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(54) **AN ENTRANCE DEVICE**
ZUSTIEGSVORRICHTUNG
DISPOSITIF D'ENTREE

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EP-A- 0 611 257 **US-A- 4 355 700**

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Description

BACKGROUND OF THE INVENTION AND PRIOR ART

[0001] The present invention refers to an entrance device according to the preamble of claim 1 disclosed in EP-A-0 611 257.

[0002] By many different types of temporary houses or buildings, there is a need for a quick and easy way of providing any form of entrance device having a staircase for enabling the entry despite the fact that the entrance of the housing or the building is not located at the ground level. It may for example concern working houses, which frequently are piled onto each other, simpler barracks or so-called evacuation dwellings, public buildings such as day nurseries, kindergartens and the like, but also more permanent dwellings and summer houses.

[0003] It is known to provide such temporary entrance devices by means of joining together wood deals. Such solutions have the disadvantages that the strength and the stability frequently are bad which may result in accidents. Another risk for accidents is that such deals or boards often get slippery during wet weather. Furthermore, such temporary solutions of wood, frequently comprise a waste of resources since the wood is simply burnt up when the temporary entrance device then is demounted and the entrance device may not be used again. Furthermore, it is also to be mentioned that the work effort required for building such temporary entrance devices of wood often is significant.

[0004] It is also known to utilize more complete entrance device constructions. However, these are frequently characterized by being heavy and ungainly and by the fact that they are difficult to adapt to various conditions regarding for example level differences.

SUMMARY OF THE INVENTION

[0005] The object of the present invention is to provide a device remedying the above-mentioned problems. In particular, it should be mountable and dismountable in an easy manner and in such a way that it may be used several times. According to a further object, the device is to be flexible in such a manner that it may be adapted to very varying conditions, for instance varying level differences between the entrance and the ground level.

[0006] This object is obtained by the entrance device initially defined and comprising the characterizing features defined in claim 1. By such a self-supported frame member a stable platform is provided on which step plates and stairs leading to the platform may be attached in an easy manner.

[0007] According to a first embodiment of the invention, the support member comprises a bracket having two legs provided in an essentially perpendicular relationship to each other, one of which is arranged to be attached to a wall of the house or the like by means of

an attachment member and the other is arranged to support the frame member. Advantageously, the attachment member may thereby comprise a longitudinal element insertable in an opening of the leg of the bracket which is arranged to support the frame member. In such a manner, a flexible system is obtained, in which the attachment member is attached to the house to which the entrance device is to be provided and the bracket supporting the frame member may easily be pushed onto the attachment member. Thereby, the attachment member may advantageously comprise a hook-like member facing away from the longitudinal element and being arranged to be introduced into a cavity in the house or the like and fasten in a beam of said house. Such an embodiment of the attachment member is particularly suitable for such working houses piled onto each other that are used at building sites. Advantageously, the legs of the bracket comprise a hollow square profile. Such a square profile results in a good stability and strength of the bracket and one may simultaneously provide a great abutment surface for the leg arranged to be attached to the wall of the house or the like.

[0008] According to a further embodiment of the invention, the frame member comprises four side pieces connected to each other to a quadrangle and the flange member comprises a flange piece projecting from each side piece towards the centre of the frame member. By such a construction, a great strength and stability of the frame member is obtained and several such frame members may be connected to each other to a self-supporting unit by providing side pieces against each other and connecting them by means of a suitable number of screw connections. Advantageously, the four flange pieces form a surrounding flange directing inwardly. Beside the fact that such a flange is a stable substrate for a step plate, it also contributes to a further raised strength of the frame member and thus to an improvement of the self-supporting capacity. Advantageously, the frame member is manufactured in aluminium, steel or any similar high-strength material.

[0009] According to a further embodiment of the invention, the entrance device has a staircase comprising a connection part arranged to be suspended onto the frame member. In such a manner, a particularly simple mounting of the staircase is enabled. Thereby, the connection part may comprise a first portion arranged to extend along the outer side of a side piece of the frame member and the second portion connected to the first portion and arranged to extend along the inner side of the side piece.

[0010] According to a further embodiment of the invention, the staircase is extendible. At the previously mentioned temporary houses and dwellings the height between the ground level and the entry of the house varies. Previously, one has tried to solve this problem by arranging the staircase on a number of loading plates for instance. This is of course a very unstable solution. Therefore, it is a great advantage to be able to provide

a staircase the length of which may be varied. Thereby, the staircase may comprise two opposite side pieces and one or more stairs provided between the side pieces, a loosely attachable extension piece having two extension side pieces and at least one stair provided therebetween, and two connecting pieces, each of which is provided to be loosely attached to a side piece and an extension side piece. Advantageously, each connecting piece is essentially plane and abuts a side piece by a first portion and abuts an extension side piece by a second portion in such a manner that these side pieces are aligned with each other. By such an embodiment, the staircase may in an easy manner be provided with a suitable number of extension pieces necessary to adapt the length of the staircase to the height conditions prevailing. Furthermore, the side pieces and the extension side pieces have in cross-section an essentially U-shaped profile with a bottom and two legs. Advantageously, the connecting piece is provided between the side pieces and the stair against the inner side of the bottom of the U-shaped profile. In such a manner, the connecting piece will not be visible when the staircase is mounted but the side of the side pieces facing outwardly will be essentially even. Advantageously, each connecting piece is kept together with two associated side pieces by means of through-going screw bolts at least one of which extends through a side piece, the connecting piece and into the stair.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] The present invention is now to be explained more closely by means of embodiments disclosed by way of example and with reference to the drawings attached.

Fig 1 discloses a side-view of an entrance device according to the invention.
 Fig 2 discloses a bracket of the entrance device in Fig 1.
 Fig 3 discloses an enlarged view of a part of the bracket in Fig 2.
 Fig 4 discloses a cross-section through a leg of the bracket in Figs 2 and 3.
 Fig 5 discloses a view from above of a frame member for the entrance device in Fig 1.
 Fig 6 discloses a cross-section through a side piece of the frame member for the entrance device.
 Fig 7 discloses a view from above of a mounting member for the frame member.
 Fig 8 discloses a staircase for the entrance device in Fig 1.
 Fig 9 discloses a view of a connecting part for the staircase device in Fig 8.
 Fig 10 discloses a side view of an upper part of the staircase in Fig 8 and the connecting part in Fig 9.
 Fig 11 discloses a view of a stair of the staircase in

Fig 8.

Fig 12 discloses a view of a side piece of the staircase in Fig 8.

Fig 13 discloses an extension piece for the staircase in Fig 8.

Fig 14 discloses a connecting piece for connecting the extension piece in Fig 13 to the staircase in Fig 8.

Fig 15 discloses a front view of a railing for the entrance device in Fig 1.

Fig 16 discloses a view of a part of the railing in Fig 15.

Fig 17 discloses in a sectional view the mounting of the railing to the frame member.

DETAILED DESCRIPTION OF DIFFERENT EMBODIMENTS

[0012] Fig 1 discloses an entrance device according to the present invention. The entrance device is intended to be attached to a house 1 or the like. In this patent application the expression "house" is used. It is to be noted that this expression refers to all possible buildings of more or less temporary kind, for example the working houses disclosed in Fig 1 and piled onto each other, evacuation dwellings and similar barracks, public buildings such as day nurseries and kindergartens, summer houses and at other places where an entrance device or staircase is necessary for giving access to an entry or the like which for instance is located at another level than the ground level. The entrance device disclosed in Fig 1 comprises a staircase 2, having an extension piece 3 and a railing 4, and a platform 5 provided horizontally and having a railing 6. The lower platforms 5 disclosed in Fig 1 are in principle constructed in the same way as the upper platform 5. One of the lower platforms 5 has a support in leg 7 and a shorter staircase 2. The other lower platform 5 discloses a slightly sloping ramp 8 suitable for a wheel chair. The upper platform 5 is supported by means of support members 9.

[0013] It is to be noted that components having a corresponding function in the different embodiments have been provided with the same reference signs.

[0014] The supporting member 9 disclosed in Fig 1 is now to be explained more closely with reference to Figs 2 to 4. The supporting member 9 comprises a bracket 10 having two legs 10a and 10b. One of the legs 10b is arranged to abut the wall of the house 1 and the other leg 10a is arranged to project essentially perpendicularly from the wall of the house 1. The leg 10a as well as the leg 10b have the square hollow cross-section disclosed in Fig 4. Although Fig 4 discloses a square cross-section, it is also possible to make the legs 10a, 10b in a more rectangular shape. The legs 10a, 10b of the bracket 10 may be manufactured in preferably extruded aluminium, which is advantageous since it is a very light material. However, it is also possible to manufacture the bracket 10 in steel plate or any high-strength material.

The bracket 10 is fixed to the wall of the house 1 by means of an attachment member 11 having a longitudinal element 12 which is disclosed inserted in an opening at the end side of the leg 10a. The attachment member 11 is fixed to the leg 10a by means of a bolt 13 extending through a first flange 14 provided on the attachment member 11 and a second flange 15 provided on the leg 10a. By tightening a nut 16 provided on the bolt 13 the flanges 14 and 15 are tightened against each other and the attachment member 11 is pulled into the leg 10a. In addition, the attachment member 11 has a hook-like member 17 intended to be fastened to the house 1. In the example disclosed, the house 1 is comprised of working houses piled onto each other and these rest on beams 18. Between a beam 18 of an upper house and a house therebeneath there is an intermediate piece (not disclosed) which provides a distance between the beam 18 and the house 1 therebeneath. The hook-like member 17 of the attachment member 11 may be arranged by being rotated 90° in relation to the orientation disclosed in Fig 3 and pushed in between the beam 18 and the house 1 therebeneath. Thereafter, the attachment member 11 is rotated back and the hook-like member 17 is fastened to the beam 18, as is disclosed in Fig 2. It is to be noted that the attachment member 11 may have many different kinds of fixing members arranged to be fastened to different types of houses and buildings etc. By means of the arrangement disclosed in Fig 2, the bracket 10 is thus rigidly fixed along the wall of the house 1. In order to further enhance the strength and the security, a further attachment member may, however, be provided at the lower end of the leg 10b, for instance screws (not disclosed) extending through the leg 10b and into the house 1. In such a manner, it is obtained that the bracket 10 may not be turned, possibly resulting in the detachment of the hook-like member 17 from its mounting location. Above the bracket, a frame member 19 rests. The frame member 19 is fixedly located on the bracket 10 by means of a mounting member 20.

[0015] The frame member 19 and the mounting member 20 are now to be described more closely with reference to Figs 5 to 7. The frame member 19 comprises four side pieces 21 connected to each other. Each side piece has a flange 22 directed inwardly towards the centre of the frame member 19. Each side piece 21 together with its associated flange 22 may be manufactured in one piece, preferably extruded aluminium. These pieces may then be welded to each other in the four corners of the frame member 19. Of course, it is also possible to manufacture the frame member 19 in steel plate or any other high-strength material. In the frame member 19, a number of step plates 23, for example four, may be inserted in such a manner that they rest against the flange 22. The step plates 23 may be manufactured in extruded aluminium, but also other materials are possible, for example steel plate or wood duckboards which may be inserted in the frame member 19. The mounting member 20 comprises a bottom plate 24 and two sup-

port plates 25 between which one of the side pieces of the frame member 19 is inserted. By means of one screw 26 provided in the outer support plate 25, the side piece 21 may be pressed against the other support plate 25 and be fixed to the mounting member 20. The bottom plate 24 has an elongated hole 27 for a screw 27a by means of which the mounting member 20 is fastened in the beam leg 10a. Because of the elongate shape of the hole 27, the mounting member 20 may be displaced laterally, in such a manner that the frame member 19 always may be inserted between the support plates 25, although a joint between two frame members would be located at the mounting member 20.

[0016] The staircase 2 together with the extension piece 3 disclosed in Fig 1 is now to be explained more closely with reference to Figs 8 to 14. The staircase 2 is disclosed in Fig 8. It comprises a number of stairs 28, see Fig 11, and two side pieces 29, see Fig 12. The stairs 28 as well as the side pieces 29 may advantageously be manufactured in extruded aluminium, steel plate or any other high-strength material. Advantageously, the stairs 28 have a rough surface 30 provided on the upper side, which act as slip protection. On the under side the stairs 28 have for instance three downwardly directed flanges 31 each of which has a downwardly open cavity 32 extending along the length of the stair and which may be provided with threads. In this connection, it is to be noted that the previously mentioned step plates 23 may have a profile similar to the one of the stairs 28. Thereby, the step plates may be fixed in their position in the frame member 19 by means of screws or some kind of snap elements, for instance, (not disclosed), which engage the cavities 32. The side pieces 29 ought to have a high strength. They may therefore have a cross-section profile being stiff with respect to twisting, for example an L-shape, a Z-shape, a U-shape etc. In the example disclosed, the side pieces 29 have a U-shaped cross-section with a bottom and two legs being relatively short in relation to the bottom. The side piece 29 has rows of three holes 33 which are provided at the same mutual distance as the cavities 32. Consequently, the stairs 28 are fixed to the two side pieces 29 by means of screws extending through the holes and threaded into the cavities 32. At the upper end of the staircase 2, a connecting part 34 is provided. This is fastened by screws in the two side pieces 29. The connecting part 34 has a first portion 35 arranged to extend along the outer side of a side piece 21 of the frame member 19. This upper portion 35 is bent 180° and thus forms a second portion 36 arranged to extend along the inner side of the side piece 21. In this manner, the staircase 2 may in a secure manner be hooked onto the frame member 19. The staircase 2 is extendible by the extension piece 3 disclosed in Figs 1 and 13. This piece comprises two extension side pieces 37, which have the same cross-section profile as the side pieces 29, and a stair 28 provided therebetween. Furthermore, the extension piece 3 comprises two connecting pieces 38, see

Figs 13 and 14. The connecting pieces 38 are provided with a number of through-going holes, at least one of which is provided in the centre in such a manner that a screw 39 may extend through the extension side piece 37, the connecting piece 38 and into a cavity 32 of the stair 28 of the extension piece 3. When the extension piece 3 is to be fixed to the staircase 2, the two upwardly projecting connecting pieces 38 are simply inserted into the two U-shaped opposite side pieces 29 of the staircase 2. Thereafter, the side piece 29 of the staircase 2 is screwed together with the connecting piece by means of screws (not disclosed). It is to be noted that several extension pieces 3 may be provided one after the other and in such a manner that the total length of the staircase 2, 3 may be adapted to all practically existing heights.

[0017] The railing 6 disclosed in Fig 1 is now to be explained more closely with reference to Figs 15 to 17. The railing 6 comprises pieces having a length corresponding to the length of the frame member 19. Each such railing piece comprises two upwardly projecting support members 40 and a transverse handrail 41. Possibly, a further transverse support member 42 may be provided between the two support members 40. The two support members 40 have at their ends a through-going hole through which a screw 43 extends, which also extends through a hole in the side piece 21 of the frame member 19 and is fixedly tightened by means of a nut 44. Possibly, the railing may be provided with a cover plate 45 provided between the support members 40.

[0018] The invention is not limited to the embodiments disclosed herein but may be varied and modified within the scope of the features defined in the following claims.

[0019] With the exception of the hook-like members 17 of the attachment member 11, all disclosed parts of the device according to the invention may be utilized as universal module elements, which may be adapted to all practically existing conditions by being built together in different manners.

Claims

1. An entrance device for facilitating the entry from the ground level through an entrance provided in a building (1) and not being located at the ground level, comprising at least one support member (9) arranged to be attached to the building (1) and at least one step plate (5, 23) arranged to be supported by means of the support member (9), **characterized by** at least one frame member (19) arranged to be supported in a self-supported orientation projecting from the building (1) by means of the support member (9) and having a flange member (22) on which the step plate rests.
2. An entrance device according to claim 1, **characterized in that** the support member comprises a

bracket (10) having two legs (10a, 10b) provided in an essentially perpendicular relationship to each other, one of which (10b) is arranged to be attached to a wall of the building (1) by means of an attachment member (11) and the other (10a) is arranged to support the frame member (19).

3. An entrance device according to claim 2, **characterized in that** the attachment member (11) comprises a longitudinal element (12) which is insertable in an opening of the bracket in the leg (10a) that is arranged to support the frame member (19).
4. An entrance device according to claim 3, **characterized in that** the attachment member (11) comprises a hook-like member (17) which faces away from the longitudinal element (12) and is arranged to be introduced into a cavity in the building (1) and to be fastened to a beam (18) or the like of said house.
5. An entrance device according to any one of claims 2 to 4, **characterized in that** the legs (10a, 10b) of the bracket comprise a hollow square profile.
6. An entrance device according to any one of the preceding claims, **characterized in that** the frame member (19) comprises four side pieces (21) which are connected to each other to form a quadrangle and that the flange member comprises a flange piece (22) projecting from each side piece (21) towards the centre of the frame member (19).
7. An entrance device according to claim 6, **characterized in that** the four flange pieces form a surrounding flange (22) directing inwardly.
8. An entrance device according to any one of the preceding claims, **characterized in that** the frame member (19) is manufactured in aluminium, steel or any similar high-strength material.
9. An entrance device according to any one of the preceding claims, **characterized by** a staircase (2) comprising a connection part (34) arranged to be suspended to the frame member (19).
10. An entrance device according to claims 6 and 9, **characterized in that** the connection part (34) comprises a first portion (35), arranged to extend along the outer side of a side piece of the frame member (19), and a second portion (36), connected to the first portion (35) and arranged to extend along the inner side of this side piece (21).
11. An entrance device according to claims 9 or 10, **characterized in that** the staircase (2) is extendible (3).

12. An entrance device according to claim 11, **characterized in that** the staircase (2) comprises two opposite side pieces (29) and one or more stairs (28) provided between the side pieces, a loosely attachable extension piece (3), having two extension side pieces (37) and at least one stair (28) provided therebetween, and two connecting pieces (38) each of which is provided to be loosely attached to a side piece (29) and an extension side piece (37).
13. An entrance device according to claim 12, **characterized in that** each connecting piece (38) is essentially plane and abuts a side piece (29) by a first portion and abuts an extension side piece (37) by a second portion in such a manner that these side pieces are aligned.
14. An entrance device according to claims 12 or 13, **characterized in that** the side pieces (29) and the extension side pieces (37) in cross-section have an essentially U-shaped profile with one bottom and two legs.
15. An entrance device according to claims 13 and 14, **characterized in that** the connecting piece (38) is provided between the side pieces (29, 37) and the stair (28) against the inner side of the bottom of the U-shaped profile.
16. An entrance device according to any one of claims 12 to 15, **characterized in that** each connecting member (38) is kept together with the two associated side pieces by means of throw-going screw bolts (39), at least one of which extends through a side piece (37), the connecting piece (38) and into the stair (28).

Patentansprüche

1. Zustiegsvorrichtung zur Erleichterung des Betretens vom Bodenniveau aus, durch einen in einem Gebäude (1) vorhandenen Eingang, der sich nicht auf Bodenniveau befindet, bestehend aus mindestens einem Trägerelement (9), das so angeordnet ist, dass es am Gebäude (1) befestigt werden kann, und mindestens einer Trittplatte (5, 23), die so angeordnet ist, dass sie von dem Trägerelement (9) gestützt wird; **gekennzeichnet durch** mindestens ein Rahmenelement (19), das so angeordnet ist, dass es in selbsttragender Ausrichtung, gegenüber dem Gebäude (1) auskragend, von dem Trägerelement (9) gestützt wird, und ein Flanschelement (22) aufweist, auf dem die Trittplatte aufliegt.
2. Zustiegsvorrichtung gemäß Anspruch 1, **dadurch gekennzeichnet, dass** das Trägerelement eine Halterung (10) umfasst, die zwei im Wesentlichen

senkrecht zueinander stehende Schenkel (10a, 10b) aufweist, von denen einer (10b) so angeordnet ist, dass er mit Hilfe eines Befestigungselements (11) an einer Wand des Gebäudes (1) befestigt werden kann, und der andere (10a) zum Stützen des Rahmenelements (19).

3. Zustiegsvorrichtung gemäß Anspruch 2, **dadurch gekennzeichnet, dass** das Befestigungselement (11) ein Längselement (12) aufweist, das in eine Öffnung der Halterung im Schenkel (10a), der zum Stützen des Rahmenelements (19) angeordnet ist, gesteckt werden kann.
4. Zustiegsvorrichtung gemäß Anspruch 3, **dadurch gekennzeichnet, dass** das Befestigungselement (11) ein hakenähnliches Element (17) aufweist, das von dem Längselement (12) weg zeigt und so angeordnet ist, dass es in einen Hohlraum in dem Gebäude (1) eingeführt und an einem Balken (18) oder Ähnlichem in besagtem Gebäude befestigt werden kann.
5. Zustiegsvorrichtung gemäß einem der Ansprüche 2 bis 4, **dadurch gekennzeichnet, dass** die Schenkel (10a, 10b) der Halterung ein hohles, quadratisches Profil haben.
6. Zustiegsvorrichtung gemäß einem der vorstehenden Ansprüche, **dadurch gekennzeichnet, dass** das Rahmenelement (19) vier Seitenteile (21) umfasst, die miteinander verbunden sind, so dass sie ein Viereck bilden, und dass das Flanschelement einen Flanschteil (22) umfasst, der von jedem Seitenteil (21) in Richtung Mitte des Rahmenelements (19) ragt.
7. Zustiegsvorrichtung gemäß Anspruch 6, **dadurch gekennzeichnet, dass** die vier Flanschteile einen nach innen weisenden Rundumflansch (22) bilden.
8. Zustiegsvorrichtung gemäß einem der vorstehenden Ansprüche, **dadurch gekennzeichnet, dass** das Rahmenelement (19) aus Aluminium, Stahl oder einem ähnlichen, hochfesten Werkstoff hergestellt ist.
9. Zustiegsvorrichtung gemäß einem der vorstehenden Ansprüche, **gekennzeichnet durch** eine Treppe (2), die ein Verbindungsteil (34) umfasst, das so angeordnet ist, dass es in das Rahmenelement (19) eingehängt werden kann.
10. Zustiegsvorrichtung gemäß den Ansprüchen 6 und 9, **dadurch gekennzeichnet, dass** das Verbindungsteil (34) einen ersten Teil (35) umfasst, der so angeordnet ist, dass er sich entlang der Außenseite eines Seitenteils des Rahmenelements (19) er-

streckt, und einen zweiten Teil (36), der mit dem ersten Teil (35) verbunden ist und so angeordnet ist, dass er sich entlang der Innenseite des besagten Seitenteils (21) erstreckt.

11. Zustiegsvorrichtung gemäß Anspruch 9 oder 10, **dadurch gekennzeichnet, dass** die Treppe (2) verlängerbar ist (3). 5
12. Zustiegsvorrichtung gemäß Anspruch 11, **dadurch gekennzeichnet, dass** die Treppe (2) zwei gegenüberliegende Wangen (29) umfasst sowie eine oder mehrere Stufen (28), die zwischen den Wangen vorhanden sind, ein lösbar zu befestigendes Verlängerungsteil (3), das zwei Verlängerungswangen (37) und mindestens eine Stufe (28) zwischen diesen Verlängerungswangen aufweist, und zwei Verbindungsteile (38), von denen jedes entsprechend vorgesehen ist, um lösbar an einer Wange (29) und einer Verlängerungswange (37) befestigt zu werden. 10
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13. Zustiegsvorrichtung gemäß Anspruch 12, **dadurch gekennzeichnet, dass** besagtes Verbindungsteil (38) im Wesentlichen plan ist und mit einem ersten Teilstück an einer Wange (29) und mit einem zweiten Teilstück an einer Verlängerungswange (37) anliegt, so dass diese Wangen axial ausgerichtet sind. 25
14. Zustiegsvorrichtung gemäß Anspruch 12 oder 13, **dadurch gekennzeichnet, dass** die Wangen (29) und die Verlängerungswangen (37) im Querschnitt ein im Wesentlichen U-förmiges Profil, mit einem Boden und zwei Schenkeln, haben. 30
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15. Zustiegsvorrichtung gemäß Anspruch 13 und 14, **dadurch gekennzeichnet, dass** das Verbindungsteil (38) zwischen den Wangen (29, 37) und der Stufe (28) angebracht ist, und zwar auf der Innenseite des Bodens des U-förmigen Profils. 40
16. Zustiegsvorrichtung gemäß einem der Ansprüche 12 bis 15, **dadurch gekennzeichnet, dass** jedes Verbindungsteil (38) mit Hilfe von durchgehenden Schrauben (39) mit den zwei zusammengeführten Wangen zusammengehalten wird, wobei mindestens eine dieser Schrauben durch eine Wange (37), das Verbindungsteil (38) und in die Stufe (28) reicht. 45
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Revendications

1. Dispositif d'entrée pour faciliter l'entrée depuis le niveau du sol par une entrée placée dans un immeuble et qui n'est pas située au niveau du sol, comprenant au moins un élément d'appui (9) conçu pour être fixé sur l'immeuble et au moins une garniture

de seuil (5, 23) conçue pour être supportée au moyen de l'élément d'appui (9), **caractérisé par** au moins un élément formant cadre (19) conçu pour être supporté dans une orientation autoportée avançant depuis l'immeuble au moyen de l'élément d'appui (9) et comportant un élément formant rebord (22) sur lequel repose la garniture de seuil.

2. Dispositif d'entrée selon la revendication 1, **caractérisé en ce que** l'élément d'appui comprend un support (10) muni de deux pieds (10a, 10b) placés dans une relation sensiblement perpendiculaire l'un par rapport à l'autre, dont un (10b) est conçu pour être fixé sur une paroi de l'immeuble au moyen d'un élément de fixation (11) et l'autre (10a) est conçu pour supporter l'élément formant cadre (19). 10
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3. Dispositif d'entrée selon la revendication 2, **caractérisé en ce que** l'élément de fixation (11) comprend un élément longitudinal (12) qui peut être inséré dans une ouverture du support dans le pied (10a) qui est conçu pour supporter l'élément formant cadre (19). 20
4. Dispositif d'entrée selon la revendication 3, **caractérisé en ce que** l'élément de fixation (11) comprend un élément en forme de crochet (17) qui est tourné à l'opposé de l'élément longitudinal (12) et est conçu pour être introduit dans une cavité dans l'immeuble et pour être fixé sur une poutre (18) ou analogue dudit immeuble. 25
5. Dispositif d'entrée selon l'une quelconque des revendications 2 à 4, **caractérisé en ce que** les pieds (10a, 10b) du support comprennent un profilé carré creux. 30
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6. Dispositif d'entrée selon l'une quelconque des revendications précédentes, **caractérisé en ce que** l'élément formant cadre (19) comprend quatre portions latérales (21) qui sont connectées les unes aux autres pour former un quadrilatère et **en ce que** l'élément formant rebord comprend une portion de rebord (22) en saillie depuis chaque portion latérale (21) vers le centre de l'élément formant cadre (19). 40
45
7. Dispositif d'entrée selon la revendication 6, **caractérisé en ce que** les quatre portions latérales forment un rebord (22) périphérique dirigé vers l'intérieur. 50
8. Dispositif d'entrée selon l'une quelconque des revendications précédentes, **caractérisé en ce que** l'élément formant cadre (19) est fabriqué en aluminium, en acier ou tout autre matériau similaire à haute résistance.
9. Dispositif d'entrée selon l'une quelconque des re-

vendications précédentes, **caractérisé par** un escalier (2) comprenant une partie de raccordement (34) conçue pour être suspendue à l'élément formant cadre (19).

marche (28).

5

10. Dispositif d'entrée selon les revendications 6 et 9, **caractérisé en ce que** la partie de raccordement (34) comprend une première portion (35), conçue pour s'étendre le long du côté extérieur d'une portion latérale de l'élément formant cadre (19), et une deuxième portion (36), raccordée à la première portion (35) et conçue pour s'étendre le long du côté intérieur de cette portion latérale (21). 10

11. Dispositif d'entrée selon la revendication 9 ou 10, **caractérisé en ce que** l'escalier (2) est télescopique (3). 15

12. Dispositif d'entrée selon la revendication 11, **caractérisé en ce que** l'escalier (2) comprend deux portions latérales (29) opposées et une ou plusieurs marches (28) placées entre les portions latérales, un élément télescopique (3) pouvant être fixé de manière lâche, comportant deux portions latérales télescopiques (37) et au moins une marche (28) placée entre les deux, et deux portions de raccordement (38), dont chacune est conçue pour être fixée de manière lâche sur une portion latérale (29) et une portion latérale télescopique (37). 20
25
30

13. Dispositif d'entrée selon la revendication 12, **caractérisé en ce que** chaque portion de raccordement (38) est sensiblement plane et bute contre une portion latérale (29) par l'intermédiaire d'une première portion et bute contre une portion latérale télescopique (37) par l'intermédiaire d'une deuxième portion, de telle façon que ces portions latérales soient alignées. 35

14. Dispositif d'entrée selon la revendication 12 ou 13, **caractérisé en ce que** les portions latérales (29) et les portions latérales télescopiques (37) ont, en section transversale, un profil sensiblement en U avec un fond et deux jambes. 40
45

15. Dispositif d'entrée selon la revendication 13 ou 14, **caractérisé en ce que** la portion de raccordement (38) est placée entre les portions latérales (29, 37) et la marche (28), contre le côté intérieur du fond du profil en U. 50

16. Dispositif d'entrée selon l'une quelconque des revendications 12 à 15, **caractérisé en ce que** l'élément de raccordement (38) est maintenu assemblé aux deux portions latérales associées au moyen de boulons filetés (39) traversants, au moins l'un d'entre eux s'étend à travers une portion latérale (37), à travers la portion de raccordement (38) et dans la 55

Fig 1

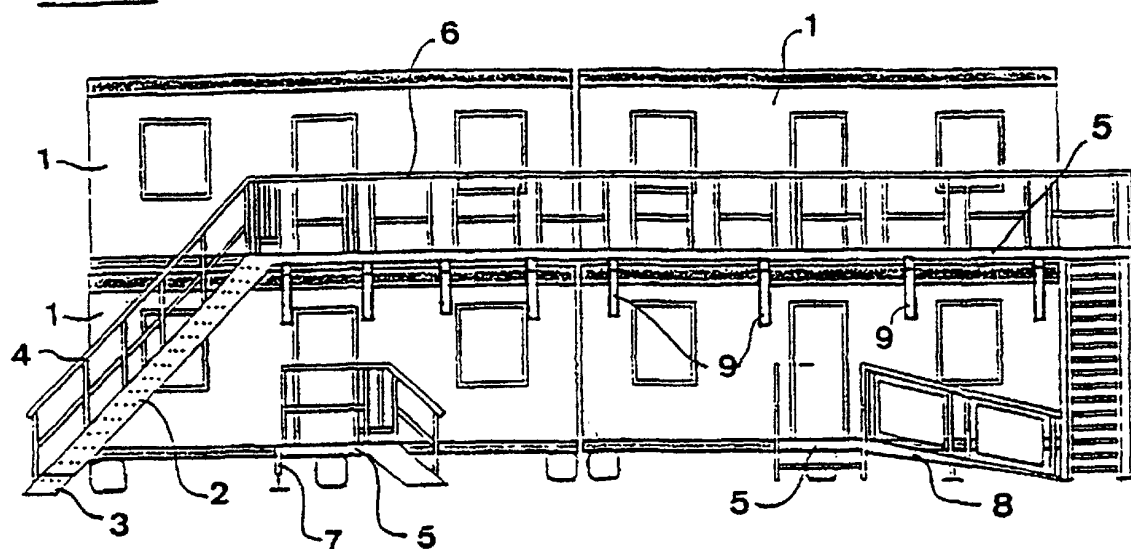


Fig 2

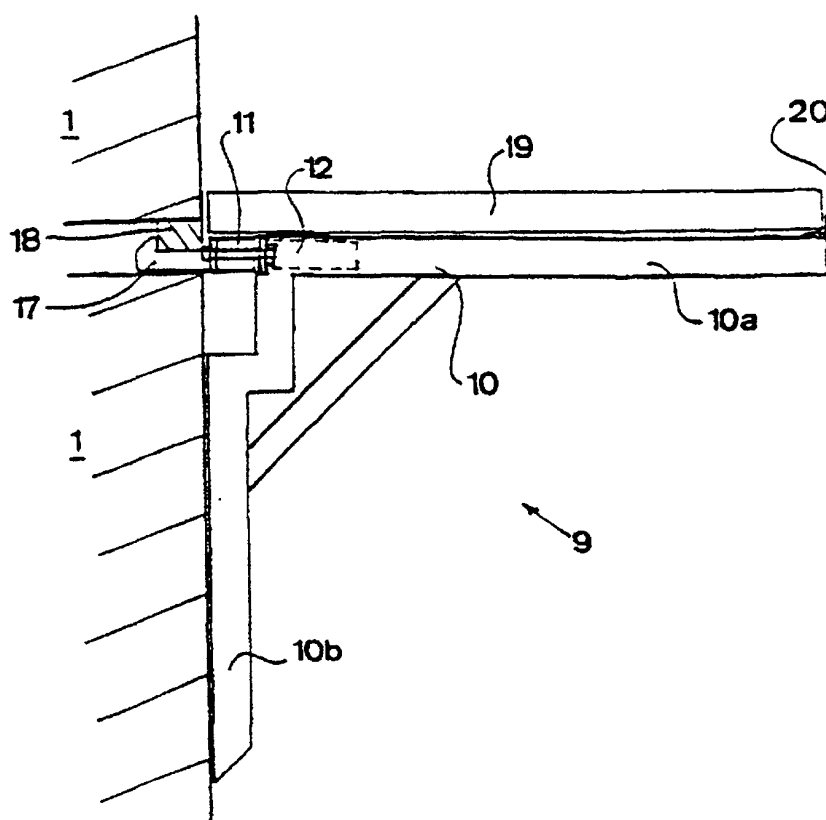


Fig 3

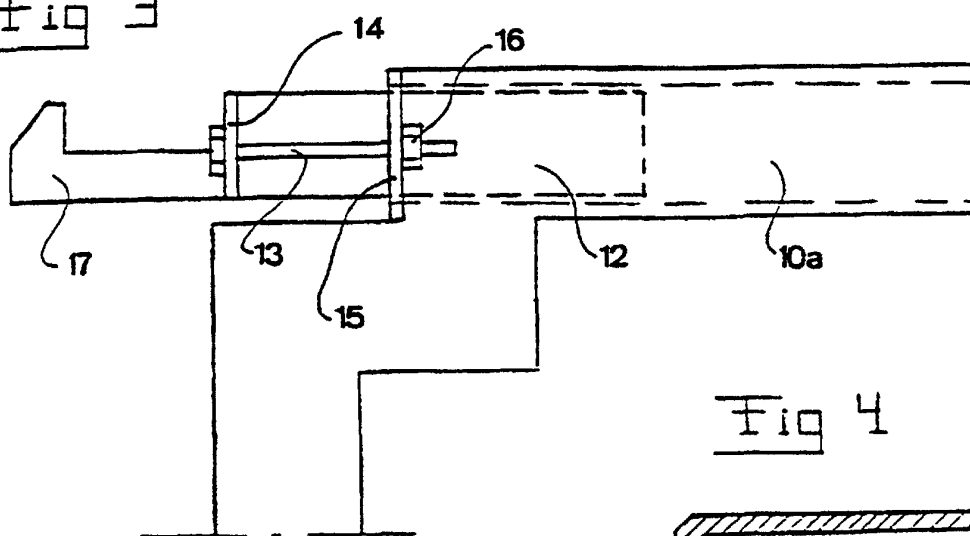


Fig 4

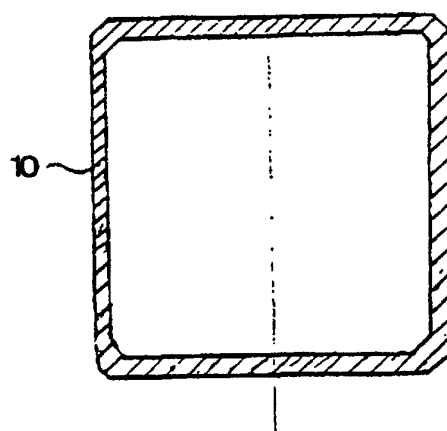


Fig 6

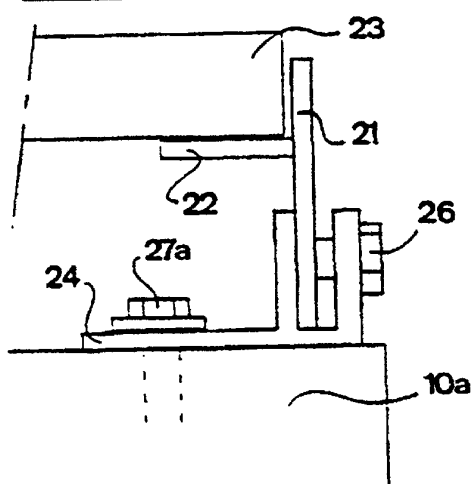


Fig 5

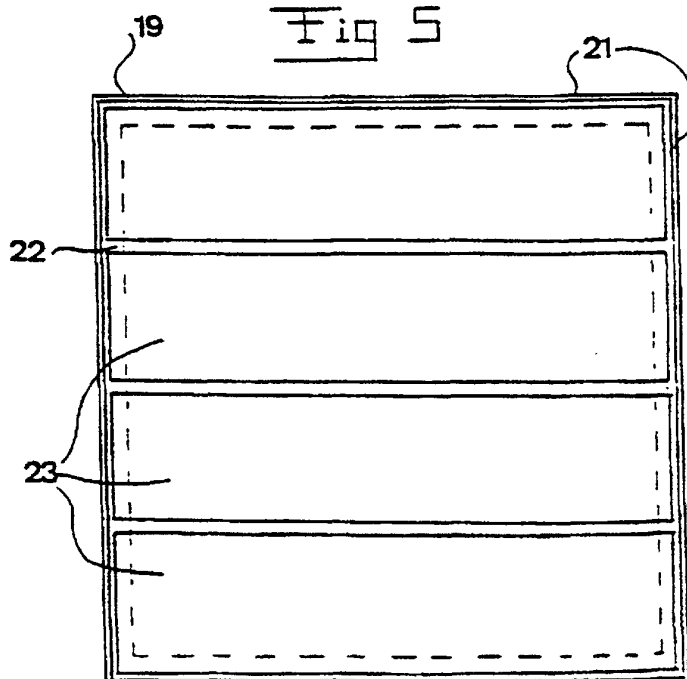
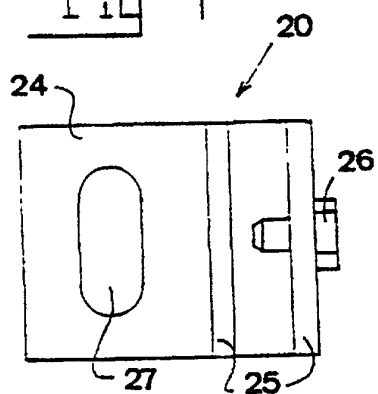
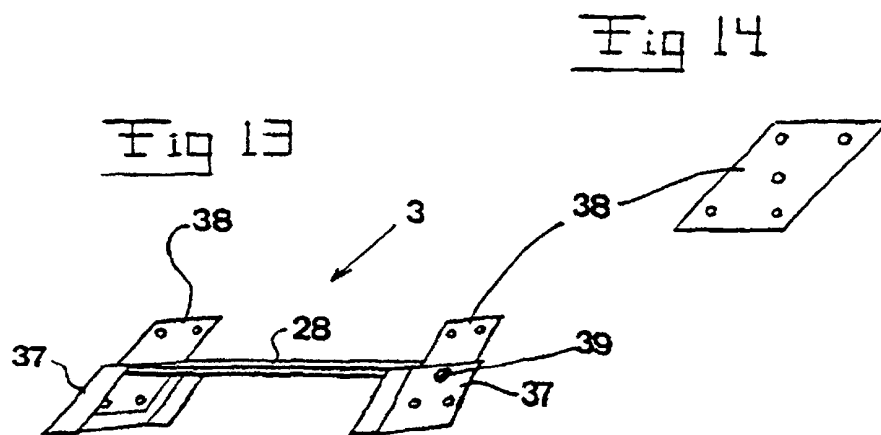
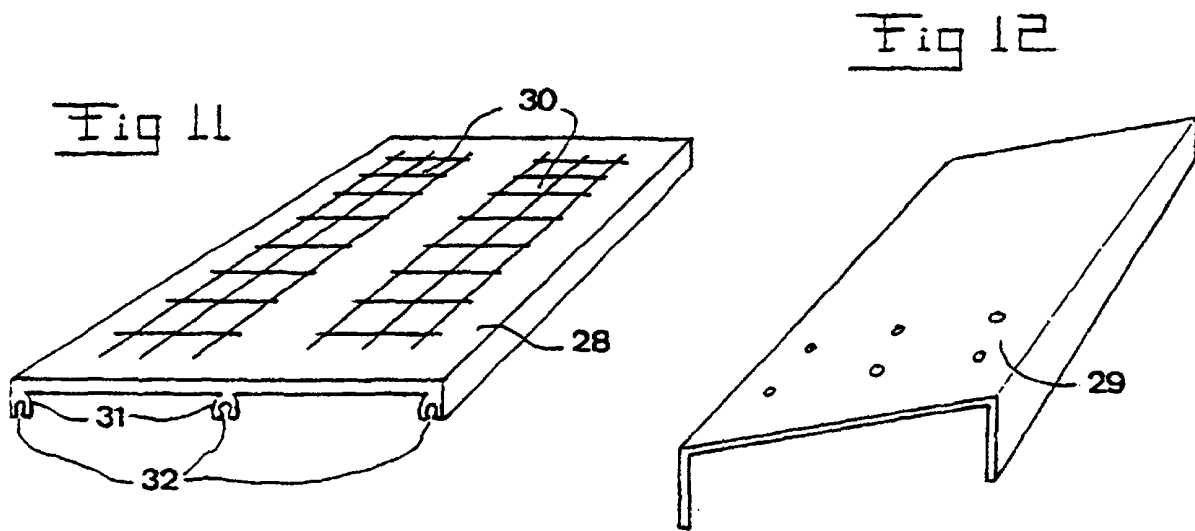
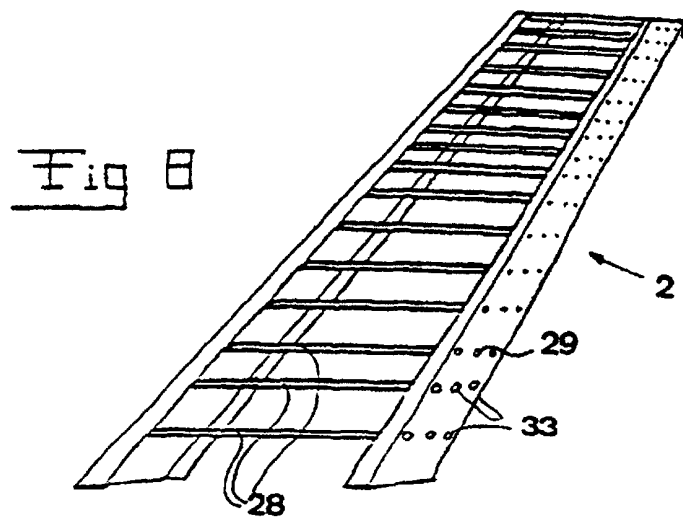
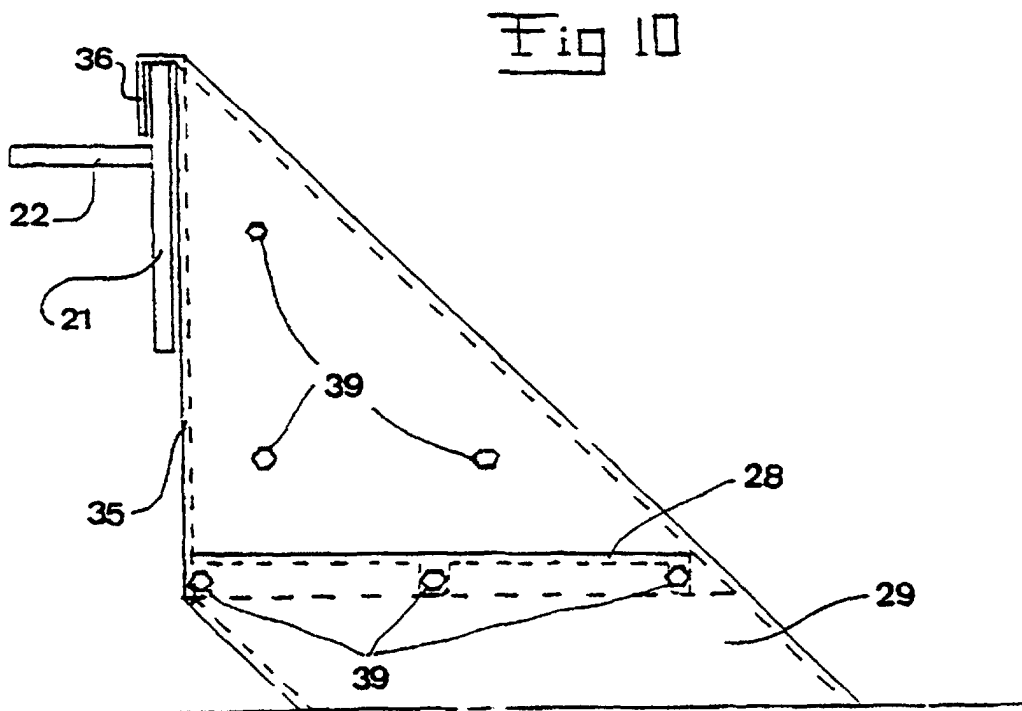
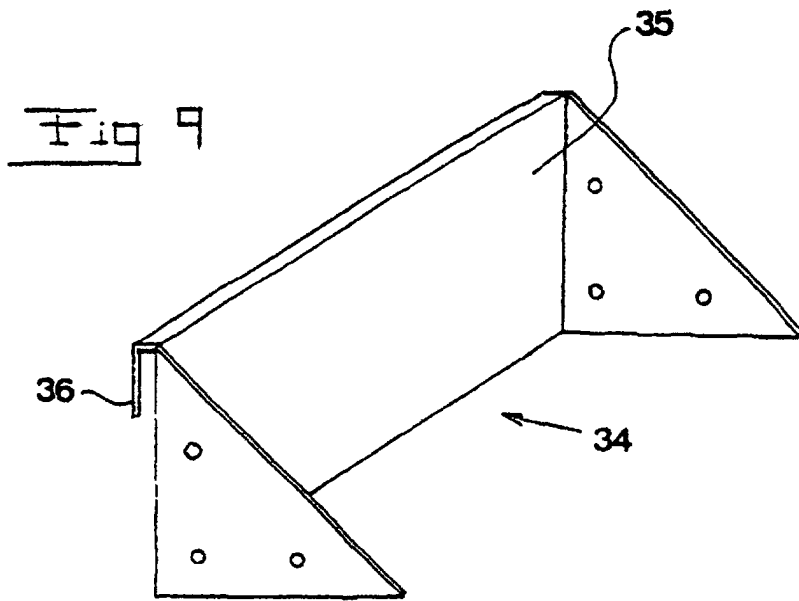


Fig 7







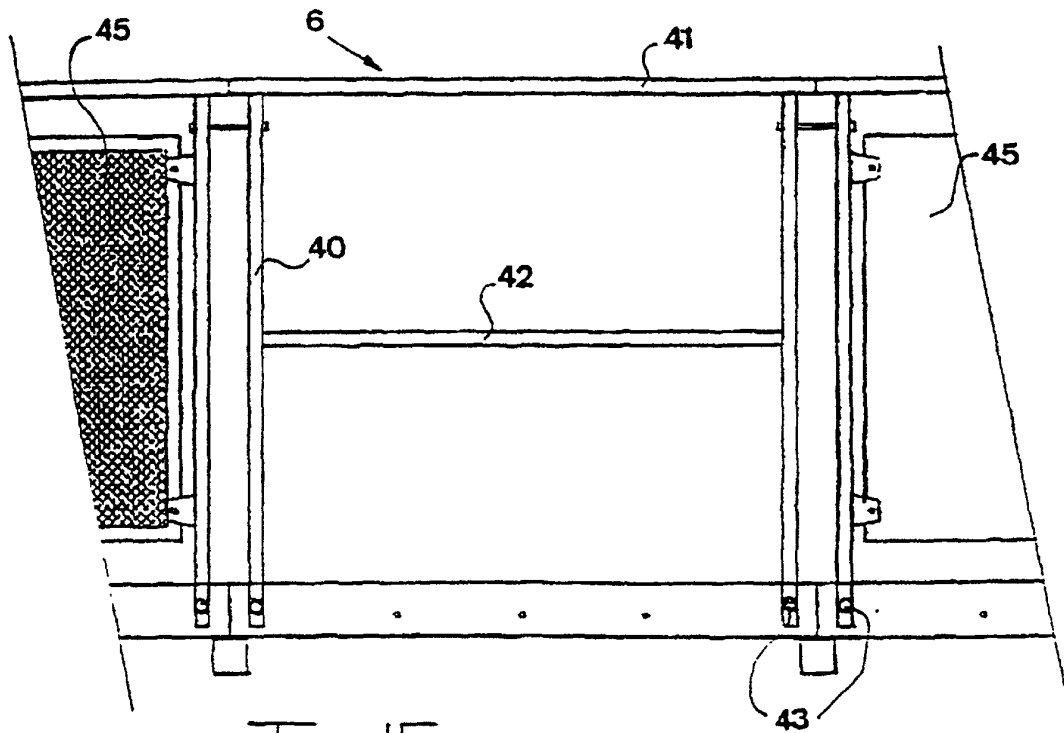


Fig 15

Fig 16

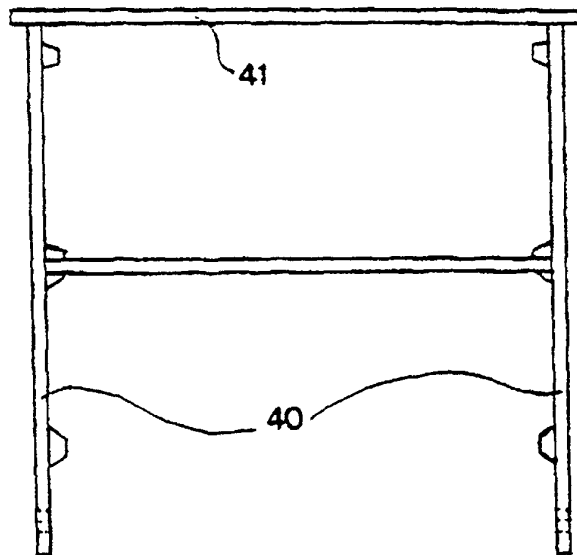


Fig 17

