SHEET (RULE 26)

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FIG. 17

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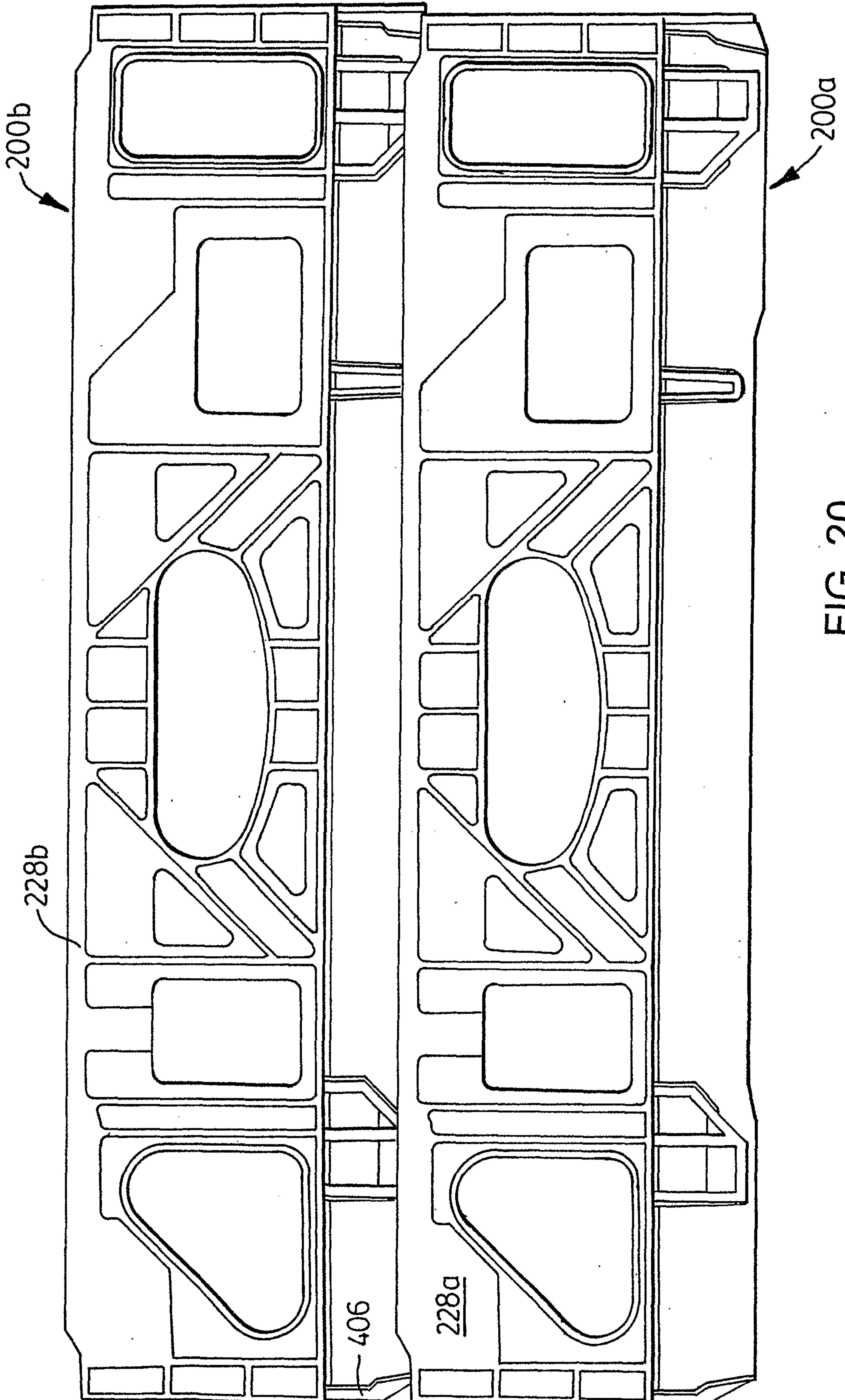
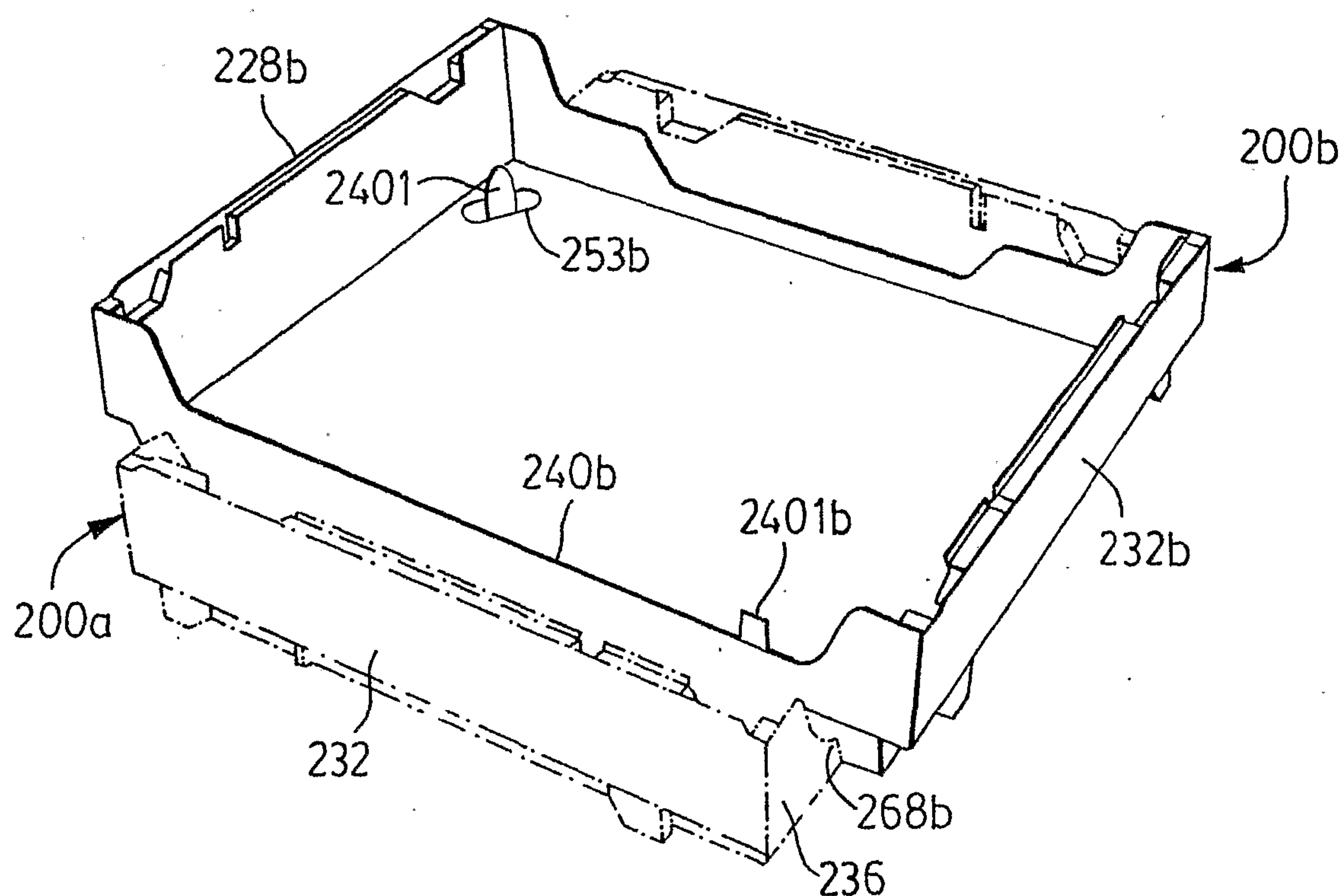


FIG. 20

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FIG. 21

