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(54) **Frame for a door or window.**

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Description

The present invention relates to a frame made up of jamb elements for a door or window in a wall opening.

Background:

In modern door and window Industry, composite materials are being used to an increasing extent in products as a replacement for solid wood. The introduction of composite materials brings about a considerable decrease in material and manufacturing cost, without the result being a product of lesser quality. The material properties of a composite element consisting of several joined fibre or particle boards, can easily be manipulated in desired directions by varying the composition and material ratios of the involved composite materials. When, on the other hand, solid wood is used in the products, the material properties are predefined by the chosen kind of wood.

In most cases, the use of composite materials creates a need to cover the composite elements with some kind of sheathed surface layer. The purpose of the surface layer is, on the one hand, to create a resistant protective cover against wear and surface damages, and on the other hand to give the composite element an attractive outer appearance. The surface of a sheathed composite element can be made considerably stronger and more enduring than the corresponding surface of a solid wood element. Depending on various demands upon appearance, the sheathing may for instance consist of wood veneer, plastic or paper materials. However, a need may also arise to sheath products made of solid wood, for instance when a cheaper kind of wood of a lesser quality is sheathed with a veneer of a more expensive kind of wood.

Technical problem:

With known techniques it is virtually impossible, on a large scale mass production basis, to achieve an edge-joining of the meeting jamb elements of a jamb, where it is impossible to identify, from the outside, the jamb as a sheathed composite product. Thus, it is desirable that the sheathed nature of the composite element will not be revealed even at a close inspection by the eye, since the object is to resemble the look of a solid wood jamb as closely as possible.

So far, there have been no successful solutions to such an edge-joining of composite jamb elements. The reason can be found in absolutely necessary roundings where the sheathed surface layer is drawn over edge-portions of the product. In this context, sharp edge portions would inevitably give rise to unacceptable stretching and cracking of the surface layer. The basic principle for jambs of the type related to the invention, where for instance one of the jamb elements is recessed for accepting the meeting jamb element, is previously known from the Swedish publication 7115940-4, which for the sake of information is an earlier patent of the applicants. Jambs of this kind have so far been made of solid wood and the design has rounded edge-portions. At the section where the jamb elements meet, there is formed joint gaps, where the cross sections of the jamb elements can partly be seen from the outside because of the rounded edge-portions. This is acceptable on jambs made of solid wood without surface treatment like paint or varnish, and represents a common compromise in the market-place where jambs with rounded edge-portions are concerned. The partial exposure of the cross sections of jamb elements is, however, completely unacceptable on sheathed jambs, since this reveals the sheath surface layer and the composition of the core. Furthermore, said exposure is unsuitable in cases where the jamb elements of a jamb made of solid wood are painted in a dark colour, for instance with dark glazing paint. In such cases it is necessary to also treat the visible cross sections of the jamb elements which thereby inevitably takes on a different shade of colour compared to the other surfaces because of the different surface property and fibre orientation of the edge wood exposed in the cross section.

It is the object of the resent invention to alleviate the above problem by providing a frame made up of jamb elements for a door or window, with rounded edge portions, where the edge-joining of meeting jamb elements do not reveal the cross sections of said jamb elements, with the exception of the stopping face of the stopping ledges.

The solution:

The above object is achieved by providing a frame made up of jamb elements for a door or window in a wall opening, of the type where the end-portion of one of the joining jamb elements is recessed for accepting the cross cut end-portion of the other jamb element, and where said frame comprises stopping ledges for an openable element, and where the jamb elements are provided with rounded edge-portions **characterized in** that one of the jamb elements, adjacent to the rounded edge-portions of the other jamb element, displays a difference in width (seen in the direction through said wall opening) relative to the other jamb element, at least equal to the radii of the rounded edge-portions, at the narrow faces of the jamb elements, and at the narrow faces of the stopping ledges facing away from the openable element.

In a preferred embodiment the jamb elements are sheathed with surface layers, inside which the jamb elements may favourably consist of joined boards of composite material.

Brief description of the drawings:

The invention will hereinafter be described by way of example only and with reference to the accompanying drawings, in which the same reference numerals in the different figures refer to corresponding parts. In the drawings:

Fig. 1 shows a broken side view of a jamb according to the invention.

Fig. 2 shows a broken perspective view of the jamb in Fig. 1.

Fig. 3 shows a cross section on line IV-IV in Fig. 1.

Fig. 4 shows a similar cross section of a joining according to known technique, although with sheathed jamb elements according to the invention.

Best mode of carrying out the invention:

In the embodiment shown in Fig. 1, the reference numeral 1 refers to a jamb consisting of jamb elements 2a, 2b, which are provided with stopping ledges 3. One of the joining jamb elements 2b is recessed for accepting the end-portion 5 of the other jamb element 2a. The vertical jamb element 2a is thus cross cut as shown in the figure and the stopping ledge of the same jamb element is here shown in engagement with the horizontal jamb element 2b by means of the dashed line 6. The jamb elements 2a, 2b further display rounded edge-portions 8 as can clearly be seen in figure 1, 2 and 3. In Fig. 3 is shown a cross section of one of the jamb elements 2a revealing that the jamb element 2a is composed of four superimposed boards 10 of wood material which may be any combination of composite materials. One of these boards 10 thus defines the stopping ledge 3. The joined boards 10 are further sheathed with a surface layer 12 encompassing the major parts of the jamb elements 2a, 2b although not the entire rear faces 13.

The vertical jamb element 2a typically displays a greater depth or width than does the horizontal jamb element 2b. In the same way, the stopping ledge displays a greater width than does the corresponding horizontal stopping ledge 3. The difference in width is at least equal to the radii of the rounded edge-portions 8. This relationship makes it impossible to see the cross sections of the jamb elements from the outside, at the edge-joining of the jamb 1 between the joining jamb elements 2a, 2b. This is clearly illustrated in the joint areas 16 in the drawings.

In Fig. 4 there is shown a known edge-joining of jambs. In comparison with the edge joining according to the invention shown in Fig. 3, the joining jamb elements 2a, 2b display identical width relative each other, which is also true for the stopping ledges 3. This means, as opposed to the embodiment according to the invention, that the cross sections of the jamb elements 2a, 2b are partially exposed in the joint areas 16, revealing the sheathed composite nature of the jamb 1 at close inspection by the eye.

According to the embodiment of the invention as shown in Fig. 3 the narrow face or stopping face 17 of the stopping ledge 3, intended to form a stop for the openable element, is positioned in the same plane as the corresponding stopping face 17 of the other jamb element. The area 18 where the stopping faces 17 meet is thus the only joint area (corresponding to those in Fig. 4) in which the cross sections of the jamb elements are revealed. Said exception is a necessity in order to provide a proper seal against the openable element.

The described embodiment of the invention thus provides a jamb with an edge-joining satisfying high demands for aesthetic appearance.

The present invention is not limited to the above described embodiment and can naturally be altered within the range of the accompanying patent claims.

Claims

1. A frame (1) made up of jamb elements for a door or window in a wall opening, of the type where the end-portion (4) of one of the joining jamb elements (2a, 2b) is recessed for accepting the cross cut end-portion (5) of the other jamb element (2a), and where said frame (1) comprises stopping ledges (3) for an openable element, and where the jamb elements (2a, 2b) are provided with rounded edge-portions (8) **characterized in** that one of the jamb elements (2b), adjacent to the rounded edge-portions (8) of the other jamb element (2a), displays a difference in width (seen in the direction through said wall opening) relative to the other jamb element (2a), at least equal to the radii of the rounded edge-portions (8), at the narrow faces of the jamb elements (2a, 2b), and at the narrow faces of the stopping ledges (3) facing away from the openable element.

2. A frame (1) made up of jamb elements according to claim 1, **characterized in** that the jamb elements (2a, 2b) are sheathed with a surface layer (12).

3. A frame (1) made up of jamb elements according to the preceeding claims, **characterized in** that the jamb elements (2a, 2b) consist of joined boards (10) of composite material, inside said sheathed surface layer (12).

4. A frame (1) made up of jamb elements according to any of the preceeding claims, **characterized in** that the narrow face (17) of the stopping ledge (3) facing towards the openable element is posi-

tioned substantially in the same plane as the corresponding narrow face (17) of the other jamb element.

Patentansprüche

1. Rahmen (1), bestehend aus Anschlagelemente, für eine Tür oder ein Fenster in einer Wandöffnung, wobei der Endbereich (4) von einem der Anschlagelemente (2a, 2b) ausgebuchtet ist, um den Querschnitts-Endbereich (5) des anderen Anschlagelementes (2a) aufzunehmen und wobei der Rahmen (1) Stopperleisten (3) für ein zu öffnendes Element umfaßt und wobei die Aschlagelemente (2a, 2b) mit abgerundeten Ekenebereiche (8) vorgesehen sind,
dadurch gekennzeichet,
daß eines der Anschlagelemente (2b), welches an den abgerundeten Eckenbereich (8) des anderen Anschlagelementes (2a) angrenzt, einen Unterschied in der Breite (gesehen in Richtung durch die Wandöffnung) relativ zum anderen Anschlagelement (2a), mindestens gleich zu den Radien der abgerundeten Eckenbereiche (8) an den Begrenzungsflächen der Anschlagelemente (2a, 2b) und an den Begrenzungsflächen der Stopperleisten (3), welche sich vom zu öffnemen Elemente abwenden, aufweist.

2. Rahmen (1), bestehend aus Aschlagelementen, nach Anspruch 1, dadurch gekennzeichnet,
daß die Anschlagelemente (2a, 2b) mit einer Oberflächenlage (12) verkleidet sind.

3. Rahmen (1), bestehend aus Anschlagelemente, ach einem der vorhergehenden Ansprüche,
dadurch gekenzeichnet,
daß die Anschlagelemente (2a, 2b) innerhalb der verkleidenden Oberflächenlage (12) aus zusammengefügten Tafeln (10) aus Verbundmaterial bestehen.

4. Rahmen (1), bestehend aus Anschlagelementen, nach einem der vorhergehenden Ansprüche,
dadurch gekennzeichnet,
daß die Begrenzugsfläche (17) der Stopperleiste (3), welche sich dem offenbaren Element zuwendet, in halbwegs gleicher Ebene wie die korrespodierende Begrenzungsfläche (17) des anderen Aschlagelememtes angeordnet ist.

Revendications

1. Bâti (1) constitué de montants pour porte ou fenêtre, dans une ouverture d'un mur, du type dans lequel la partie d'extrémité (4) de l'un des montants (2a, 2b) qui se raccorde est évidée afin qu'elle loge la partie d'extrémité découpée (5) de l'autre montant (2a), et le bâti (1) comporte des rebords d'arrêt (3) destinés à un élément ouvrant, et les montants (2a, 2b) ont des parties arrondies de bord (8), caractérisé en ce que l'un des montants (2b), près des parties arrondies de bord (8) de l'autre montant (2a), présente une différence de largeur (dans la direction perpendiculaire à l'ouverture dans le mur) par rapport à l'autre montant (2a) qui est au moins égale aux rayons des parties arrondies de bord (8), aux faces étroites des montants (2a, 2b) et aux faces étroites des rebords d'arrêt (3) tournées du côté opposé à l'élément ouvrant.

2. Bâti (1) constitué de montants selon la revendication 1, caractérisé en ce que les montants (2a, 2b) sont gainés d'une couche de surface (12).

3. Bâti (1) constitué de montants selon les revendications précédentes, caractérisé en ce que les montants (2a, 2b) sont formés de panneaux raccordés (10) d'un matériau composite, à l'intérieur de la couche de surface de gainage (12).

4. Bâti (1) formé de montants selon l'une quelconque des revendications précédentes, caractérisé en ce que la face étroite (17) du rebord d'arrêt (3) tournée vers l'élément ouvrant est placée pratiquement dans le même plan que la face étroite correspondante (17) de l'autre montant.

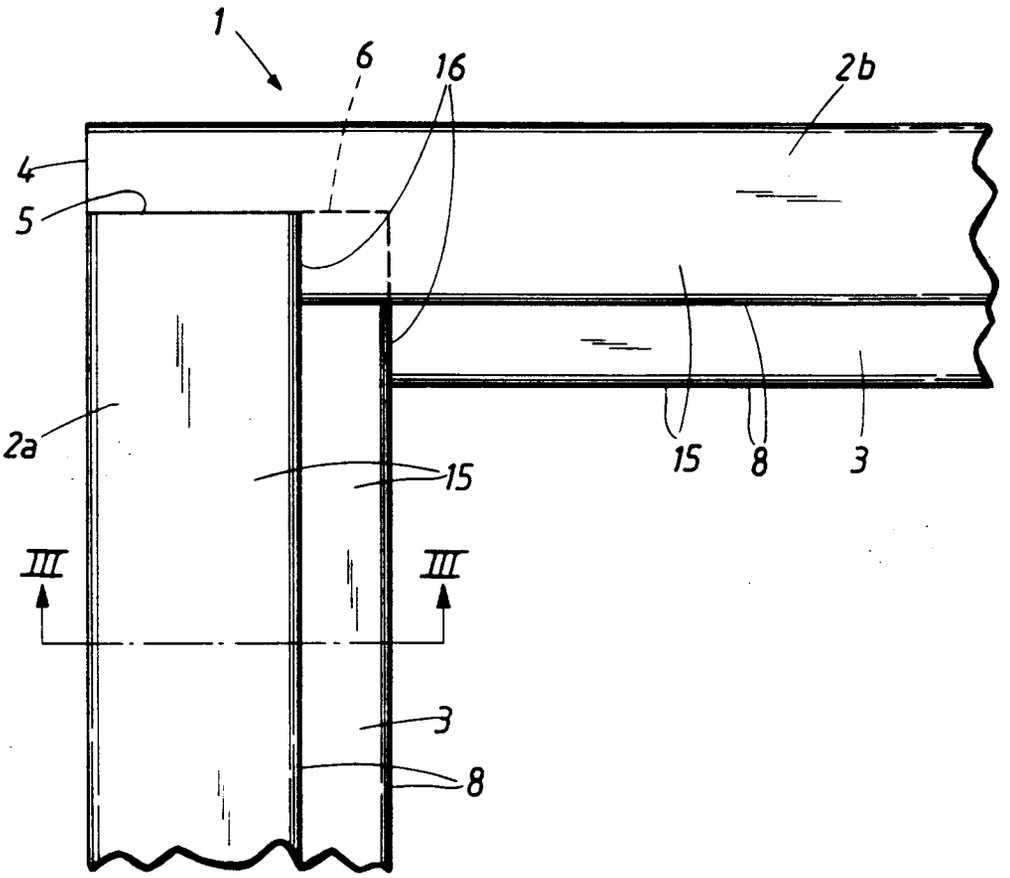

FIG.1

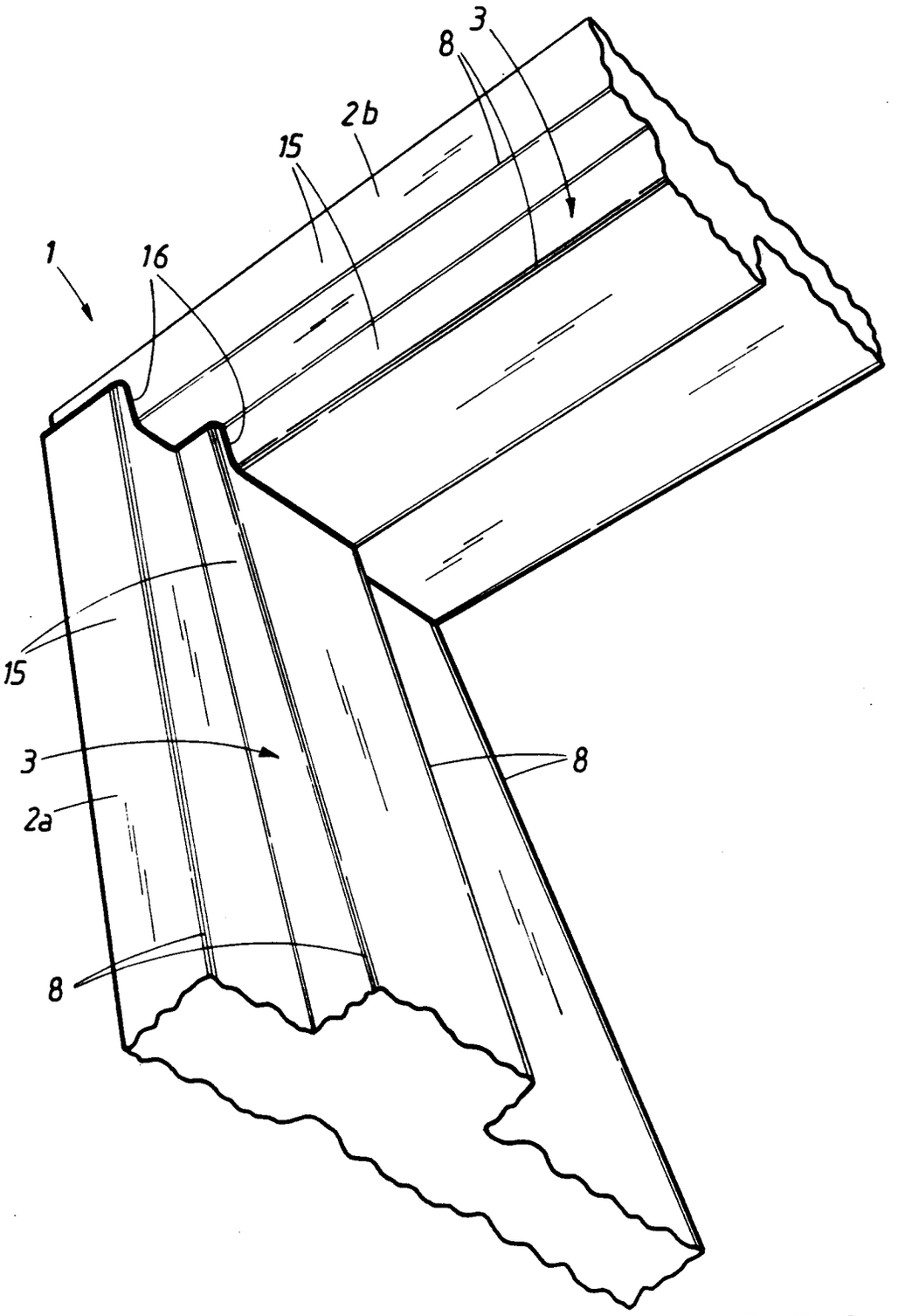

FIG.2

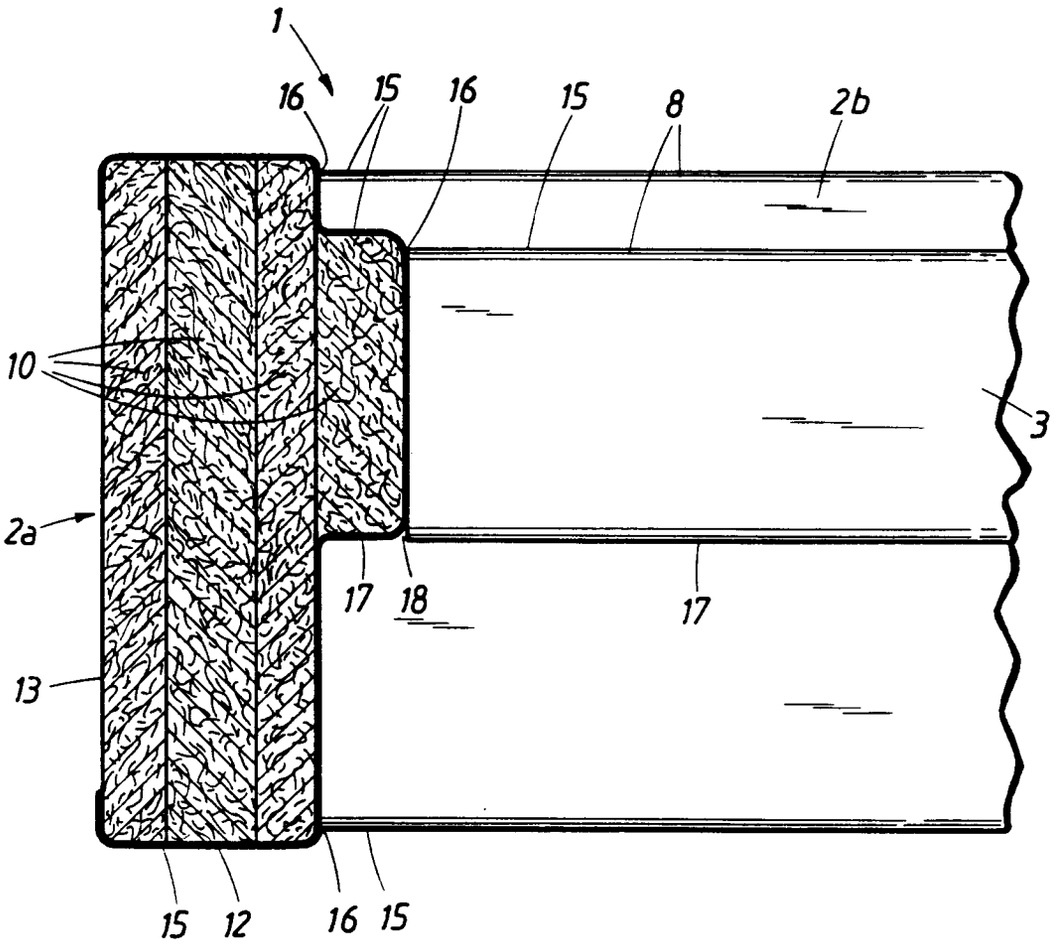

FIG. 3

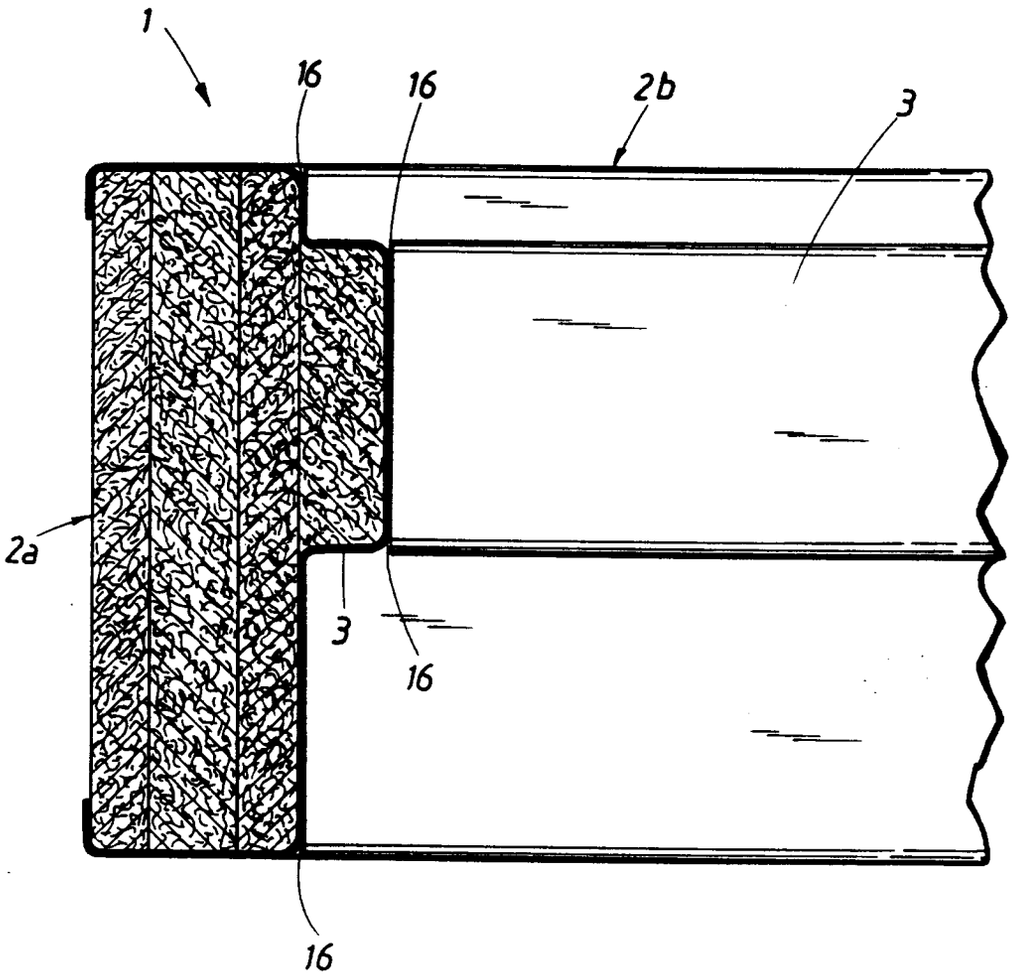

FIG. 4