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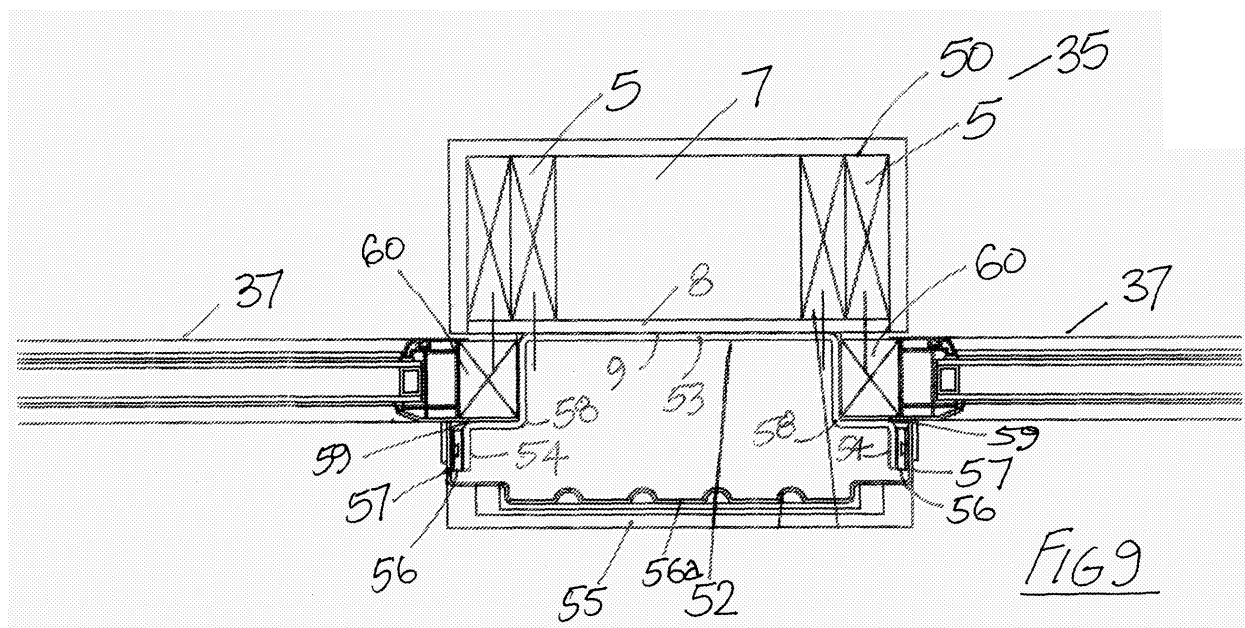
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(54) **Prefabricated pilaster assembly**

(57) A prefabricated pilaster assembly (35) comprising a wooden pilaster frame (50) with a fibreglass or GRP cladding panel (55) mounted on a front of the pilaster frame (50) by means of a C-shaped mounting plate (52). Outwardly extending arms (54) of the mounting plate (52)

and inwardly extending side panels (57) of the cladding panel (55) overlap. A number of slide fasteners (56) with interengaging parts on the mounting plate (52) and side panels (57) secure the cladding panel (55) on the pilaster frame (50).



## Description

**[0001]** This invention relates to building construction generally and more particularly to the construction of conservatories, sunrooms, orangeries, and the like.

**[0002]** In a typical conservatory construction a relatively low brick wall is built on a foundation, then prefabricated wall panels comprising a glazed door frame and a number of window frames are mounted upright on the wall to form the side wall of the conservatory and then a roof is mounted on the side wall. A problem with this method is firstly that the wall must be very accurately constructed in order to correctly receive and cooperate with the wall panels. This is skilled work and bricklayers are relatively expensive and not always available to do the work. This can lead to considerable expense and delays in carrying out the construction work. The present invention is directed towards overcoming these problems.

**[0003]** According to the invention there is provided a prefabricated pilaster assembly including a prefabricated pilaster frame, one or more associated cladding panels for mounting on an exterior of the prefabricated pilaster frame, and means for mounting each cladding panel on the prefabricated pilaster frame.

**[0004]** In one embodiment, the mounting means comprises complementary interengagable mounting connectors on the prefabricated pilaster frame and the cladding panel.

**[0005]** In a particularly preferred embodiment the cladding panels are demountably secured to the prefabricated pilaster frame.

**[0006]** In another embodiment the mounting means comprises means for hanging each cladding panel on the prefabricated pilaster frame.

**[0007]** In another embodiment the hanging means comprises complementary interengageable hanging formations on the prefabricated pilaster frame and the cladding panel.

**[0008]** In a further embodiment the hanging means comprises a plurality of hanging brackets mounted vertically spaced-apart on an external face of the prefabricated pilaster frame and associated hanger elements mounted vertically spaced-apart on an inside face of each cladding panel.

**[0009]** Preferably, the hanging brackets are formed of a non-corrosive metal material.

**[0010]** In another embodiment, the mounting means comprises a number of two part slide connectors, each slide connector having a first part mounted on the pilaster frame for slidable engagement by a second part which is mounted on the cladding panel.

**[0011]** In a further embodiment, the first part is mounted on the pilaster frame by means of a mounting plate attached to an outer face of the pilaster frame, said mounting plate being C-shaped having an inner end attached to the pilaster frame with outwardly extending arms on which the first parts of the slide connectors are mounted.

**[0012]** In another embodiment, the outwardly extending arms are stepped to accommodate an upright mounting element for supporting a glazing panel or wall panel, said mounting element being fixed to an outer face of the pilaster frame.

**[0013]** In a further embodiment, the cladding panel is of channel section having an outer panel with in-turned side panels which overlap the outwardly extending arms of the mounting plate, second parts of the slide connectors being mounted on inside faces of said side panels.

**[0014]** Conveniently, each cladding panel may be formed with a decorative outer face. Any suitable decoration may be provided to simulate brickwork, a panelled finish, etc.

**[0015]** In another embodiment the cladding panels are formed of a plastics material. The cladding panels may be formed of unplasticised polyvinyl chloride (uPVC). Alternatively, the cladding panels are formed of fibreglass or glass reinforced plastics material.

**[0016]** In another embodiment, the prefabricated pilaster frame comprises a framework with a facing panel on a front face of the framework and a breather membrane covering an exterior face of the facing panel.

**[0017]** In another embodiment, a pair of mutually perpendicular facing panels are supporting on adjacent external faces of the framework.

**[0018]** In another embodiment, a mounting plate is attached to each of said facing panels and a corner cover plate is mounted between adjacent side edges of the two mounting plates.

**[0019]** In another embodiment the prefabricated pilaster frame is formed of wooden and/or metal materials.

**[0020]** In another embodiment the cladding panel is supported spaced-apart from the prefabricated pilaster frame leaving a cavity therebetween. Conveniently a drainpipe may be routed through the cavity.

**[0021]** In another aspect the invention provides a conservatory, orangery or the like including a number of pilaster assemblies mounted upright and spaced-apart on a base, a plurality of wall panels mounted between the pilaster assemblies forming with the pilaster assemblies an upstanding side wall of the conservatory, and a roof assembly mounted on top of the pilaster assemblies.

**[0022]** In another embodiment the wall panels include window and door frame assemblies.

**[0023]** In a still further aspect of the invention there is provided a method for constructing a conservatory, including:

preparing a base;

mounting a number of prefabricated pilaster frames spaced-apart and upstanding on the base;

mounting associated cladding panels on an exterior of the prefabricated pilaster frames;

mounting a number of wall panels between the pre-

fabricated pilaster frames forming an upstanding side wall of the conservatory; and

mounting a roof assembly on top of the side wall plaster assemblies

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**[0024]** In a further embodiment the method includes the step of hanging the cladding panels on the associated prefabricated pilaster frames.

**[0025]** In another embodiment the method includes the step of mounting an internal drainpipe within a pilaster assembly between the pilaster frame and the associated cladding panel mounted on the pilaster frame.

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**[0026]** In another embodiment the wall panels include window and door frame assemblies.

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### **Detailed Description of the Invention**

**[0027]** The invention will be more clearly understood by the following description of some embodiments thereof, given by way of example only, with reference to the accompanying drawings, in which:

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Fig. 1 is a sectional side elevational view of a prefabricated pilaster assembly according to the invention;

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Fig. 2 is a plan view of another arrangement of the prefabricated pilaster assembly of the invention;

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Fig. 3 is a front elevational view of the prefabricated pilaster assembly;

Fig. 4 is a plan view of an orangery constructed using a number of the prefabricated pilaster assemblies of the invention;

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Fig. 5 is a front elevational view of the orangery;

Fig. 6 is a side elevational view of the orangery;

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Fig. 7 is a side elevational view showing another side of the orangery;

Fig. 8 is a detail sectional plan view showing portion of a side wall of the orangery;

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Fig. 9 is a detail sectional plan view showing a pilaster assembly according to the invention in the side wall of the orangery;

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Fig. 10 is a detail sectional plan view showing a pilaster assembly according to the invention at a corner of the side wall of the orangery;

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Fig. 11 is an elevational view of a cladding panel used in the pilaster assembly;

Fig. 12 is a side elevational view of the pilaster cladding panel of Fig. 11;

Fig. 13 is a plan view of the pilaster cladding panel of Fig. 11;

Fig. 14 is an elevational view of a mounting plate used in the pilaster assembly;

Fig. 15 is a side elevational view of the mounting plate of Fig. 14;

Fig. 16 is a plan view of the mounting plate of Fig. 14;

Fig. 17 is a front elevational view of another cladding panel;

Fig. 18 is a side elevational view of the cladding panel of Fig. 17;

Fig. 19 is a plan view of the cladding panel of Fig. 17;

Fig. 20 is a front elevational view of a further cladding panel;

Fig. 21 is a side elevational view of the cladding panel shown in Fig. 20; and

Fig. 22 is a plan view of the cladding panel shown in Fig. 20.

**[0028]** Referring to the drawings, and initially to Fig. 1 thereof, there is illustrated a prefabricated pilaster assembly according to the invention indicated generally by the reference numeral 1. The prefabricated pilaster assembly 1 includes a prefabricated pilaster frame 2 and one or more associated uPVC cladding panels 3 for mounting on an exterior of the prefabricated pilaster frame 2.

**[0029]** In this case the prefabricated pilaster frame 2 is a wooden frame with upstanding side members 5 interconnected at their upper and lower ends by upper cross members 6 and lower cross members 7. A facing panel, comprising in this case a plywood sheet 8, is mounted at a front of the prefabricated pilaster frame 2. An outer breather membrane 9 of water-proof material covers an outer face of the plywood sheet 8. The sides and inner face of the wooden frame may be closed by suitable sheeting material.

**[0030]** A plurality of hanging brackets 10 are mounted vertically spaced-apart on an external face of the prefabricated pilaster frame 2, being fixed to the plywood sheet 8. Each hanging bracket 10 comprises an aluminium block or other non-corrosive metal material. Vertical vent holes 11 extend through each hanging bracket 10 to allow for air circulation. A V-channel receiver 12 is provided at an outer side of each hanging bracket 10. Associated hanger elements 13 of complementary shape to the re-

ceiver 12 are mounted vertically spaced-apart on an inside face of each cladding panel 3. Screws 14 secure each hanger element 13 to the cladding panel 3. Thus, each cladding panel 3 can simply be dropped on to the hanging brackets 10 with the hanging elements 13 on the cladding panel 3 engaging and seating in the receivers 12 on the hanging brackets 10.

**[0031]** It will be noted that the cladding panel 3 is supported spaced-apart from the prefabricated pilaster frame 2 leaving a cavity 15 therebetween for air circulation.

**[0032]** An inside of the prefabricated pilaster frame 2 may be closed off with a sheet of, for example, MDF or plywood. Also if desired thermal insulation material may be housed within the frame 2.

**[0033]** Referring to Fig. 2 there is shown another arrangement for forming the prefabricated pilaster frame which in this case comprises a centre aluminium box frame 20 with side box frames 21, 22 secured thereto by screws 23. Cladding panels 3 are mounted on the frames 20, 21, 22 to form the pilaster assembly.

**[0034]** In this case the cladding panels 3 comprise a central shaped panel 25 mounted on the centre frame 20 and moulded corner post panels 26, 27 mounted on each of the side frames 21, 22. A foot panel 28 (Fig. 3) is mounted at a bottom of the prefabricated pilaster assembly 1.

**[0035]** In use, a flat base is provided at a side of a building where a conservatory is to be constructed. A number of the prefabricated pilaster frames 2 are mounted spaced-apart and upstanding on the base. The associated cladding panels 3 are then mounted on an exterior of the prefabricated pilaster frames 2. A number of wall panels are mounted between the prefabricated pilaster frames 2 for forming an upstanding side wall of the conservatory. These wall panels may include a number of window frames and a door frame assembly if required. A roof assembly is then mounted on top of the side wall to complete the conservatory.

**[0036]** It will be noted that an internal drainpipe may be conveniently routed through a pilaster assembly 1 if required.

**[0037]** It will be appreciated that the invention provides a prefabricated pilaster assembly and also a method of constructing a conservatory using said prefabricated pilaster assemblies. The invention advantageously greatly speeds up the construction time. Also skilled labour is not required for the construction. The prefabricated pilaster frames 2 can be readily easily erected on site and the cladding panels hung on the prefabricated pilaster frames 2.

**[0038]** It will be noted that various different colours and designs of cladding panels 3 may be provided and indeed the cladding panels 3 may be changed at a later stage if required according to the taste of the home owner.

**[0039]** Referring now to Figs. 4 to 16, there is shown an orangery according to the invention, indicated generally by the reference numeral 30. The orangery 30 is at-

tached to an exterior wall 31 of an existing dwelling having an access opening 32 with doors 33 for communication between the dwelling and the orangery 30. The orangery 30 comprises a number of spaced-apart upstanding prefabricated assemblies 35, 36 according to the invention, interconnected by glazing panels 37, 38, essentially comprising aluminium frames with double-glazing panels therein. A roof assembly 39 is supported on top of the pilaster assemblies 35, 36. One of the glazing frames 38 is in the form of double doors 40 to allow external access. The orangery 30 is mounted on a flat support base 42 extending outwardly from the exterior wall 31 of the dwelling.

**[0040]** Referring in particular to Fig. 9, a prefabricated pilaster assembly 35 is shown. The pilaster assembly 35 has a wooden frame 50. A mounting plate 52 is attached to the plywood sheet 8 forming an outer face of the pilaster frame 50. This mounting plate 52 is C-shaped in section having an inner end 53 attached to the pilaster frame 50 with outwardly extending arms 54 on which cladding panels 55 are mounted by means of slide connectors 56. Each cladding panel 55 is of channel section having an outer decorative panel 56a with in-turned side panels 57 which overlap the outwardly extending arms 54 of the mounting plate 52. Each slide connector 56 is of two part construction, one part being mounted on the arms 54 and the other part being mounted on an inside face of the side panels 57 of the cladding panel 55.

**[0041]** It will be noted that each outwardly extending arm 54 is stepped 58 to form a recess 59 to accommodate an upright mounting element 60, in this case comprising a wooden batten for supporting a glazing panel 37 which is attached thereto. Each mounting element 60 is securely fastened to the pilaster frame 50 at a front side edge of the pilaster frame 50.

**[0042]** Referring in particular to Fig. 10, there is shown a corner prefabricated pilaster assembly, indicated generally by the reference numeral 36. In this case, the pilaster frame 50 is of L-shaped construction. Also, a fibreglass or GRP cover plate 70 is mounted at the corner between adjacent mounting plates 52. Side edges 71 of the corner cover plates 70 are engaged between the mounting elements 60 and the mounting plates 52, as shown in the drawing.

**[0043]** Figs. 17 to 19 and Figs. 20 to 22 show alternative designs of cladding elements for mounting on the pilaster frames. The slide connectors 56 allow the cladding elements to be easily changed if required.

**[0044]** The invention is not limited to the embodiments hereinbefore described which may be varied in both construction and detail within the scope of the appended claims.

## Claims

1. A prefabricated pilaster assembly including:

- a prefabricated pilaster frame,  
one or more associated cladding panels for  
mounting on an exterior of the prefabricated pi-  
laster frame, and  
means for mounting each cladding panel on the  
prefabricated pilaster frame.
2. A prefabricated pilaster assembly as claimed in claim 1, wherein the mounting means comprises comple-  
mentary interengagable mounting connectors on the  
prefabricated pilaster frame and the cladding panel. 10
  3. A prefabricated pilaster assembly as claimed in claim 1 or claim 2, wherein the cladding panels are de-  
mountably secured to the prefabricated pilaster  
frame. 15
  4. A prefabricated pilaster assembly as claimed in claim 1 or claim 2 wherein the mounting means comprises  
a plurality of hanging brackets mounted vertically  
spaced-apart on an external face of the prefabricated  
pilaster frame and associated hanger elements  
mounted vertically spaced-apart on an inside face  
of each cladding panel. 20
  5. A prefabricated pilaster assembly as claimed in any  
preceding claim wherein the cladding panel is sup-  
ported spaced-apart from the prefabricated pilaster  
frame leaving a cavity therebetween. 25
  6. A prefabricated pilaster assembly as claimed in any  
preceding claim, wherein the mounting means com-  
prises a number of two part slide connectors, each  
slide connector having a first part mounted on the  
pilaster frame for slidable engagement by a second  
part which is mounted on the cladding panel. 30
  7. A prefabricated pilaster assembly as claimed in claim 6, wherein the first part is mounted on the pilaster  
frame by means of a mounting plate attached to an  
outer face of the pilaster frame, said mounting plate  
being C-shaped, having an inner end attached to the  
pilaster frame with outwardly extending arms on  
which the first parts of the slide connectors are  
mounted. 35
  8. A prefabricated pilaster assembly as claimed in claim 7, wherein the outwardly extending arms are stepped  
to accommodate an upright mounting element for  
supporting a glazing panel or wall panel, said mount-  
ing element being fixed to an outer face of the pilaster  
frame. 40
  9. A prefabricated pilaster assembly as claimed in any  
preceding claim, wherein the cladding panel is of  
channel section having an outer panel with in-turned  
side panels which overlap the outwardly extending  
arms of the mounting plate. 45
  10. A prefabricated plaster assembly as claimed in claim 9 wherein second parts of the slide connectors are  
mounted on inside faces of said side panels.
  11. A prefabricated pilaster assembly as claimed in any  
preceding claim wherein the cladding panels are  
formed of a plastics material. 50
  12. A prefabricated pilaster assembly as claimed in claim 11 wherein the cladding panels are formed of un-  
plasticised polyvinyl chloride.
  13. A prefabricated pilaster assembly as claimed in any  
preceding claim, wherein the cladding panels are  
formed of fibreglass or glass reinforced plastics ma-  
terial.
  14. A prefabricated pilaster assembly as claimed in any  
preceding claim, wherein the prefabricated pilaster  
frame comprises a framework with a facing panel on  
a front face of the framework and a breather mem-  
brane covering an exterior face of the facing panel.
  15. A prefabricated pilaster assembly as claimed in any  
preceding claim, wherein a pair of mutually perpen-  
dicular facing panels are supported on adjacent ex-  
ternal faces of the framework.
  16. A prefabricated pilaster assembly as claimed in claim 15, wherein a mounting plate is attached to each of  
said facing panels, and a corner cover plate is mount-  
ed between adjacent side edges of the two mounting  
plates. 55

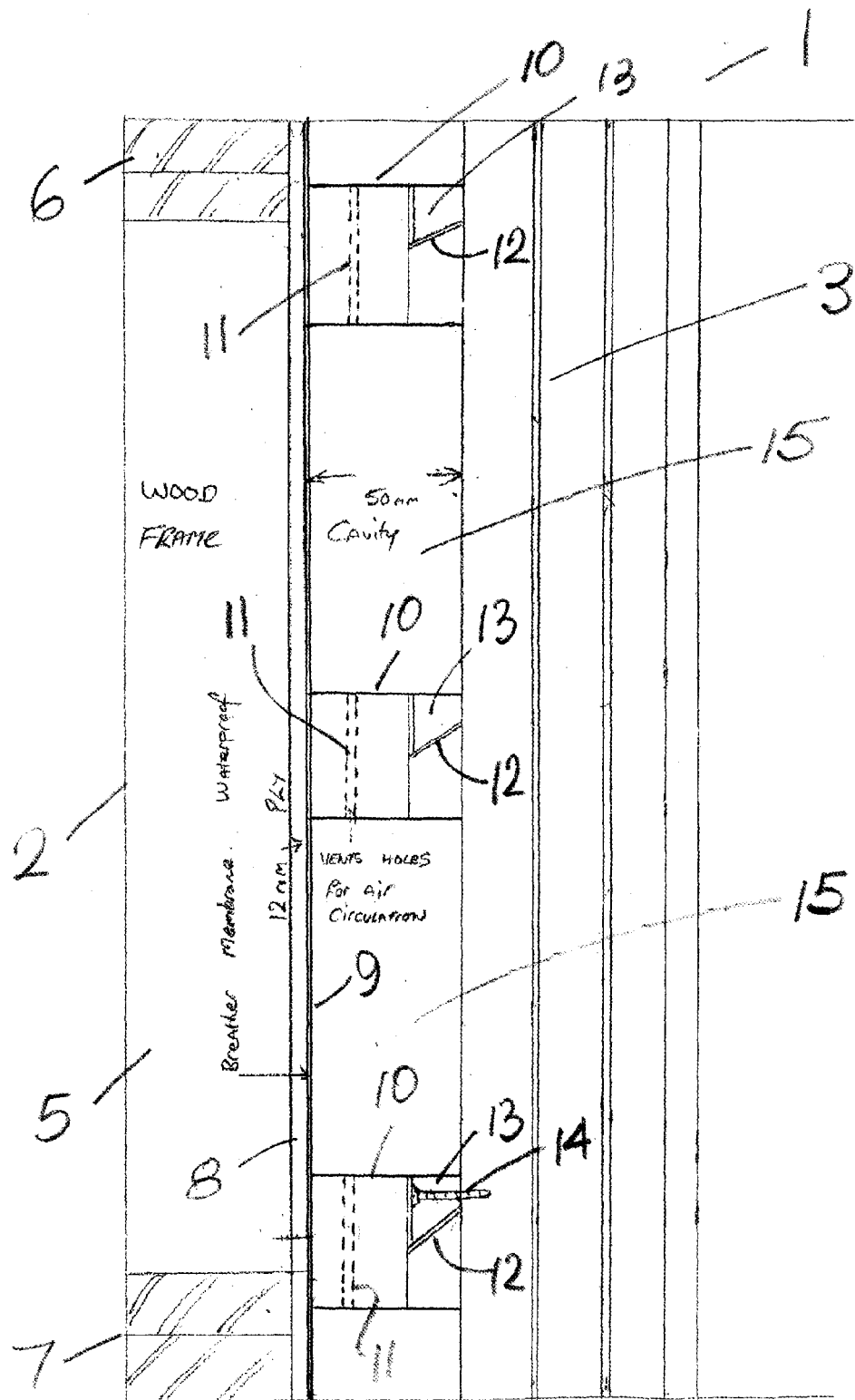
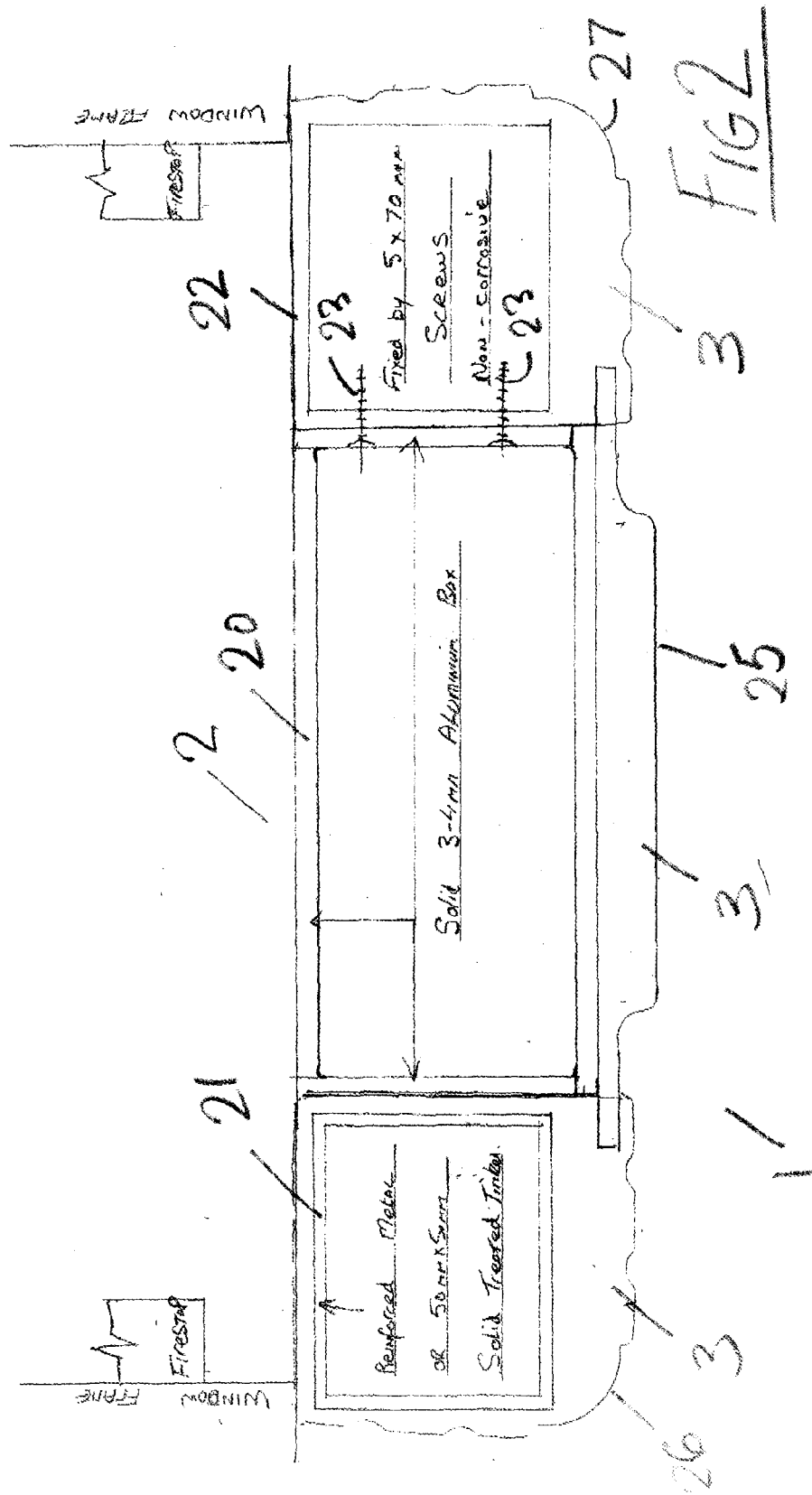


FIG 1



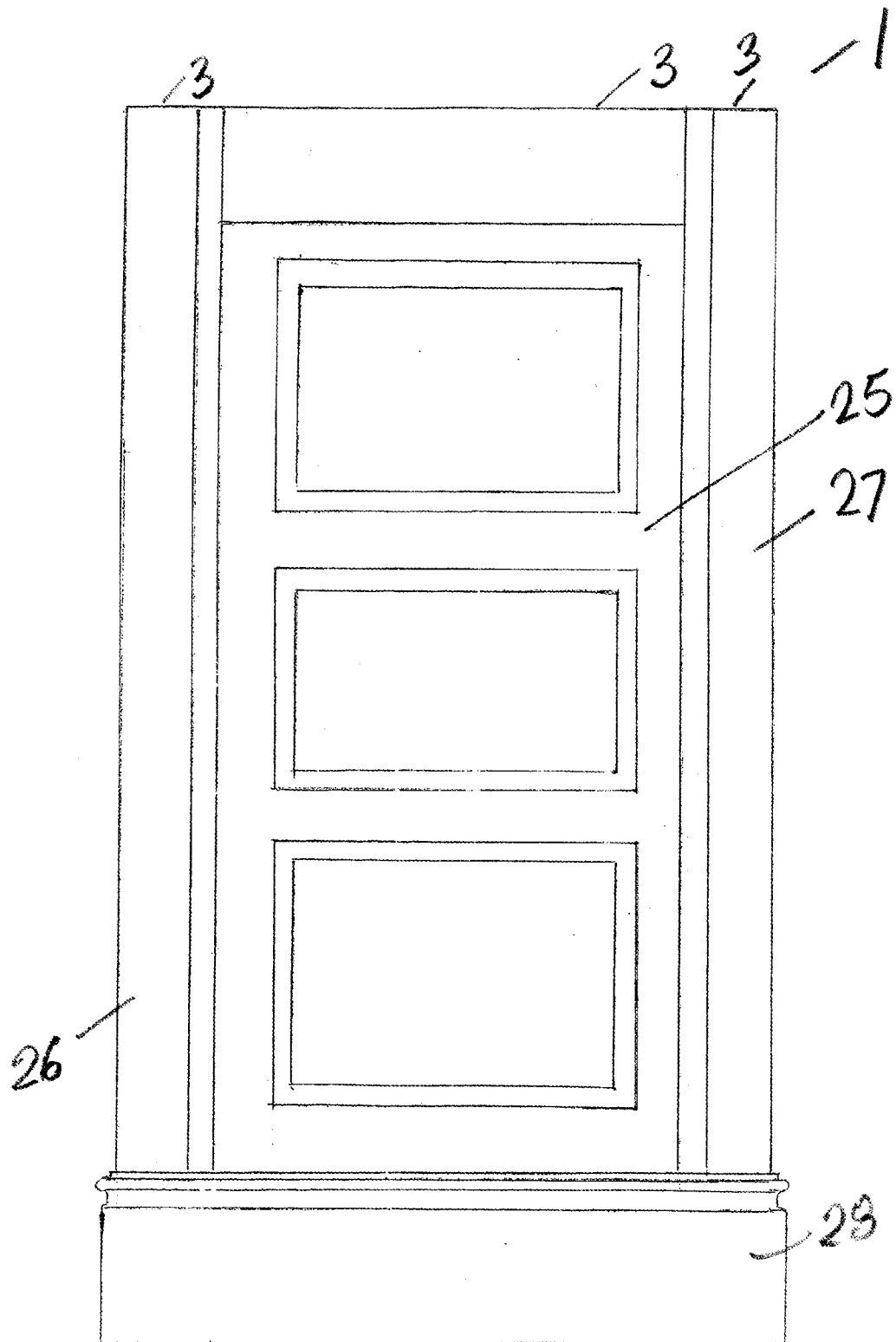
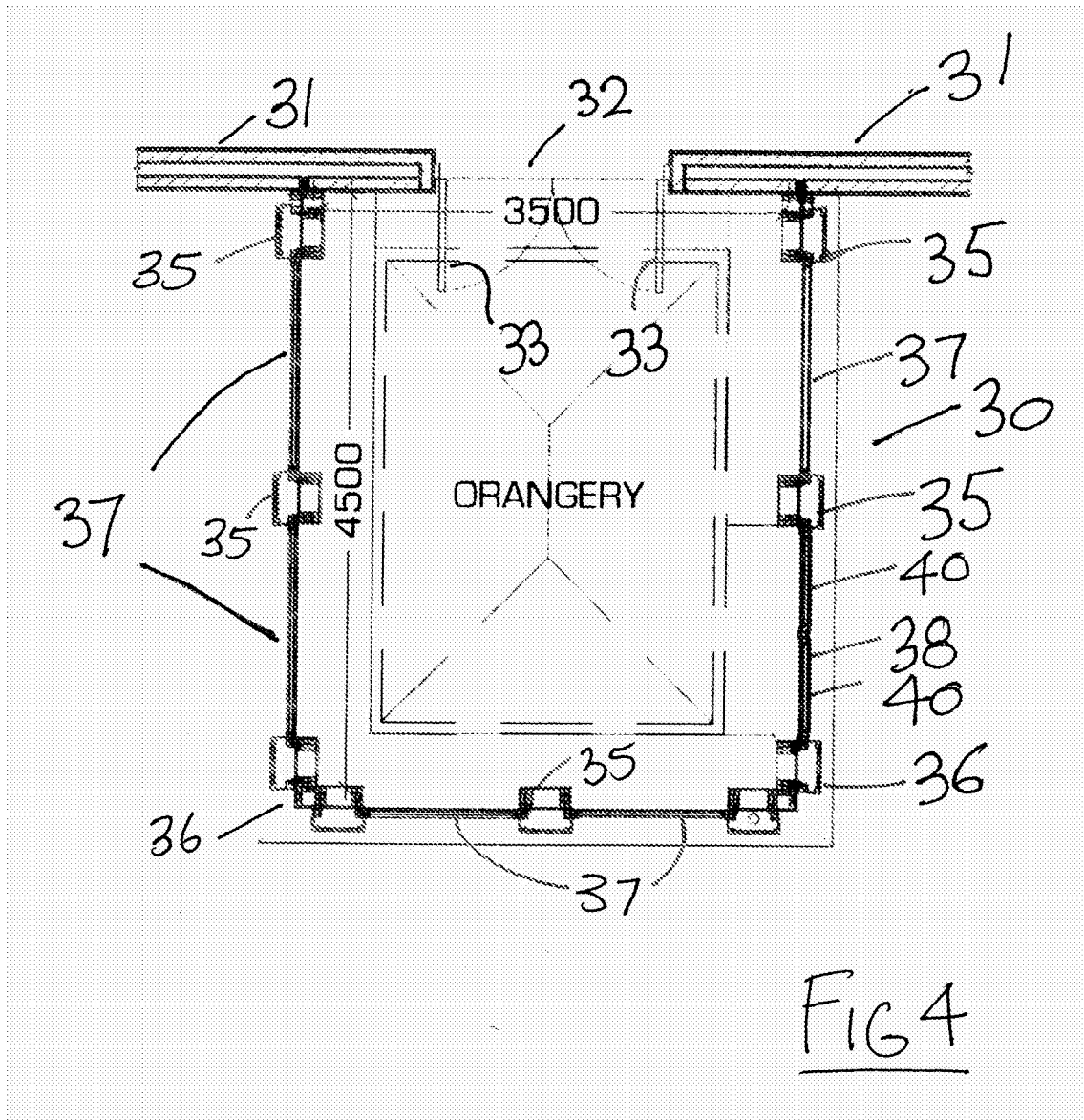


Fig 3





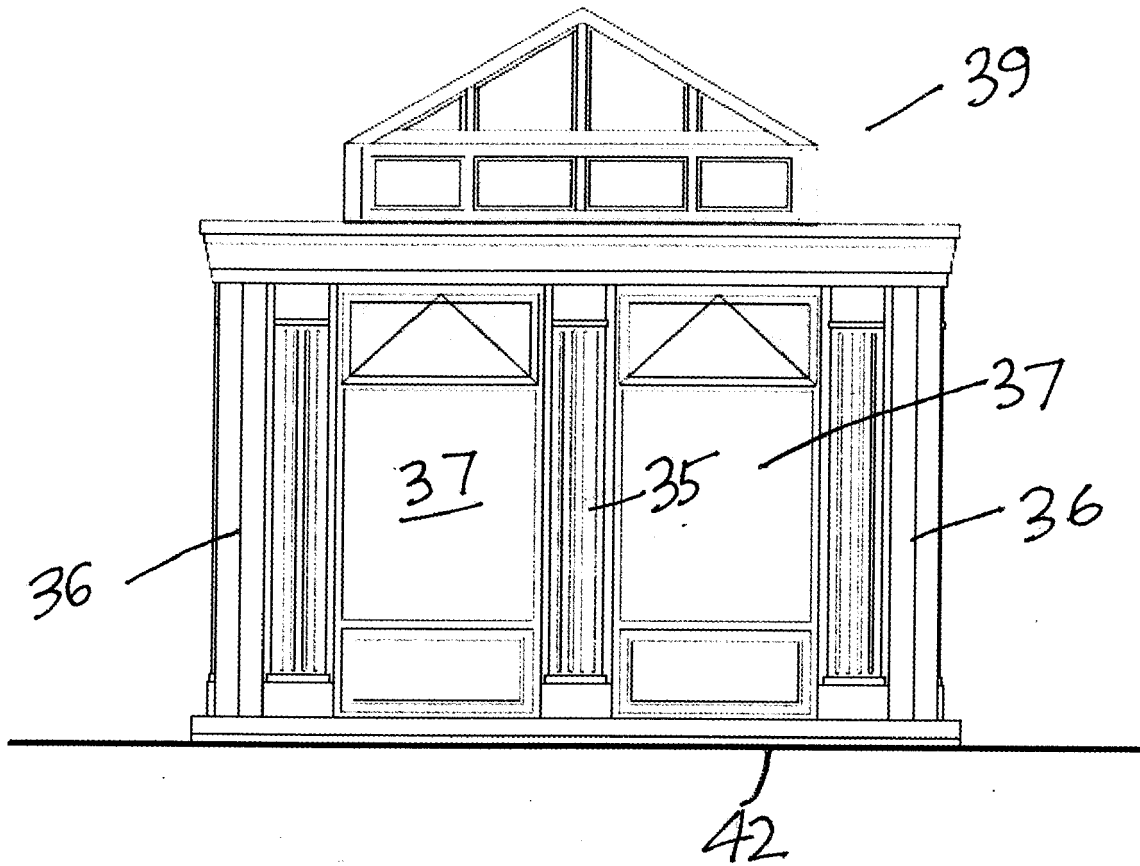


FIG 5

