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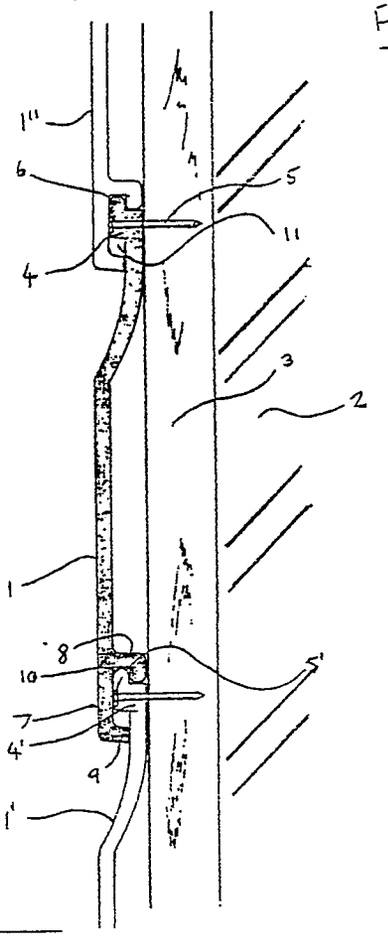
(54) Cladding system.

(57) A cladding system comprises a plurality of adjacent cladding members (1, 1', 1") each having a portion (4) for securing to the surface (3,2) to be clad, and an interlocking portion (7) adapted to interlock with and overly a securing portion of an adjacent cladding member. At the interlock between two such cladding members there is defined an anti-capillary channel (11) of relatively large dimensions that prevents water being drawn into the interlock by capillary action and thus promoting corrosion of the fixing elements such as nails (5).

FIG. 1



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Cladding System

This invention relates to a cladding system for buildings.

It is known to clad the sides of buildings with cladding members, for example elongate cladding members formed of unplasticized polyvinyl chloride (UPVC) that simulate traditional wooden planking. Such cladding members may be applied to the surface to be clad either horizontally or vertically as the situation demands, and secured by means of nails, cleats or other fixing means. Conventionally the cladding members are provided with interlocking portions whereby adjacent cladding members may overly and interlock one another to provide a weather-proof cladding. In some arrangements the overlapping cladding members shield the fixing means which secure the members to the building and which are provided in the region of the interlock.

A problem with known arrangements is that the interlock between two adjacent cladding members tends to define narrow spaces extending between the cladding members and along which water may be drawn by capillary action. Such water can have a detrimental effect on the fixing of the underlying cladding member to the surface, for example by promoting corrosion of the fixing means. This can be particularly troublesome in the case of fixing by means of e.g. nails directly in the interlocked region.

According to one broad aspect the present invention provides a cladding system comprising a plurality of adjacent cladding members, each said cladding member comprising a first portion for securing to a surface to be clad, and a second portion adapted to interlock with and overly a said first portion of an adjacent like cladding member, the arrangement being such that at the interlock between two such members there is defined an anti-capillary channel for preventing the entry of water into said interlock by means of capillary action.

By means of this arrangement the fixing means, e.g. a nail, is protected from both directly driven rain, and water drawn indirectly through capillary action. By the term "anti-capillary channel" is meant a channel or groove, such as a capillary groove, which is of relatively large dimensions compared to the spaces that are otherwise defined between two interlocked cladding members so that capillary action cannot occur, or is at least substantially reduced.

In a preferred embodiment the first portion of each said cladding member comprises a raised portion at one edge for receiving fixing means to fix the cladding member to a surface, and each said second portion comprises a channel portion at a second edge adapted to interlock with the raised portion of an adjacent cladding member, wherein said anti-capillary channel is defined between the raised portion of one said cladding member and the outermost part of said interlocking channel portion of an adjacent member.

Preferably the cladding members are generally elongate and the interlock, and also the anti-capillary channel, extends parallel to the members for substantially the entire length of the members.

In a particularly preferred embodiment the cladding members are elongate and on one side are provided with a securing portion comprising a rib extending substantially the whole length of the member, and on the other side are provided with an interlocking portion comprising a pair of flange members, one of said flange members defining a recess adapted to receive the rib of a said securing portion, and said anti-capillary channel being defined between said securing portion and the other of said pair of flange members.

It is also preferred that the securing portion be substantially thicker than the remainder of the cladding member. This is advantageous when it is desired to secure, e.g. by nailing, a cladding member formed of a relatively soft material, such as cellular foam.

According to another broad aspect of the invention there is provided a cladding member having a first portion for securing to a surface to be clad and a second portion adapted to interlock with and overly a said first portion of an adjacent like cladding member, the arrangement being such that at the interlock between two such members there is defined an anti-capillary channel for preventing the entry of water into said interlock by means of capillary action.

According to another broad aspect the present invention provides a cladding member comprising, a raised portion at one edge for receiving fixing means to fix the cladding member to a surface, and a channel portion at a second edge, said channel portion being adapted to interlock with the raised portion of an adjacent like cladding member, the arrangement being such that at the interlock between two such cladding members there is defined an anti-capillary channel between the raised portion of one said cladding member and the outermost part of the interlocking channel portion of an adjacent cladding member.

Some embodiments of the invention will now be described by way of example and with reference to the accompanying drawings, in which:-

Fig. 1 is a sectional view through a surface clad with cladding members according to a first embodiment of the present invention, and

Fig. 2 is a view similar to Fig. 1 showing a second embodiment.

Referring firstly to Fig. 1 a cladding member 1, in the form of an elongate cladding plank, is fixed to a wall 2 via a batten 3. It will be appreciated though that in some circumstances the cladding member 1 may be fixed directly to the wall 2 without the need of an intermediary batten. It will also be appreciated that Fig. 1 shows portions of adjacent underlying and overlying cladding members 1′ and 1″ that interlock with cladding member 1 in a manner to be described below.

The cladding member 1 is in the form of an elongate cladding plank and is formed along one edge with a securing portion 4 which is substantially thicker than the remainder of the plank 1, and is preferably approximately twice the thickness of the remainder of the plank. The cladding plank 1 is fixed to the batten 3, or wall 2 as the case may be, by means of nails 5 or similar fixing elements, passing through the securing portion 4. The provision of a relatively thick securing portion 4 is particularly advantageous when the plank is formed of a relatively soft material such as cellular foam. The outer side of the securing portion 4 is provided with a rib 6 that extends the length of the cladding plank 1.

The other edge of the cladding plank 1 is provided with an interlocking portion 7 that is adapted to overly and interlock with the securing portion 4′ of an adjacent plank 1′. The interlocking portion 7 is defined by two flanges 8,9 which extend for the length of the plank 1 and which are formed on the underside of the plank 1, that is to say they are directed towards the wall 2 in use. As can be seen from Fig. 1 the securing portion 4′ is received between this pair of flanges. One of the flanges, 8, is substantially L-shaped in cross-section and defines a recess 10 that is complementary to and adapted to receive the rib 6′ of the underlying plank 1′. As can be seen from Fig. 1, the other of the two flanges, 9, is provided at the edge of the plank 1 and is spaced from the securing portion 4′ of the underlying plank so that an anti-capillary channel 11 is defined therebetween. It will be appreciated that were the flange 9 to be formed so as to fit closely against the securing portion 4′, there would be formed a series of very narrow channels between the two portions extending along the interlock between two planks and along which water may be drawn by capillary action. By providing an anti-capillary channel 11 of relatively large cross-section such capillary action is prevented. Thus the interlock protects the nails 5 from rain not only directly, by virtue of the interlocking portion overlying the securing portion, but also indirectly since water cannot be drawn along the interlock by capillary action. This interlock design also has the advantage that a better line may be achieved between interlocking planks, particularly when viewed from below, if the fixing nails have not been fully driven home.

The embodiment shown in Fig. 1 is particularly suitable for a plank that is to be fixed to a wall horizontally, but the invention is equally applicable to vertical cladding members and Fig. 2 shows an embodiment of such a vertical cladding member. In Fig. 2 the same reference numerals have been used to refer to the same elements as in Fig. 1, and the corresponding description applies to Fig. 2 as well as to Fig. 1.

Claims

1. A cladding system comprising a plurality of adjacent cladding members, each said cladding member comprising a first portion for securing to a surface to be clad, and a second portion adapted to interlock with and overly a said first portion of an adjacent like cladding member, the arrangement being such that at the interlock between two such members there is defined an anti-capillary channel for preventing the entry of water into said interlock by means of capillary action.

2. A cladding system according to claim 1 wherein the first portion of each said cladding member comprises a raised portion at one edge for receiving fixing means to fix the cladding member to a surface, and each said second portion comprises a channel portion at a second edge adapted to interlock with the raised portion of an adjacent cladding member, wherein said anti-capillary channel is defined between the raised portion of one said cladding member and the outermost part of said interlocking channel portion of an adjacent member.

3. A cladding system according to claim 1 or 2 wherein the cladding members are generally elongate and the interlock extends parallel to the members for substantially the entire length of the members.

4. A cladding system according to claim 3 wherein the anti-capillary channel extends parallel to the cladding members.

5. A cladding system according to claim 4 wherein the cladding members are provided on one side with a securing portion comprising a rib extending substantially the whole length of the member, and on the other side are provided with an interlocking portion comprising a pair of flange members, one of said flange members defining a

recess adapted to receive the rib of a said securing portion, and said anti-capillary channel being defined between said securing portion and the other of said pair of flange members.

6. A cladding system according to any preceding claim wherein the securing portion is substantially thicker than the remainder of the cladding member.

7. A cladding system according to claim 6 wherein the thickness of the securing portion is twice the thickness of the remainder of the cladding member.

8. A cladding member having a first portion for securing to a surface to be clad and a second portion adapted to interlock with and overly a said first portion of an adjacent like cladding member, the arrangement being such that at the interlock between two such members there is defined an anti-capillary channel for preventing the entry of water into said interlock by means of capillary action.

9. A cladding member comprising, a raised portion at one edge for receiving fixing means to fix the cladding member to a surface, and a channel portion at a second edge, said channel portion being adapted to interlock with the raised portion of an adjacent like cladding member, the arrangement being such that at the interlock between two such cladding members there is defined an anti-capillary channel between the raised portion of one said cladding member and the outermost part of the interlocking channel portion of an adjacent cladding member.

FIG. 1

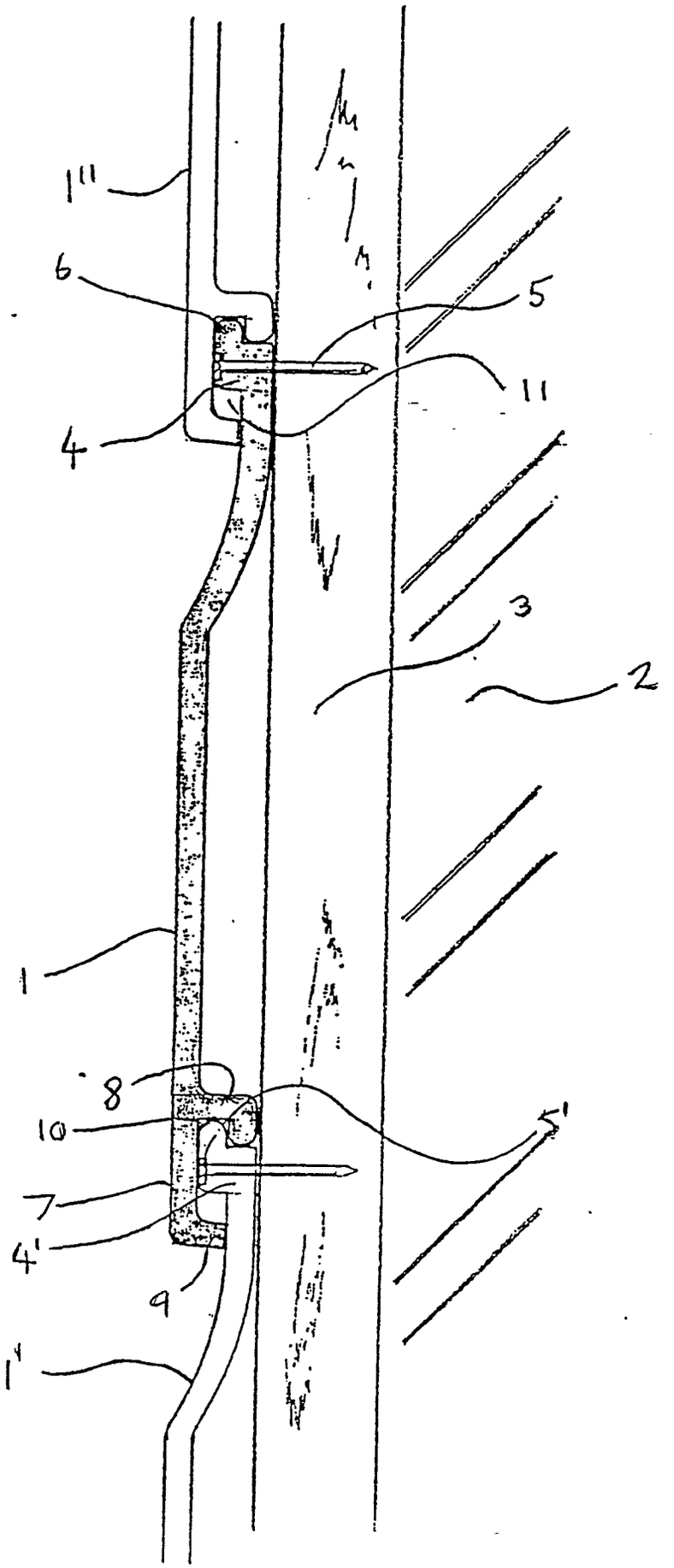
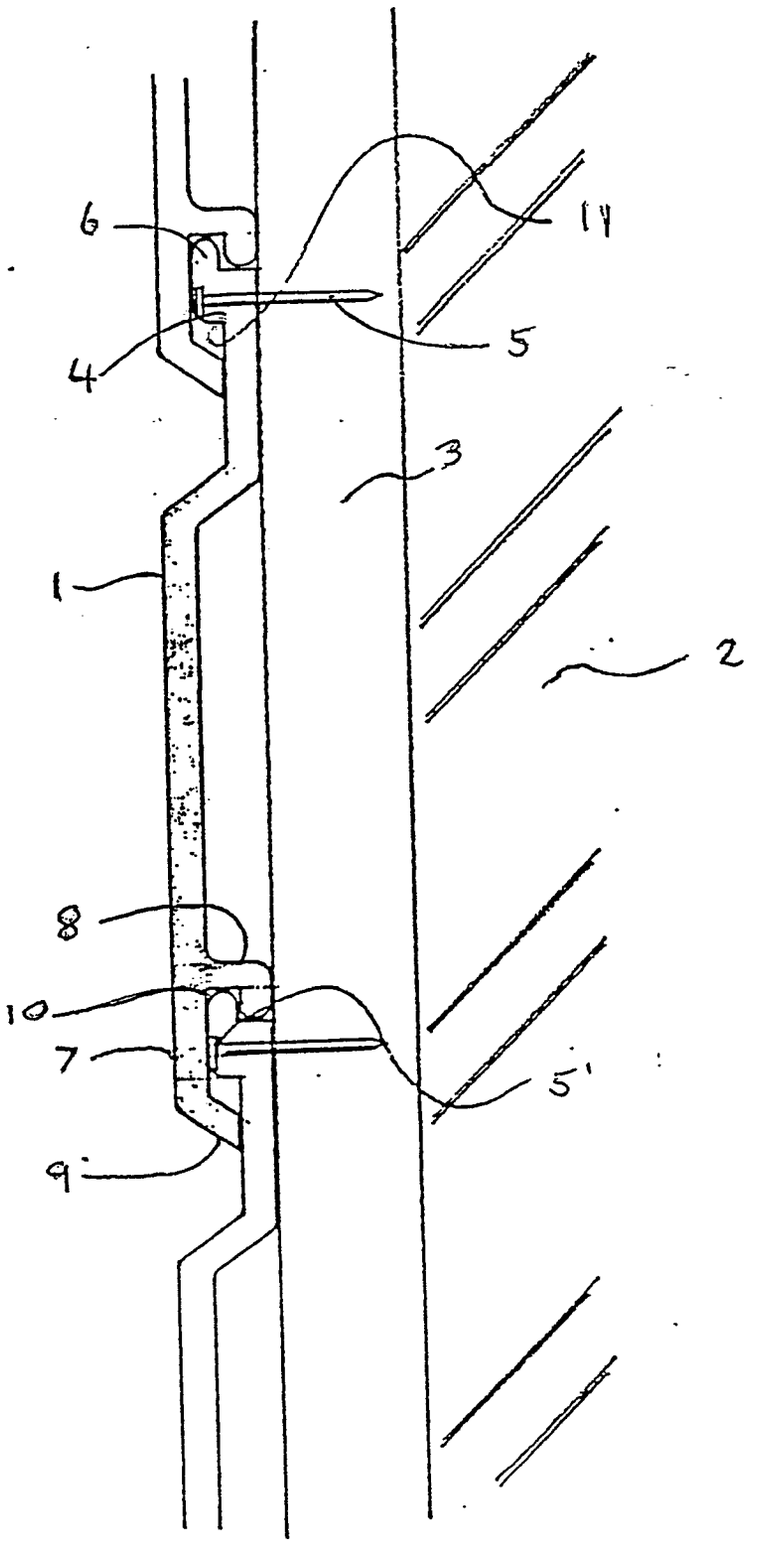


FIG. 2



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EUROPEAN SEARCH REPORT

Application Number

EP 89 30 1812

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	DE-A-3 401 891 (PUROLL HARTSCHAUM-GmbH) * Page 4, line 1 - page 5, line 32; page 7, lines 10-27; page 10, line 15 - page 12, line 9; figures 1-6 *	1,3,4,8	E 04 F 13/08
Y		2,5-7,9	
Y	US-A-2 354 639 (H.T. SEYMOUR) * Page 1, left-hand column, line 46 - page 2, left-hand column, line 30; figures 1-3 *	2,5,9	
A		1,3,4,8	
Y	US-A-4 308 702 (J.J. RAJEWSKI) * Column 2, line 34 - column 3, line 30; figures 1,2 *	6,7	
A		1,3,5,8	
A	US-A-2 948 367 (S.R. UGLIETTO) * Column 1, line 59 - column 2, line 47; figures 1-3 *	1-5,8,9	TECHNICAL FIELDS SEARCHED (Int. Cl.4)
A	GB-A- 483 751 (E. HURDEN) * Page 1, line 71 - page 2, line 69; figures 1-4 *	1,2,4,5,8,9	E 04 F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	10-07-1989	AYITER J.

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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