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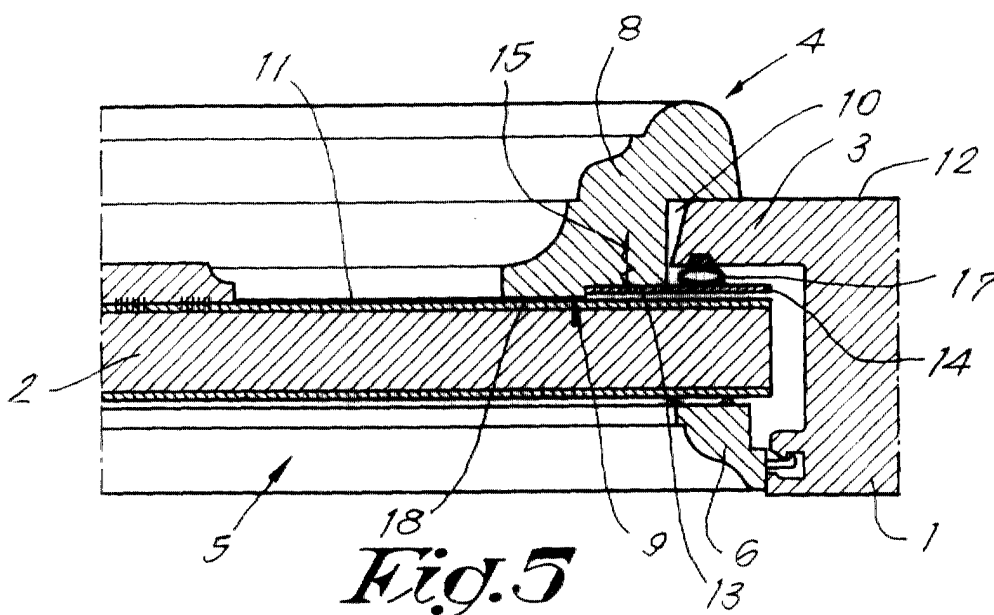
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(54) **Profiled door, window or the like**

(57) Profiled door, window or the like, substantially consisting of a frame (1) in which a panel (2) or a second frame is provided and whereby the transition between said frame (1) and the panel (2) or second frame is formed by transition profiles (4) having decorative

mouldings, characterized in that this profiled door, window or the like is made of a synthetic material, a metal or the like, whereby said transition profiles (4) are resting freely against the frame (1) and/or the panel (2) or said second frame.



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Description

[0001] The present invention relates to a profiled door, window or the like, more particularly a construction of the type substantially consisting of a frame in which a panel or a second frame is provided, whereby the transition between said frame and the panel or second frame is formed by profiles and whereby said construction is realized in a synthetic material, a metal, for example, aluminium, or the like.

[0002] Although the invention can be applied to doors as well as to windows or any other constructions, for simplicity's sake in the following description only door constructions will be mentioned.

[0003] As is known, doors, more particularly external doors, mostly are manufactured of wood, in consideration of the fact that this material allows a relatively simple assembly of the different components of such doors, whereby certain parts may be provided with, for example, mouldings with ornamental forms, such that very aesthetic doors can be manufactured.

[0004] The fact that these doors are made of wood, however, forms a first important disadvantage which is inherent to the choice of material and consists in that such door, and more particularly each of its components, can expand and shrink, warp and such under the influence of temperature and humidity.

[0005] In order to prevent a rapid ageing of such wooden doors, moreover they have to be maintained periodically, more particularly it will be necessary to treat such doors periodically, for example, by painting, varnishing or the like.

[0006] Another disadvantage of wooden doors consists in that they are rather expensive, considering the fact that, on one hand, such doors mostly are made of hardwood, which is a relatively expensive basic material, and that, on the other hand, the manufacture and maintenance of such doors is very labour-intensive.

[0007] In trying to overcome said disadvantages of wooden doors, already doors made of aluminium, synthetic material or the like have been proposed.

[0008] Such doors of aluminium, synthetic material or the like are composed of a frame, normally consisting of hollow profiles, and a panel, whereby the transitions between the frame and the panel often consist of sealing strips.

[0009] Mostly, such sealing strips strongly show in respect to the profiles of which the door consists, such that the transition from the frame to the door panel is very obvious.

[0010] Moreover, said transition always is very straight, contrary to such transition in wooden doors.

[0011] Normally, it is also impossible to paint the frame, the panel and the sealing strips in such a manner that the difference of the materials becomes invisible and that there will be no cracks in the paint as a result of the different expansion coefficients.

[0012] Thus, the present invention has a profiled door,

window or the like as its object which does not show the aforementioned and other disadvantages of wooden doors, windows and such and whereby also the disadvantages of aluminium doors, windows and the like are avoided, in such a manner that a door, window or the like in a synthetic material or a metal is obtained with which the decorative design of a profiled wooden door can be equalled.

[0013] To this aim, the invention relates to a profiled door, window or the like consisting of a frame in which a panel or a second frame is provided, whereby the transition between said frame and the panel or second frame is formed by transition panels having decorative mouldings, whereby this profiled door, window or the like is made of a synthetic material, a metal, for example, aluminium, or the like, whereby said transition profiles are resting freely against the frame and/or the panel or said second frame.

[0014] Such profiled door, window or the like will, on one hand, show all advantages of a door, window or the like made of metal or synthetic material and, in respect to its appearance, will have all possibilities and show all advantages of a wooden door, window or the like.

[0015] An additional advantage is that such door, window or the like always remains dismountable, such that not only repair works become very simple, but that also, if desired, the appearance of such door, window or the like can be altered in a simple manner.

[0016] Still another advantage of the profiled doors, windows or the like according to the invention is that the panels may show straight sides as well as bent sides.

[0017] The profiles applied herewith can be realized hollow as well as massive, generally by means of extrusion, such that they, despite of the shape, can be processed into easily dismountable frames in order to decorate doors, windows or the like.

[0018] Such frame will cover the transition between the frame and the panel of a door, window or the like and decorate such transition.

[0019] It is noted that in aesthetic respect, there is no limitation to the different shapes of the frames, as well as there is no limitation to the number of frames incorporated in one and the same door, window or the like. In fact, these frames may be realized square, rectangular, circular, oval, triangular, trapezoid or according to other shapes, whether or not composed.

[0020] The corners of the profiles are made in mitre joint or false mitre, whereby the mitres are glued or welded together or incorporated into each other by means of corner pieces which are invisibly fixed in the profiles.

[0021] The advantage thereof is that entirely free frames are obtained which can be attached on a door, window or the like and whereby such attachment can be realized by using new or known attachment methods.

[0022] As already noted, said frames can be dismounted in a very simple manner and, after a possible damage, can simply be replaced without the necessity of realizing a new door, window or the like.

[0023] It is clear that said frames allow to work symmetrically as well as asymmetrically, in other words, such frames can be provided either only at the interior side, or at the exterior side or at both sides of a door, window or the like.

[0024] With the intention of better showing the characteristics of the invention, hereafter, as an example without any limitative character, several preferred forms of embodiment are described, with reference to the accompanying drawings, wherein:

figures 1, 2 and 3 represent schematic front views of profiled doors according to the invention;
figure 4, at a larger scale, represents a cross-section according to line IV-IV in figure 1, figures 2 and 3, respectively;
figure 5, at still a larger scale, represents the part indicated by F5 in figure 4;
figures 6 to 16 represent cross-sections, similar to that of figure 5, however, for embodiment variants;
figure 17 represents a cross-section similar to that of figure 4, in the case of a multiple frame;
figure 18, at a larger scale, represents the part indicated by F18 in figure 17.

[0025] A profiled door according to the invention substantially consists of a frame 1 in which a panel 2 is provided, whereby the transition between a stop 3 of the frame 1 and the panel 2 is formed by a so-called transition profile 4 which preferably is provided with so-called mouldings.

[0026] The frame 1 as well as the panel 2 can be formed of a synthetic material, for example, PVC, or a metal, for example, aluminium, or, regarding the panel, of a glass panel.

[0027] In combination with an aluminium frame 1 and an aluminium panel 2, preferably also transition profiles 4 consisting of aluminium shall be used, such that a uniform appearance of the door is obtained.

[0028] With a frame 1 and a panel 2 consisting of synthetic material, however, preferably transition profiles 4 consisting of synthetic material shall be used, whereby these transition profiles 4 can be constructed massive as well as hollow, which in fact also is valid for aluminium profiles.

[0029] In order to keep the panel 2 at its place and to ensure an easy mounting and/or dismounting of the composing parts of the door, window or the like, the door, at its interior side 5, is provided with biasing profiles 6 or 7 which can be snapped onto the frame 1 and which press the panel 2 at the front side thereof against the transition profile 4, possibly by the intermediary of sealing strips.

[0030] In order to provide space for the peripheral edge of the panel 2, the edges of the frame 1 directed towards each other are realized in a U-shape.

[0031] By snap-on action, said biasing profile 6-7 co-operates with the frame 1, more particularly with a re-

cess in the interior edge of the frame 1, whereas the transition profile 4 fits against the frame 1 and against the panel 2 and is connected to the frame 1 and/or the panel 2.

[0032] In the forms of embodiment represented in figures 5 to 8, a transition profile 4 consists of a profile 8 of synthetic material, the rear side 9 of which is provided with a first recess 10, the depth of said recess being somewhat smaller than the distance between the front side 11 of the panel 2 and the front side 12 of the frame 1, and with a second recess 13, in which an aluminium plate 14 is attached which extends up to behind said stop 3 of the frame 1.

[0033] In the embodiments represented in figures 5 and 7, this plate 14 is attached against the wall of said second recess 13 by means of screws 15, whereas in the embodiments represented in figures 6 and 8, the plate 14 is fixed at the transition profile 4 by means of a mortise and tenon connection 16.

[0034] Additionally, the aluminium plate 14 can be glued onto the wall of said second recess 13 of the transition profile 4.

[0035] At the rear side of stop 3, a sealing strip 17, for example, in rubber, is provided in order to obtain a water-tight connection with aluminium plate 14.

[0036] In the case of the embodiments as represented in figures 5 and 6, between the rear side 9 of the transition profile 4 and the panel 2 also a thin elastic joint 18 is provided which, for example, may consist of a rubber strip.

[0037] In the embodiments of figures 7 and 8, an additional sealing strip 19 is provided in said second recess 13, which sealing strip 19 fits closely against the panel 2.

[0038] In the forms of embodiment of a profiled door according to the invention, as represented in figures 8 to 16, the transition profiles 4 always are attached either fixedly to the frame 1, or fixedly to the panel 2.

[0039] The fixation of the transition profiles 4 on the frame 1 and/or on the panel 2 and the sealing between the transition profiles 4 and the panel 2, the frame 1, respectively, can be formed in different manners, as described in the following.

[0040] As represented in figure 9, the transition profiles 4 can be glued onto the stop 3 of the frame 1, whereas the connection with the panel 2 is formed by a thin elastic joint 20.

[0041] In order to render the transition from the frame 1 to the panel 2 completely water-tight, moreover a sealing strip 17 is provided on the rear side of the stop 3. The sealing strip 17 is compressed between said stop 3 and the panel 2 by means of the biasing profile 6-7.

[0042] The form of embodiment represented in figure 10 is analogous to the preceding form of embodiment, with that difference that the transition profiles 4 are glued onto the panel 2, whereas the connection with the frame 1 is formed by a thin elastic joint 21.

[0043] In figure 11, a variant is represented in which

the transition profiles 4 are screwed onto the frame 1 and in which a sealing strip 19 is provided in said second recess 13.

[0044] If the transition profiles 4 are made of synthetic material, preferably by extrusion, they can immediately be provided with sealing strips 22 which are made of a synthetic material of a composition other than that of the actual transition profile 4, for example, rubber.

[0045] In figures 12, 13 and 14, cross-sections of doors are represented in which the transition profiles 4 are fixed on the frames 1, whereas the sealing between the transition profiles 4 and the panel 2 consists of said sealing strips 22.

[0046] The water tightness of the door is additionally ensured by a sealing strip 17 between the frame 1 and the panel 2.

[0047] The transition profiles 4 can be fixed on the frame 1 by means of glue, as represented in figure 13, by means of a plate 23 which is provided on the transition profile 4 by means of extrusion and which is connected to the stop 3 by a mortise and tenon connection 24, as represented in figure 12, or by snapping the transition profiles 4 on screwed-home attachment profiles 25 or press buttons, as represented in figure 14.

[0048] Finally, in figures 15 and 16, doors are represented of which the frame 1 as well as the panel 2, the transition profiles 4 and the profiles 7, are made of aluminium.

[0049] The transition profiles 4 are screwed onto the frame 1, snapped-on onto buttons 26, respectively, which buttons are screwed onto the frame 1.

[0050] The water tightness of the profiled door in this case is ensured by, on one hand, a sealing strip 27 which is fixed on the rear side of the transition profiles 4 and fits closely against the panel 2 and, on the other hand, a sealing strip 28 which is provided on the aluminium profile of the frame 1 and also fits closely against the panel 2.

[0051] It is clear that in this manner, a profiled door is obtained which can be manufactured of a material other than wood, such as a synthetic material, metal or the like, whereby a complete water tightness is obtained, whereas the frame 1 and the panel 2, each separately, nevertheless can expand or shrink under the influence of temperature, humidity, material characteristics and such and the sealing strips 17-18-27-28 remain invisible.

[0052] In the embodiments of figures 11, 12, 14, 15 and 16, these additional sealing strips 19-22-27 are not necessary, but provide for an additional safety.

[0053] Such doors have the appearance of wooden doors, possibly can be finished in the same manner as wooden doors, however, show all the advantages of doors made of synthetic material or aluminium. So, amongst others, they require no or almost no maintenance and usually are deformation-free and can be dismounted, if necessary.

[0054] It is also clear that the construction of the

doors, as described heretofore, can also be applied to windows or the like, whereby the panel 2, for example, is replaced by a second frame and the transition profiles 4 freely sit against the panel or glass 2 and/or whereby a transition profile is fixed at said second frame.

[0055] An example thereof is represented in figures 16 and 17, whereby inside the frame 1, intermediary frames are fixed, in this case 29 and 30, respectively, with each time the insertion of sealings 17-31, and whereby between the frame 1 and the intermediary frames 29 and 30, on one hand, and between the intermediary frame 30 and a panel 2, on the other hand, transition profiles 4 can be provided.

[0056] The present invention is in no way limited to the forms of embodiment described by way of example and represented in the figures; on the contrary may such profiled door, window or the like be realized in a variety of forms and dimensions, without leaving the scope of the invention.

Claims

1. Profiled door, window or the like, substantially consisting of a frame (1) in which a panel (2) or a second frame is provided and whereby the transition between said frame (1) and the panel (2) or second frame is formed by transition profiles (4) having decorative mouldings, **characterized in that** this profiled door, window or the like is made of a synthetic material, a metal or the like, whereby said transition profiles (4) are resting freely against the frame (1) and/or the panel (2) or said second frame.
2. Profiled door, window or the like according to claim 1, **characterized in that** said transition profiles (4) are fixed against the frame (1) and/or the panel (2) or said second frame in a detachable manner.
3. Profiled door, window or the like according to claim 2, **characterized in that** the biasing profile (6) co-operates, by snap-on action, with the frame (1), more particularly with a recess in the interior edge of the frame (1).
4. Profiled door, window or the like according to claim 1 or 2, **characterized in that** the transition profiles (4) are fixed on the panel (2).
5. Profiled door, window or the like according to claim 1 or 2, **characterized in that** the transition profiles (4) are fixed on the frame (1).
6. Profiled door, window or the like according to any of the preceding claims, **characterized in that** the frame (1) is provided with a stop (3) and that on the transition profiles (4), a plate (14) is fixed which extends up to behind said stop (3) of the frame (1).

7. Profiled door, window or the like according to claim 1 and 6, **characterized in that** a transition profile (4), at the rear side, is provided with a first recess (10), the depth of which is somewhat smaller than the distance between the front side (11) of the panel (2) and the front side (12) of the frame (1), on one hand, and with a second recess (13), in which said plate (14) is fixed, on the other hand. 5
8. Profiled door, window or the like according to claim 7, **characterized in that** said plate (14) is fixed with the transition profile (4) by means of screws (15). 10
9. Profiled door, window or the like according to claim 7, **characterized in that** said plate (14) is fixed with the transition profile (4) by means of a mortise and tenon connection (16). 15
10. Profiled door, window or the like according to claim 7, **characterized in that** the transition profiles (4) are fixed by means of screws (15) which are provided from the rear side of the stop (3). 20
11. Profiled door, window or the like according to claim 6, **characterized in that** the transition profiles (4) are fixed by means of press buttons (25-26). 25
12. Profiled door, window or the like according to claim 6, **characterized in that** at the rear side of the stop (3), a sealing strip (17) is provided which can cooperate with the adjoining panel. 30
13. Profiled door, window or the like according to claim 7, **characterized in that** in said second recess (13), an additional sealing strip (19) is provided. 35
14. Profiled door, window or the like according to any of the preceding claims, **characterized in that** a sealing strip (19-22-27) is provided on the transition profiles (4). 40
15. Profiled door, window or the like according to any of the preceding claims, **characterized in that** a sealing strip (17-28) is provided on the frame (1). 45
16. Profiled door, window or the like according to any of the preceding claims, **characterized in that** the corners of the transition profiles (4) are made as a mitre joint or false mitre and that these mitres are glued or welded together. 50
17. Profiled door, window or the like according to any of the claims 1 to 15, **characterized in that** the corners of the transition profiles (4) are made as a mitre joint or false mitre and that these mitres are connected to each other by means of non-visible corner pieces. 55

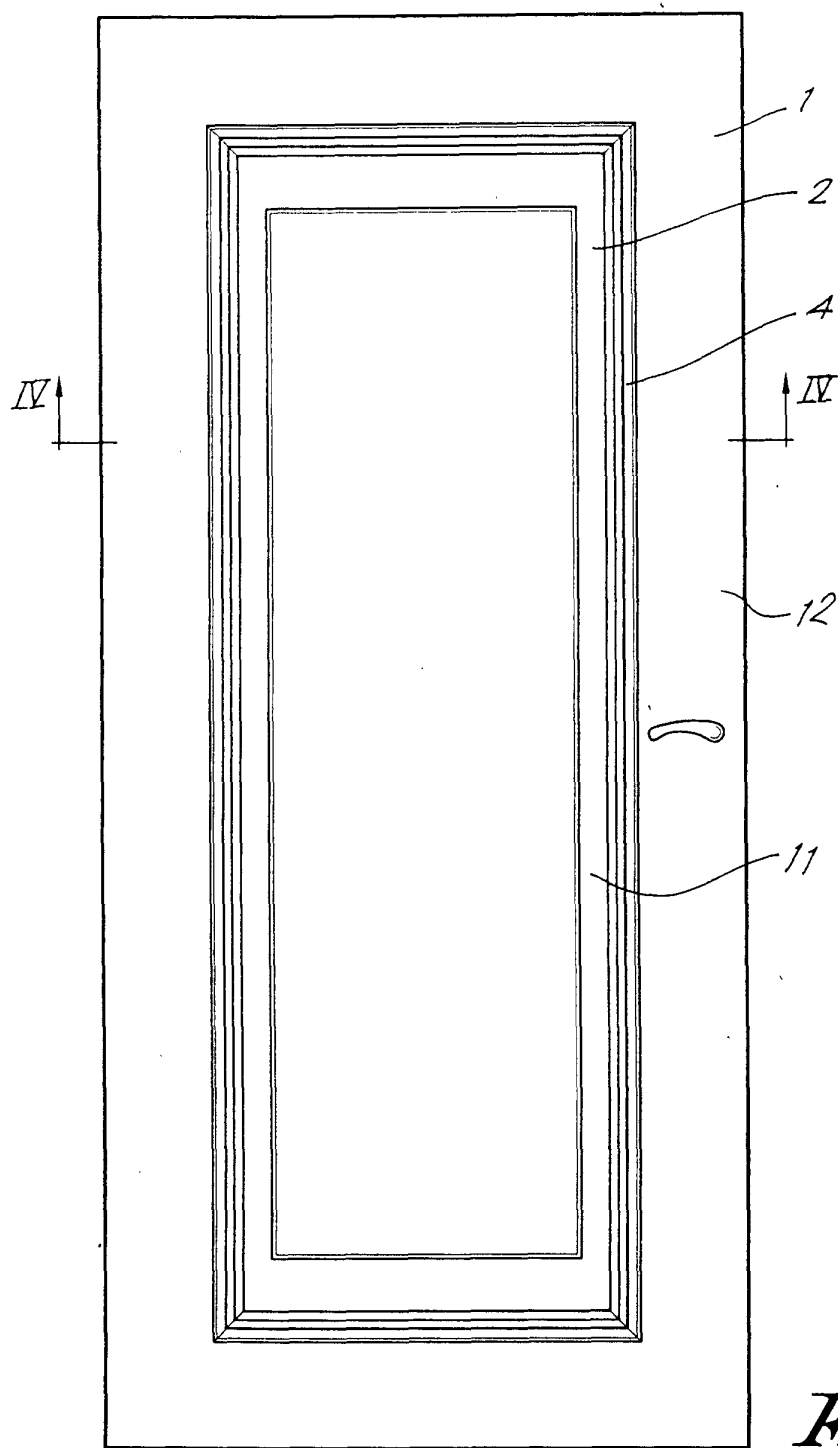


Fig. 1

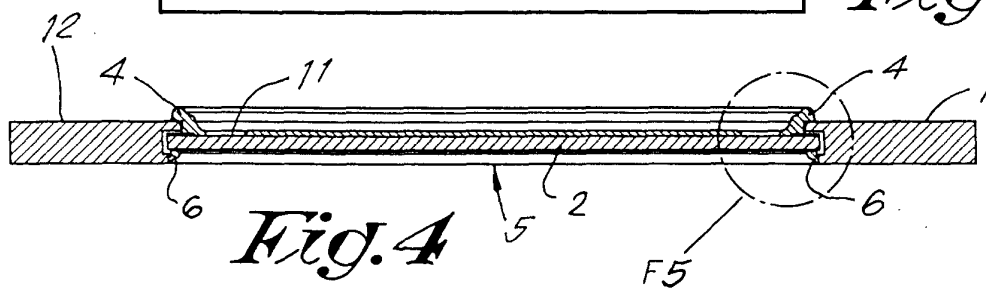


Fig. 4

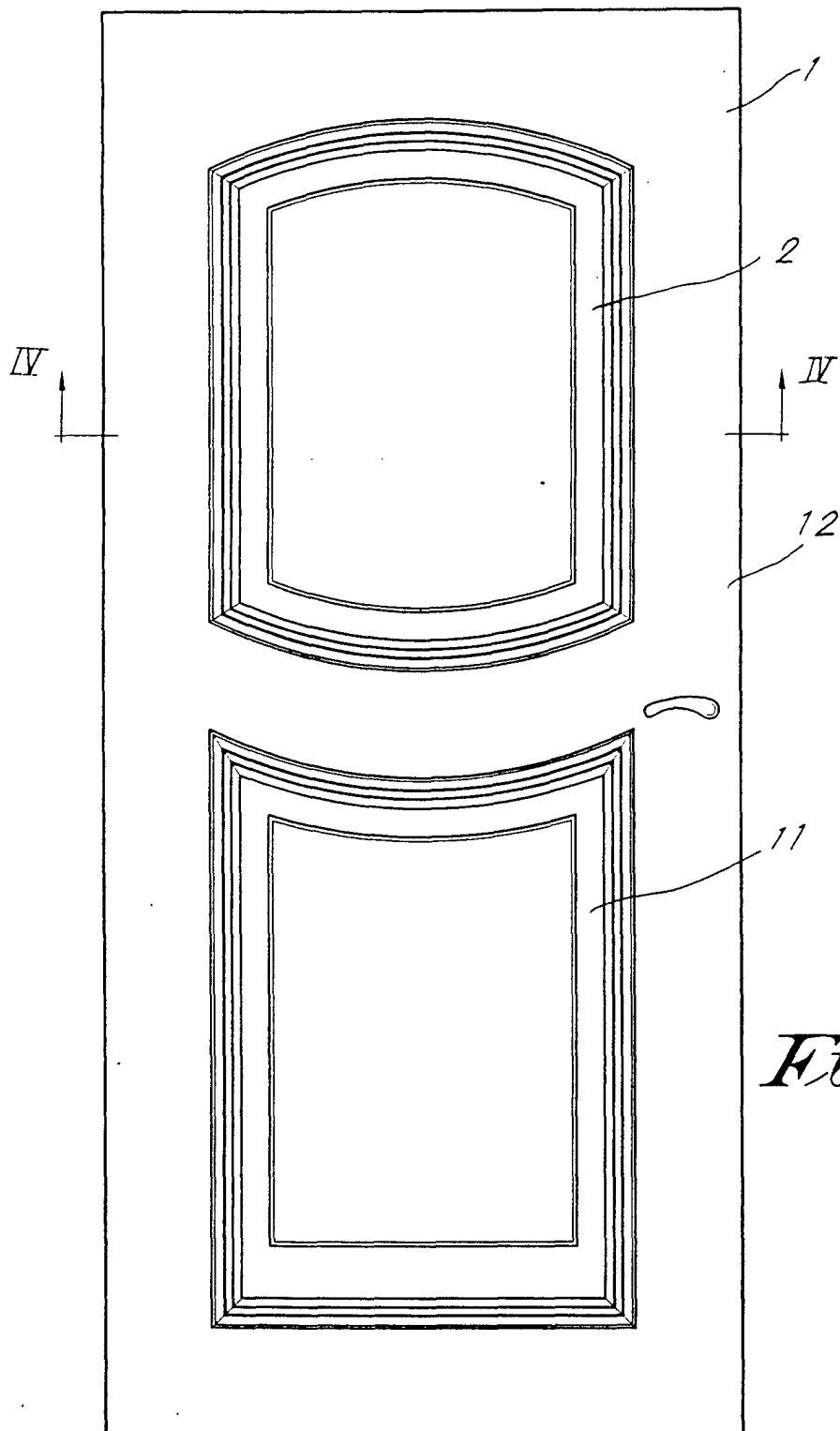
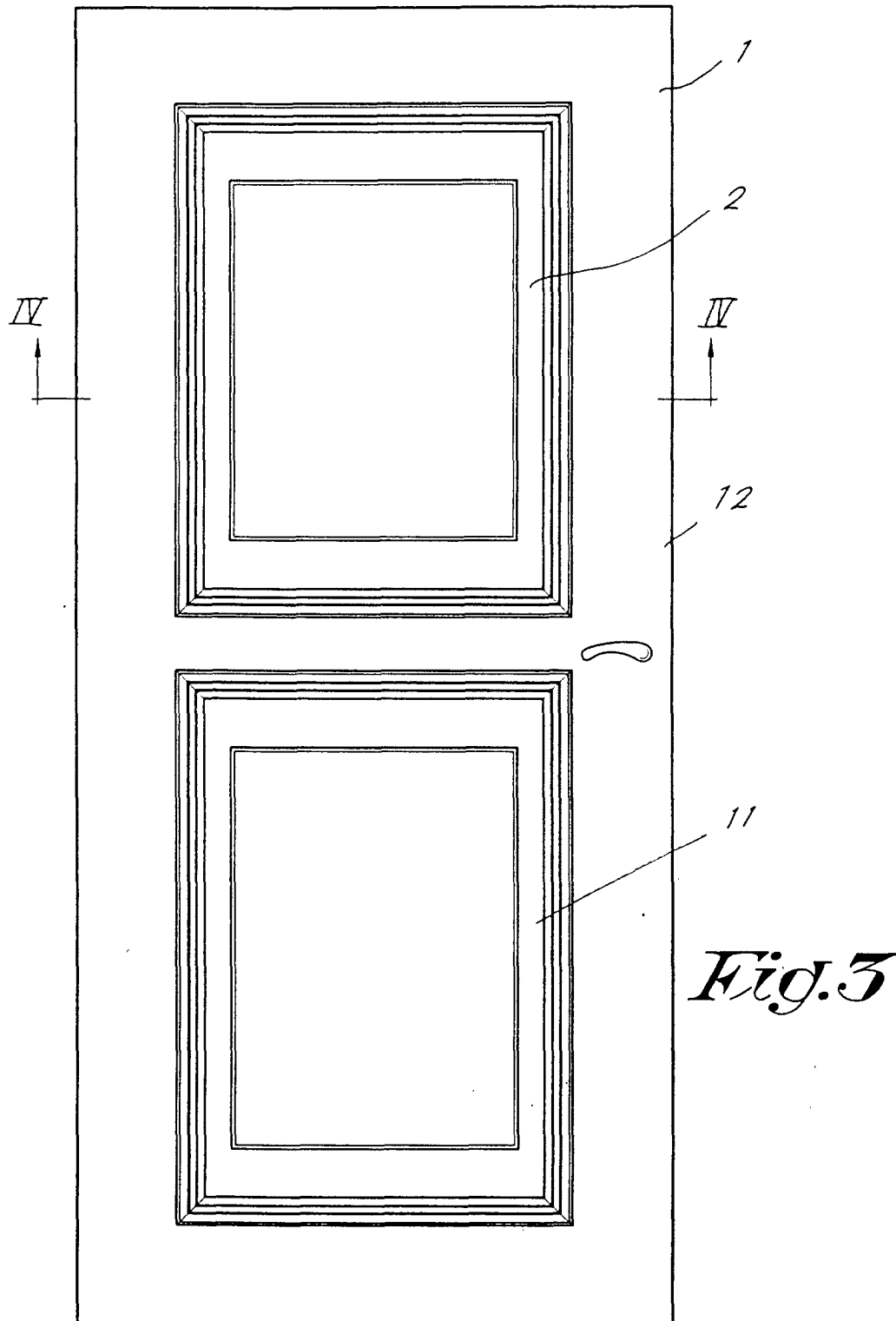
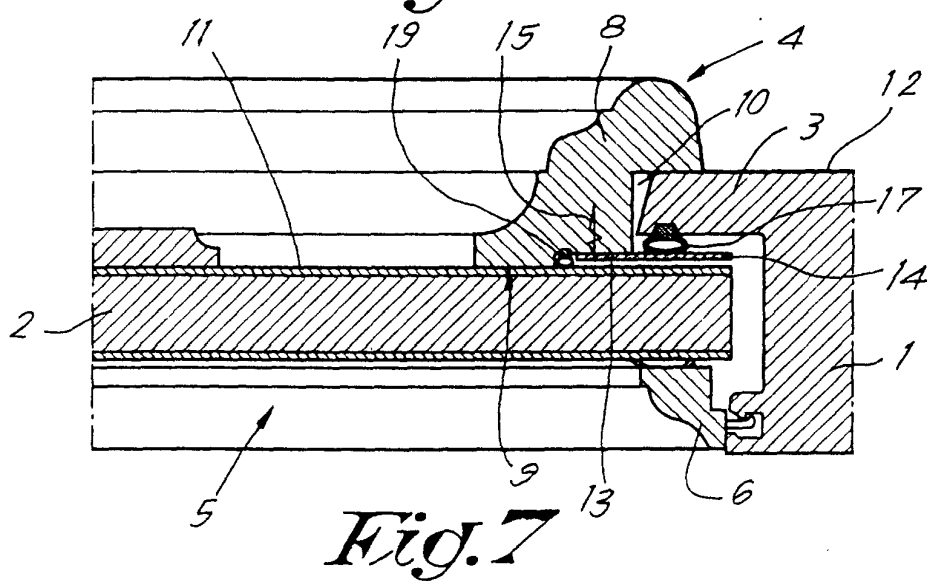
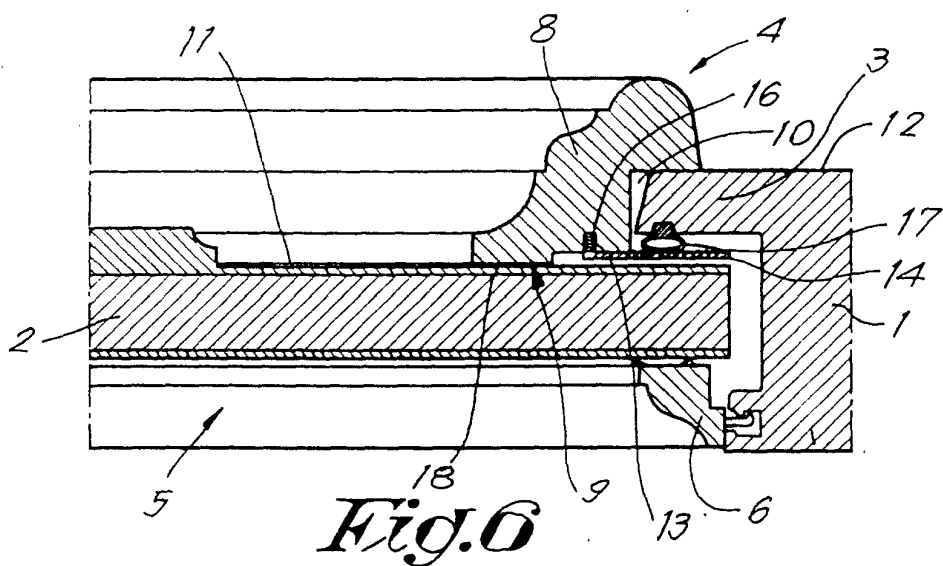
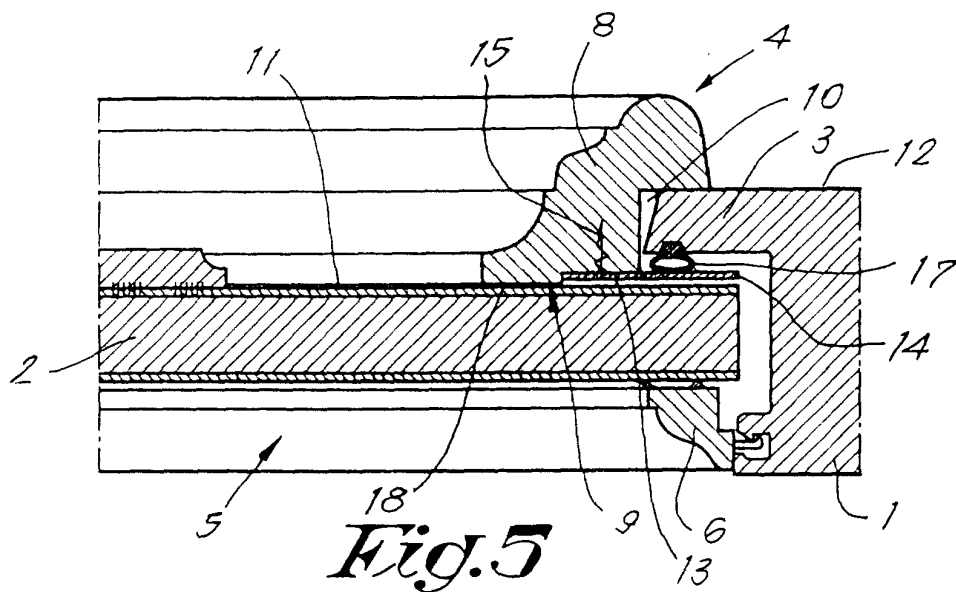
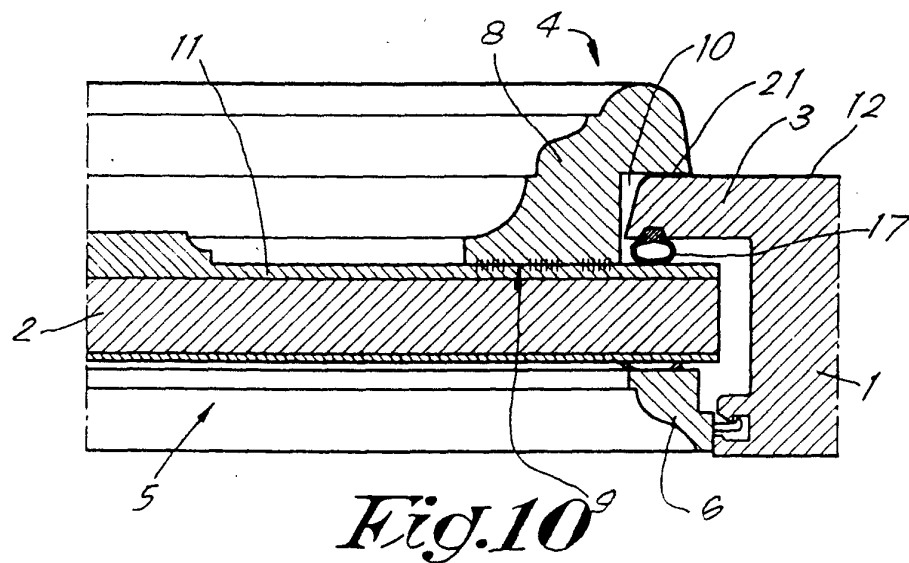
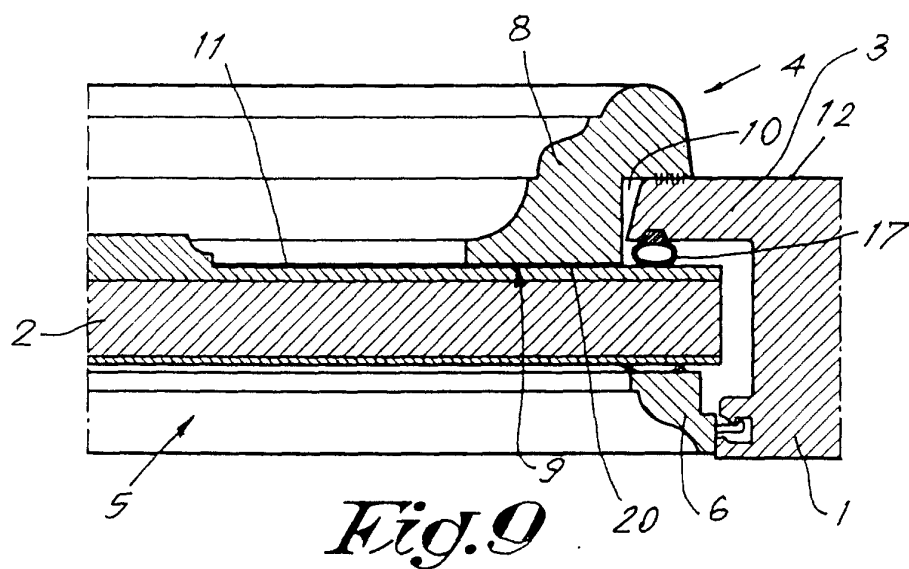
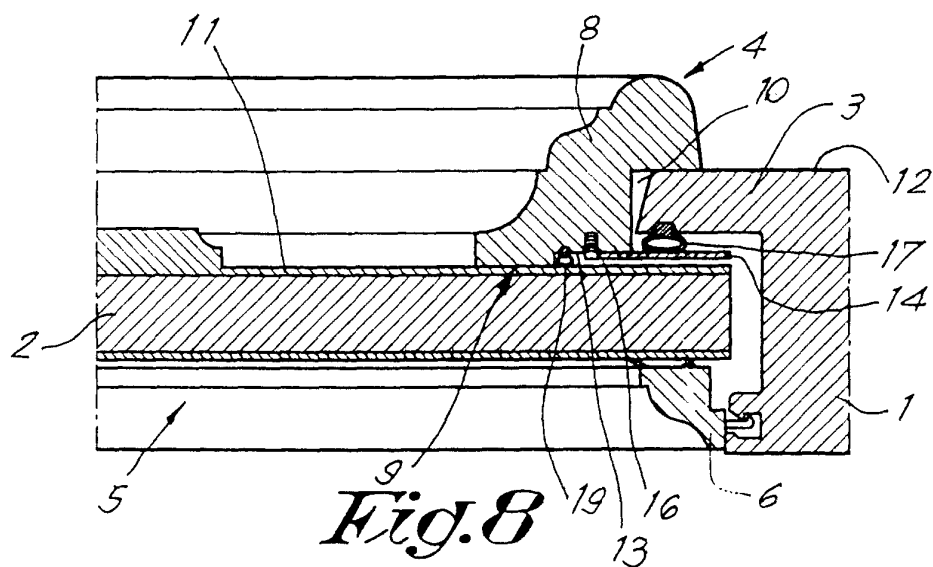


Fig. 2







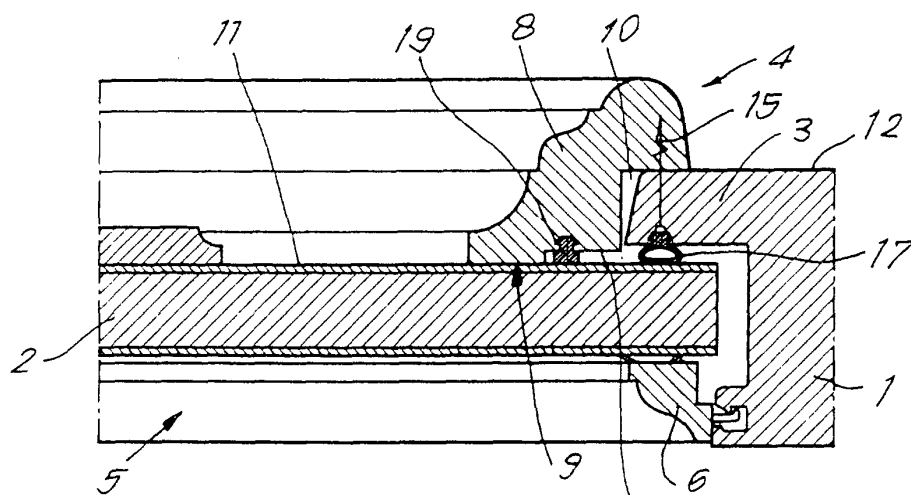


Fig. 11

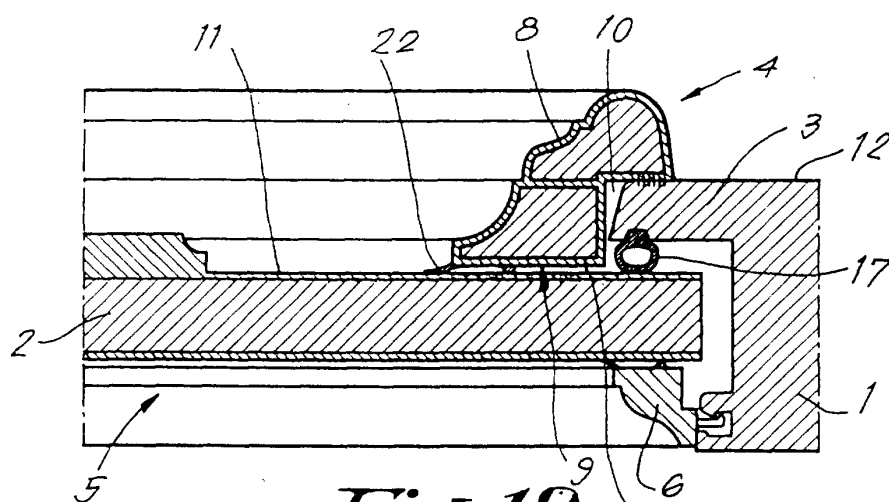


Fig. 12

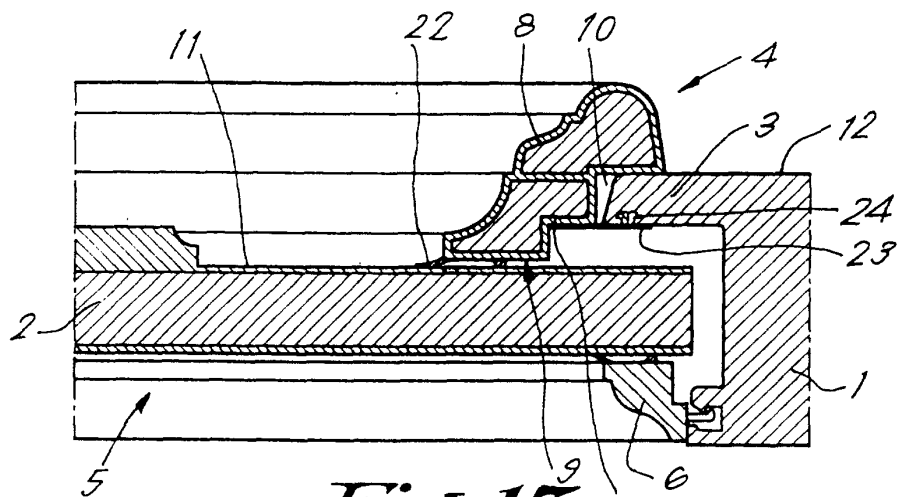


Fig. 13

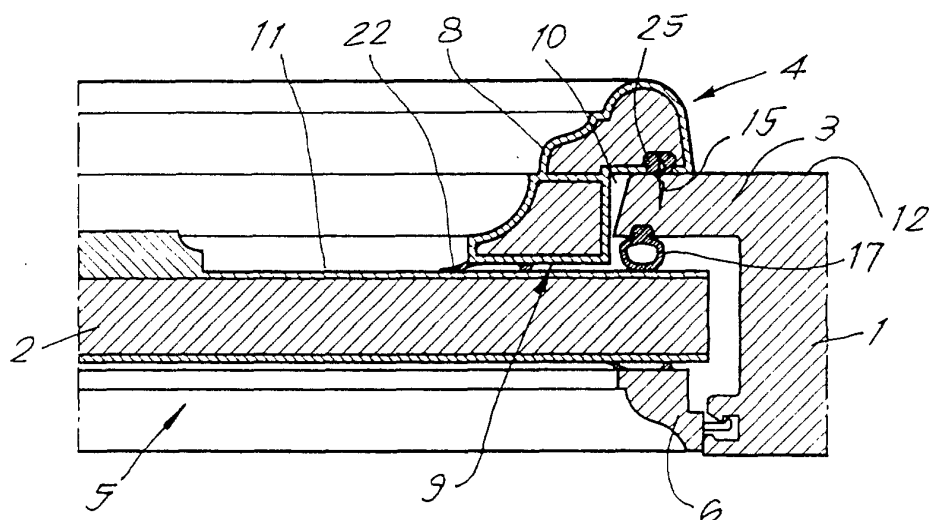


Fig. 14

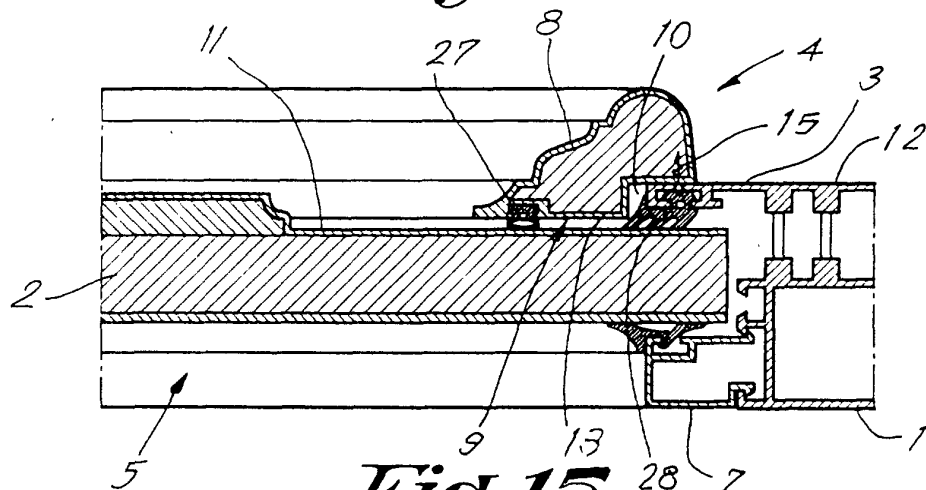


Fig. 15

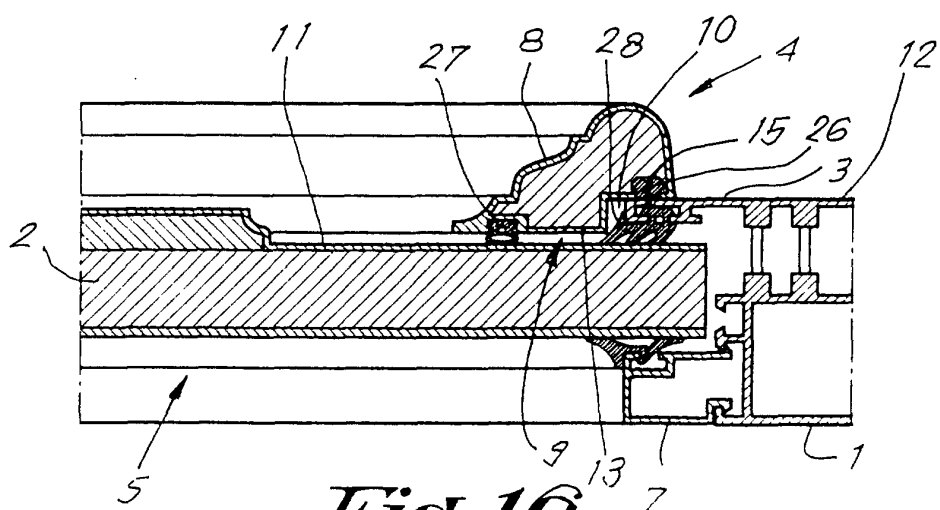


Fig. 16

