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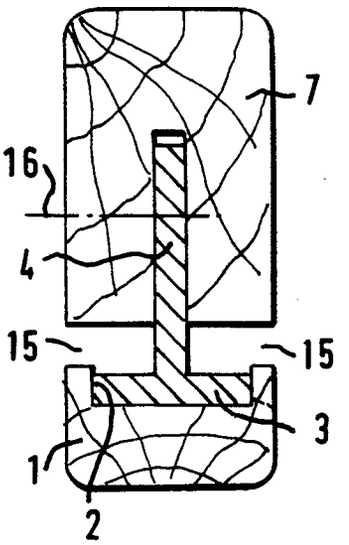
(54) Screening.

(57) A glazing bar, primarily for security screening, is made up in composite form from a first slab 1 and a second slab 7. The first slab 1 has firmly anchored therein the head of a T section of metal, of which the stem forms a central flange 4 which engages in a slot in the second slab 7 and may be secured in position by fixing screws 13. Then fully engaged, the two slabs have opposed faces which are partially covered by resilient pads 6 and 11 and which form a glazing recess for receiving the edge of a sheet of security glass or other panelling. Other constructions are illustrated in other figures.



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SCREENING

This invention relates to screening, and more particularly to security screening for banks and other establishments where staff are handling money or other valuables, and need to be protected from physical attack.

Such security screening normally takes the form of security glass, which may be partially replaced by panels, e.g. of blockboard, mounted between vertical glazing bars or frame elements. However conventional glazing bars are not aesthetically attractive, and frequently are not strong enough or security screening. Also assembly and disassembly may be difficult. The screening may also include speaking apertures of limited height, and secure lintels or transoms may need to be fitted above such speaking apertures. Similarly, where screening is horizontally divided as between glazing and solid panels, secure transoms need to be provided.

In accordance with the present invention, there is provided a frame element for security screening, especially a glazing bar, comprising first and second elongate slabs, the first elongate slab having structurally attached thereto a T section metal bar, with the stem of the T projecting to form a structural flange engageable in an elongate slot of the second slab and securable therein, the slabs being spaced from each other, when the flange is engaged in the slot, so as to define a recess to receive a glass or other panel on at least one side of the flange, between the opposed spaced faces of the slabs.

The recess or recesses may receive security glass or another form of panel, or it may be used to attach the frame element to another structural member, such as a door jamb or a transom or lintel over a speaking aperture, or other panel.

In order to provide a good nesting for the glazing, each of the said opposed spaced faces may be provided with a resilient liner. It is convenient if the flange is securable by transverse fasteners, such as screws, passing through at least part of the second slab and engaging in apertures through the flange.

In order to provide a good aesthetic finish, the slabs themselves may be of timber, preferably a hard wood, but other materials may be used, e.g. a reconstituted wood with a veneer finish.

In order to provide a strong anchoring for the flange, the T section may have its head set in the first slab and secured by screws or an ultra strong adhesive, or both.

In addition to simple upright frame members and transoms, the invention also applies to more complex members, such as corner pieces, which comprise two or even more interlinked T section pieces, with their associated slabs. Such complex arangements may include cavities suitable for use as cable ducts.

The invention also comprises a security screen including security glass or panels set between glazing bars or other frame elements according to the invention as set forth above.

The invention will be further described with reference to the accompanying drawings, in which:

Figure 1 is a sectional view of a first elongate slab in accordance with one form of the invention;

Figure 2 is a sectional view of the corresponding second elongate slab;

Figure 3 is a side elevation of a short length of the two slabs combined to form an upright glazing bar or mullion;

Figure 4 is a sectional view showing a mullion or upright frame member formed from parts generally similar to those illustrated in Figures 1 and 2;

Figures 5 to 7 are further sectional views showing modified versions of frame elements adapted for use respectively as a jamb and as transverse frame members; and

Figures 8 and 9 show further modified versions for use as corner frame members at internal and external returns respectively.

Figure 1 shows a slab 1 of timber of generally rectangular section and having an inner face rabbeted as indicated at 2 to receive a head 3 of a T section element also comprising a stem forming a central flange 4 provided with a number of fixing holes 5. The head 3 may be secured in the rabbet by means of ultra strong adhesive or screws or both. Cushion pads 6 of foam plastic material cover the otherwise exposed edges of the timber and part of the head 3 on each side.

Figure 2 shows a second slab 7, again of timber to provide a pleasant appearance, which is enhanced by the provision of rounded or moulded corners. The full length of the slab 7 has an elongate slot 8 which is a close but non-interference fit with the central flange 4. The slab 7 is thus of U section. The faces 9 of the slab on either side of the slot are partially covered by cushioning pads 11 of foam plastic material, similar to the pads 6. One or more fixing screw holes 12 are provided as illustrated.

When the flange 4 is introduced into the slot 8 to match the screw holes 12 with the fixing holes 5, a gap is left between the opposed faces of the slabs 1 and 7 which are partially covered by the pads 6 and 11. This gap forms a recess for receiving the edge of a panel, generally of security glass or a strong material

such as a block board, and the whole structure can be solidified by inclusion of fixing screws 13 in the screw holes 12 to mate with the screw holes 5.

Should it be needed to dismantle the screening, the screws 13 can be fairly easily removed and the slabs 7 and 1 separated. Normally only one of them would be permanently secured to a base surface. The two slabs 1 and 7 thus form a composite frame element or glazing bar which is of pleasing appearance as it is either of solid timber or a suitable attractive finish of block board or other hard basic material. Security is maintained by the T section members being of steel or other strong metal construction, such as a thick section of aluminium, structurally anchored to the slab 1 and secured into the slab 7 by the fixing screws.

Figure 4 shows a sectional view of a typical mullion, in which the gaps or recesses illustrated at 15 are both of a size suitable to receive a pane of security glass. The cushioning pads are omitted for clarity of illustration. Further, it is to be noted that the head 3 of the T is recessed into the rabbet 2. The position of a screw hole is illustrated at 16, and it will be seen that the hole is arranged to be continued on both sides of the flange 4. This means that the specified spacing of fixing screws can be achieved with half of the screws entering from one side and the other half from the opposite side, thus improving the appearance of the finished screening.

Turning now to Figure 5, a door frame upright or jamb is illustrated at 17, and attached to this through packing 18 is a fixing block 19. A security screen jamb is made up of a block 1 having the T section set and secured therein, and a second block 22 which differs from the block 7 in that it is not of U section, but rather of L section so as to provide a recess to fit over the fixing block 19. The jamb is secured to the fixing block 19 by means of fixing screws at the positions 23 to secure both the

block 22 and the flange 4 to the block 19. Also, it will be seen that the recess 15a is somewhat wider than the recess 15 to receive a panel of block board or the like instead of a pane of security glass. It will be understood that security glass could be used at this position if required.

It will also be understood that one or both of the recesses 15 shown in Figure 4 could be made wider to receive a solid panel rather than a glazing panel, if required.

An arrangement such as this is shown in figure 6, in which the slabs 1 and 7 are shown as combined with a T section to form a transverse frame member or transom above a panel 24 and to form a link between this panel 24 and a panel of pane 25 of security glass.

It is also to be noted that the T section of a transom is somewhat thinner than the section employed for the mullion and jamb.

Figure 7 shows another variation in which a speaker door 26 is surrounded by a metal frame , of which a lintel 27 is shown in Figure 7. Attached to the lintel 27 is a fixing block 28. Attached to the block 28 is a transom element generally similar to that illustrated in Figure 6 but having the slab 7 replaced by a slab 29 in which one leg of the U is much shortened to accommodate the block 28.

Figure 8 shows an internal return corner frame member made up from two frame elements, each comprising slabs 1 and 22, and a common L shaped linking member 31 of timber attached to the wider recesses. Panels or panes are shown at 25. It is also to be noted that between the two slabs 1 and the linking element 31 there is defined a space 32 which may be used as a cable duct if required.

Figure 9 shows an arrangement for an external return frame member. Slabs 1 are arranged with their central flanges 4 meeting orthogonally at their distal ends, and each slab 1 is associated with a second slab 34 or 35 to define a recess for a panel 25. The slabs 34 and 35 together form an L section.

Between the adjacent sides of the flanges 4 there is located a common linking slab 37 of timber which is attached to the slabs 34 and 35 and to the two flanges 4 by means of fixing screws extending through aligned holes along the lines 38 and 39 respectively. The whole assembly is thus structurally secured together, and recess 41 formed between the element 37 and the two flanges 4 may be used as a cable duct if required.

In use, the slab 1 in all cases is directed towards the external or public side of the screen since this slab conceals the fixing screws uniting it with the T section. In figures 8 and 9 the chain dotted line 42 is intended to illustrate the edge of the counter on the public side.

Various modifications may be made within the scope of the invention.

CLAIMS

1. A frame element, such as a glazing bar, for security screening characterised by comprising first and second elongate slabs (1,7,22,29,34,35), the first elongate slab (1) having structurally attached thereto a T section metal bar, with the stem (4) of the T projecting to form a structural flange engageable in an elongate slot of the second slab (7,22,29,34,35) and securable therein, the slabs (1,7,22,29,34,35) being spaced from each other, when the flange (4) is engaged in the slot, so as to define a recess (15,15a) to receive a glass or other panel (25) on at least one side of the flange (4), between the opposed spaced faces of the slabs (1,7,22,29,34,35).

2. A frame element according to claim 1, characterised in that each of the said opposed spaced faces is provided with a resilient liner (6,11).

3. A frame element according to claim 1 or 2, characterised in that the flange (4) is securable by transverse fasteners, such as screws, passing through at least part of the second slab (7,22,29,34,35) and engaging in apertures (5) in the flange (4).

4. A frame element according to claim 1, 2 or 3, characterised in that the slabs (1,7,22,29,34,35) themselves are of timber, preferably a hard wood.

5. A frame element according to claim 1, 2 or 3, characterised in that the slabs (1,7,22,29,34,35) themselves are of a reconstituted wood with a veneer finish.

6. A frame element according to any of the preceding claims, characterised in that the T section has its head (3) set in the first slab (1) and secured by screws or an ultra strong adhesive, or both.

7. A frame element according to any of the preceding claims, in the form of a corner frame member, characterised by comprising two T section metal bars, each having its head (3) structurally set in an individual first slab (1), the first slabs (1) defining an internal corner, the stems (4) of the Ts diverging at an angle and being received in recesses formed between respective second slabs (22) and a common corner piece (31) defining an external corner.

8. A frame element according to any of claims 1 to 6, in the form of a corner frame member, characterised by comprising two T section metal bars, each having its head (3) structurally set in an individual first slab (1), the first slabs (1) defining an external corner, the stems (4) of the Ts converging at an angle and being received in recesses formed between respective second slabs (34,35), defining an external corner, and a common piece (37) bridging the internal corner between the stems (4).

9. A frame element according to claim 7 or 8, characterised in that the stems (4) of the two Ts are perpendicular to each other.

10. A security screen including security glass or other panels (25) set between glazing bars or other frame elements according to any of the preceding claims.

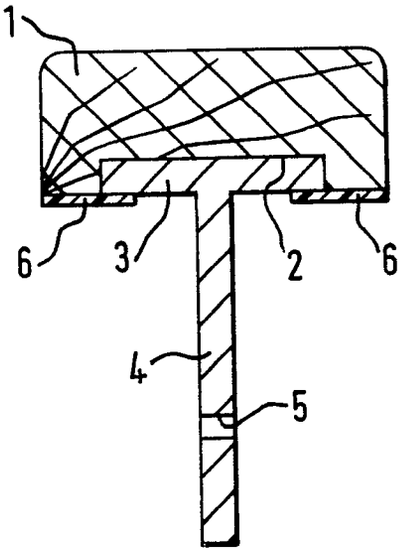

FIG.1.

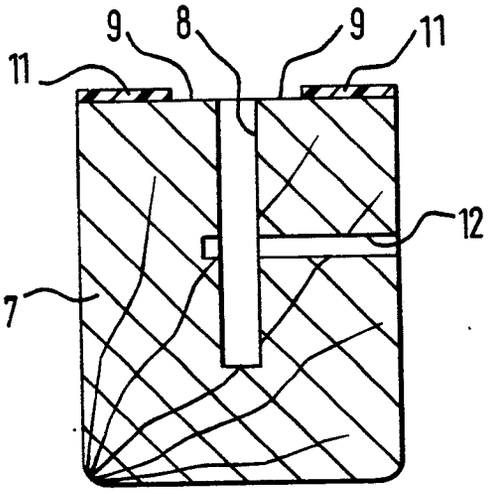

FIG.2.

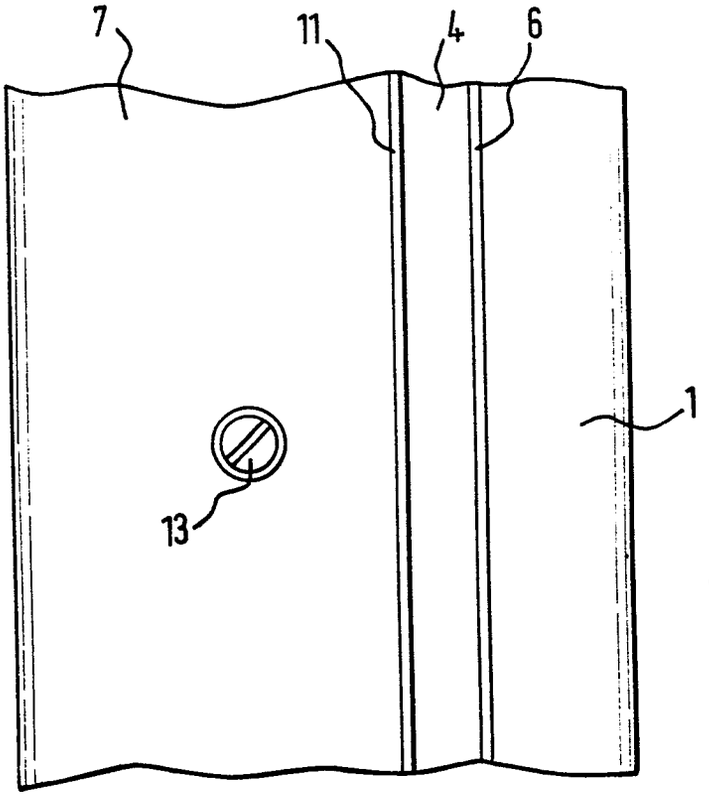

FIG.3.

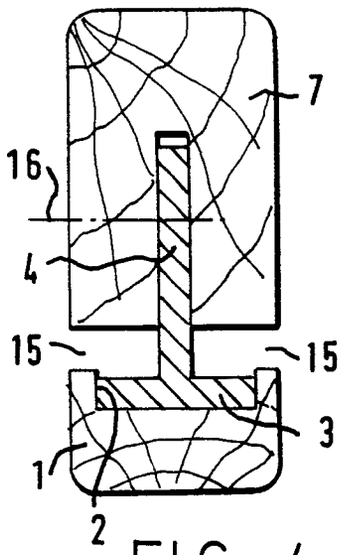

FIG. 4.

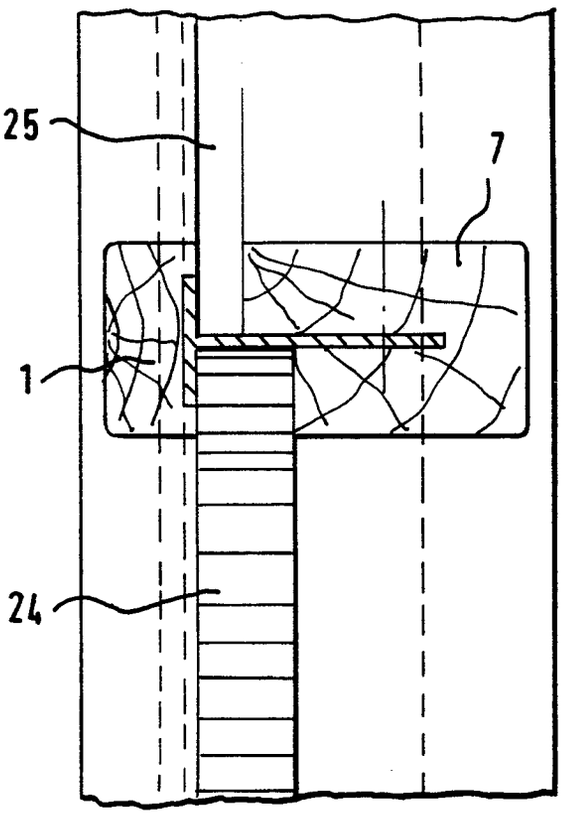

FIG.6.

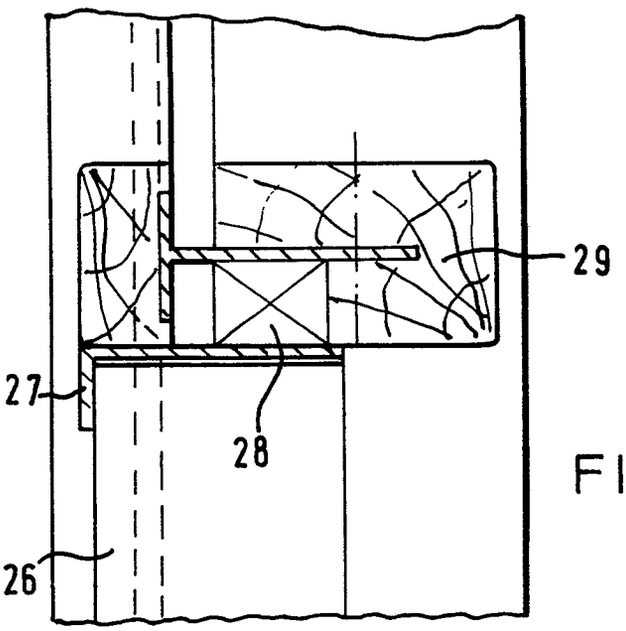

FIG.7.

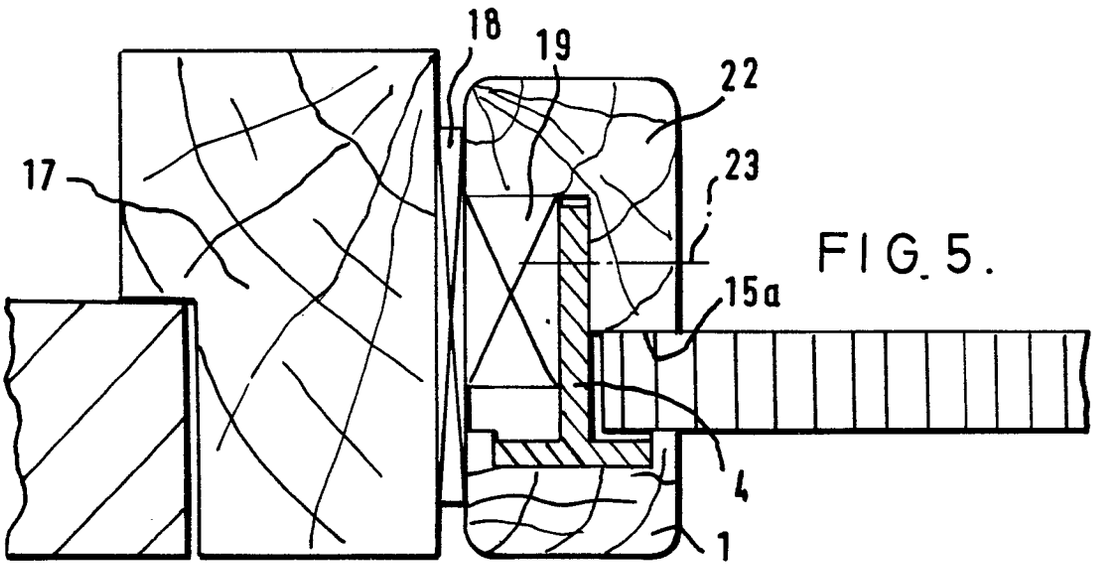

FIG.5.

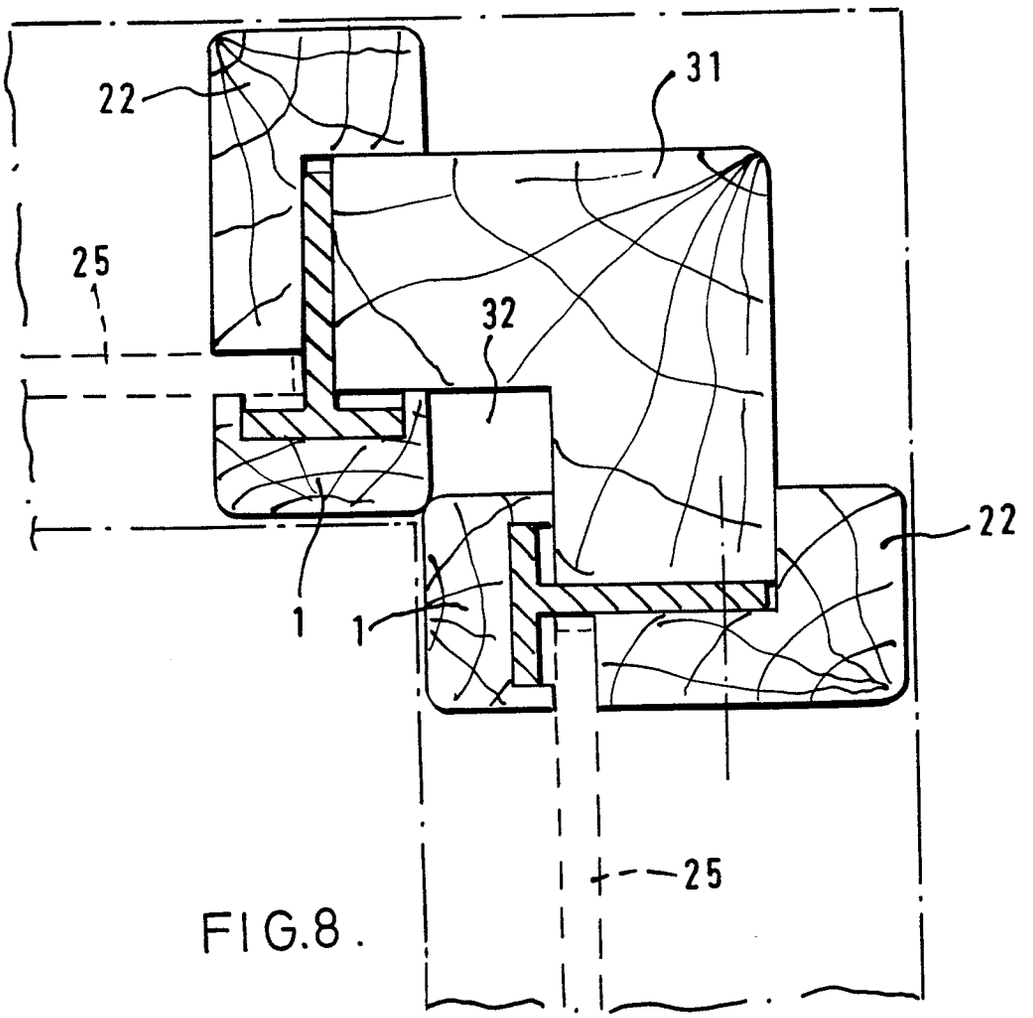

FIG.8.

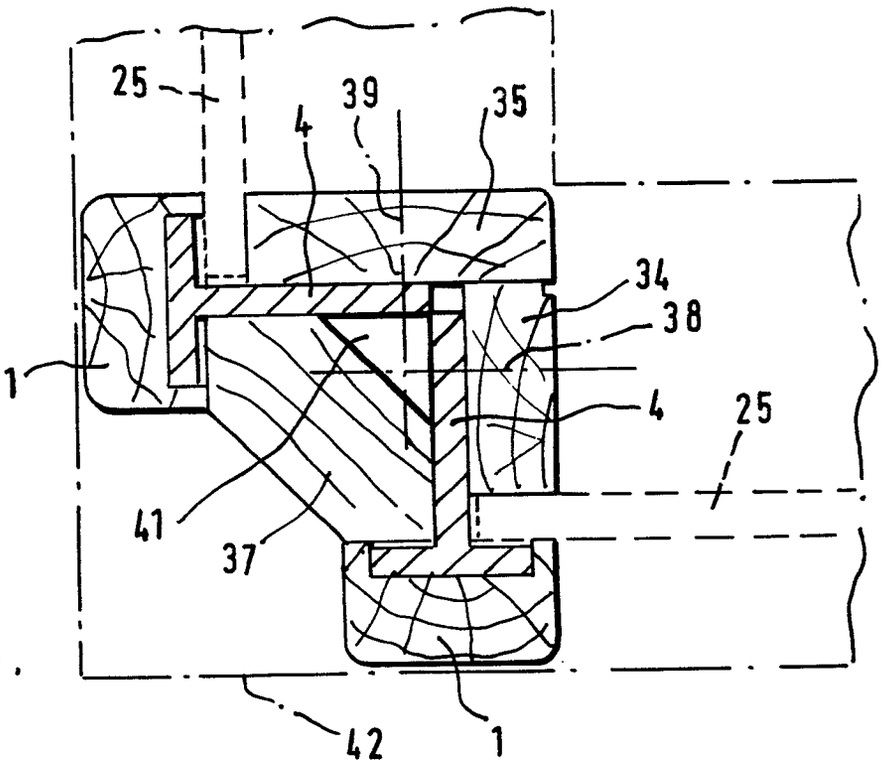

FIG.9.