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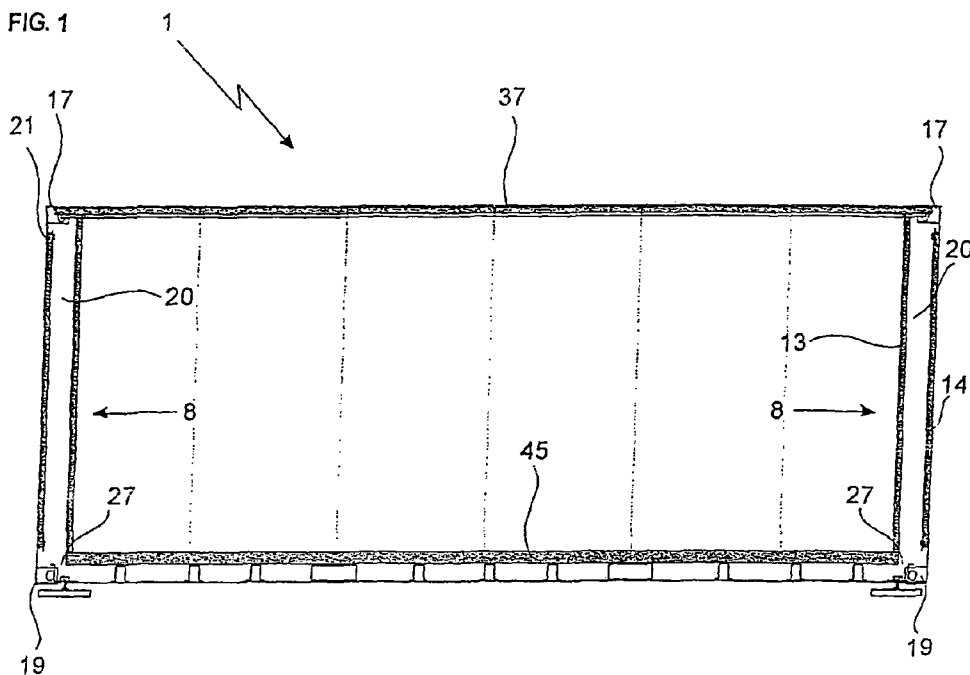
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(57) Abstract: The present invention relates to the field of mobile structures for forming environments adapted to carry out health activities. The modular and mobile health center, forming the object of the present invention, consist of at least an openable container (1) and a connecting structure (38); said openable container (1) being suitable for hosting people and the equipment and instruments necessary for carrying out the health activities; said connecting structure (38) allows the passage of people and equipment.

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**MODULAR AND MOBILE HEALTH CENTER****D E S C R I P T I O N**

It is an object of the present invention a modular and mobile health centre. The above mentioned modular and mobile health centre is suitable for hosting patients, health workers and the equipment necessary for carrying out the required health activities. The above mentioned modular and mobile health centre consists of at least an openable container 1 and a connecting structure 38. The modular and mobile health centre, which is the object of the present invention, can be placed either in urban areas, mountain districts or coastal or desert regions and can be differently sized and configured according to the number of openable containers 1 and connecting structures 38 and their location. According to the prior art, mobile health centres make use of standard containers made up of fixed panels provided with windows and/or doors or structures resulting from joining peripherally open containers and successively sealing the peripheral surfaces of the structure so obtained by means of fixed panels provided with windows and/or doors, if necessary. The drawbacks arising from the former solution above mentioned, according to the known art, are the following: container small size; difficulty in keeping the inside of the container clean and sterile

due to patients and health workers coming and going inside-outside the container. The drawbacks of the latter solution, according to the known art, are: the structure assembling operations have to be carried out  
5 on site and consequently the rooms inside the structure might easily get dirty during the assembling step; the fitting in place of the structure and the time required for the health centre to be operative is long; the structure cannot be easily extended. It is an object of  
10 the present invention to overcome or reduce the above mentioned drawbacks. Said objects are fully achieved by the modular and mobile health centre which is characterized by what stated in the appended claims. Features and advantages will be better understood from  
15 the following description of a preferred embodiment, to be considered as illustrative and not restrictive, shown in the accompanying drawings, in which: figure 1 is a longitudinal section of the openable container 1; figure 2 is a horizontal section of the openable container 1;  
20 figure 3 is a plan of the openable container base connected to the plurality of side members 10; figure 4 is a front view of the openable container long side; figure 5 is a cross section of the openable container 1; figure 6 is the matching configuration between the  
25 openable container 1 and the connecting structure 38;

figure 7 shows the shape of each mobile frame 41; figure 8 shows a possible configuration of the connecting structure 38. Now, with reference to the above mentioned figures, a description of the structural features of the present invention will be given. The openable container 1 consists of a frame made up of four vertical studs 15, two short horizontal members 17 and two long horizontal members 16. The two long and the two short horizontal members 16, 17 are fixed to the four vertical studs 15.

10 The vertical studs 15, the long and short horizontal members 16, 17 consist of folded plates having a thickness between 2 and 4 mm. The vertical studs 15 are fixed at the bottom to a base consisting of two long structural section members 18, two short structural section members 19, a plurality of supporting sections 23 apt to support the floor 45, two receptacles 24 for the fork of the lift-truck to be inserted and at least four supporting boards 12; the two long structural section members 18, two short structural section members

15 section members 19, a plurality of supporting sections 23 and two receptacles 24 being made of metal and tightly clamped to each other. The at least four supporting boards 12, located at the bottom of said base adjust the height of the openable container 1. Each of the two short sides of

20 the openable container 1 is closed by a head wall 8

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consisting of an outer head panel 14, two structural C section members 21, an inner head panel 13 and two shaped members 22. The two structural C section members 21, apt to house the outer head panel end 14, tightly  
5 clamped to said structural C section members 21, are secured to the two vertical studs 15 on each short side of the openable container 1. Further, the shaped members 22, apt to house the inner head panel end 13, tightly fastened to said shaped members 22, are secured to the  
10 two vertical studs 15 placed on each short side of the openable container 1. In each of the two head walls 8, the inner head panel 13 and the outer head panel 14 are mutually detached so as to create a service space 20 to house water pipes, electric wires and all the elements  
15 necessary to fix the instruments and equipment on the inner head panel 13 to ensure the operation of the health care unit located in the openable container 1.

As a way of an example and not to be considered as restrictive, said instruments and equipment provided for  
20 the operation of the operative unit consist of: water basins, WC, electric boards, switches, sockets, mains for the machines inside the openable container 1, lighting devices, air vents, jacks, data gates, furniture, air conditioning devices, tanks. Clamping of  
25 structural C section members 21 and shaped members 22 to

vertical studs 15 is carried out by welding or mechanic connecting means such as, for example, screws. In order to ensure pipes and cables inside service space 20 an outer passage, a plurality of holes 26 formed on the outer surface 25 of each vertical studs 15 and a slot placed next to the lower part of each service space are provided. Said holes 26 and said slot 27, if not used, are then infilled by means of plugs or other closing members. The openable container upper surface is completely covered by a roofing panel 37. To each of the two long horizontal members 16 and to their corresponding long structural section member 18 below, a mobile frame 41, consisting of an upper structural C section member 44, two side structural C section members 42 and a lower structural C section member 43, is clamped by means of detachable connecting members such as bolts, for example; said upper structural C section member 44, said two side structural C section members 42 and said lower structural C section member 43 being made of metal and mutually tightly clamped by welding. To each of the two mobile frames 41, a plurality of upper hinges 5 and a plurality of lower hinges 30 are secured; said plurality of upper hinges 5 being placed outside the upper structural C section member 44; said plurality of lower hinges 30 being placed inside the lower

structural C section member 43. To each of the plurality of upper hinges 5, the upper end of the upper openable panel 28 below, is connected. The upper hinges 5, which make up each plurality of the same, are ranged lengthwise and allow the upper openable panel 28, connected thereto, to rotate around the axis passing through the centres of the above mentioned upper hinges. To each of the two plurality of lower hinges 30, the lower end of the lower overhanging panel 29 is connected. The lower hinges 30, making up each plurality of the same, are arranged lengthwise and allow the lower openable panel 29, connected thereto, to rotate around the axis passing through the centres of the above mentioned lower hinges. The lower openable panels 29 and the upper openable panels 28 have the same size so as to completely close the mobile frames 41. When the lower openable panel 29 and the upper openable panel 28, on the same side of the openable container 1, are both in a horizontal open position, the clear opening existing between said two openable panels is 2 m or more. In their respective hinged ends, lower openable panels 29 and upper openable panels 28 have fastener systems which, when needed, keep the above mentioned openable panels closed. The connecting structure 38 comprises: a plurality of side members 10, at least four supporting

boards, a footboard 7, a skirting board 9, a hand rail structure 33, a lower hooking member 35, a side bent member 31, a guiding member 36, an upper bent member 6 and an upper hooking member 34. Said side bent member 31 and said upper bent member 6 are made of polycarbonate, wood or metal sheet. Said plurality of side members 10, placed outside the openable container 1 and orthogonal to the long structural section members 18, is secured to one of the two long structural section members 18 by means of detachable connecting means; each side member 10 consisting of a metal structural section member in the core of which a plurality of holes 11 are provided to make pipes and cables pass through; said plurality of side members 10 being supported by at least four supporting boards 12 apt to adjust the connecting structure height. By means of mechanic connecting members, above the plurality of side members 10, footboard 7 is secured next to the lower horizontally open openable panel 29 supported by the afore mentioned plurality of side members 10; said footboard 7 being as long and thick as the adjacent lower openable panel 29 and having such a width that the side surface 32 of the above mentioned footboard is in line with side member free ends below. The skirting board 9, apt to support the hand rail structure 33, is tightly constrained to



the side surface 32. By means of lower hooking member 35, side bent member 31 is tightly connected to the skirting board 9. By means of guide member 36, the side bent member 31 is tightly connected to the upper bent member 6 which is hooked to the free end of the adjacent open upper openable panel 28 by means of the upper hooking member 34. Skirting board 9, hand rail structure 33, lower hooking member 35, side bent member 31, guide member 36, upper bent member 6, upper hooking member 34, footboard 7, each lower openable panel 29, each upper openable panel 28 substantially have the same longitudinal length. The above mentioned skirting board is hollow so as to accommodate cables and/or pipes and/or lighting members.

In another embodiment of the openable container 1, the mobile frame 41, the plurality of upper hinges 5, the upper openable panel 28, the plurality of lower hinges 30 and the lower openable panel 29, on the openable container side not connected to the connecting structure 38 are omitted or they may be replaced by a fixed panel apt to completely close the side surface of the openable container 1 on which said fixed panel is placed.

In a further embodiment of connecting structure 38, skirting board 9, hand rail structure 33, lower hooking member 35, side bent member 31 and guide member 36 are

replaced by a second upper hooking member 34 connected to the upper openable panel of a second openable container 1; said second upper hooking member 34 being symmetrical about the longitudinal symmetry plane of footboard 7 to the actual upper hooking member 34; said second openable container 1 being symmetric about the longitudinal symmetry plane of footboard 7 to the actual openable container 1.

According to another embodiment shown in figure 8, besides footboard 7, the plurality of side members 10, at least four supporting boards 12, skirting board 9, hand rail structure 33, lower hooking member 35, side bent member 31, guiding member 36, upper bent member 6, upper hooking member 34, the connecting structure 38 comprises a side closing panel 39; said side closing panel 39 being secured above the upper hooking member 34 and below footboard 7.

The modular and mobile health centre offers the following advantages: low costs as to the construction of the afore mentioned health centre; the modular and mobile health centre can be differently sized and configured according to real requirements; the aforementioned health centre can be easily fixed in place and moved; it can be placed in urban areas, mountain districts or coastal or desert regions; the

fixing in place of the health centre, which is the object of the present invention, allows to keep the rooms inside the container 1 clean and/or undamaged.

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**C L A I M S**

1. A modular and mobile health centre comprising at least: an openable container (1) and a connecting  
5 structure (38), said openable container (1) comprising:  
- a frame made up of four vertical studs (15), two short horizontal members (17), two long horizontal members (16), - a base consisting of two long structural section members (18), two short structural section members (19),  
10 a plurality of supporting sections (23) apt to support the floor (45), two receptacles (24) for the fork of the lift-truck to be inserted and at least four supporting boards (12), - a floor (45), a roofing panel (37), is characterized in that it provides: two pluralities of  
15 upper hinges (5), - two pluralities of lower hinges (30), - two upper openable panels (28), - two lower openable panels (29), two head walls (8), each of which consists of a inner head panel (13), an outer head panel (14), two structural C section members (21) and two  
20 shaped members (22); said connecting structure (38) is characterized in that it comprises: a plurality of side members (10), at least four supporting boards (12), a footboard (7), a skirting board (9), a hand rail structure (33) a lower hooking member (35), a side bent  
25 member (31), a guiding member (36), an upper bent member

(6), an upper hooking member (34).

2. The modular and mobile health centre according to claim 1, characterized in that the two structural C section members (21), apt to house the end of the outer  
5 head panel (14) tightly clamped to said structural C section members (21), the two shaped members (22) apt to house the ends of the inner head panel (13) tightly clamped to said shaped members (22) are secured to the two vertical studs (15) placed at each short side of the  
10 openable container (1).

3. The modular and mobile health centre according to claims 1 and 2, characterized in that in each of the two head walls (8), located on the short sides of the openable container (1), the inner head panel (13) and  
15 the outer head panel (14) are mutually detached so as to create a service space (20) to house water pipes, electric wires and all the elements necessary to fix, on the inner head panel (13), the instruments and equipment to ensure the operation of the health care unit located  
20 in the openable container 1.

4. The modular and mobile health centre according to claims 1, 2 e 3, characterized in that it provides a plurality of holes (26) formed on the outer surface (25) of each vertical stud (15); said holes (26) being sized  
25 to allow pipes and cables inside service spaces (20) to

pass through; said holes (26), if not used, being infilled by means of plugs or other closing members.

5 5. The modular and mobile health centre according to claims 1, 2 and 3, characterized in that it provides a slot (27) placed next to the lower part of each service space (20); said slot (27) being seized so as to allow pipes and cables inside service spaces (20) to pass through; said slot (27), if not used, being infilled by means of plugs or another closing member.

10 6. The modular and mobile health centre according to claim 1, characterized in that a mobile frame (41) consisting of an upper structural C section member (44), two side structural C section members (42) and a lower structural C section member (43) is secured by means of  
15 detachable connecting means such as bolts, for example, to each of the two long horizontal members (16) and to their respective long structural section member (18) below; said upper structural C section member (44), said two side structural C section members (42) and said  
20 lower structural C section member (43) being made of metal and mutually tightly clamped by welding.

7. The modular and mobile health centre according to claims 1 and 6, characterized in that to each of the two mobile frames (41), a plurality of upper hinges (5) and  
25 a plurality of lower hinges (30) are secured; said

plurality of upper hinges (5) being placed outside the upper structural C section member (44); said plurality of lower hinges (30) being placed inside the lower structural C section member (43).

5 8. The modular and mobile health centre according to claims 1 and 7, characterized in that to each of the two plurality of upper hinges (5), the upper end of the upper openable panel (28) below, is connected; the upper hinges (5), making up each plurality of the same,  
10 ranging lengthwise and allowing the upper openable panel (28), connected thereto, to rotate around the axis passing through the centres of the above mentioned upper hinges.

9. The modular and mobile health centre according to  
15 claims 1 and 7, characterized in that to each of the two plurality of lower hinges (30), the lower end of the overhanging lower openable panel (29) is connected; the lower hinges (30), making up each plurality of the same, being arranged lengthwise and allowing the lower  
20 openable panel (29), connected thereto, to rotate around the axis passing through the centres of the above mentioned lower hinges.

10. The modular and mobile health centre according to claims 1, 6, 7, 8 and 9, characterized in that the lower  
25 openable panels (29) and the upper openable panels (28)

have the same size so that said openable panels, when closed, completely close the mobile frames (41).

11. The modular and mobile health centre according to claims 1, 8, 9 and 10, characterized in that when the  
5 lower openable panel (29) and the upper openable panel (28), on the same side of the openable container 1, are both in a horizontal open position, the clear opening existing between said two openable panels is 2 m or more.

10 12. The modular and mobile health centre according to claims 1, 8, 9, 10 e 11, characterized in that in their respective hinged ends, lower openable panels 29 and upper openable panels 28 have fastener systems which, when needed, keep the above mentioned openable panels  
15 closed.

13. The modular and mobile health centre according to claim 1, characterized in that the plurality of side members (10), placed outside the openable container (1) and orthogonal to the long structural section members  
20 (18), is secured to one of the two long structural section members (18) by means of detachable connecting means; each side member (10) consisting of a metal structural section member in the core of which a plurality of holes 11 are provided to make pipes and  
25 cables pass through; said plurality of side members (10)



being supported by at least four supporting boards (12) apt to adjust the height of the connecting structure (38).

14. The modular and mobile health centre according to  
5 claims 1, 9, 10, 11, 12 e 13, characterized in that by means of mechanic connecting members, above the plurality of side members (10), footboard (7) is secured next to the lower horizontally open openable panel (29) supported by the afore mentioned plurality of side  
10 members (10); said footboard (7) being as long and thick as the adjacent lower openable panel (29) and having such a width that the side surface (32) of the above mentioned footboard is in line with the free ends of side members (10) below.

15 15. The modular and mobile health centre according to claims 1, 8, 10, 11, 12 e 14, characterized in that the skirting board (9), apt to support the hand rail structure (33), is tightly constrained to the side surface (32); by means of lower hooking member (35),  
20 side bent member (31) is tightly connected to the skirting board (9); by means of guide member (36), the side bent member (31) is tightly connected to the upper bent member (6) which is hooked to the free end of the adjacent open upper openable panel (28) by means of the  
25 upper hooking member (34).

16. The modular and mobile health centre according to claims 1, 8, 9, 10, 11, 12 e 14, characterized in that skirting board (9), hand rail structure (33), lower hooking member (35), side bent member (31), guide member  
5 (36), upper bent member (6), upper hooking member (34), footboard (7), each lower openable panel (29), each upper openable panel (28) substantially have the same longitudinal size.

17. The modular and mobile health centre according to  
10 claims 1, 15 and 16, characterized in that the above mentioned skirting board (9) is hollow so as to accommodate cables and/or pipes and/or lighting members.

18. The modular and mobile health centre according to  
15 claims 1, 15 and 16, characterized in that said side bent member (31) and said upper bent member (6) are made of polycarbonate or wood or metal sheet.

19. The modular and mobile health centre according to the preceding claims, characterized in that the openable container (1) provides that the mobile frame (41), the  
20 plurality of upper hinges (5), the upper openable panel (28), the plurality of lower hinges (30) and the lower openable panel (29) placed on the side of the openable container (1) not connected to the connecting structure (38), are omitted.

25 20. The modular and mobile health centre according to

claims from 1 to 18, characterized in that the mobile frame (41), the plurality of upper hinges (5), the upper openable panel (28), the plurality of lower hinges (30) and the lower openable panel (29), on the side of  
5 openable container (1) not connected to the connecting structure (38) are replaced by a fixed panel apt to completely close the side surface of the openable container 1 on which said fixed panel is fitted.

21. The modular and mobile health centre according to  
10 claims 1, 14, 15, 16, 17 and 18, characterized in that the connecting structure (38) provides that skirting board (9), the hand rail structure (33), the lower hooking member (35), the side bent member (31) and the guide member (36) are replaced by a second upper hooking  
15 member (34) connected to the upper openable panel of a second openable container (1); said second upper hooking member (34) being symmetrical about the longitudinal symmetry plane of footboard (7), to the actual upper hooking member (34); said second openable container (1)  
20 being symmetric about the longitudinal symmetry plane of footboard (7) to the actual openable container (1).

22. The modular and mobile health centre according to claims 1, 14 and 15, characterized in that besides footboard (7), the plurality of side members (10), at  
25 least the four supporting boards (12), skirting board

(9), hand rail structure (33), lower hooking member (35), side bent member (31), guiding member (36), upper bent member (6), upper hooking member (34), the connecting structure (38) comprises a side closing panel  
5 (39); said side closing panel (39) being secured above the upper hooking member (34) and below footboard (7).

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FIG. 1

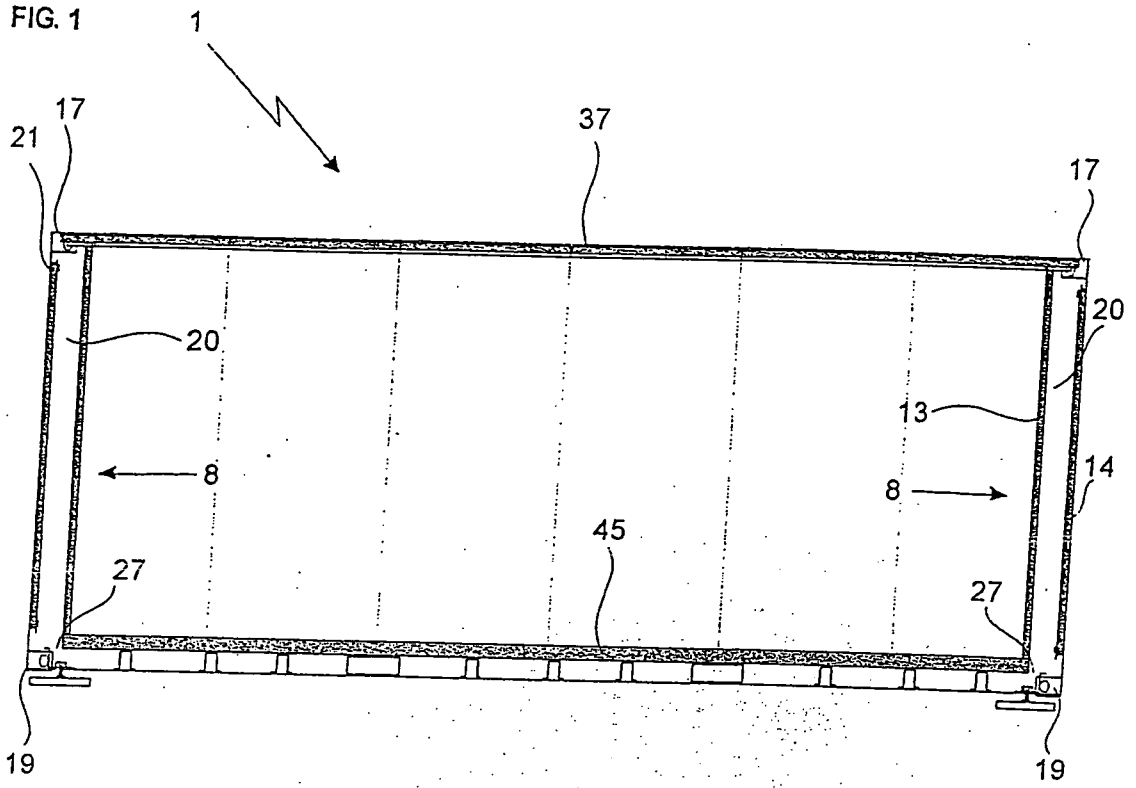


FIG. 2

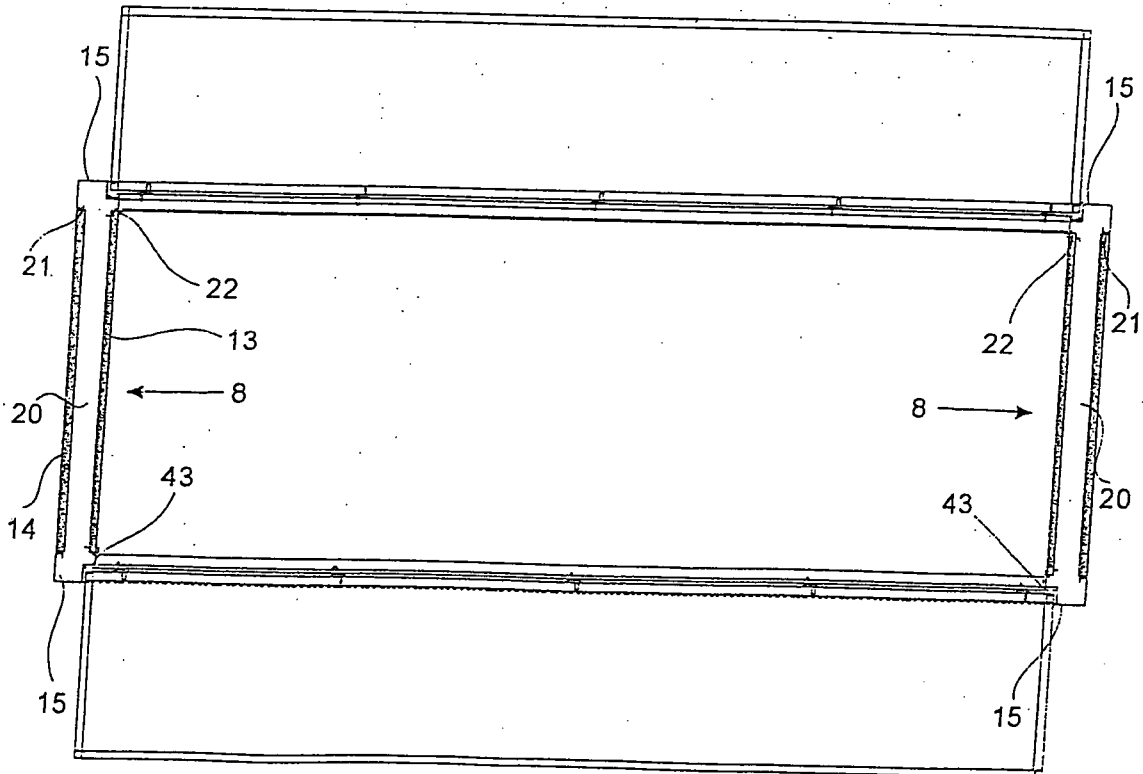


FIG. 3

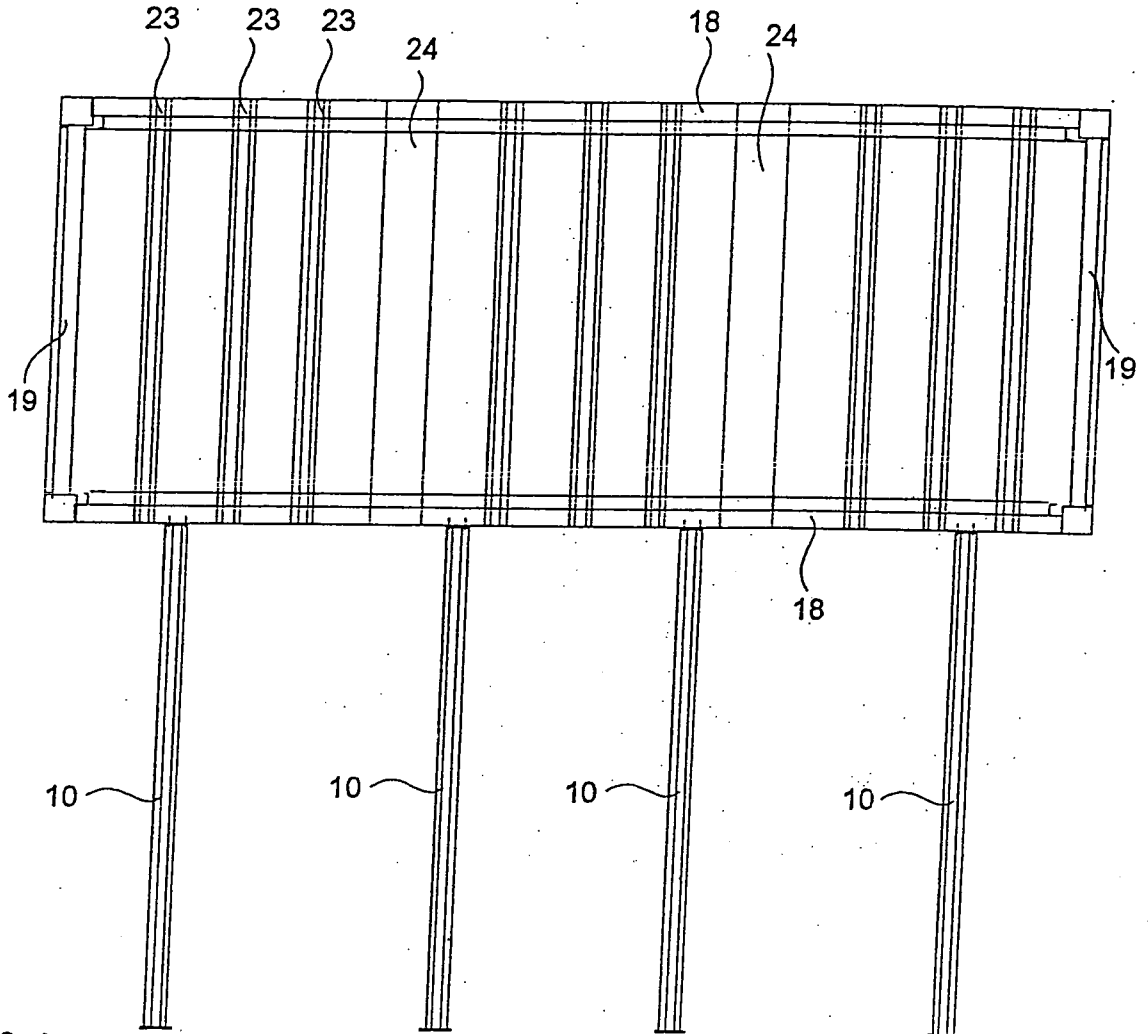


FIG. 4

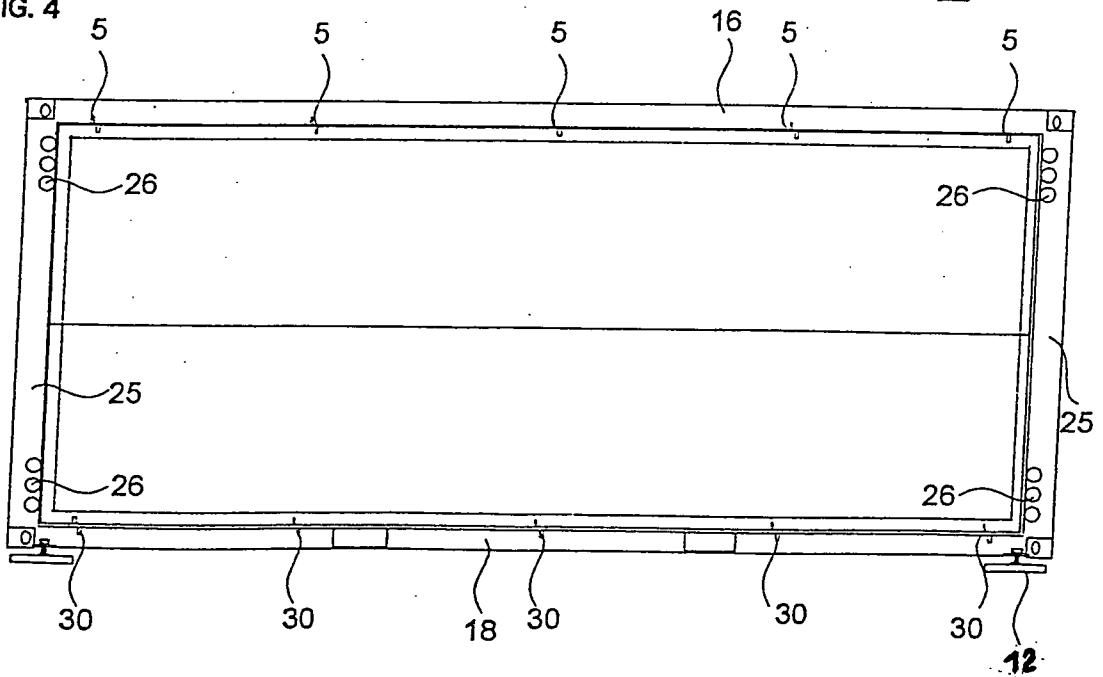


FIG. 5

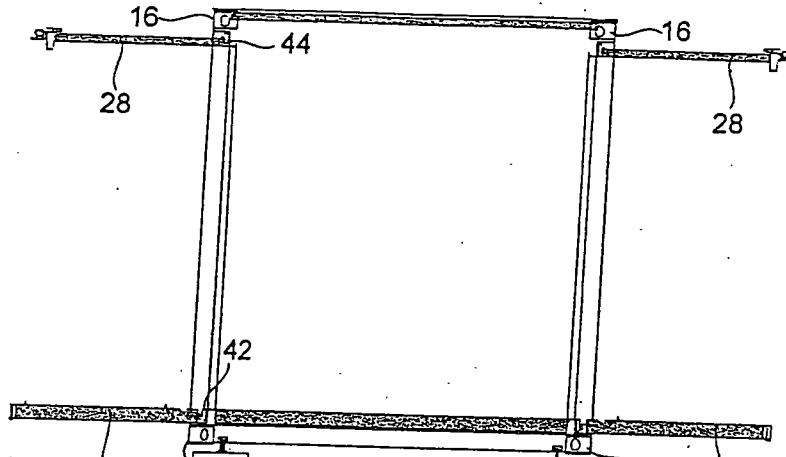


FIG. 6

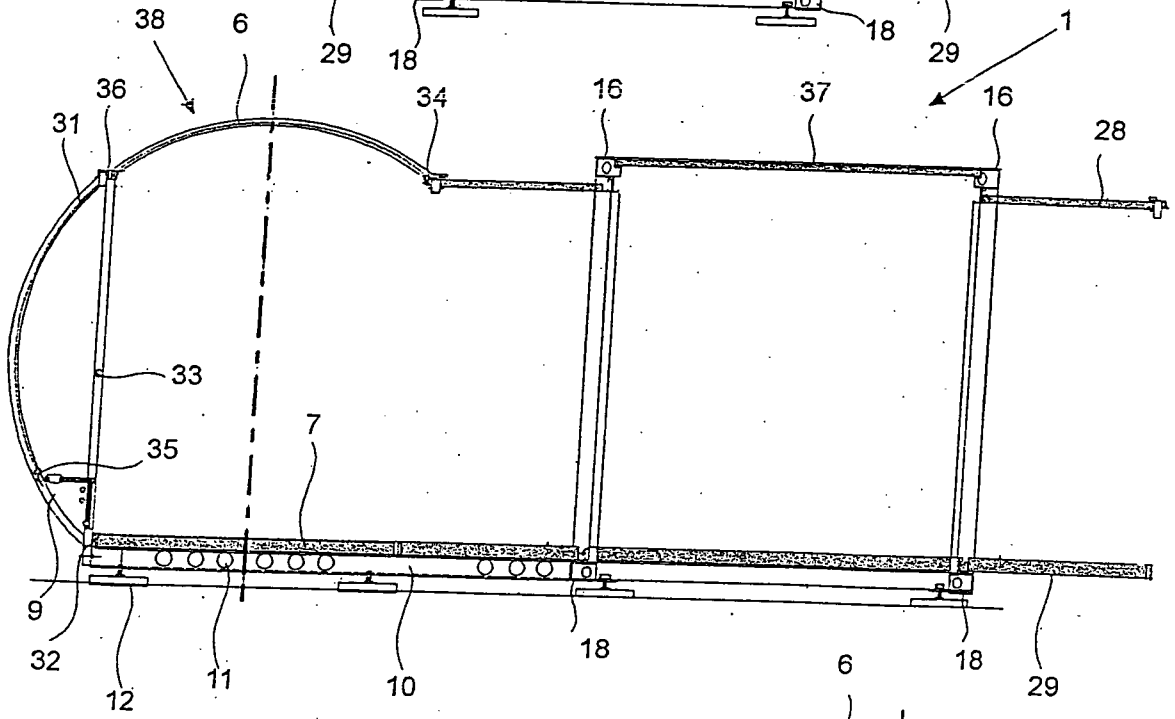


FIG. 7

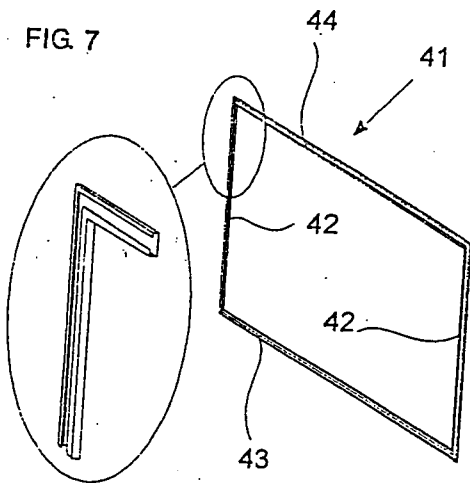


FIG. 8

