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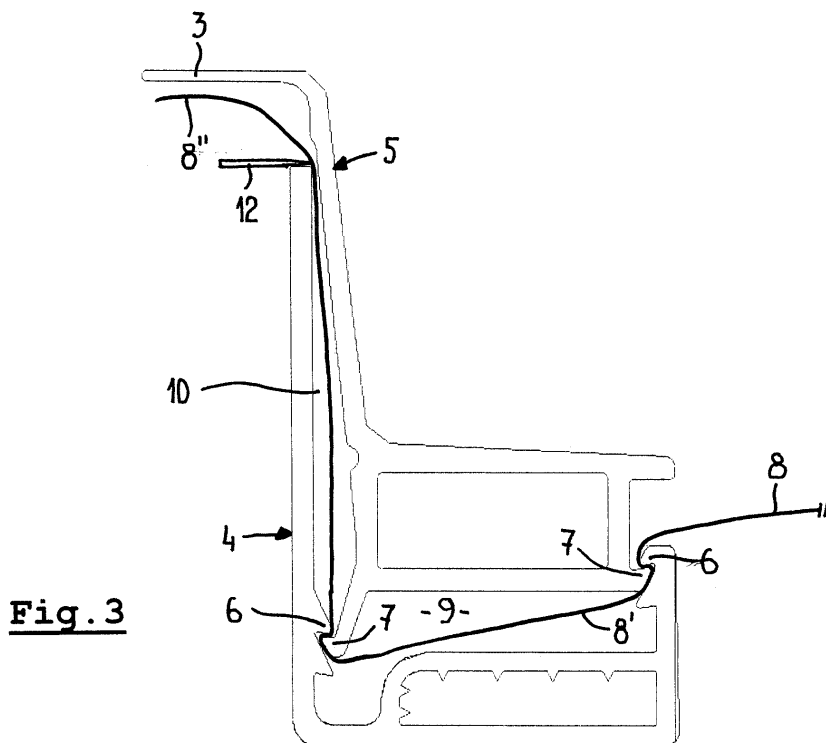
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(54) **Method for the production of an insect screen, and insect screen**

(57) A method is provided for the fabrication of an insect screen of the type for mounting in a window opening and comprising a surrounding frame (1) defining a central opening (2) and a gauze (8) spanning said central opening, wherein the frame comprises a base part (4) provided with a channel (9) which opens toward one side of the frame and wherein a circumferential edge of the gauze is received in said channel and locked therein by

a locking part (5). The method comprises a step of partially entering the locking part into the channel of the base part, a step of removing excess edge material (8'') of the gauze and a step of fully entering the locking part into the channel, wherein the step of removing excess edge material is carried out before the locking part has fully entered the channel. Further an insect screen is provided.



Description

[0001] The invention firstly relates to a method for the fabrication of an insect screen of the type for mounting in a window opening and comprising a surrounding frame defining a central opening and a gauze spanning said central opening, wherein the frame comprises a base part provided with a channel which opens toward one side of the frame and wherein a circumferential edge of the gauze is received in said channel and locked therein by a locking part.

[0002] According to a state of the art method of the above type, the locking part comprises an elongate flexible member, e.g. made out of rubber material. When the circumferential edge of the gauze has been received in the channel and has been locked therein by the locking part, the outermost part of the circumferential edge projects from the channel beyond the locking part, thus compromising the aesthetics of the insect screen.

[0003] It is an object of the present invention to provide an improved method of the type referred to above.

[0004] Thus, in accordance with the present invention, the method is **characterized in that** it comprises a step of partially entering the locking part into the channel of the base part, a step of removing excess edge material of the gauze and a step of fully entering the locking part into the channel, wherein the step of removing excess edge material is carried out before the locking part has fully entered the channel.

[0005] Because the step of removing excess edge material is carried out before the locking part has fully entered the channel (or, in other words, when the locking part has only partially entered said base part), the cutting edge in the gauze will be pushed into the base part when the locking part is fully entered into the channel. As a result the cutting edge then is hidden from view by the base part and the insect screen has improved aesthetics.

[0006] It is noted that the step of partially entering the locking part into the channel of the base part, the step of removing excess edge material of the gauze and the step of fully entering the locking part into the channel may be carried out successively, but it is conceivable too to combine steps, such as the step of removing excess material and the step of fully entering the locking part into the channel (in which case the removal of excess material might be caused by the step of fully entering the locking part, e.g. by a cutting operation caused by cooperating parts of the base part and locking part).

[0007] In a preferred embodiment of the method according to the invention, the step of removing excess edge material of the gauze comprises cutting away the excess material through cutting means. But also other removal processes may be applied (among others depending on the material of the gauze).

[0008] Preferably, during cutting away the excess edge material of the gauze the locking part defines a cutting counter part for the cutting means. Thus the locking part defines a support for the gauze, increasing the

efficiency of the cutting process.

[0009] In an embodiment of the method the cutting means comprise a knife. Such a knife may be operated by automated means, or manually.

[0010] According to another embodiment of the method according to the present invention said base part and locking part are provided with cooperating locking members for locking the locking part to the base part while clamping the gauze between both parts, which locking members are shaped for defining at least a first stable position of the locking part in which it is partially received in the channel of the base part, and a second stable position of the locking part in which it is fully received in said channel.

[0011] In the first stable position the excess edge material of the gauze is removed, and in the second stable position the insect screen is fully assembled and the outermost part of the circumferential edge of the gauze is hidden from view.

[0012] Preferably, the cooperating locking members of the base part and locking part define snap locks.

[0013] As an alternative an embodiment of the method is mentioned according to which the cooperating locking members of the base part and locking part are defined by wall parts frictionally engaging each other (in such a case the cooperating locking members may define more than two stable positions, e.g. an infinite amount of stable positions).

[0014] The invention secondly relates to an insect screen of the type for mounting in a window opening and comprising a surrounding frame defining a central opening and a gauze spanning said central opening, wherein the frame comprises a base part provided with a channel which opens toward one side of the frame and wherein a circumferential edge of the gauze is received in said channel and locked therein by a locking part.

[0015] According to the present invention such an insect screen is **characterized in that** said base part and locking part are provided with cooperating locking members for locking the locking part to the base part while clamping the gauze between both parts, which locking members are shaped for defining at least a first stable position of the locking part in which it is partially received in the channel of the base part, and a second stable position of the locking part in which it is fully received in said channel.

[0016] Such locking members allow the production of the insect screen in accordance with the method according to the present invention.

[0017] In a preferred embodiment of the insect screen according to the present invention the locking part is provided with a projecting wing which, in the position of the locking part in which it is fully received in said channel, covers the gap between the base part and the locking part receiving the outer edge of the gauze.

[0018] Such a projecting wing contributes to an improved aesthetics of the insect screen, but may also be used for mounting the insect screen in the window open-

ing, e.g. between a stationary part and a movable part of the window.

[0019] It is noted that, although the insect screen is described here as applicable to a window opening, it is also conceivable that the insect screen is used in combination with another opening, such as for example a door opening. Further it is noted that the insect screen may be of a type having a stationary gauze or a type having a movable gauze.

[0020] Hereinafter the invention will be elucidated while referring to the drawings, in which

Figure 1 shows, in an perspective view, an embodiment of the insect screen according to the invention; Figure 2 shows, in a cross section, a base part and locking part in a disassembled state;

Figure 3 shows, in accordance with figure 2, the base part and locking part in an partly assembled state, and

Figure 4 shows, in accordance with figure 2, the base part and locking part in the fully assembled state.

[0021] Firstly referring to figure 1, an insect screen for mounting in a window opening is illustrated. It comprises a surrounding frame 1 defining a central opening 2 and a gauze 8 (not illustrated in figure 1) spanning said central opening 2. Such a gauze 8 is connected to the frame 1 with its circumferential edge.

[0022] The frame is provided with an outwardly projecting mounting wing 3 to be received between a stationary part and a movable part of the window. The mounting wing, in the illustrated embodiment, extends all around the circumference of the frame 1, but it is conceivable too that the mounting wing 3 is not present at some locations.

[0023] Referring to figures 2, 3 and 4, the frame comprises a base part 4 and a separate locking part 5. Said base part 4 and locking part 5 are provided with cooperating locking members 6, 6' and 7 (in the present embodiment locking fingers defining snap locks) for defining stable positions of the locking part 5 relative to the base part 4.

[0024] In figure 2 the locking part 5 is not yet attached to the base part 4. In this position the circumferential edge 8' of the gauze 8 may be positioned between said parts 4 and 5.

[0025] Figure 3 shows a step of partially entering the locking part 5 into a channel 9 of the base part 4 until the locking members 7 of the locking part have come into locking engagement with upper locking members 6 of the base part 4 while clamping the gauze 8 (more specifically part 8' thereof) between both parts 4 and 5. Thus, the locking members 6 and 7 are shaped for defining at least a first stable position of the locking part 5 in which it is partially received in the channel 9 of the base part 4. An outer part 8" of the gauze still projects from a gap 10 between the base part 4 and locking part 5.

[0026] In the position of figure 3 a cutting knife 12 en-

gages the gauze 8 just above the base part 4 and cuts away the outer part 8" of the gauze 8. During this cutting step the locking part 5 may define a cutting counter part for the cutting knife 12.

5 [0027] Finally, figure 4 shows the step of fully entering the locking part 5 into the channel 9 of the base part 4. As a result, the cutting edge of the gauze 8 is pulled downwards below the upper edge of the base part 4 into the gap 10 and is hidden from view.

10 [0028] In the position illustrated in figure 4 the locking members 7 of the locking part 5 cooperate with the lower locking members 6' of the base part for defining a second stable position of the locking part 5 in which it is fully received in the channel 9 of the base part 4 and in which the gauze 8 is firmly clamped between said parts 4 and 5.

15 [0029] The mounting wing 3 is illustrated clearly which, in the position of the locking part 5 in which it is fully received in said channel 9 according to figure 4, covers the gap 10 between the base part 4 and the locking part 5 receiving the outer edge 8' of the gauze 8.

20 [0030] Although in the illustrated embodiment the cooperating locking members 6, 6' and 7 of the base part 4 and locking part 5 define snap locks, also other solutions for defining stable positions of the parts 4 and 5 relative to each other are conceivable, such as for example when the cooperating locking members of the base part and locking part are defined by wall parts frictionally engaging each other (directly or indirectly via the gauze 8).

25 [0031] Once assembled in accordance with figure 4, the insect screen may be mounted in a window opening. This may be established, for example, by positioning the mounting wing 3 of the frame 1 in a gap between a stationary part and movable part of the window (not illustrated but as known per se).

30 [0032] Of course, such a stationary part and movable part also may be part of, for example, a door opening or other opening.

35 [0033] The invention is not limited to the embodiments described above, which may be varied widely within the scope of the invention as defined by the appending claims.

Claims

1. Method for the fabrication of an insect screen of the type for mounting in a window opening and comprising a surrounding frame defining a central opening and a gauze spanning said central opening, wherein the frame comprises a base part provided with a channel which opens toward one side of the frame and wherein a circumferential edge of the gauze is received in said channel and locked therein by a locking part, **characterized in that** the method comprises a step of partially entering the locking part into the channel of the base part, a step of removing excess edge material of the gauze and a step of fully entering the locking part into the channel, wherein

the step of removing excess edge material is carried out before the locking part has fully entered the channel.

2. Method according to claim 1, wherein the step of removing excess edge material of the gauze comprises cutting away the excess material through cutting means. 5
3. Method according to claim 2, wherein during cutting away the excess edge material of the gauze the locking part defines a cutting counter part for the cutting means. 10
4. Method according to claim 2 or 3, wherein the cutting means comprise a knife. 15
5. Method according to any of the previous claims, wherein said base part and locking part are provided with cooperating locking members for locking the locking part to the base part while clamping the gauze between both parts, which locking members are shaped for defining at least a first stable position of the locking part in which it is partially received in the channel of the base part, and a second stable position of the locking part in which it is fully received in said channel. 20 25
6. Method according to claim 5, wherein the cooperating locking members of the base part and locking part define snap locks. 30
7. Method according to claim 5, wherein the cooperating locking members of the base part and locking part are defined by wall parts frictionally engaging each other. 35
8. Insect screen of the type for mounting in a window opening and comprising a surrounding frame defining a central opening and a gauze spanning said central opening, wherein the frame comprises a base part provided with a channel which opens toward one side of the frame and wherein a circumferential edge of the gauze is received in said channel and locked therein by a locking part, **characterized in that** said base part and locking part are provided with cooperating locking members for locking the locking part to the base part while clamping the gauze between both parts, which locking members are shaped for defining at least a first stable position of the locking part in which it is partially received in the channel of the base part, and a second stable position of the locking part in which it is fully received in said channel. 40 45 50
9. Insect screen according to claim 8, wherein the cooperating locking members of the base part and locking part define snap locks. 55

10. Insect screen according to claim 9, wherein the cooperating locking members of the base part and locking part are defined by wall parts frictionally engaging each other.

11. Insect screen according to any of the claims 8-10, wherein the locking part is provided with a projecting wing which, in the position of the locking part in which it is fully received in said channel, covers the gap between the base part and the locking part receiving the outer edge of the gauze.

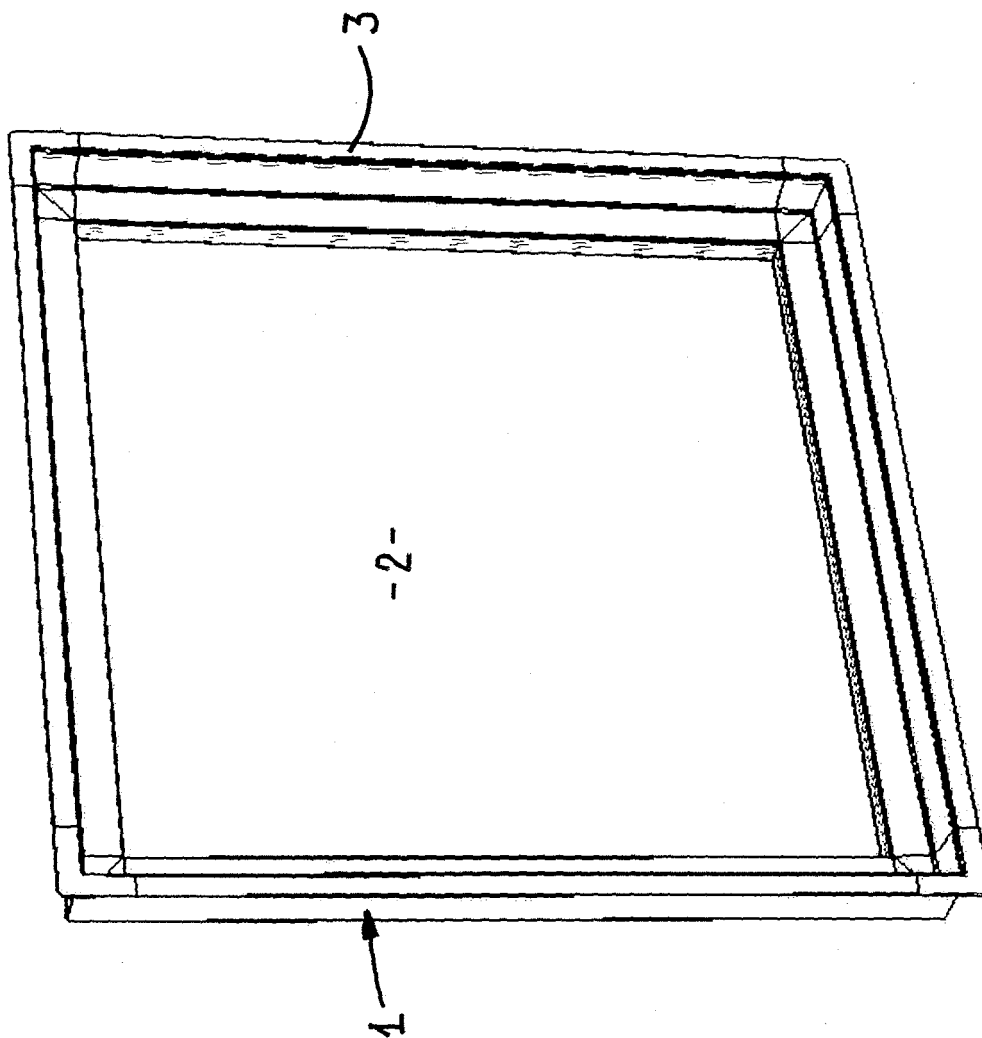


Fig. 1

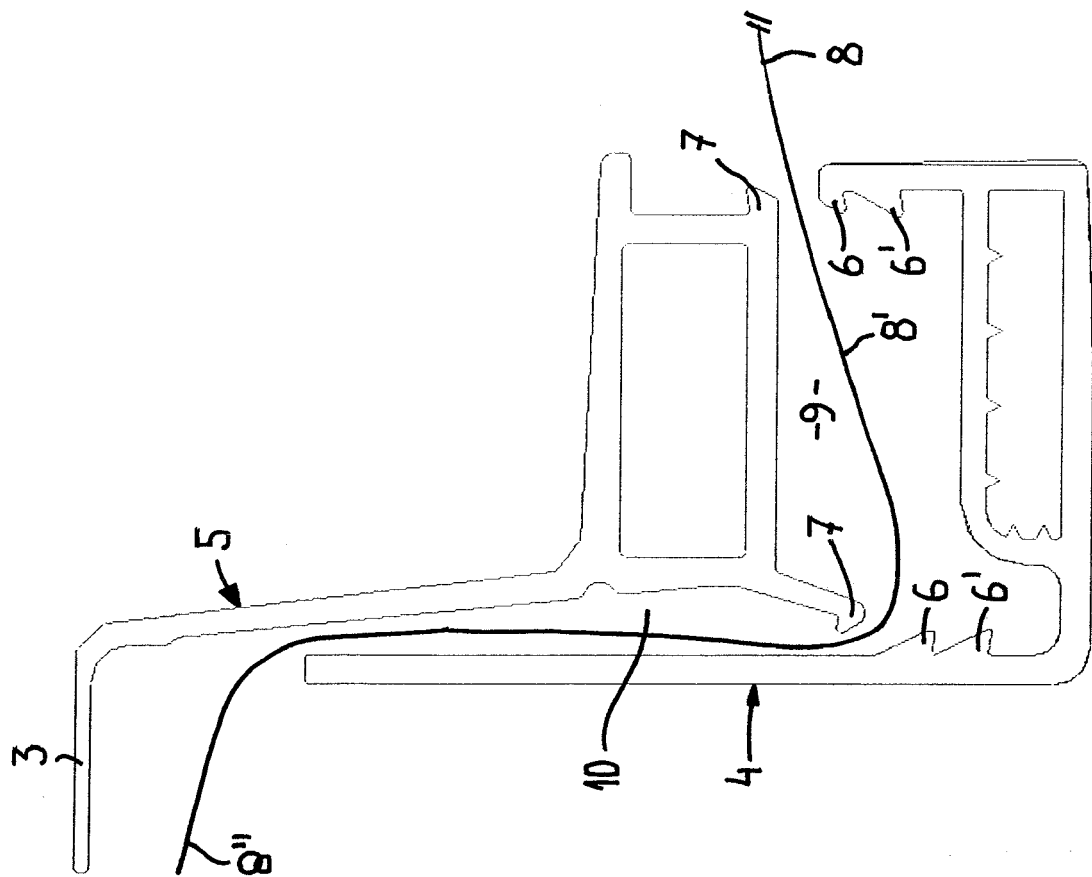


Fig. 2

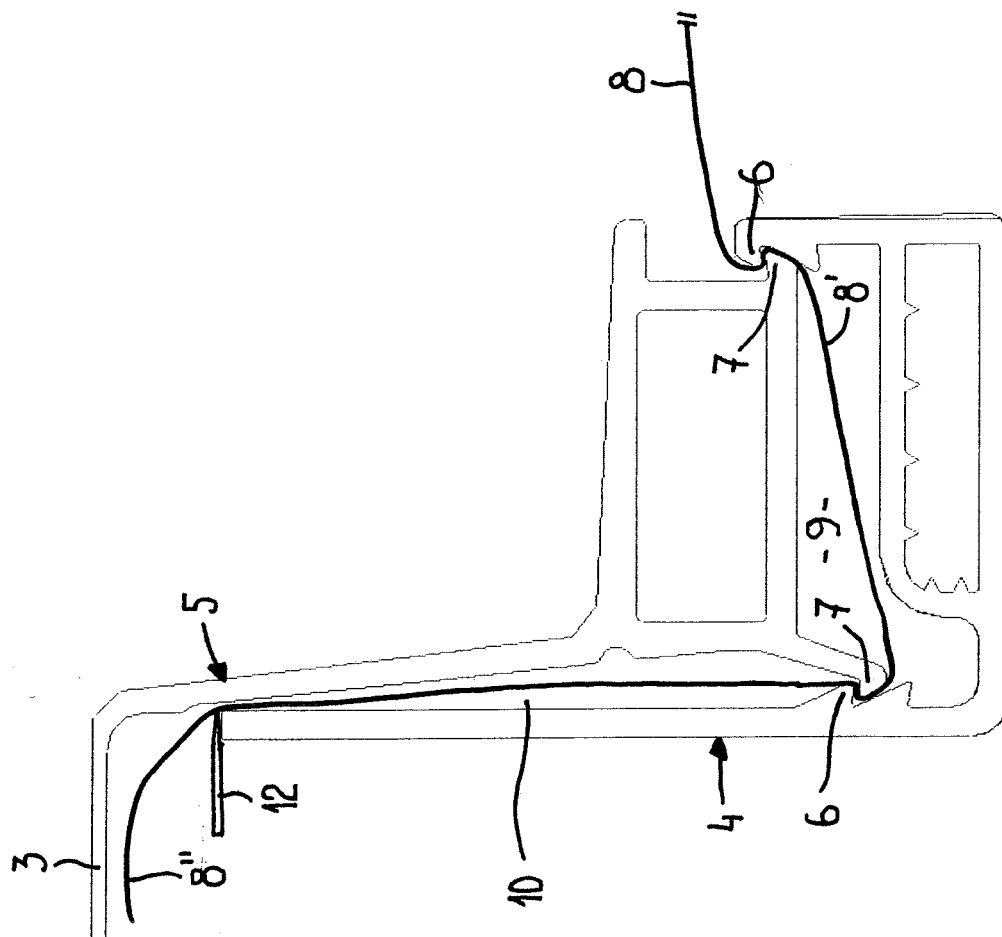


Fig. 3

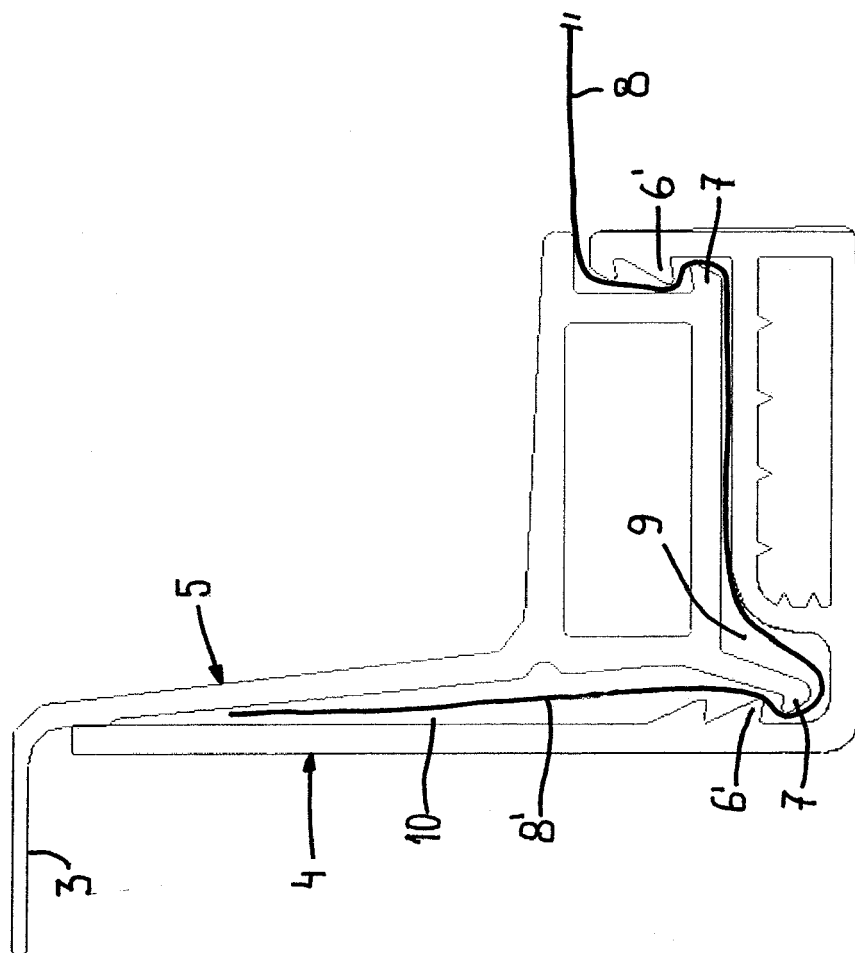


Fig. 4



EUROPEAN SEARCH REPORT

Application Number
EP 08 15 9902

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 1 758 720 A (EDWARD SODERGREN JOHN) 13 May 1930 (1930-05-13) * the whole document *	1-11	INV. E06B9/52
A	US 4 453 585 A (RUGGEBERG SR BRUNO [US] ET AL) 12 June 1984 (1984-06-12) * column 6, line 62 - line 65 * * figure 4 *	2,4	
			TECHNICAL FIELDS SEARCHED (IPC)
			E06B D05C
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 4 November 2008	Examiner Cornu, Olivier
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 T : theory or principle underlying the invention 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			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 08 15 9902

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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04-11-2008

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 1758720	A	13-05-1930	NONE	

US 4453585	A	12-06-1984	NONE	

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