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(11)

**EP 0 894 912 A2**

(12)

## EUROPEAN PATENT APPLICATION

(43) Date of publication:  
**03.02.1999 Bulletin 1999/05**

(51) Int Cl.<sup>6</sup>: **E04D 13/15, E04D 13/158**

(21) Application number: **98305574.0**

(22) Date of filing: **14.07.1998**

(84) Designated Contracting States:  
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU  
MC NL PT SE**  
Designated Extension States:  
**AL LT LV MK RO SI**

(30) Priority: **31.07.1997 GB 9716071**  
**09.08.1997 GB 9716822**  
**22.01.1998 GB 9801248**

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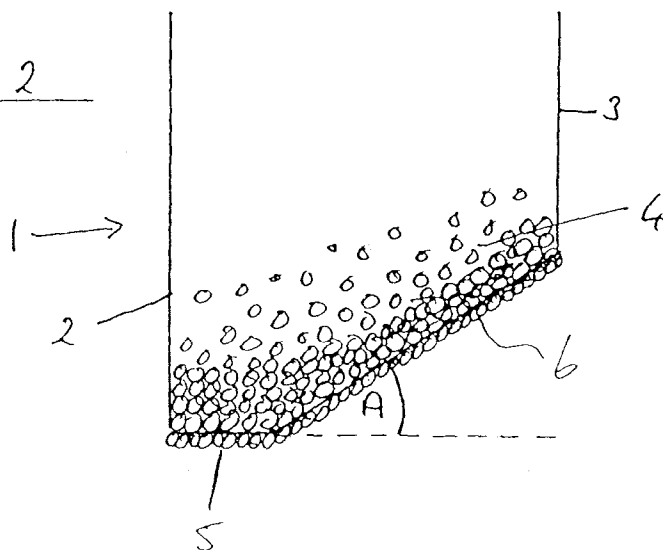
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### (54) Concealed cut edge for decorative barge boards

(57) A method of cutting a decorative pattern in a barge board 1, or alternatively a fascia board or a finial board, made from co-extruded plastics material and having a front face 2, a rear face 3 and a cellular core 4. The cellular core 4 can become stained when exposed by cutting and the present method removes the stained cut edge from the line of sight of the observer. The pattern is cut in the barge board 1 at an acute angle

of 45°-60° to the front face 2 and accordingly the portion of the cellular core 4 exposed by cutting the pattern in the barge board 1 is not directly visible from the ground. A small cut 5 is made at right angles to the front face 2 before the angled cut is made to prevent damage to the cut edge from handling. Also provided is a decorative barge board or fascia board or finial board made by the method described.

Fig 2



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## Description

**[0001]** The present invention relates to a method of producing a decorative pattern on a co-extruded board for use on buildings, especially barge boards, fascia boards and finial boards.

**[0002]** Roofs are usually provided with a soffit which is secured below the rafters such that it extends horizontally from the wall of the building beneath the roof to close the gap between the roof eaves and the building wall. A fascia board is secured to the ends of the rafters and extends from the edge of the soffit to the underside of the tiles and lies parallel to the building wall. A barge board is secured to the gable end of the building and runs parallel to the building wall at the angle of the roof. A finial board can be secured to the apex of a gable end to provide an additional decorative element.

**[0003]** Barge boards, fascia boards and finial boards are generally manufactured from wood or a plastics material, such as co-extruded PVC and frequently include decorative patterns. Wooden barge boards, fascia boards and finial boards are usually cut to give the desired pattern and the face of the board and cut edge painted to provide resistance to weathering.

**[0004]** Co-extruded PVC barge boards, fascia boards and finial boards have a cellular core and integral "solid" front and back faces which are weather resistant. However, cutting the board to form a pattern exposes the cellular material which becomes stained grey by dust and rain and is therefore unsightly. At present the exposed cellular edge is often capped to prevent the ingress of water and staining from exposure to rain and dust. Such capping involves a further operation and additional material which is both time consuming and expensive. The capping material can become loose and dangerous and is often manufactured from a different material to the PVC barge, fascia or finial board and therefore discolours at a different rate. Furthermore, the use of capping restricts the pattern of the decorative barge board, fascia board or finial board to a relatively simple pattern.

**[0005]** The object of the present invention is to provide a method of producing a decorative barge board, fascia board or finial board which overcomes the problem of cellular core exposed by cutting becoming stained and unsightly and also removes the need for capping.

**[0006]** Accordingly from one aspect the present invention provides a method of producing a decorative pattern on a barge board, fascia board or finial board having a back face and a front face comprising the steps of:-

cutting the decorative pattern in the board such that the cut is made at an acute angle to the front face.

**[0007]** In the context of the present invention the expression "board" as used hereinafter is to be construed as including barge boards, fascia boards and finial boards.

**[0008]** Preferably the board is made from a coextrud-

ed plastics material, such as PVC.

**[0009]** A cellular core is preferably provided between the front and back faces of the board.

**[0010]** Preferably the cutting angle is between 45° and 60° to the front face. The angled cut removes the cut edge and therefore the exposed cellular core from the line of sight of an observer. Furthermore the exposed cellular core is in shadow and therefore naturally appears to be coloured grey.

**[0011]** The angled cut also provides a run off for rain water and therefore removes the need for capping to prevent the ingress of water.

**[0012]** Although the invention has been described with reference to boards made of plastics material, such as co-extruded PVC, it is also applicable to use with other materials, such as wood, where the angled cut will assist in protection of the cut surface and enhance the appearance of the barge board.

**[0013]** An initial narrow cut extending from and at right angles to the front face may be provided before the angled cut. Preferably said cut has a width of 3-5 mm. The right angled portion prevents the cut edge from damage caused by handling and due to the reduced width of the right angled portion any discoloration which occurs is not visible to an observer at ground level.

**[0014]** Preferably the decorative pattern is routed on to the co-extruded PVC barge board. The equipment used is preferably a CNC router. This equipment can produce the decorative effect at high speed and with great accuracy.

**[0015]** When a decorative barge or fascia board is cut from a length of plain co-extruded PVC board a corresponding cut-off of reversed pattern is generated as well as the decorative barge or fascia board itself. This cut off portion may be secured by any suitable means to the front face of an existing barge or fascia board to provide an additional decorative effect.

**[0016]** The existing barge or fascia board may be the decorative barge or fascia board to which the cut off portion corresponds. This use prevents the cut off portion from being discarded and provides a further decorative effect.

**[0017]** From another aspect the present invention provides a barge board, fascia board or finial board having a front face and a back face and a decoratively shaped exposed edge portion wherein the said edge portion is formed at an acute angle, preferably 45°-60°, to the said front face whereby the edge portion is substantially in the shadow of the front face and out of the line of sight of an observer.

**[0018]** From a further aspect the present invention provides a decorative barge board, fascia board or finial board having a back face, and a front face when manufactured in accordance with the process of the present invention.

**[0019]** The present invention will be further described by means of example only with reference to the drawings in which:-

**Figure 1** shows a cross sectional view of an element of a co-extruded PVC barge board with a decorative pattern cut at a right angle through the board according to the prior art methods;

**Figure 2** shows a cross sectional view of a co-extruded PVC barge board with a decorative pattern cut at an acute angle through the board according to the present invention;

**Figure 3** shows a perspective view of the rear face of the barge board of Figure 2;

**Figure 4** shows a length of plain co-extruded PVC barge board cut to give a decorative barge board and a cut off portion;

**Figure 4a** shows a front view of decorative barge board having the corresponding cut off piece secured thereto to give a further decorative effect;

**Figure 4b** shows a cross-sectional view of the decorative barge board of Figure 4a; and

**Figure 5** shows a perspective view of the rear face of a co-extruded PVC finial board with a decorative pattern cut at an angle through the board according to the present invention.

[0020] In the illustrations the barge board is formed from co-extruded cellular PVC having a front face, a rear face and a cellular core portion integral with the front and rear faces, the cellular core having a closed structure.

[0021] In Figure 1 the co-extruded barge board 1 of width 16 mm is routed at right angles to the front face 2 to expose the cellular core 4.

[0022] The cellular core 4 quickly becomes stained grey along the cut edge 4a from exposure to rain and dust which gives an unsightly finish when viewed from the ground. The cut edge can be capped or sealed in a number of ways, typically by securing a moulding or tape by adhesives. However such cappings may perceptibly loosen in service, may not always match the exact colour of the barge board, may display a distinctive glue line and may tend to change colour at a different rate to the main barge board.

[0023] In Figures 2 and 3 the co-extruded barge board 1 of width 16 mm is routed at an angle A to the front face 2. The angle A is 45°. A small cut is first made at right angles to the front face 2 towards the rear face 3, to give a narrow portion 5 of exposed cellular core 4 which is at right angles to the front face 2 to prevent damage to the cut edge caused by handling. The portion 5 has a width of 3 mm and although visible from the ground, is not of sufficient width to look unsightly if it becomes stained. The portion 6 of the exposed cellular core 4 which is cut at an angle to the front face 2 is not directly visible from

the ground and is furthermore in shadow and therefore naturally appears grey in colour.

[0024] Figure 3 shows a further decorative feature, circular hole 7, cut into the barge board 1 at an angle to the front face 2 as described above resulting in the portion 5 at right angles to the front face 2 and portion 6 at an angle thereto as in the cutting of the pattern in the lower edge of the barge board 1.

[0025] Figure 4a shows a length of plain co-extruded barge board 11 which has been cut to give a decorative barge board 22 and a cut-off portion 23. The barge board 11 is routed at an angle to the front face 12 as described in relation to Figure 2 to provide an angled edge portion (not shown).

[0026] Figures 4b and 4c show the use of the cut-off portion 23 as an additional decorative feature for use with an existing barge board. The cut off portion 23 is secured to the front face of the decorative barge board 22 by means of concealed screws or pins (not shown). As shown particularly in Figure 4c the cut off portion 23 is arranged such that angled cut inclines away from the face exposed to view.

[0027] In Figure 5 the finial board 30 is formed from co-extruded cellular PVC having a front face 31, a rear face 32 and a cellular core portion 33 integral with the front and rear faces, the cellular core having a closed structure. The finial board 30 is provided with decorative features comprising a circular end 36 and a pointed end 37.

[0028] The finial board 30 has a width of 18 mm and is routed at an angle B to the front face 31. The angle B is 50°. A small cut is first made at right angles to the front face 31 towards the rear face 32, to give a narrow portion 34 of exposed cellular core 33 which is at right angles to the front face 31 to prevent damage to the cut edge caused by handling. The portion 34 has a width of 5 mm and although visible from the ground it is not of sufficient width to look unsightly. The portion 35 of the exposed cellular core 33 which is cut at an angle to the front face 31 is not directly visible from the ground and is in shadow so appears to be naturally grey in colour.

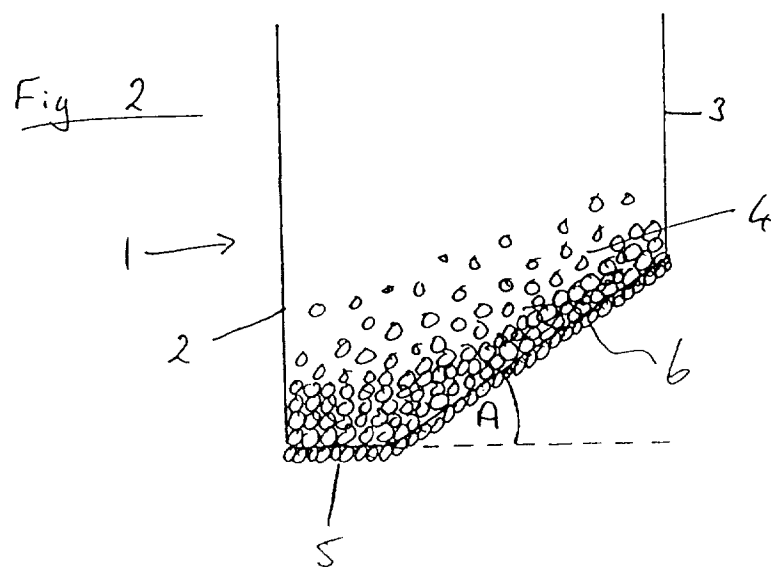
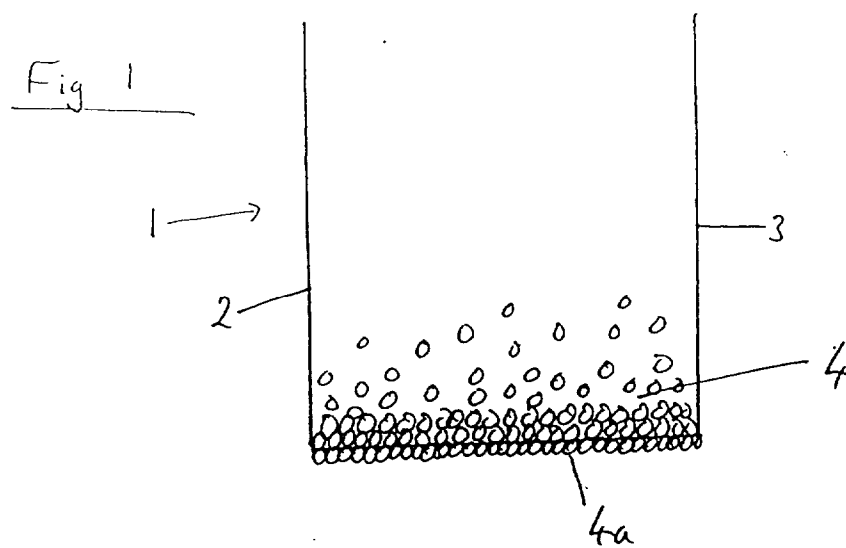
## Claims

1. A method of producing a decorative pattern on a board (1,30) as hereinbefore defined having a back face (3,32) and a front face (2,31) comprising the steps of:-  
cutting the decorative pattern in the board (1,30) such that the cut is made at an acute angle to the front face (2,31).
2. The method according to claim 1 wherein the board is a barge board (1) or a fascia board.
3. The method according to claim 1 wherein the board is a finial board (30).

4. The method according to any preceding claim wherein the board (1,30) is made of co-extruded PVC.
5. The method according to any preceding claim wherein the board (1,30) has a cellular core (4,33). 5
6. The method according to any preceding claim wherein the cutting angle is between 45° and 60° to the front face (2,31). 10
7. The method according to any preceding claim wherein an initial narrow cut extending from and at right angles to the front face (2,31) is provided before the angled cut. 15
8. The method according to any one of claims 1,2 and 4-7 wherein the decorative barge (22) or fascia board is cut from a length of plain co-extruded PVC board (11) and a corresponding cut-off (23) of reversed pattern is generated as well as the decorative barge (22) or fascia board itself. 20
9. The method according to claim 8 wherein the cut off portion (23) is secured by any suitable means to the front face of an existing barge (22) or fascia board to provide an additional decorative effect. 25
10. The method according to claims 8 or 9 wherein the existing barge (22) or fascia board is the decorative barge (22) or fascia board to which the cut off portion (23) corresponds. 30
11. A board as hereinbefore defined having a front face (2,31) and a back face (3,32) and a decoratively shaped exposed edge portion (6,35) wherein the said edge portion (6,35) is formed at an acute angle to the said front face (2,31) whereby the edge portion (6,35) is substantially in the shadow of the front face (2,31) and out of the line of sight of an observer. 35 40
12. The board according to claim 12 wherein the angle is 45°-60°.
13. The board according to claims 11 or 12 wherein the board is for use on building and is a barge board (1), a fascia board, or a finial board (30) made out of co-extruded plastics material. 45

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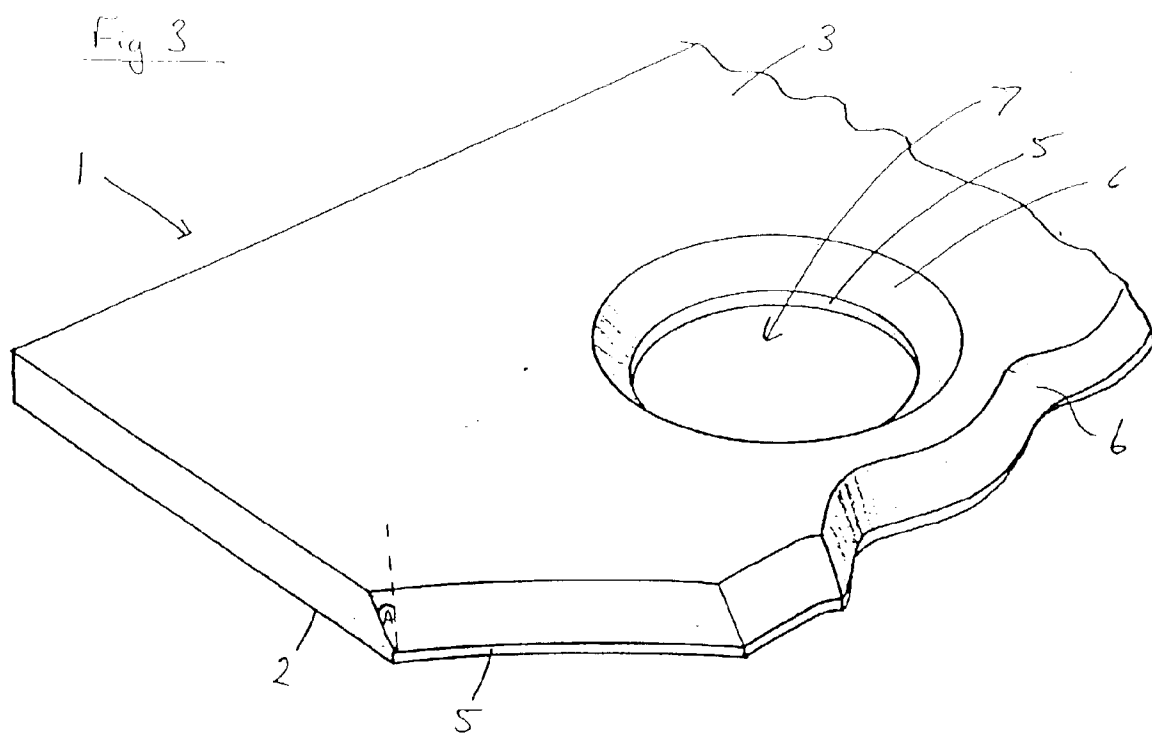


Fig 4a

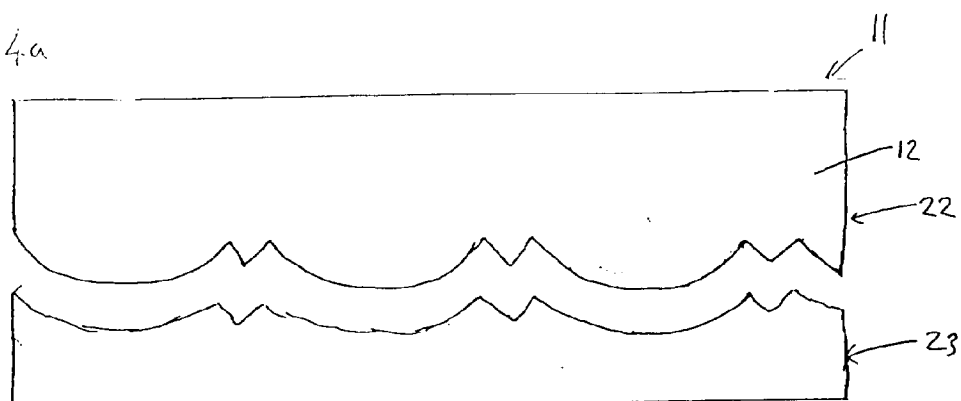


Fig 4b

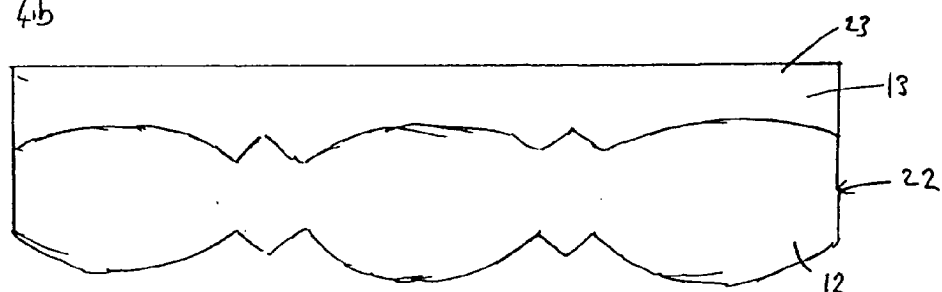


Fig 4c

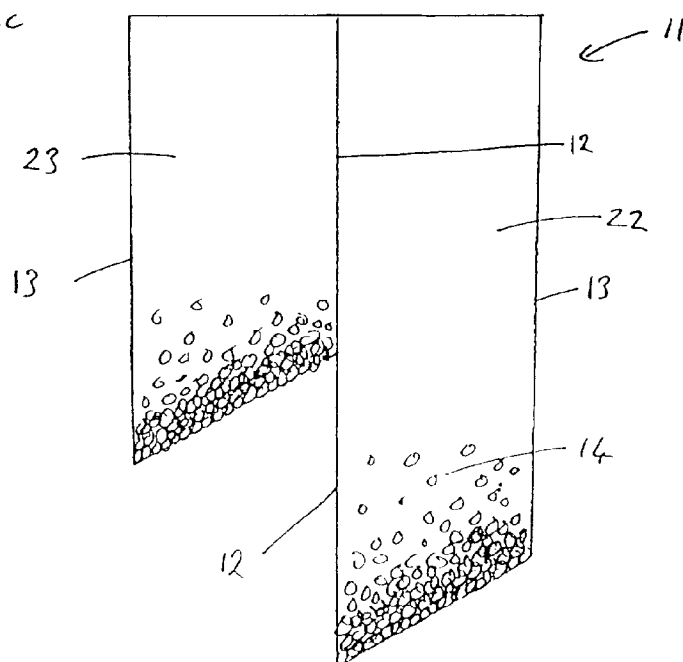


Fig 5

