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(54) **CRATE WITH DISPLAY PANEL DECORATION**

KASTEN MIT INFORMATIONS- ODER DEKORATIONSPLATTE

CASIER A PANNEAU DECORATIF

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Description

[0001] This invention relates to a crate for carrying articles, for example bottles, which is furnished with a detachable display panel on one or more of its sides or end walls. Such panels are useful for brand identification purposes, advertising and for carrying other data relevant to the crated products and can be readily detached and replaced as the circumstances dictate.

[0002] BE 905329A illustrates a crate having a display panel connected to at least one wall of the crate by the engagement of locking tabs formed in corners of the display panels with corresponding locking apertures formed in the wall.

[0003] A problem associated with such display panels at present on the market, is that when they become wet, they bend and no longer provide a useful display. This invention seeks to overcome or mitigate this problem.

[0004] One aspect of the invention provides a crate for carrying articles, such as bottles, comprising at least one wall having a display panel detachably connected to said wall, wherein said wall is formed with a plurality of locking apertures spaced apart, each of said locking apertures receiving one of a corresponding group of locking tabs provided on at least one edge of the display panel which is thereby detachably connected to said wall characterised in that said wall is provided with a plurality of grooves and wherein each of said grooves receives another edge of the display panel.

[0005] According to an optional feature of this aspect of the invention, the display panel may be rectilinear and wherein said locking tabs may protrude from opposing sides of said display panel, the distance between said tabs along one side being greater than the distance between tabs along the opposing side.

[0006] According to another optional feature of this aspect of the invention, each of the grooves may be attached to a lip on its outer surface, said lip is adapted to guide said display panel into position.

[0007] According to yet another optional feature of this aspect of the invention, each of the grooves and/or the apertures may be positioned so that said display panel is maintained in a substantially flat relationship against said wall.

[0008] According to a further optional feature of this aspect of the invention, the locking tabs may be located along upper and lower edges of said display panel each facing away from said display panel.

[0009] According to yet a further feature of this aspect of the invention, each of the grooves may be positioned to support the side edges of said display panel.

[0010] According to still a further feature of this aspect of the invention, the locking tabs located along the lower edges of said display panel may protrude a greater distance than the locking tabs located along the upper edges of the display panel thereby enabling the lower edge tabs to be maintained in their respective locking apertures when the locking tabs protruding from the upper

edges are located in their corresponding apertures.

[0011] Another aspect of the invention provides a method of detachably connecting a display panel to the at least one wall of the crate characterised in that the blank is bent to compress the side edges, and the lower edge being pushed into a face to face relationship with the crate wall until lower tabs are engaged with corresponding apertures, the grooves then act as guides to assist in slotting side edges into their respective grooves, the upper edge tabs are brought into contact with their respective apertures and locked into position.

[0012] A third aspect of the invention provides a display panel for use with a crate of the invention described herein, which display panel is rectilinear and wherein a plurality of locking tabs protrude from opposing sides of the display panel, the distance between the tabs along one side being greater than the distance between tabs along the opposing side.

[0013] Embodiments of the invention will now be described by way of example only, with reference to the accompanying drawings, in which:-

FIGURE 1 is an elevated view of a crate and a paperboard display panel to be fastened to the side and/or end walls of a plastics crate;

FIGURE 2 is a side elevation of a plastics crate incorporating locking apertures for detachable affixing a display panel and grooves for supporting the side edges of the display panel;

FIGURE 3 is an end elevation of a plastics crate shown in Figure 2;

FIGURE 4 is a sectional view (X-X) of the crate shown in Figure 2.

FIGURE 5 is a sectional view (Z-Z) of the crate shown in Figure 2.

FIGURE 6 is an enlarged view of the crate and display panel.

FIGURE 14 is a sectional view (C-C) of the crate shown in Figure 3.

FIGURE 16 is a side view of another embodiment of the crate.

FIGURE 17 is an end elevation of the crate shown in Figure 16.

FIGURE 18 is a sectional view (X-X) of the crate shown in Figure 16.

FIGURE 19 is a sectional view (Y-Y) of the crate shown in Figure 16.

FIGURE 20 is a side view of another embodiment.

FIGURE 21 is an end elevation of the crate illustrated in Figure 20.

FIGURE 22 is a sectional view (X-X) of the embodiment shown in Figure 20.

FIGURE 23 is a sectional view (Z-Z) of the embodiment shown in Figure 20.

FIGURE 24 is a sectional view (Y-Y) of an embodiment illustrated in Figure 20.

FIGURE 25 is a side view of another embodiment of the crate.

FIGURE 26 is an end elevation of the crate illustrated in Figure 25.

FIGURE 27 is a sectional view (X-X) of the embodiment illustrated in Figure 25.

FIGURE 28 is a sectional view (Y-Y) of the embodiment illustrated in Figure 25.

FIGURE 29 is a sectional view (Z-Z) of the embodiment illustrated in Figure 25.

[0014] There are no figures 7,8,9,10,11,12,13 or 15.

[0015] Referring to Figure 1, a rectilinear blank 10 of paperboard or other suitable material for forming a display panel is formed with locking tabs 12,14,16,18 protruding from upper and lower edges of the blank. The locking tabs are of known form.

[0016] Illustrated in Figure 2 is a plastics bottle crate 20 which has in one or more of its end and/or side walls 22, a caved section 23 to receive the blank 10. Caved section 23 contains four locking apertures a1, a2, a3, a4 spaced apart so that they can receive locking tabs 12, 14, 16, 18 respectively.

[0017] The size and/or shape of the display panel can be varied according to particular requirements. The selection of the position and number of locking tabs on the blank can also be varied to enable the blank to be positioned in a face to face relationship with the caved section panel 24.

[0018] In the embodiment illustrated in Figure 1, the distance d1 between tabs positioned on the lower edge of the blank 10 is greater than the distance d2 between tabs located along the upper edge of blank 10. One benefit of this feature is that it assists in minimising carton bending, once the display panel is in use.

[0019] The side edges of the display panel are positioned within grooves g1, g2 located within the caved section, as shown in Figure 2. The grooves maintain the display panel in a flat relationship within the caved section and assist in minimising amount of display panel

bending, once in use.

[0020] The display panel is attached to one or more of the crate sides or end walls, by bending the carton and using lips L1 and L2 illustrated in Figure 2, to channel the display panel and lower edge locking tabs 12,14 towards apertures a1, a2. Locking tabs 12,14 are then inserted into their respective apertures a1, a2. Lips L1, L2 maintain the carton in a bent form and guide the side edges s1, s2 shown in Figure 1 into the grooves g1, g2 respectively while the display panel is being channelled into the correct position. Once side edges s1 and s2 are located in grooves g1 and g2 respectively, as illustrated in Figure 6 the upper locking tabs 16, 18 are located into their respective apertures a3, a4.

[0021] In the embodiment illustrated in Figure 1, locking tabs 12, 14 extending from the lower edge are longer than locking tabs 16,18 extending from the upper edge, to ensure that when the upper edge locking tabs are moved into a final position, locking tabs 12, 14 (already in position) are not disengaged from locking apertures a1, a2, thereby dislodging the display panel.

[0022] The display panels can be readily removed from the crate walls, e.g. by vacuum cups which usually results in the locking tabs tearing off when the panel is removed.

[0023] Other forms of locking tabs and/or locking apertures are envisaged. Equally, the type and number of grooves or the display panel are not limited to the embodiments illustrated. However, by this arrangement advertising, identification or other data can be applied to the crate and is replaceable when a different display of information is required or if through general wear and tear and the attached display panel has become damaged or soiled and therefore requires replacement.

[0024] Other embodiments of the invention are illustrated in figures 16 to 19, 20 to 24 or 25 to 29 and are similar to that described above, so they are not described in any more detail.

Claims

1. A crate for carrying articles, such as bottles, comprising at least one wall having a display panel (10) detachably connected to said wall, wherein said wall is formed with a plurality of locking apertures (a1, a2, a3, a4) spaced apart, each of said locking apertures receiving one of a corresponding group of locking tabs provided on at least one edge of the display panel which is thereby detachably connected to said wall **characterised in that** said wall is provided with a plurality of grooves (g1, g2) and wherein each of said grooves receives another edge (s1, s2) of the display panel.
2. A crate according to claim 1, wherein said display panel (10) is rectilinear and wherein said locking tabs (12, 14, 16, 18) protrude from opposing sides

of said display panel, the distance between said tabs along one side being greater than the distance between tabs along the opposing side.

3. A crate according to claim 1 or claim 2 wherein each of said grooves (g1, g2) is attached to a lip (L1, L2) on its outer surface, said lip (L1, L2) is adapted to guide said display panel into position.
4. A crate according to any of claims 1 to 3 wherein each of said grooves (g1, g2) and/or said apertures (a1,a2,a3,a4) are positioned so that said display panel (10) is maintained in a substantially flat relationship against said wall.
5. A crate according to any of claims 1 to 4 wherein said locking tabs (12, 14, 16, 18) are located along upper and lower edges of said display panel (10) each facing away from said display panel.
6. A crate according to any preceding claim wherein each of said grooves (g1, g2) is positioned to support the side edges of said display panel.
7. A crate according to claim 5 or claim 6 wherein said locking tabs (12, 14) located along the lower edges of said display panel protrude a greater distance than the locking tabs (12, 18) located along the upper edges of the display panel (10) thereby enabling the lower edge tabs (12, 14) to be maintained in their respective locking apertures (a1, a2) when the locking tabs (16, 18) protruding from the upper edges are located in their corresponding apertures (a3,a4).
8. A method of detachably connecting a display panel (10) to the at least one wall (20, 22) of the crate of claims 5 and 6, **characterised in that** the blank is bent to compress the side edges (s1, s2), and the lower edge being pushed into a face to face relationship with the crate wall until lower tabs (12, 14) are engaged with corresponding apertures (a1,a2,) the grooves (g1, g2) then act as guides to assist in slotting side edges (s1, s2) into their respective grooves, the upper edge tabs (16, 18) are brought into contact with their respective apertures (a3,a4) and locked into position.
9. A display panel (10) for use with the crate as defined in any one of claims 2 to 7, which display panel (10) is rectilinear and wherein a plurality of locking tabs (12, 14, 16, 18) protrude from opposing sides of said display panel, the distance between said tabs along one side being greater than the distance between tabs along the opposing side.

Patentansprüche

1. Kiste zum Tragen von Gegenständen wie Flaschen, wobei diese wenigstens eine Wand umfasst, die eine Sichtwandfläche (10) aufweist, die abnehmbar mit der Wand verbunden ist, wobei die Wand mit einer Vielzahl voneinander beabstandeter Verschlussöffnungen (a1, a2, a3, a4) ausgebildet ist, wobei jede der Verschlussöffnungen eine Verschlusslasche aus einer entsprechenden Gruppe von Verschlusslaschen aufnimmt, die an wenigstens einer Kante der Sichtwandfläche bereitgestellt sind, die dadurch abnehmbar mit der Wand verbunden ist, **dadurch gekennzeichnet, dass** die Wand mit einer Vielzahl von Rillen (g1, g2) bereitgestellt ist, und wobei jede der Rillen eine andere Kante (s1, s2) der Sichtwandfläche aufnimmt.
2. Kiste nach Anspruch 1, wobei die Sichtwandfläche (10) geradlinig ist und wobei die Verschlusslaschen (12, 14, 16, 18) von gegenüberliegenden Seiten der Sichtwandfläche vorstehen, wobei der Abstand zwischen den Laschen entlang einer Seite größer ist als der Abstand zwischen den Laschen entlang der gegenüberliegenden Seite.
3. Kiste nach Anspruch 1 oder 2, wobei jede der Rillen (g1, g2) an einer Lippe (L1, L2) an ihrer Außenfläche befestigt ist, wobei die Lippe (L1, L2) angepasst ist, um die Sichtwandfläche in Position zu führen.
4. Kiste nach einem der Ansprüche 1 bis 3, wobei jede der Rillen (g1, g2) und/oder die Öffnungen (a1, a2, a3, a4) derart angeordnet sind, dass die Sichtwandfläche (10) in einer im Wesentlichen flachen Beziehung gegen die Wand gehalten wird.
5. Kiste nach einem der Ansprüche 1 bis 4, wobei die Verschlusslaschen (12, 14, 16, 18) entlang oberer und unterer Kanten der Sichtwandfläche (10) angeordnet sind, wobei jede von der Sichtwandfläche wegweist.
6. Kiste nach einem der vorstehenden Ansprüche, wobei jede der Rillen (g1, g2) angeordnet ist, um die Seitenkanten der Sichtwandfläche zu halten.
7. Kiste nach Anspruch 5 oder 6, wobei die entlang der unteren Kanten der Sichtwandfläche angeordneten Verschlusslaschen (12, 14) eine größere Strecke vorstehen als die entlang der oberen Kanten der Sichtwandfläche (10) angeordneten Verschlusslaschen (16, 18), wodurch die Laschen der unteren Kante (12, 14) in ihren entsprechenden Verschlussöffnungen (a1, a2) gehalten werden können, wenn die von den oberen Kanten vorstehenden Verschlusslaschen (16, 18) in ihren entsprechenden Öffnungen (a3, a4) angeordnet sind.

8. Verfahren zum abnehmbaren Verbinden einer Sichtwandfläche (10) mit wenigstens einer Wand (20, 22) der Kiste nach Anspruch 5 oder 6, **dadurch gekennzeichnet, dass** der Zuschnitt gebogen wird, um die Seitenkanten (s1, s2) zusammenzudrücken, und wobei die untere Kante in eine flächenberührende Beziehung mit der Kistenwand geschoben wird, bis untere Laschen (12, 14) von entsprechenden Öffnungen (a1, a2) in Eingriff genommen werden; die Rillen (g1, g2) dann als Führungen wirken, um beim Einbringen der Seitenkanten (s1, s2) in ihre entsprechenden Rillen zu unterstützen, die Laschen der oberen Kante (16, 18) in Kontakt mit ihren entsprechenden Öffnungen (a3, a4) gebracht werden und in Position fixiert werden.
9. Sichtwandfläche (10) für die Verwendung zusammen mit der Kiste nach einem der Ansprüche 2 bis 7, wobei die Sichtwandfläche (10) geradlinig ist und wobei eine Vielzahl von Verschlusslaschen (12, 14, 16, 18) von gegenüberliegenden Seiten der Sichtwandfläche vorstehen, wobei der Abstand zwischen den Laschen entlang einer Seite größer ist als der Abstand zwischen Laschen entlang der gegenüberliegenden Seite.

Revendications

1. Casier pour transporter des articles, tels que des bouteilles, comportant au moins une paroi ayant un panneau d'affichage (10) connecté de manière amovible à ladite paroi, ladite paroi étant munie d'une pluralité d'ouvertures de verrouillage (a1, a2, a3, a4) espacées, chacune desdites ouvertures de verrouillage recevant une patte de verrouillage d'un groupe correspondant de pattes de verrouillage agencées sur au moins un bord du panneau d'affichage qui est ainsi connecté de manière amovible à ladite paroi, **caractérisé en ce que** ladite paroi est munie d'une pluralité de gorges (g1, g2), et chacune desdites gorges reçoit un autre bord (s1, s2) du panneau d'affichage.
2. Casier selon la revendication 1, dans lequel ledit panneau d'affichage (10) est rectiligne, et lesdites pattes de verrouillage (12, 14, 16, 18) font saillie à partir de côtés opposés dudit panneau d'affichage, la distance entre lesdites pattes situées le long d'un premier côté étant supérieure à la distance entre des pattes situées le long du côté opposé.
3. Casier selon la revendication 1 ou 2, dans lequel chacune desdites gorges (g1, g2) est fixée à une lèvre (L1, L2) sur sa surface extérieure, ladite lèvre (L1, L2) étant adaptée pour guider ledit panneau d'affichage en position.
4. Casier selon l'une quelconque des revendications 1 à 3, dans lequel chacune desdites gorges (g1, g2) et/ou desdites ouvertures (a1, a2, a3, a4) est positionnée de sorte que ledit panneau d'affichage (10) est maintenu dans une disposition sensiblement plate contre ladite paroi.
5. Casier selon la revendication 1 à 4, dans lequel lesdites pattes de verrouillage (12, 14, 16, 18) sont situées le long des bords supérieurs et inférieurs dudit panneau d'affichage (10), chacune étant dirigée en s'éloignant dudit panneau d'affichage.
6. Casier selon l'une quelconque des revendications précédentes, dans lequel chacune desdites gorges (g1, g2) est positionnée pour supporter les bords latéraux dudit panneau d'affichage.
7. Casier selon la revendication 5 ou 6, dans lequel lesdites pattes de verrouillage (12, 14) situées le long des bords inférieurs dudit panneau d'affichage font saillie sur une distance plus importante que les pattes de verrouillage (12, 18) situées le long des bords supérieurs du panneau d'affichage (10), en permettant ainsi aux pattes de bord inférieur (12, 14) d'être maintenues dans leurs ouvertures de verrouillage respectives (a1, a2) lorsque les pattes de verrouillage (16, 18) faisant saillie à partir des bords supérieurs sont situées dans leurs ouvertures correspondantes (a3, a4).
8. Procédé pour connecter de manière amovible un panneau d'affichage (10) à la au moins une paroi (20, 22) du casier des revendications 5 et 6, **caractérisé en ce que** l'ébauche est courbée pour comprimer les bords latéraux (s1, s2), et le bord inférieur étant poussé dans une disposition en vis-à-vis avec la paroi de casier jusqu'à ce que les pattes inférieures (12, 14) soient en prise avec des ouvertures correspondantes (a1, a2), les gorges (g1, g2) agissent alors comme des guides pour aider à placer les bords latéraux (s1, s2) dans leurs gorges respectives, et les pattes de bord supérieur (16, 18) sont amenées en contact avec leurs ouvertures respectives (a3, a4), et verrouillées en position.
9. Panneau d'affichage (10) destiné à être utilisé avec le casier tel que défini selon l'une quelconque des revendications 2 à 7, le panneau d'affichage (10) étant rectiligne et une pluralité de pattes de verrouillage (12, 14, 16, 18) faisant saillie à partir de côtés opposés dudit panneau d'affichage, et la distance entre lesdites pattes situées le long d'un premier côté étant supérieure à la distance entre des pattes situées le long du côté opposé.

FIG. 2

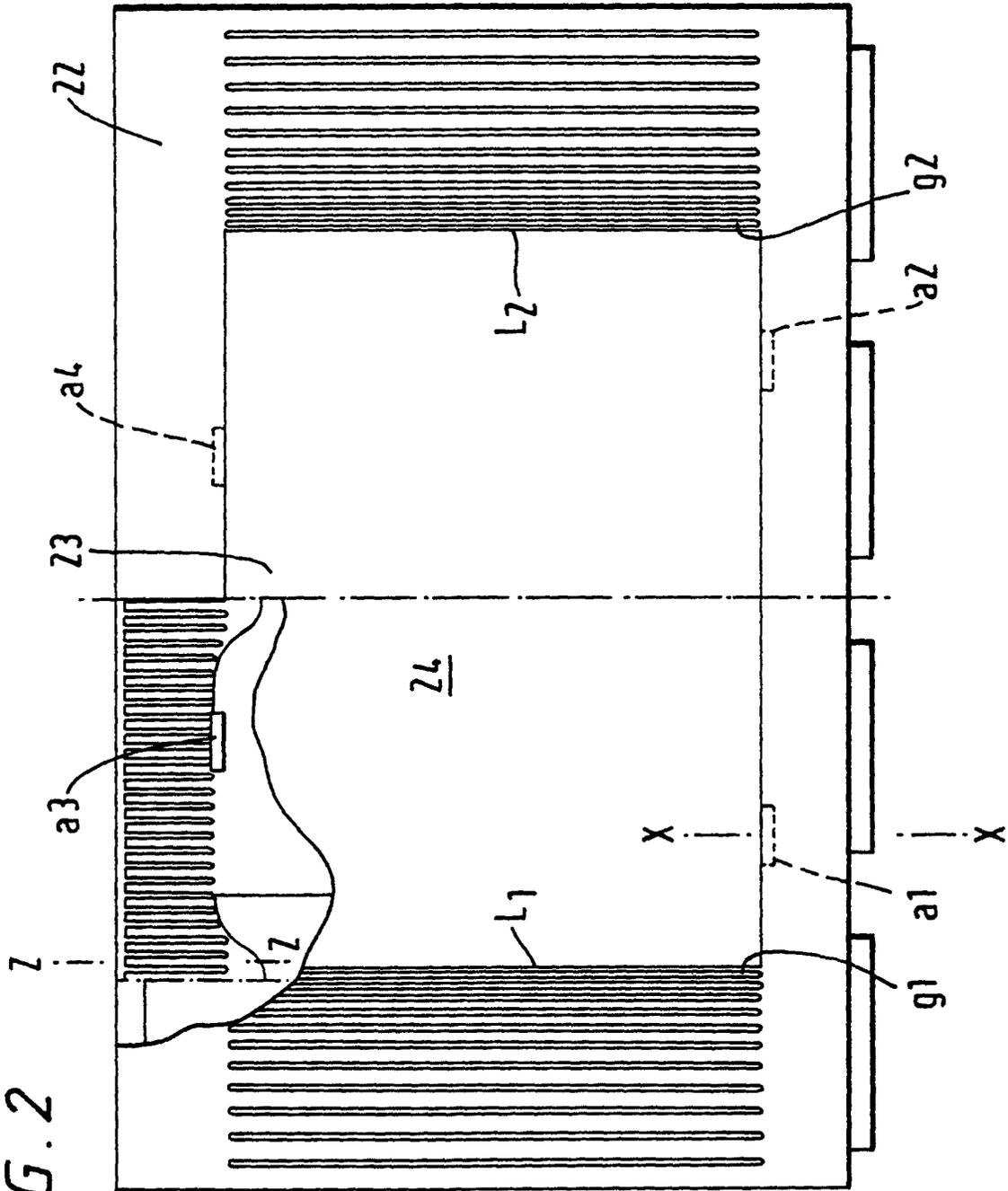


FIG. 3

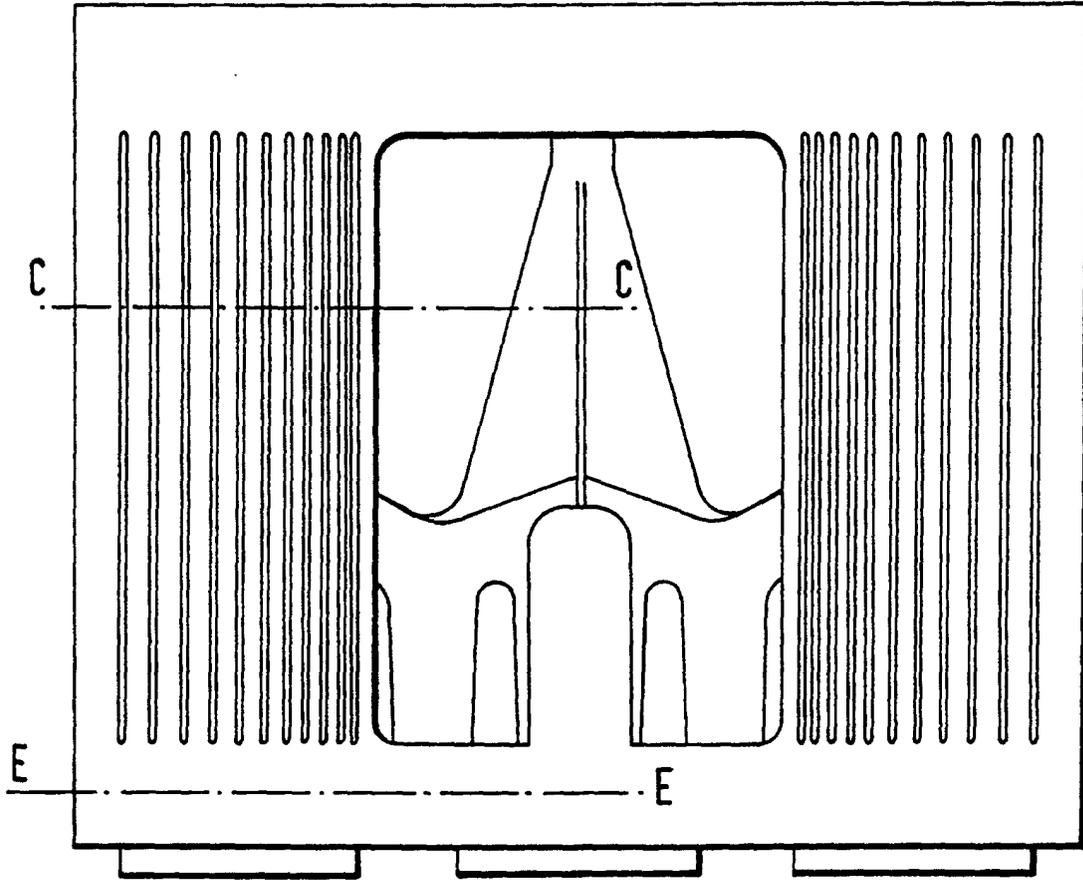


FIG. 4

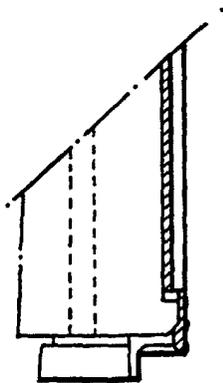
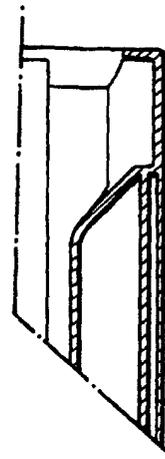


FIG. 5



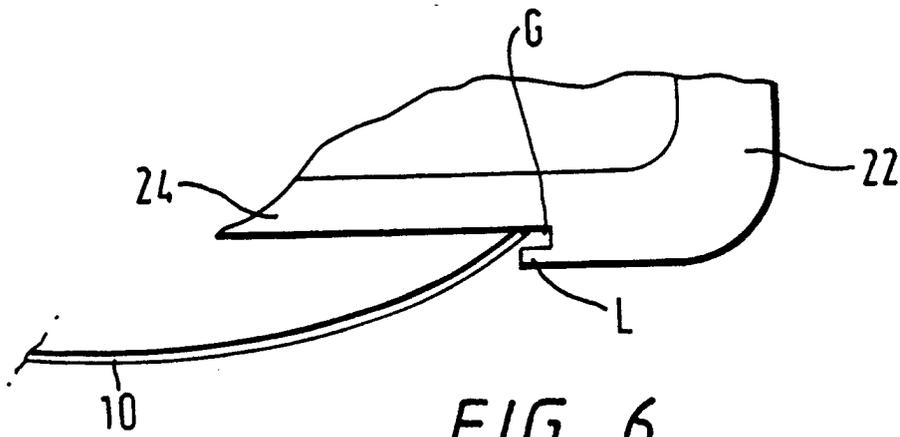


FIG. 6

FIG. 14

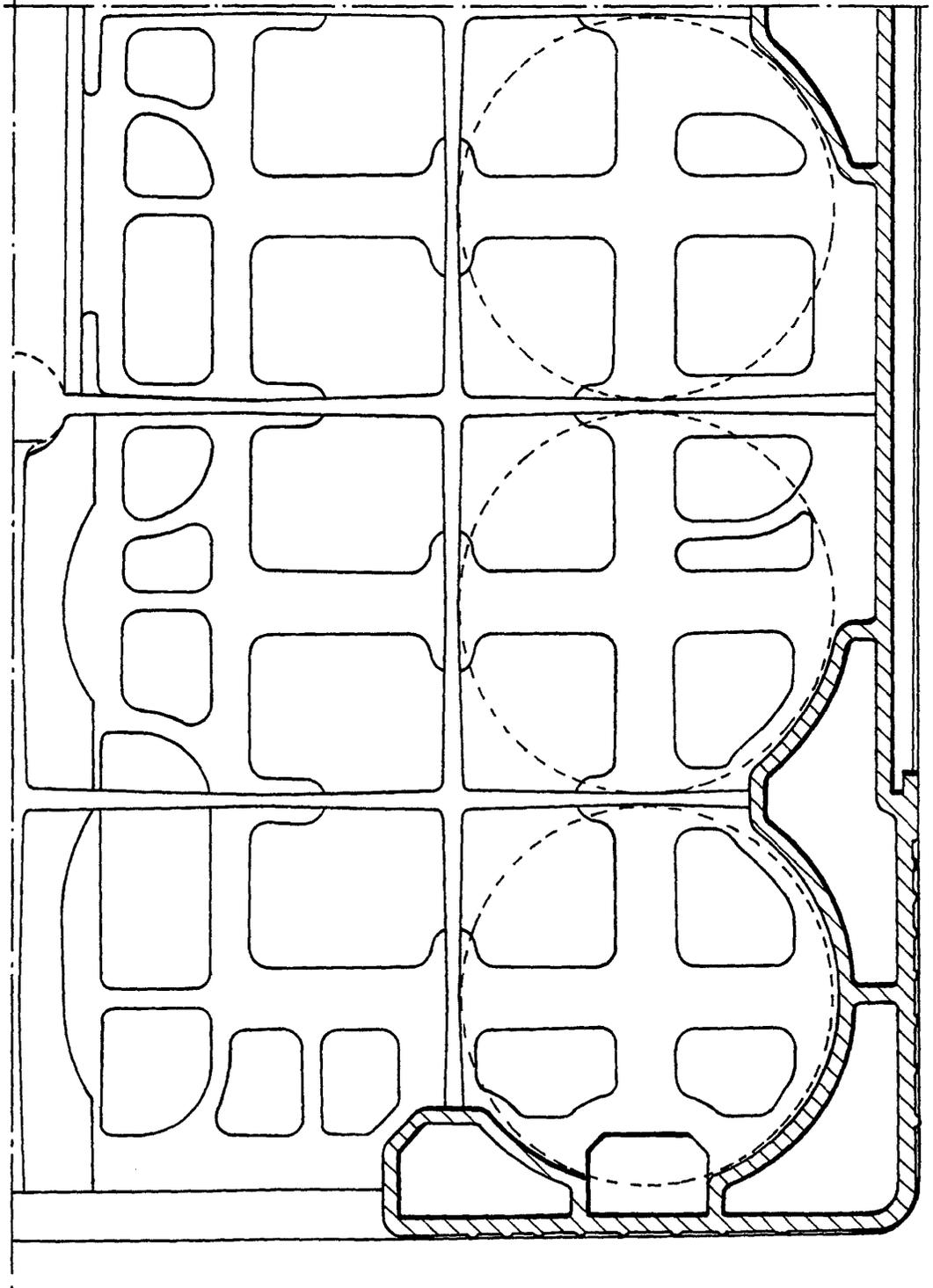


FIG. 16

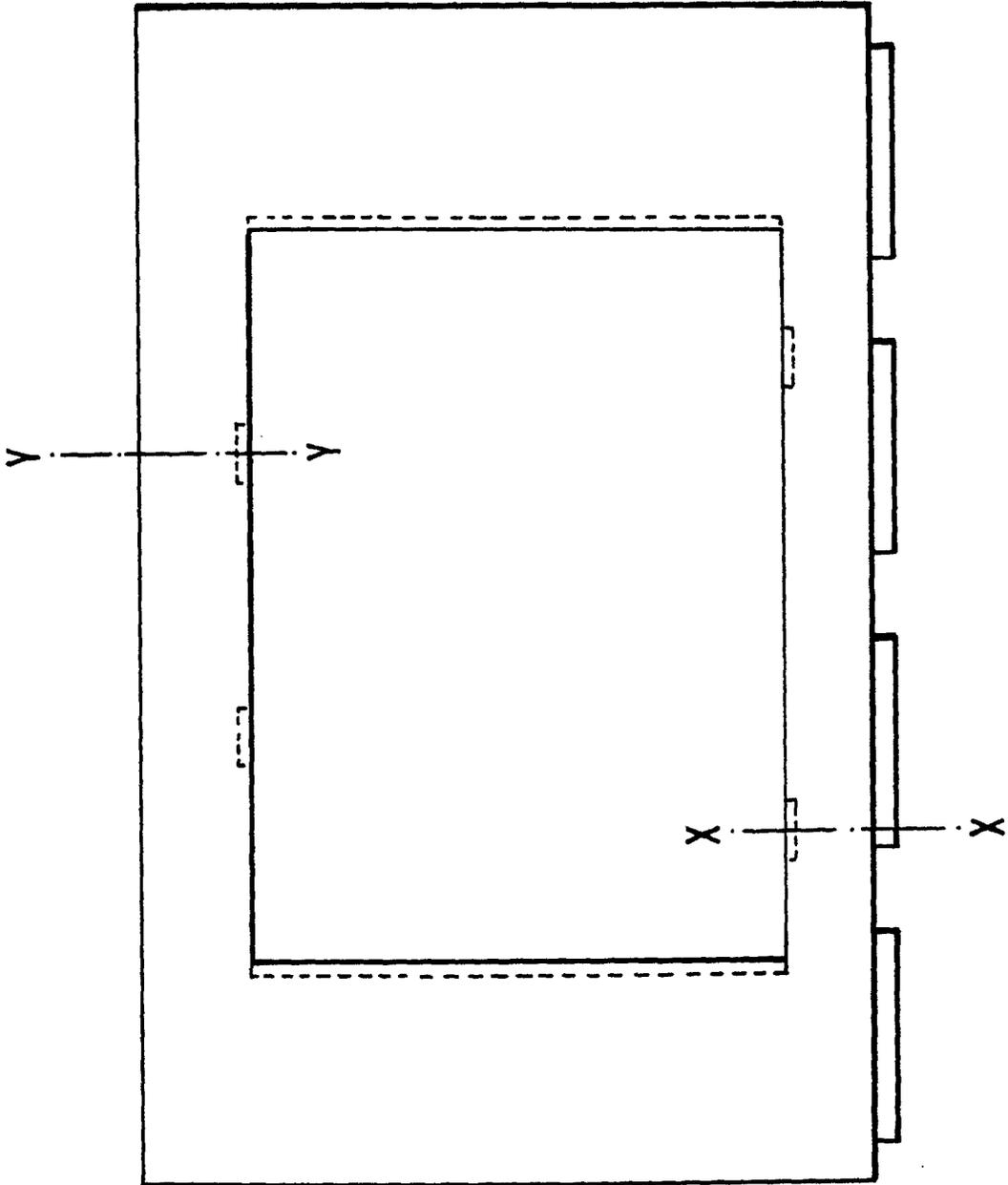


FIG. 17

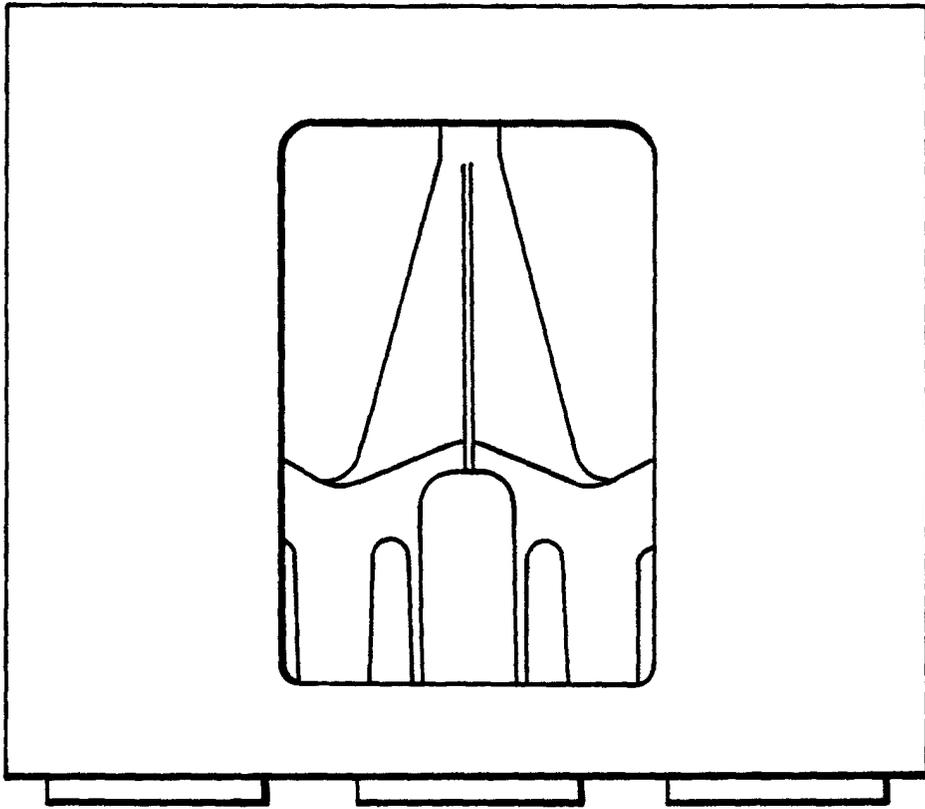


FIG. 18

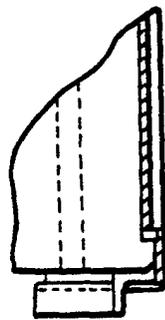


FIG. 19

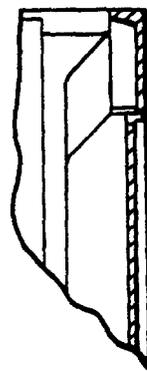


FIG. 20

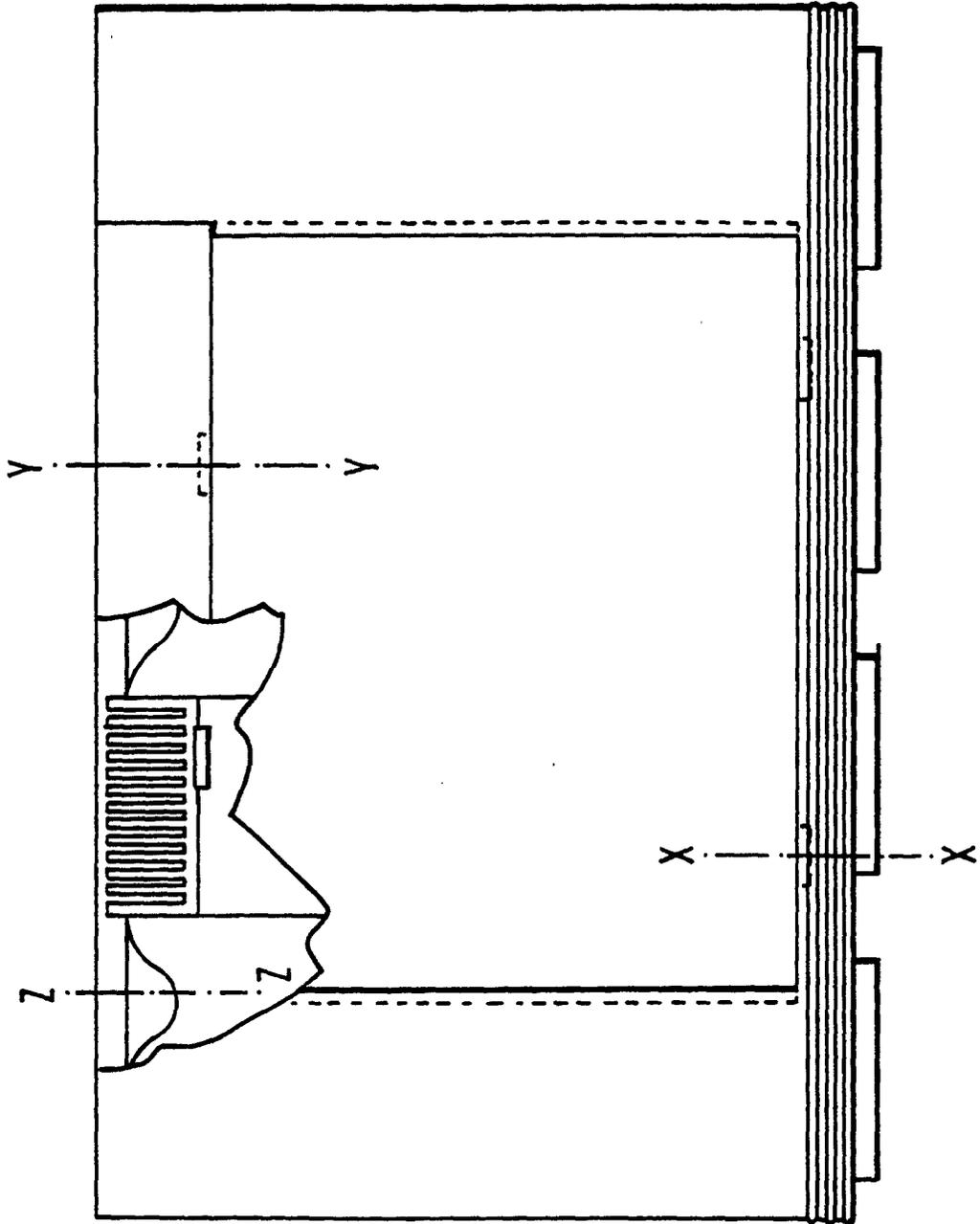


FIG. 21

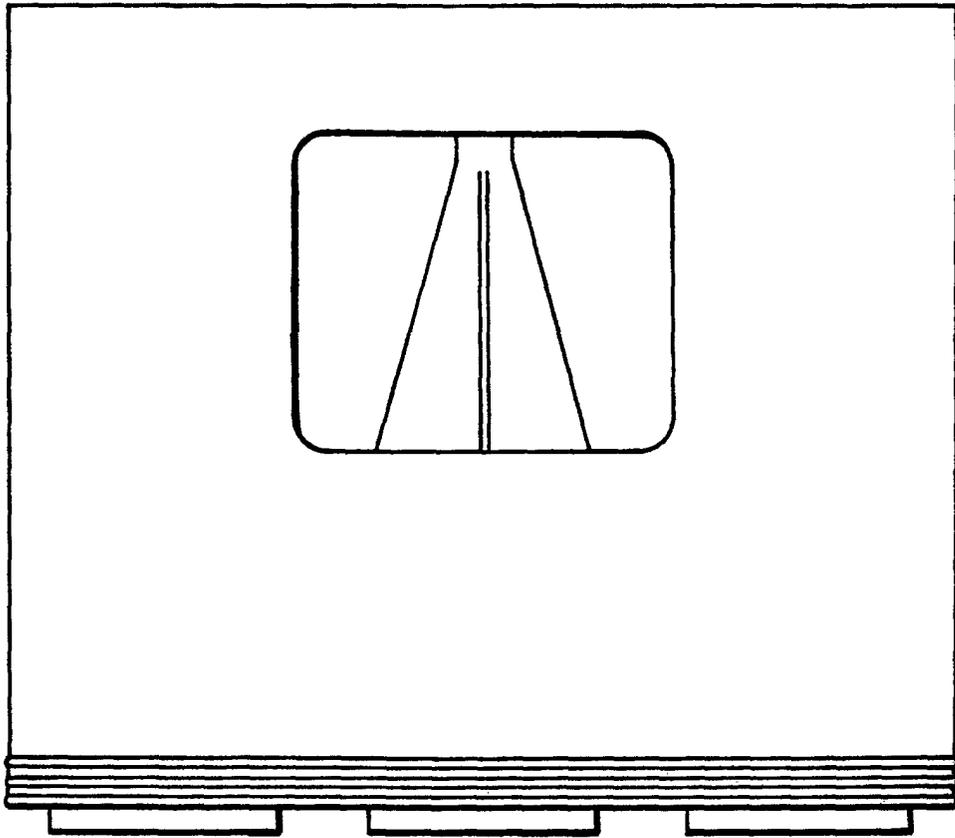


FIG. 22

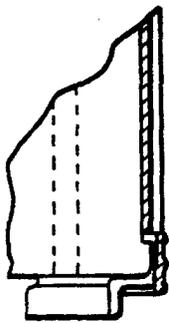


FIG. 23

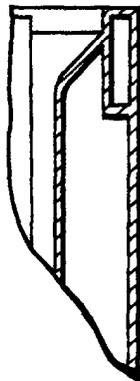


FIG. 24

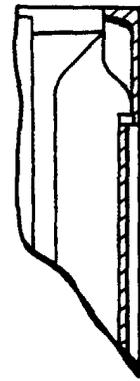


FIG. 25

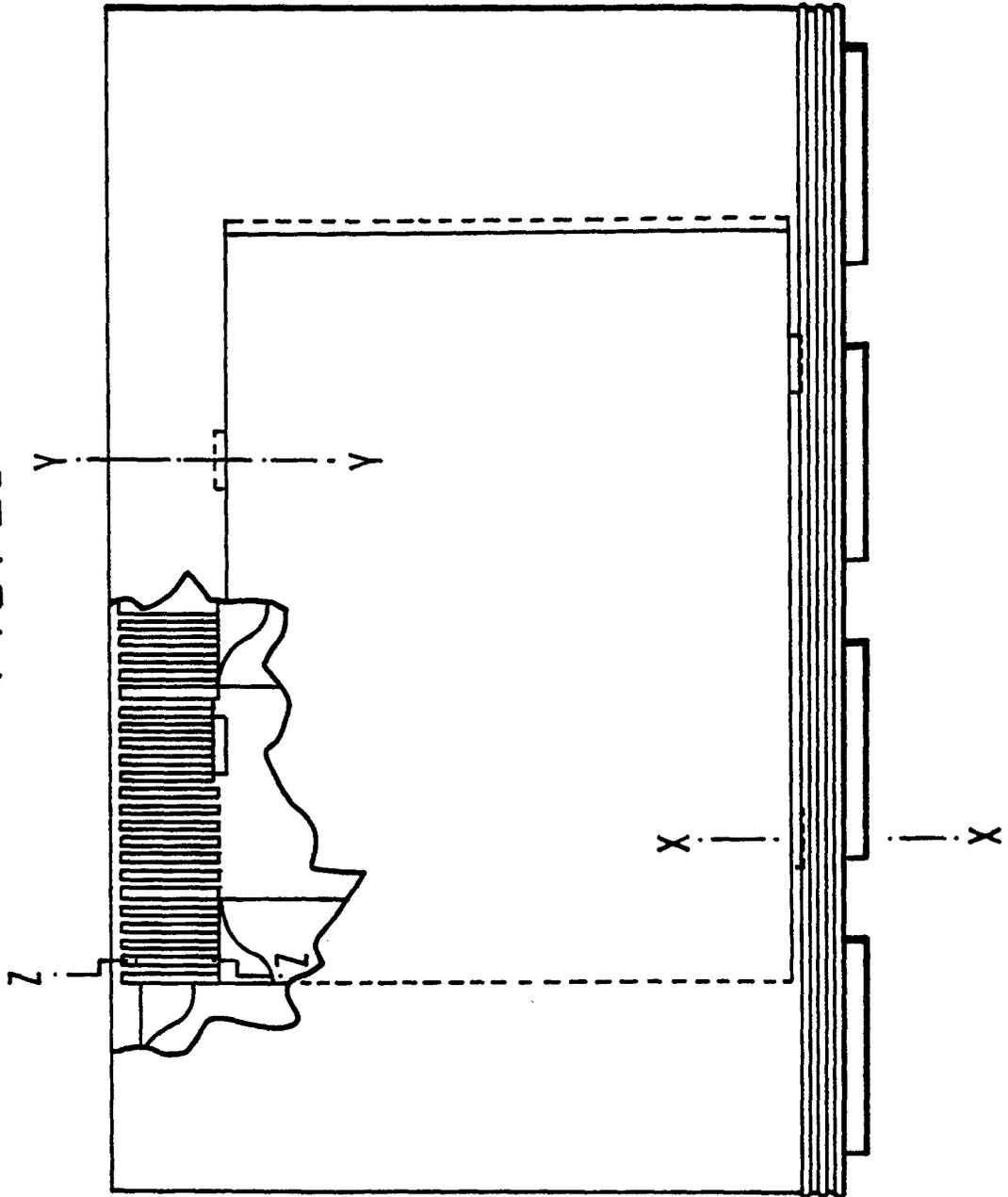
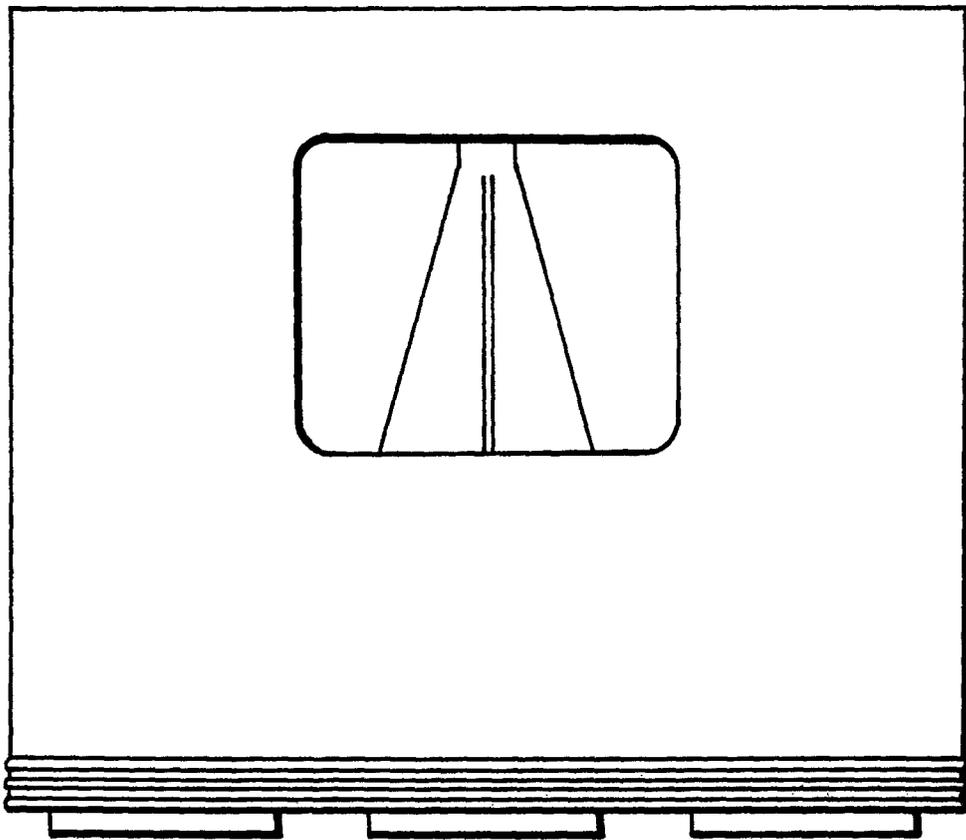


FIG. 26



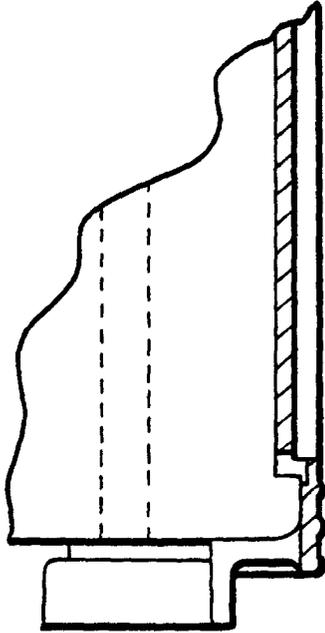


FIG. 27

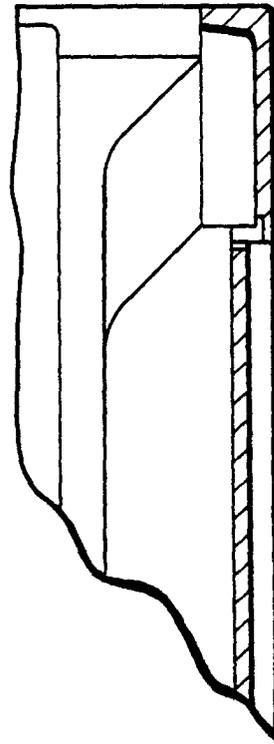


FIG. 28

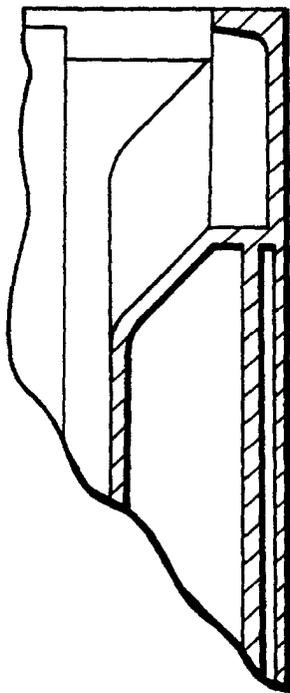


FIG. 29