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(54) **Extension for a building**

(57) Extension (1) for a building (7) which is at least provided with one front wall (2) and one or several side walls (3,4), **characterised in that** the extension (1) is erected such that it can move in relation to the building (7) between a restricted position and an extended position, whereby the covered and/or screened space (13) inside the building (7) is smaller in the restricted position than in the extended position.

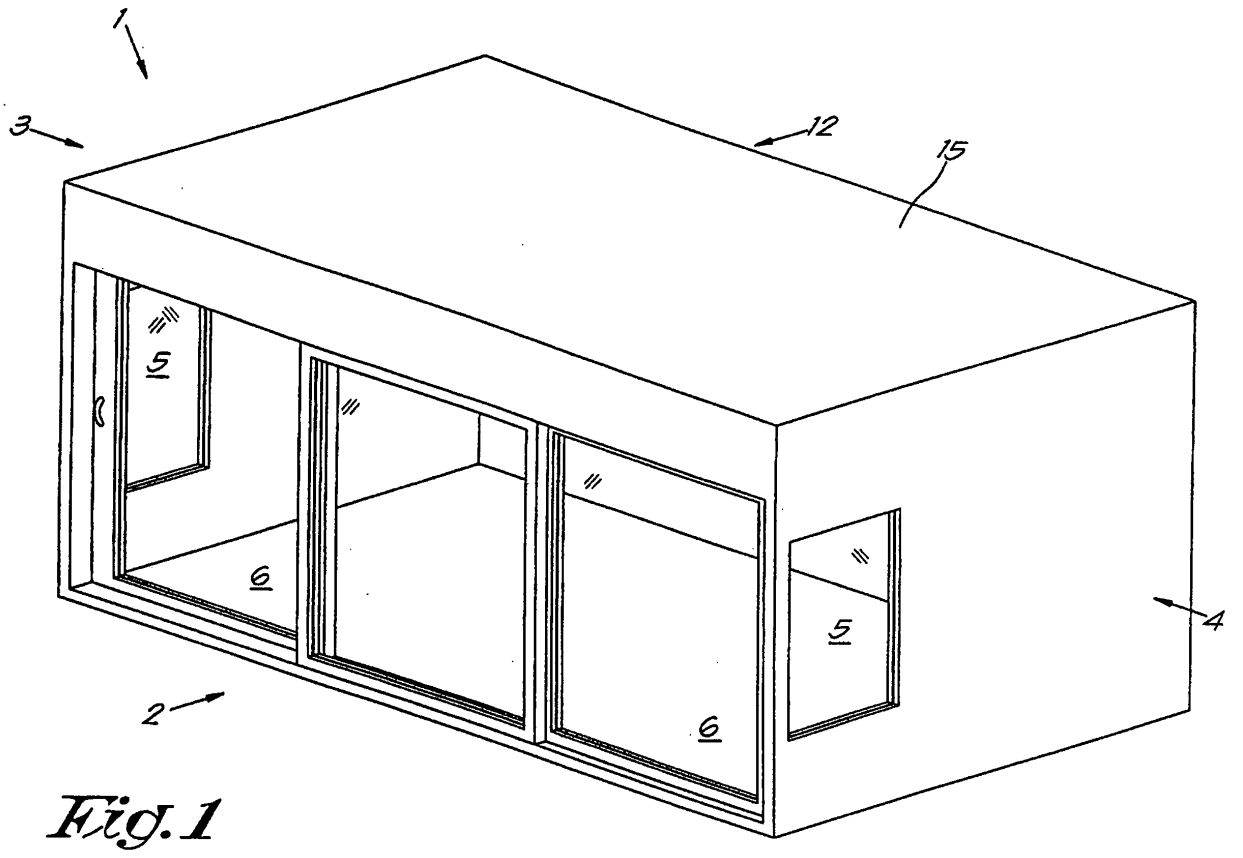

Fig. 1

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Description

[0001] The present invention concerns an extension for a building provided with at least one front wall and one or several side walls.

[0002] Without restricting the invention thereto, the invention in particular concerns an extension designed for apartment buildings having several floors, whereby every floor is provided with its own balcony.

[0003] Naturally, according to the present state of the art, many extensions for buildings are already known in the form of fixed constructions, such as for example a veranda or a built-on sun room or even a garage or the like.

[0004] The known extensions are usually provided with several windows and/or glass doors and possibly a transparent roof.

[0005] An advantage of such extensions is that the covered space in the building can be enlarged without too many investments.

[0006] Moreover, thanks to the many window frames, the structure that is obtained is very open but nevertheless protected from weather conditions.

[0007] There is also much incidence of light, which also contributes to the quality of life inside the building, in particular when the weather conditions are bad.

[0008] A disadvantage of the known extensions is that, in case of good weather conditions and a blazing sun, because of the many windows and the large amount of incident light, an uncomfortable hothouse is created.

[0009] It is also known that apartment buildings with several floors are often provided with balconies or terraces surrounded by railings, which balconies or terraces serve as a sort of garden or open space for the higher floors.

[0010] Such balconies or terraces offer the occupants of the higher floors the occasion to get a breath of fresh air for example, or to enjoy some nice weather.

[0011] A disadvantage of such balconies and terraces, however, is that little use can be made of them in countries with a bad climate, since the weather conditions seldom allow for it, as a result of which a considerably large volume of the building is hardly or not at all used.

[0012] The present invention aims to remedy one or several of the above-mentioned and other disadvantages.

[0013] In particular, the present invention aims to use the available space as efficiently as possible, whereby a pleasant climate is created for the occupants, under good as well as bad weather conditions, or a good relation is obtained between the available open space and the available screened space.

[0014] To this end, the present invention concerns an extension for a building which is at least provided with one front wall and one or several side walls, whereby this extension is erected such that it can move in relation to the building between a restricted position and an extended position and whereby the covered space inside the building is smaller in the restricted position than in the extended position.

[0015] An advantage of such an extension according to the invention is that, under bad weather conditions, the covered space of the building which is screened from the weather conditions can be enlarged by simply putting the extension in the extended position.

[0016] The other way round, more open space can be created when the weather is fine, such as for example on a terrace or balcony or the like, by putting the extension in the restricted position.

[0017] In this way is obtained an optimal relation between the available open space and the available screened space under all weather conditions.

[0018] It is clear that such a moving extension is particularly appropriate to be applied in apartment buildings, since the available space is usually rather limited there.

[0019] According to a preferred embodiment of an extension according to the invention, the front wall of the extension is part of the front of the building in the restricted position, whereas this front wall is situated at a certain distance from the front of the building in the extended position, typically for example against the railing or the edge of a balcony or terrace of the building.

[0020] An extension according to the invention in accordance with this embodiment is very suitable to be applied in buildings with terraces and balconies, since such a terrace or balcony can be easily screened from the weather conditions and can be transformed into an open space again by moving the extension from its respective extended into its restricted position.

[0021] Moreover, as the front wall of the extension is part of the front of the building in the restricted position and connects to the railing or the edge in the extended position, a perfectly finished view is obtained under all circumstances.

[0022] According to an even more preferred embodiment of an extension according to the invention, the walls of the extension are rigidly connected to one another, whereby the extension as a whole can shift inside the building.

[0023] The side walls of the extension can hereby shift inside the building, for example over the side walls of the building, whereby the latter side walls serve as a guide for the aforesaid side walls.

[0024] The extension can hereby move for example in a rolling manner over the ground, but also suspended to the ceiling and/or moving over rails on the side walls.

[0025] Other embodiments are not excluded either.

[0026] Such an embodiment of an extension according to the invention with a rigid connection of the walls is particularly practical, since its construction can be made very robust and all sorts of provisions can be made so as to automate the movement of the extension between the restricted and the extended position, for example provisions in the shape of electric motors which are driven with a remote control or the like.

[0027] Alternatively, an extension according to the in-

vention can also be made with walls that are hinge-mounted, whereby the extension can be put in the restricted position or the extended position by making the walls hinge in relation to one another.

[0028] In this manner, it is for example possible to make a cheaper version with which the same practical result is nevertheless obtained, namely an optimal relation between the available open space and the available screened space under all sorts of weather conditions.

[0029] All sorts of materials can be used to manufacture an extension according to the invention, such as for example wood, aluminium, metal, plastic and glass, or a combination of said materials, or any other material whatsoever.

[0030] In order to better explain the characteristics of the invention, the following preferred embodiments of an extension for a building according to the invention are described with reference to the accompanying drawings, in which:

figure 1 shows a first embodiment of an extension according to the invention, seen in perspective;
figures 2 and 3 represent the extension from figure 1 applied in an apartment building for use on a balcony and on a terrace respectively;
figure 4 is a section according to the plane indicated by IV-IV in figure 1 when the extension is put in the extended position;
figures 5 and 6 are sections analogous to figure 4, when the extension is situated in an intermediate position and in the restricted position respectively;
figure 7 shows an alternative embodiment of an extension according to the invention, seen in perspective, in particular of an embodiment with hinge-mounted panels;
figures 8 to 10 are sections analogous to figures 4 to 6 included representing the use of the embodiment with hinge-mounted panels on a balcony, in the extended position, an intermediate position and in the restricted position respectively;
figures 11 and 12 represent alternative situations in which an extension according to the invention is applied in the embodiment with hinge-mounted panels, put in the extended and in the restricted position respectively; and,
figure 13 shows an extension according to the invention, seen in perspective, analogous to figure 1, in an embodiment with a number of provisions.

[0031] The extension 1 according to the invention represented in figure 1 is provided with a front wall 2 and two side walls 3 and 4, just as many known extensions for buildings.

[0032] In the front wall 2 are further provided windows 5 and doors 6, in this case sliding doors 6, which is also already known according to the present state of the art.

[0033] As is clearly shown in figures 2 to 6 included, an extension 1 according to the invention is special in that the extension 1 can move in relation to a building 7.

[0034] In the case of figure 2, the building 7 is formed of several floors 8 of which every upper floor is provided with a balcony 9 and whereby every floor 8 is provided with such a moving extension 1 according to the invention.

[0035] The actual front 10 of the building 7 is hereby provided with an opening 11 over its entire width B on every floor 8, in which the extensions 1 are provided in a moving manner.

[0036] Every extension 1 can hereby maximally move in the opening 10 between a restricted position, as represented in figure 2 for example for the extension 1 on the lower three floors 8, and an extended position, as is represented in figure 2 for the extension 1 of the top floor 8.

[0037] The extension 1 is open on the side 12 opposite the front wall 2.

[0038] Naturally, the idea is that persons can move as such inside the building 7 in the covered and screened space 13 formed by the walls 14 of the building 7 and the walls 2, 3 and 4 of the extension 1.

[0039] For clarity's sake, the sections of figures 4 to 6 included represent the transition between the two extreme positions, starting from the extended position via an intermediate position to the restricted position respectively.

[0040] Naturally, the covered and/or screened space 13 in the building 7 is more limited in the restricted position than in the extended position, or vice versa, said covered and/or screened space 13 is larger in the extended position of the extension 1 than in the restricted position.

[0041] According to a preferred embodiment of an extension 1 according to the invention, the front wall 2 of the extension 1 is part of the front 10 of the building 7 in the restricted position, whereas the front wall 2 of the extension 1 is situated at a certain maximal distance D from the front 10 of the building 7 in the extended position, preferably for example in the utmost position against the railing or the edge 17 of a balcony 9 of the building 7.

[0042] With such an embodiment, the balcony 9 of the building 7 will be entirely open in the restricted position of the extension 1, whereas it will be entirely screened in the extended position of the extension 1.

[0043] Moreover, in the restricted position, the front wall 2 of the extension 1 will be situated in the plane of the front 10 of the building 7, such that the outlook of the building 7 is not harmed.

[0044] Other embodiments are not excluded, however, whereby the minimally restricted position is situated for example more inward in the building 7 and the maximally extended position does not reach up against the railing 17, for example.

[0045] In the embodiment of figure 1 as discussed above, the extension 1 is also provided with a roof wall 15, but this is not strictly necessary according to the invention.

[0046] Moreover, it is not excluded to provide a floor

wall on the extension 1 between the side walls 3 and 4 and the front wall 2.

[0047] In this first embodiment of an extension 1 according to the invention, the walls, in particular the front wall 2, the side walls 3 and 4 and the roof wall 15 of the extension 1 are rigidly connected to one another, whereby the entire rigid construction of the extension 1 can shift inside the building 7.

[0048] The side walls 2 and 3 of the extension 1 can hereby shift inside the building 7 over the side walls 16 of the building 7, whereby said side walls 16 serve as a guide for the aforesaid side walls 2 and 3, such that an extension 1 is obtained having about the same width B as the building 7.

[0049] To this end, the extension 1 can be provided for example with a mechanism with collapsible wheels under the side walls 2 and 3, whereby for example a rail on the side walls 16 serves as the actual guide.

[0050] The extension 1 may be designed such that its shifting in and out can be done entirely manually.

[0051] However, it is not excluded to provide electric motors to that end, for example, which may be either or not operated via a remote control.

[0052] The example of figure 3 is entirely analogous to the example of figure 2, but in this case the ground floor 8 is already provided with a fixed extension 18, whereby the roof 19 of said extension 18 serves as a terrace 20 for the apartment on the first floor 8.

[0053] In the example of figure 3, an extension 1 according to the invention is placed on the first floor 8. Said extension 1 can in this case move between a restricted position whereby the front wall 2 is situated in the plane or practically in the plane of the front 10 of the building 7 and an extended position whereby the extension 1 has been provided up against the edge 17 of the terrace 20.

[0054] Apart from the fact that a terrace 20 is usually larger than a balcony 9 and, consequently, also the extension 1 must be larger in a case as in figure 3 than in a case as in figure 2, there is no further difference between the applications of figures 2 and 3.

[0055] According to an alternative embodiment of an extension 1 according to the invention, it is for example possible to realise the extension 1 without a roof wall 15.

[0056] Naturally, there will be a problem with this embodiment in that, in the extended position of the extension 1, the space 13 in the building 7 will not be entirely screened as there is no roof wall 15.

[0057] This problem can be simply solved by making sure, for example, that the side walls 3 and 4 as well as the front wall 2 fit closely onto the balcony 9 lying on top in the extended position of the extension 1, such that the roof of the extension 1 is formed of said balcony 9 lying on top of the latter.

[0058] In this manner, the same effect can be obtained with a simpler or cheaper construction, namely that the relation between the space of the building 7, which is screened from any weather conditions, and the open space can be freely adjusted, for example as a function of the weather.

[0059] Figure 7 shows yet another embodiment of an extension 1 according to the invention, whereby the walls of the extension 1 are hinge-mounted to one another by means of hinges 21 this time.

[0060] In particular, the front wall 2 of the extension 1 consists of four hinged panels 22 in the given example, whereby said front wall 2 is hinge-mounted on its side edges 23 as well with each time one hinged side panel 22 forming one of the side walls 3 and 4 of the extension 1.

[0061] The hinged panels are again provided with windows 5 and doors 6, whereby the most varying alternatives are possible.

[0062] The use of such an extension 1 according to the embodiment of figure 7 is somewhat different from that of the preceding embodiments as the extension 1 must be put in the restricted position or in the extended position by making the walls or panels 22 hinge in relation to one another.

[0063] This is illustrated by means of figures 8 to 10 included.

[0064] Figure 8, for example, represents the extension 1 in its extended position, whereby the panels 22 enclose the edge 17 of a balcony 9.

[0065] For a good sealing, it is best made sure that a connection is provided on the top side with a balcony 9 lying on top.

[0066] In order to put the extension 1 in its restricted position, the side wall 4 must in this case be disconnected from the building 7 first.

[0067] To this end, this side wall 4 is provided with appropriate coupling means 25 on its free edge 24.

[0068] The other side wall 3 is hinge-mounted in a fixed manner to the building.

[0069] Next, the panels 22 are hinged towards one another, which is represented for a certain intermediate position in figure 9, and the panels 22 forming the side walls 3 and 4 of the extension are turned inward.

[0070] Finally, the result of figure 10 is obtained whereby the side walls 3 and 4 are swung back against the side walls 16 in the building 7 and the front wall 2 is moved inward over a certain distance in relation to the original extended position.

[0071] Figures 11 and 12 represent an alternative to the embodiment of figure 7, whereby the extension 1 is this time only formed of a front wall 2 formed of a panel 22 which is connected to another panel 22 by means of hinges 21, which panel serves as a side wall 3 to the extension 1.

[0072] The front wall 2 is hereby connected in a detachable manner to a side wall 16 of the building 7 by means of coupling means 25, whereas the side wall 3 is hinge-mounted in a fixed manner to the front 10 of the building 7.

[0073] In the given example of figures 11 and 12, a part 26 of the balcony 9 is always open.

[0074] Figure 11 represents the extended position of the extensions 1, whereas figure 12 shows the restricted

position.

[0075] Starting from the extended position of figure 11, an additional open part 27 may be created on the balcony 9 by successively first detaching the front wall 2 from the side walls 16, then swinging back the side panel 3 to the inside of the building 7 and finally fixing the front wall 2 to the side walls 16 again, however somewhat more inward in relation to the original fastening points.

[0076] In the side wall 3 is in this case provided a door 6 which makes it possible, in the extended position as well as in the restricted position, to reach the balcony 9 as of the building 7.

[0077] Naturally, innumerable variations on the embodiments with the hinged panels 22 as shown here are possible.

[0078] Figure 13 show a more detailed version of an extension 1 analogous to the embodiment of figure 1, with a number of practical provisions which make the use of an extension 1 according to the invention even more interesting.

[0079] For example, it is easy to provide a bench 28 on an extension 1 according to the invention which can move along with the extension between the extended position and the restricted position.

[0080] Moreover, it could be interesting for example if this bench 28 could shift out through the front wall 2, such that the bench 28 can be easily shifted onto the open balcony 9 in the restricted position of the extension 1.

[0081] Another interesting provision might consist for example of a little sliding table 29 provided in a sliding manner under a bench 30 of the extension 1.

[0082] An alternative to such a sliding table 29 is for example a collapsible table 31 which is hinge-mounted to the front wall 2 between a folded-out horizontal position and a folded-in position parallel to the plane of the front wall 2.

[0083] An advantage of such a bench 28 or such tables 29 and 30 is that they can be easily installed and stored again, whereby optimal use is made of the available space.

[0084] Another additional provision, also represented in figure 13, might for example be an awning 32 provided on the top side of the front wall 2 of the extension 1.

[0085] Such an awning 32 could for example serve as a sunblind when the extension 1 is put in its restricted position.

[0086] Naturally, many other possibilities are conceivable as well.

[0087] The invention is by no means restricted to the embodiments of an extension 1 for a building 7 according to the invention described by way of example and represented in the accompanying drawings; on the contrary, such an extension 1 can be made in many other ways while still remaining within the scope of the invention.

Claims

1. Extension (1) for a building (7) which is at least provided with one front wall (2) and one or several side walls (3,4), **characterised in that** the extension (1) is erected such that it can move in relation to the building (7) between a restricted position and an extended position, whereby the covered and/or screened space (13) inside the building (7) is smaller in the restricted position than in the extended position.

2. Extension (1) according to claim 1, **characterised in that** the front wall (2) of the extension (1) is part of the front (10) of the building (7) in the restricted position.

3. Extension (1) according to claim 1 or 2, **characterised in that** the front wall (2) of the extension (1) is situated at a certain distance (D) from the front (10) of the building (7) in the extended position.

4. Extension (1) according to claim 3, **characterised in that** the front wall (2) of the extension (1) is situated against the railing or the edge (17) of a balcony (9) or terrace (20) of the building in the extended position.

5. Extension (1) according to any one of the preceding claims, **characterised in that** the roof of the extension (1) is formed of a balcony (9) of the building (7) lying on top of the latter in the extended position.

6. Extension (1) according to any one of the preceding claims, **characterised in that** the extension (1) is provided with a roof wall (15).

7. Extension (1) according to any one of the preceding claims, **characterised in that** the extension (1) is provided with a floor wall.

8. Extension (1) according to any one of the preceding claims, **characterised in that** the walls (2,3,4,15) of the extension (1) are rigidly connected to one another, whereby the extension (1) as a whole can shift inside the building (7).

9. Extension (1) according to claim 8, **characterised in that** the side walls (3,4) of the extension (1) can shift inside the building (7) over the side walls (16) of the building (7), whereby the side walls (16) serve as a guide for the aforesaid side walls (3,4).

10. Extension (1) according to any one of claims 1 to 7 included, **characterised in that** the walls (2,3,4) of the extension (1) are hinge-mounted to one another, whereby the extension (1) can be put in its restricted position or its extended position by making the walls

(22) hinge in relation to one another.

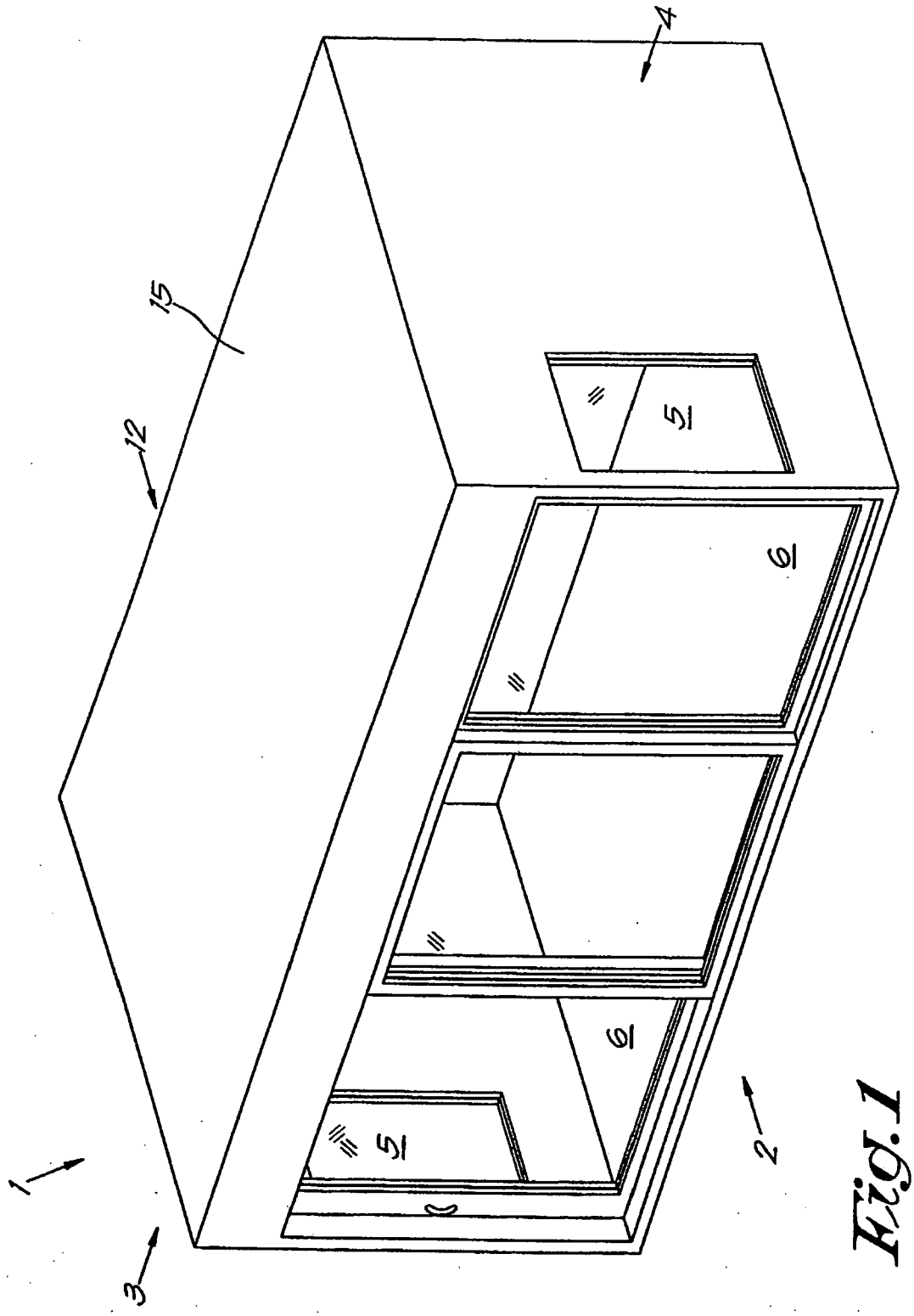

Fig.1

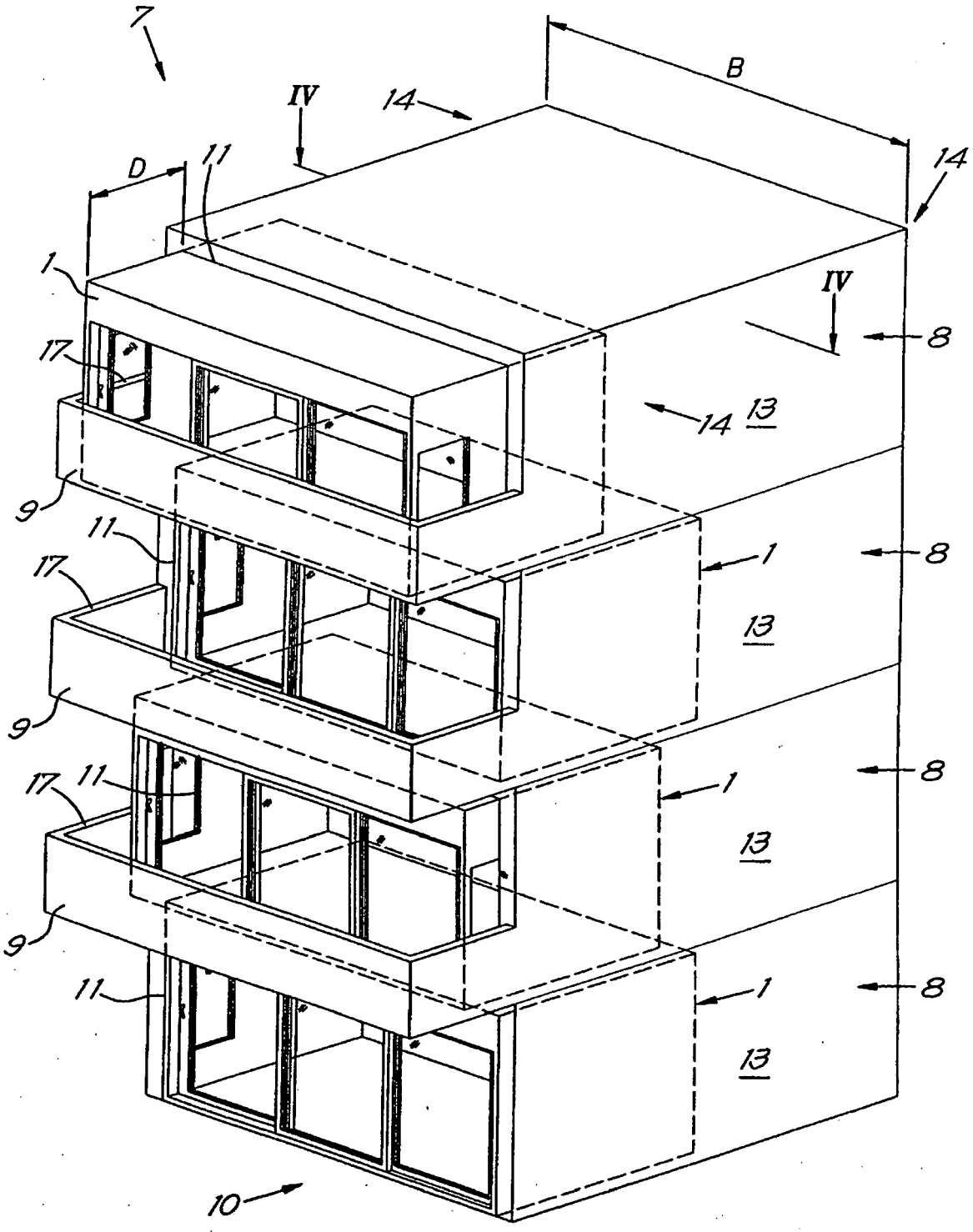

Fig.2

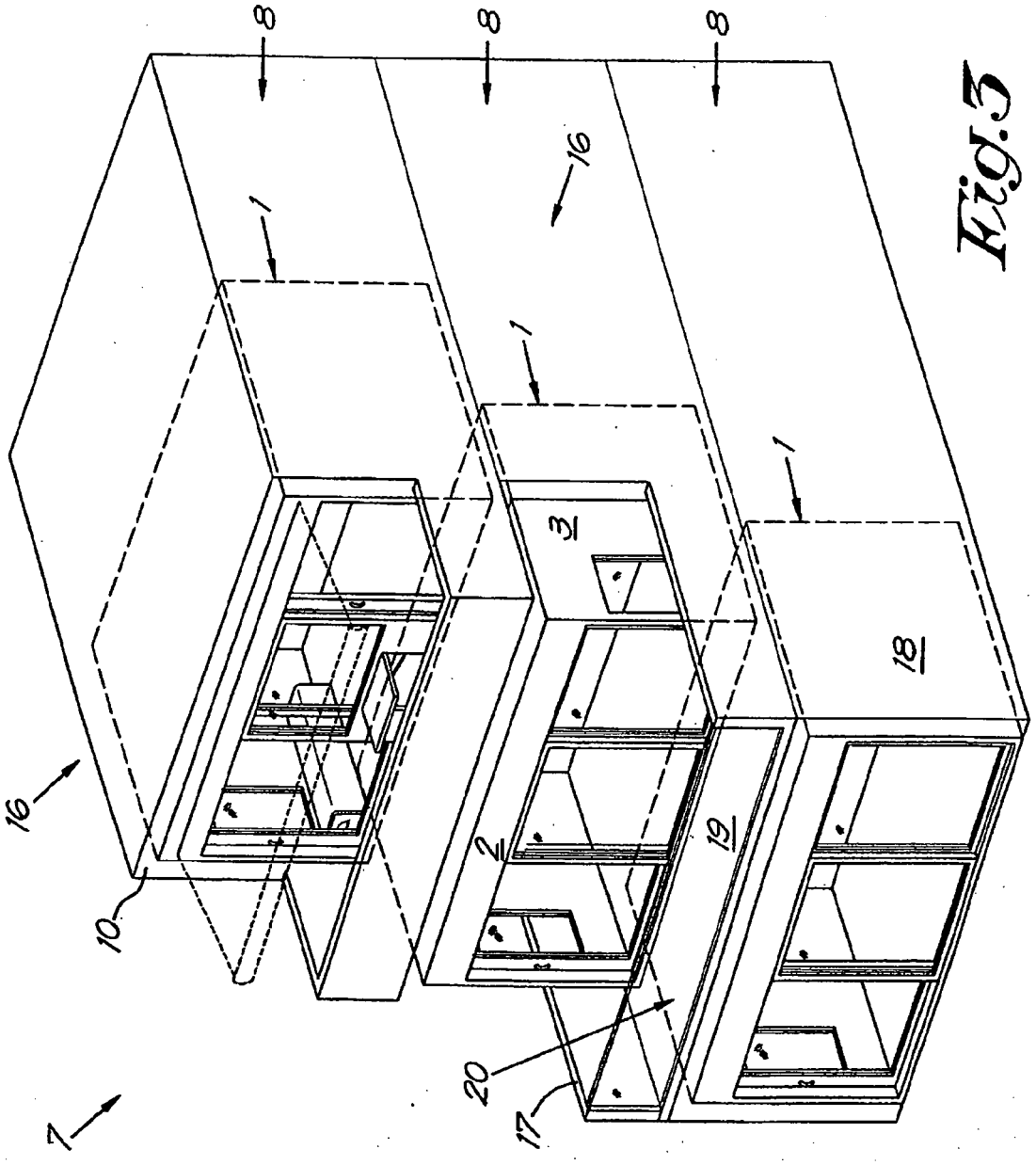

Fig.3

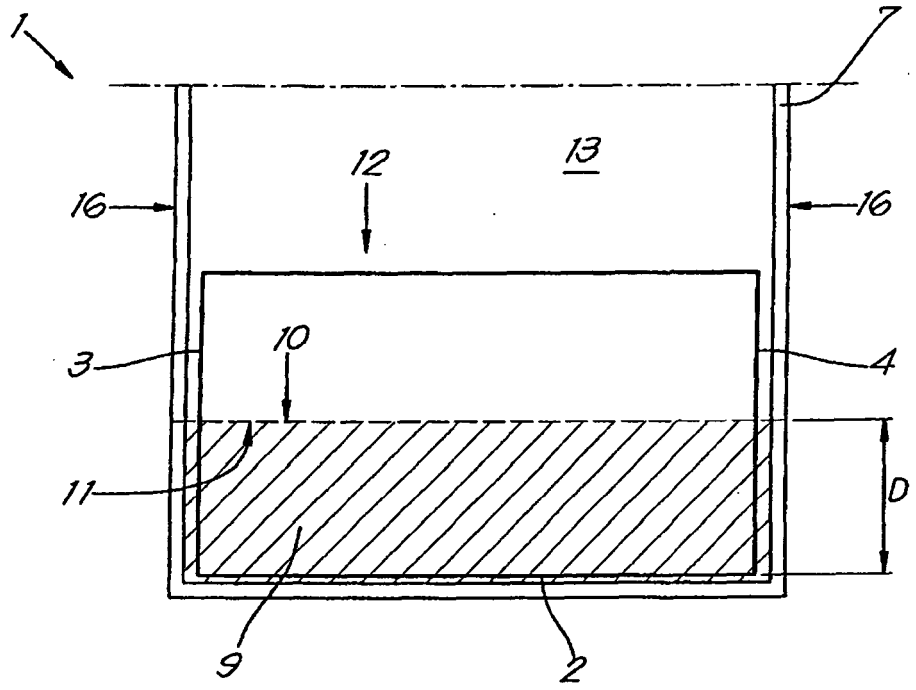

Fig.4

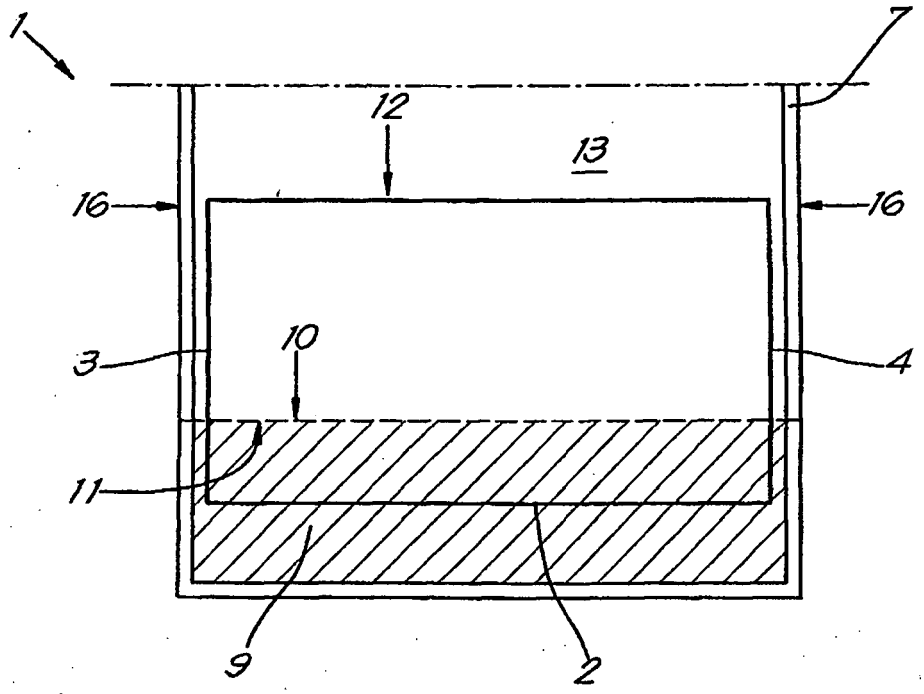

Fig.5

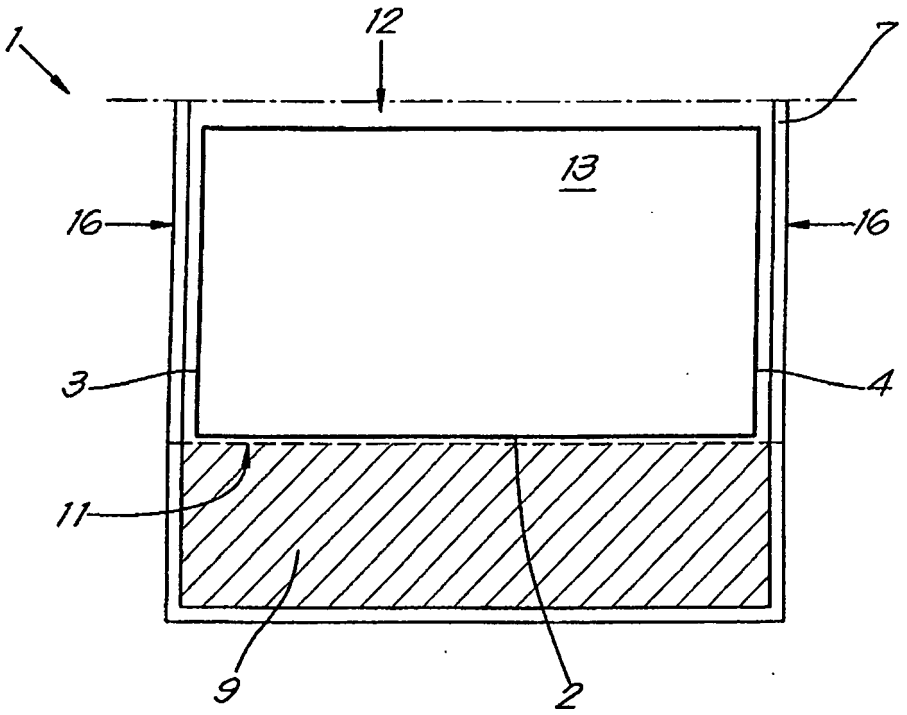

Fig.6

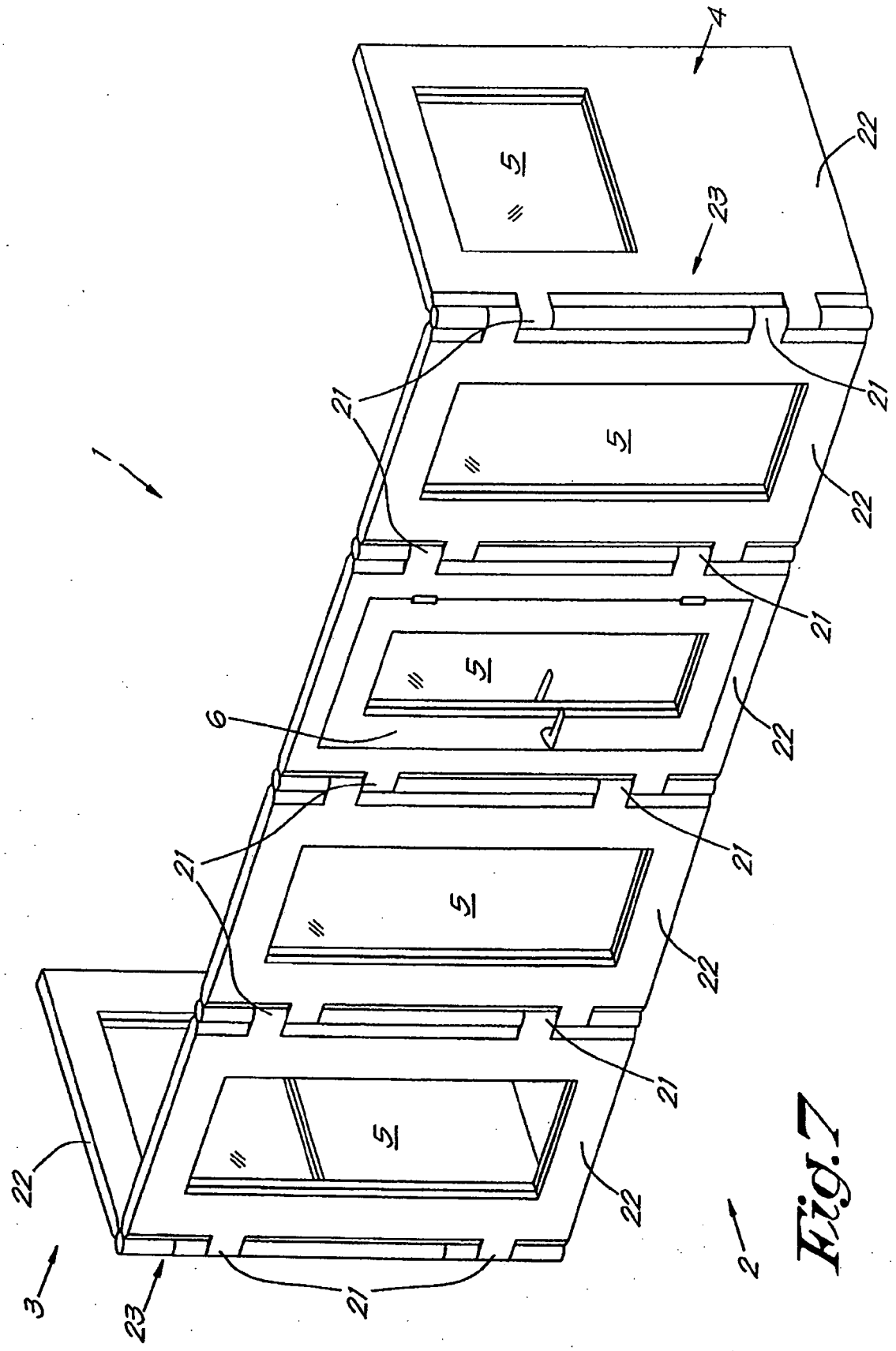

Fig.7

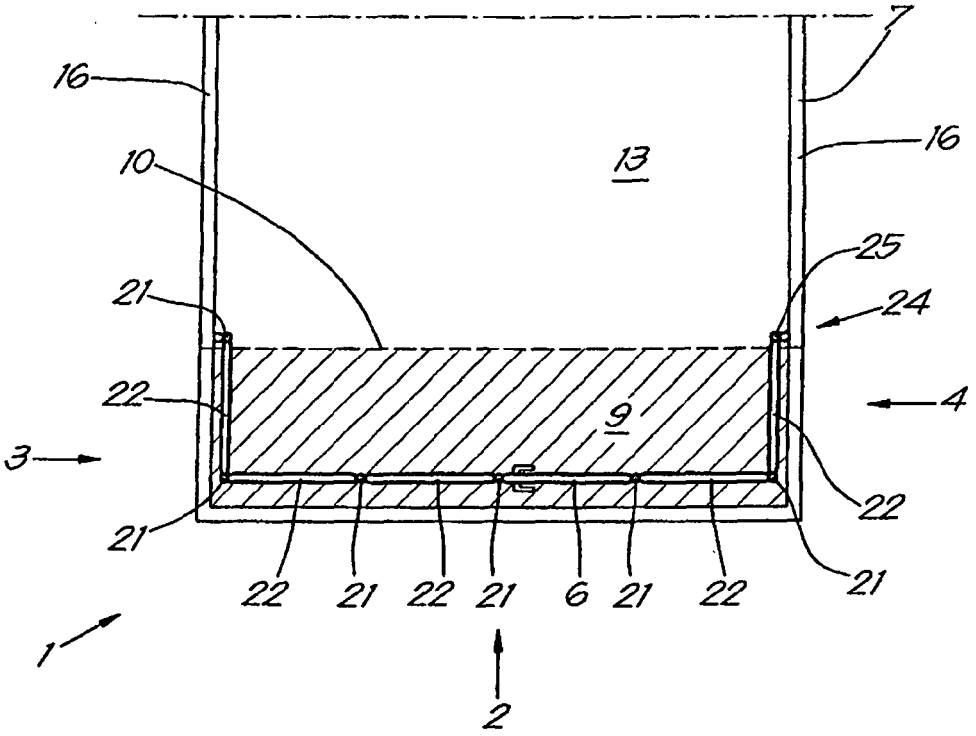
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Fig.8

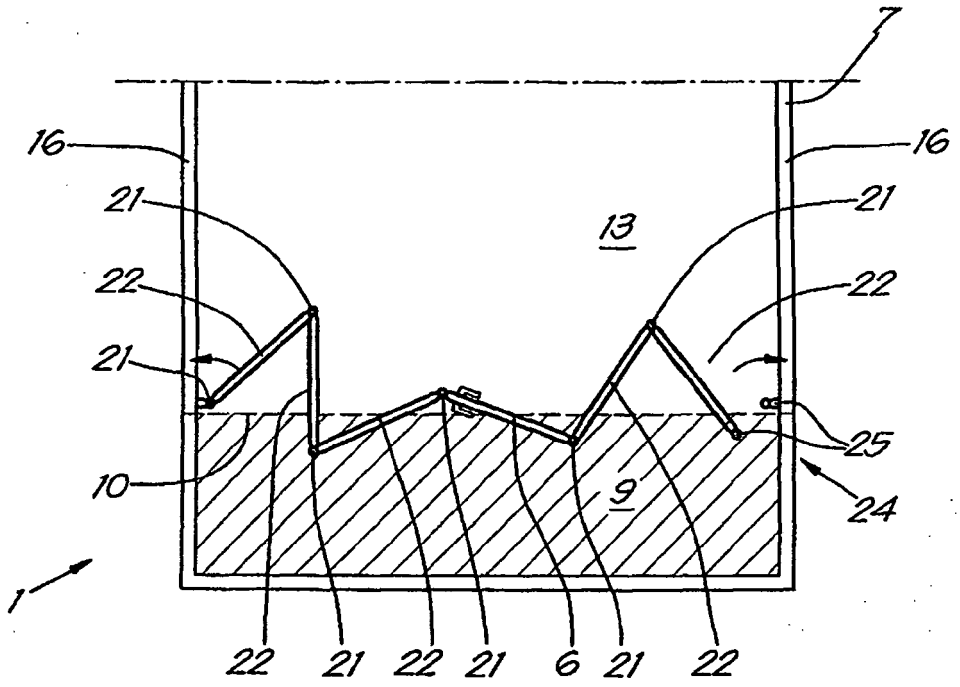
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Fig.9

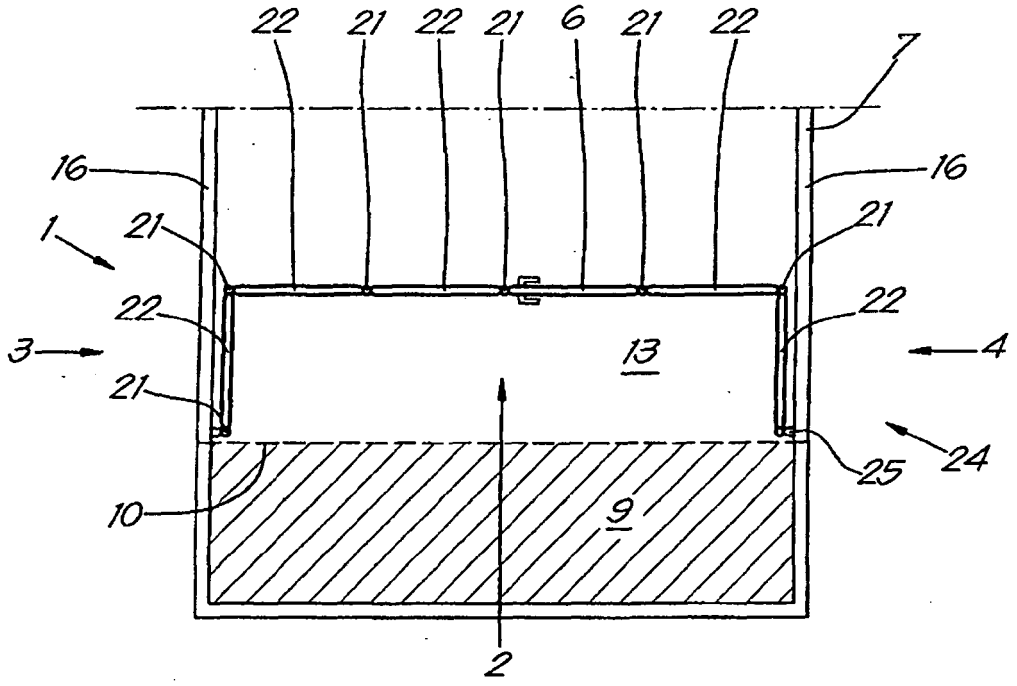
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Fig.10

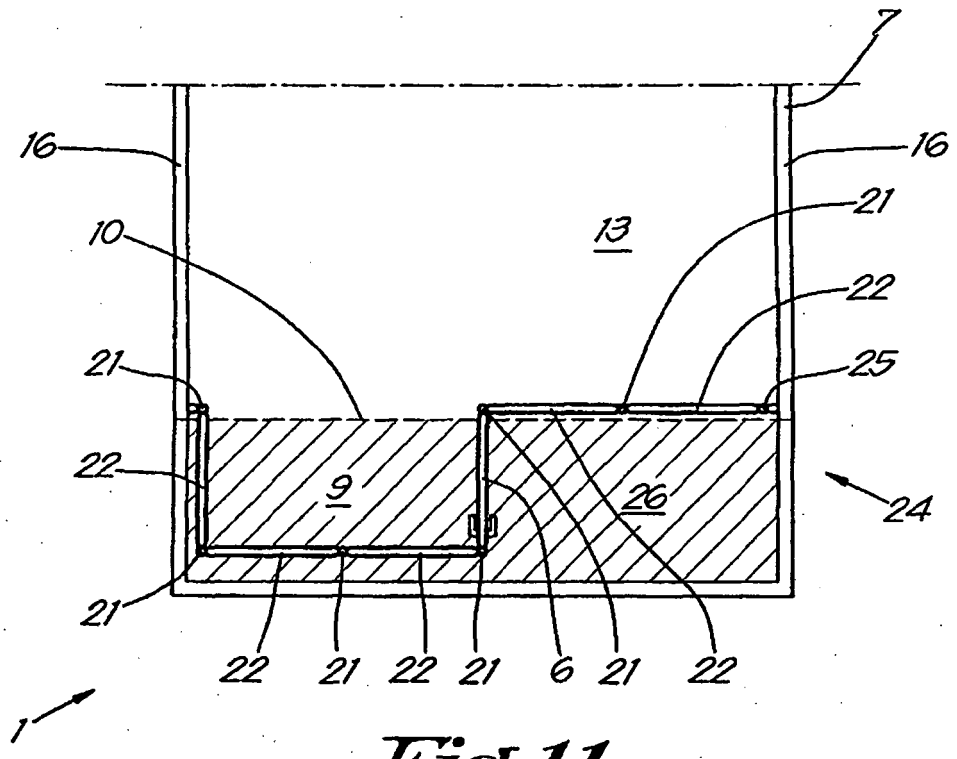
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Fig.11

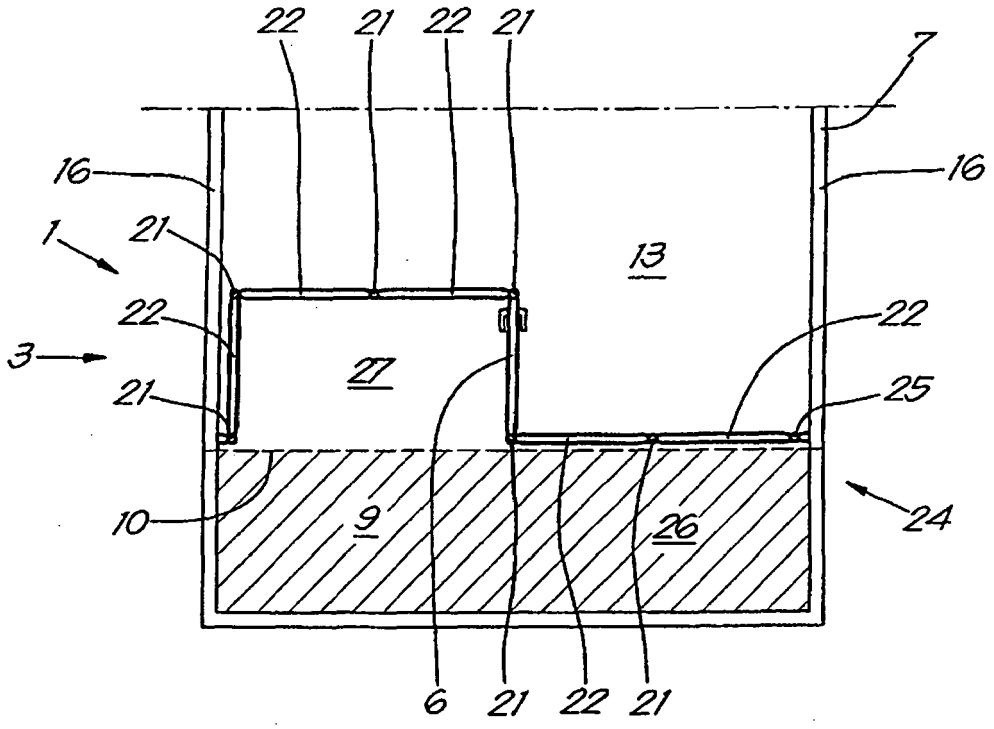

Fig. 12

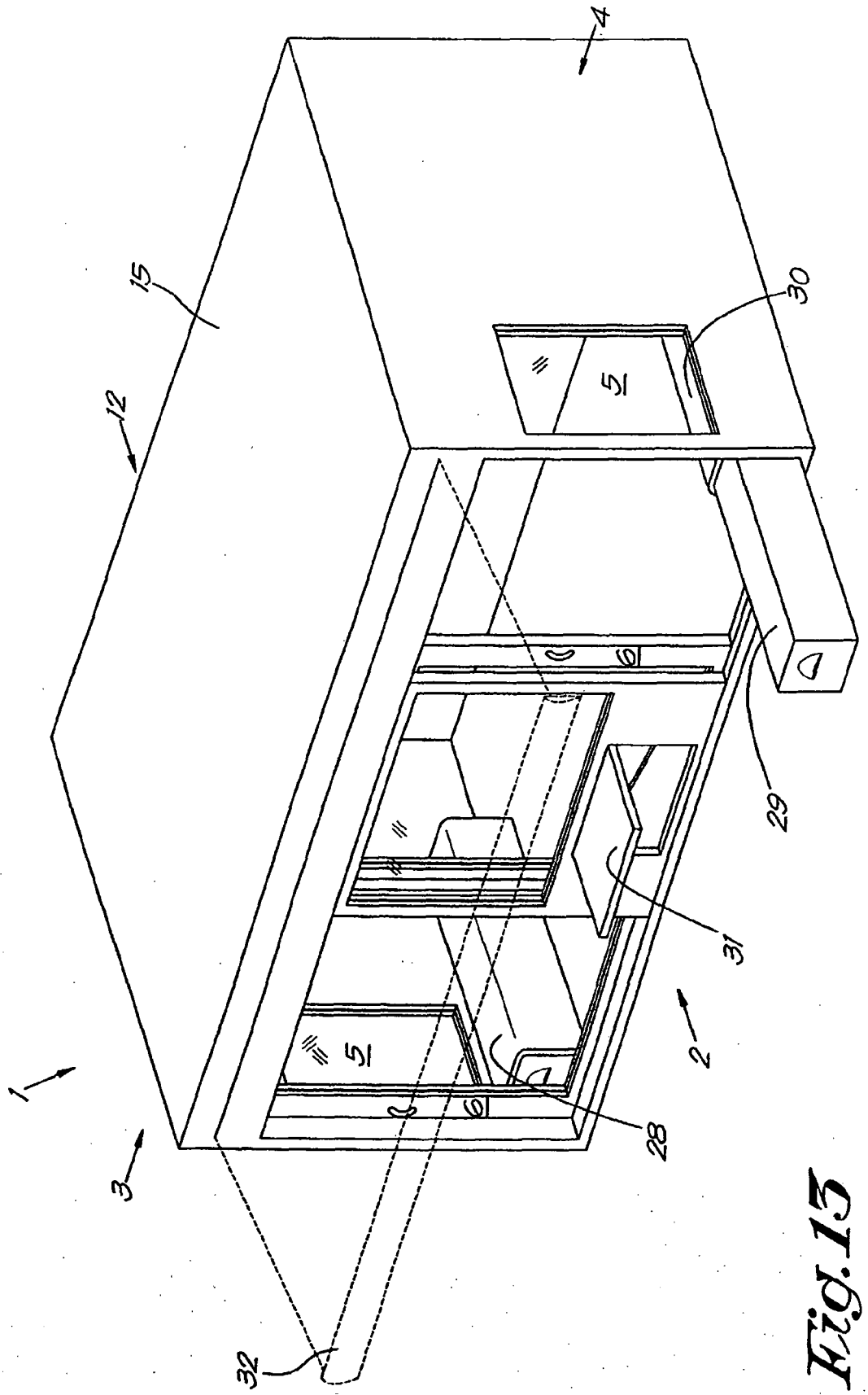

Fig.13

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European Patent Office
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EUROPEAN SEARCH REPORT

Application Number
EP 09 00 2429

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 6 874 283 B1 (WILLIAM A. HINDLE) 5 April 2005 (2005-04-05) * column 6, line 30 - column 10, line 59; figures 1-5 * -----	1-3,7,8	INV. E04B1/00 E04B1/343 E04H1/12
X	DE 33 13 495 A1 (PERDOLT GOTTFRIED [AT]) 8 December 1983 (1983-12-08) * page 5; figures 1-4 * -----	1,4,5,10	
X	DE 101 54 848 C1 (DORNIER GMBH [DE]) 27 February 2003 (2003-02-27) * paragraph [0023] - paragraph [0031]; figures 1-4 * -----	1-3,6-9	
X	FR 2 576 955 A (ZILIANI BRUNO [FR]) 8 August 1986 (1986-08-08) * the whole document * -----	1-3,6,8,9	
X	US 2006/053700 A1 (VANCE DENNIS R [US]) 16 March 2006 (2006-03-16) * paragraphs [0002], [0010]; figures 15-38 * -----	1,10	

TECHNICAL FIELDS SEARCHED (IPC)

E04B
E04H

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	8 June 2009	Zuurveld, Gerben

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

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E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 09 00 2429

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6874283 B1	05-04-2005	NONE	
DE 3313495 A1	08-12-1983	AT 373326 B	10-01-1984
DE 10154848 C1	27-02-2003	WO 03040485 A1	15-05-2003
		EP 1442178 A1	04-08-2004
		US 2005055891 A1	17-03-2005
FR 2576955 A	08-08-1986	NONE	
US 2006053700 A1	16-03-2006	NONE	

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82