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A4N N14A

(56) Documents Cited:
GB 2352394 A **GB 2340480 A**
GB 2251786 A **BE 001010414 A**

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UK CL (Edition X) **A4N, E1D, F2M**
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Other: **EPODOC, WPI**

(54) Abstract Title: **Bath panel**

(57) A facing panel system comprises at least two panels 12, 14, 16 and means for joining them side by side. The means for joining the panels 12, 14, 16 may be cams 30 and dowels 32. Each dowel may have a first end 34 which is screwed into a hole in a first of the panels 12, 16 and a second end 36 which is inserted through a hole in a second of the panels into a cam 30. Turning of the cams 30 may engage heads of the second ends 36 of the dowels and hold the panels 12, 14, 16 together. The assembled panels 12, 14, 16 may form a bath panel. The bath panel may comprise three upper panel members and three lower panel members, the lower panel members providing a plinth and the panels being secured together by a plurality of cams and dowels.

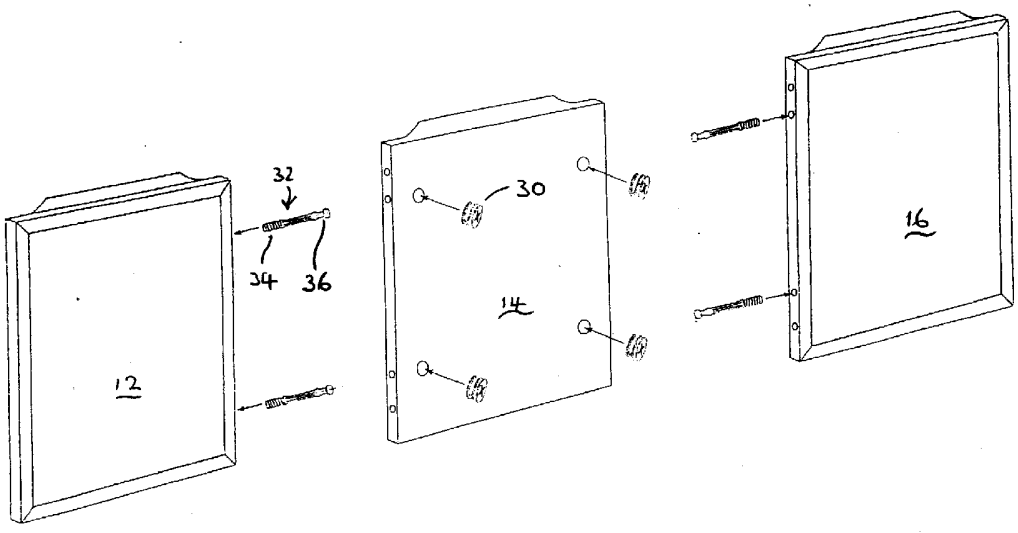


Figure 2

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At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.
Original Printed on Recycled Paper

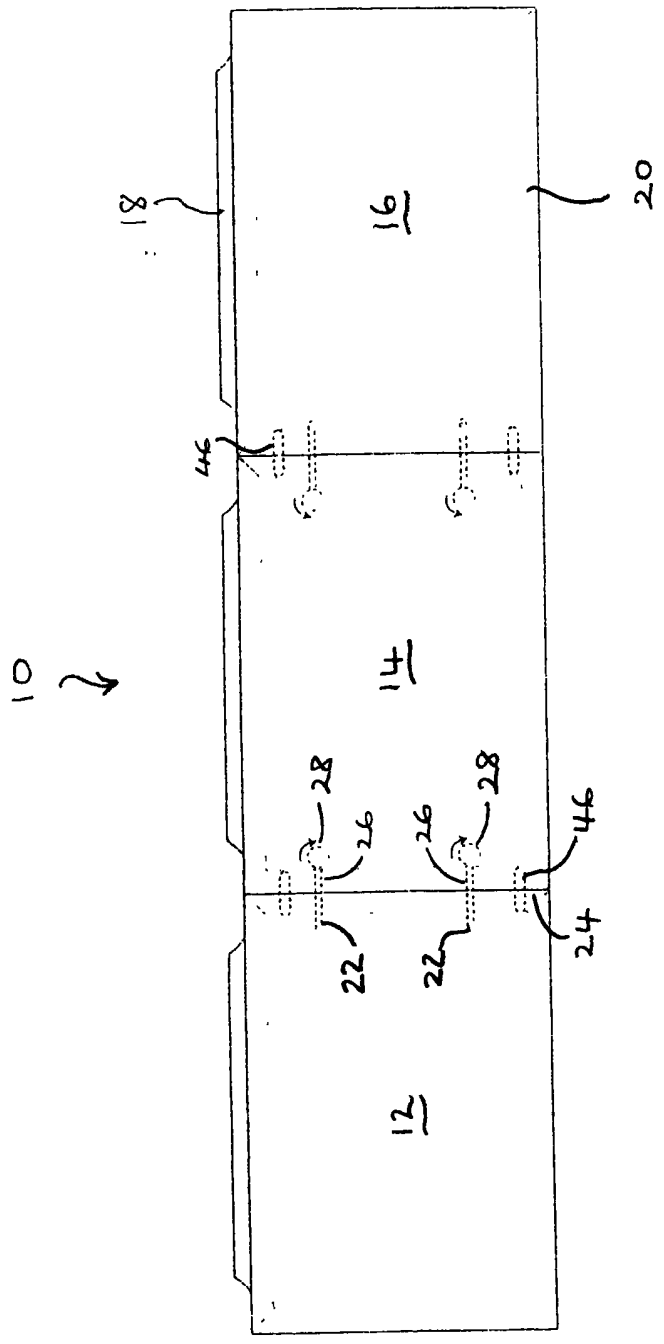


Figure 1

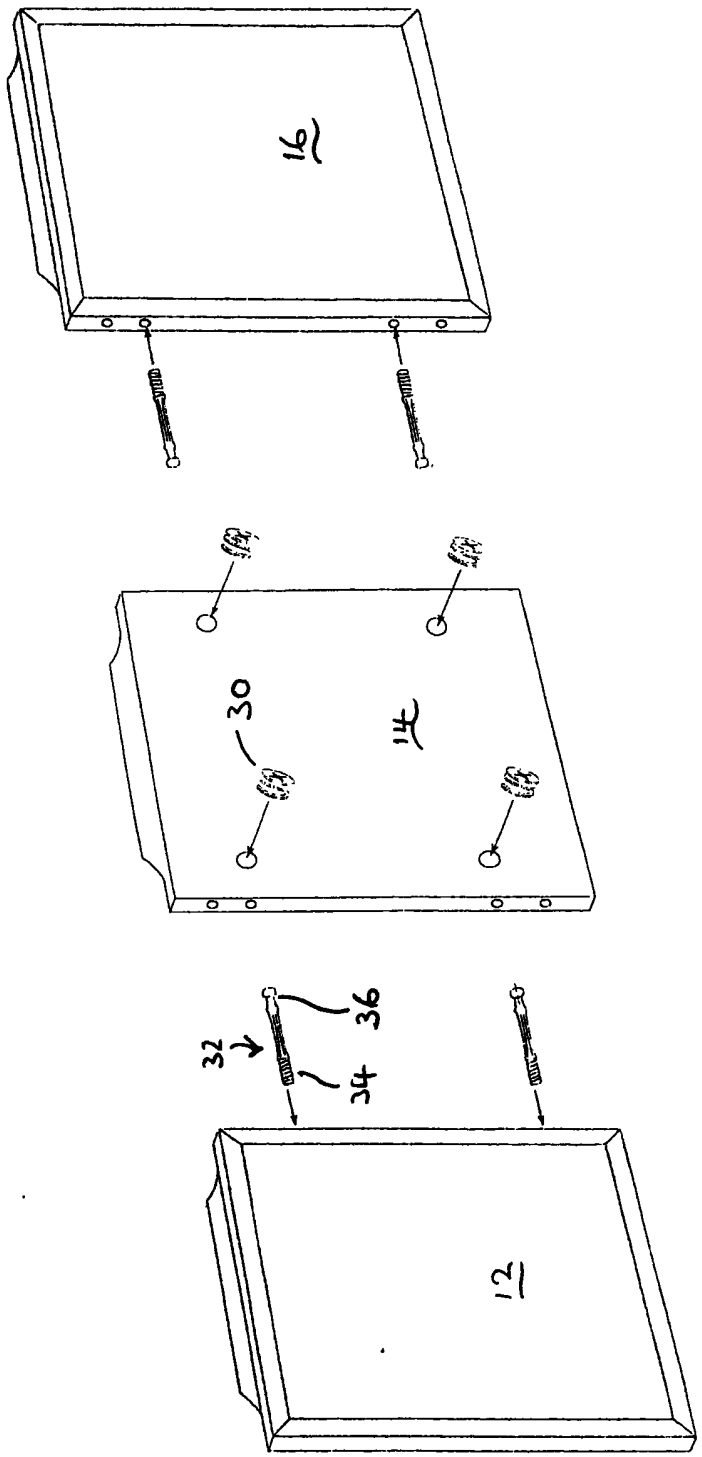


Figure 2

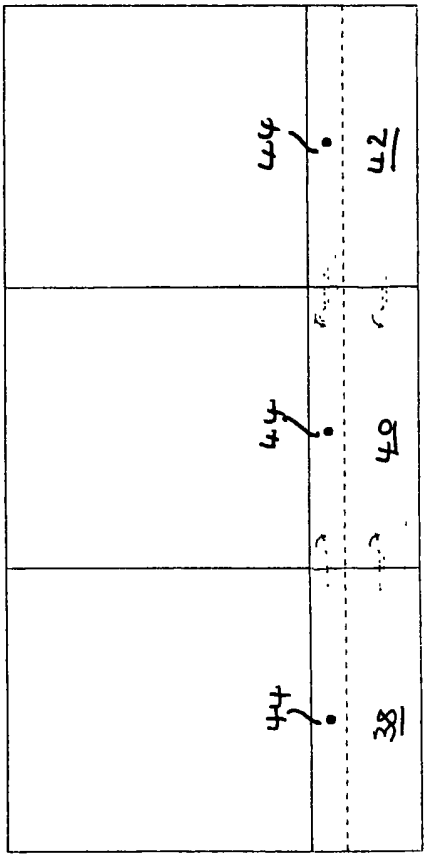


Figure 3

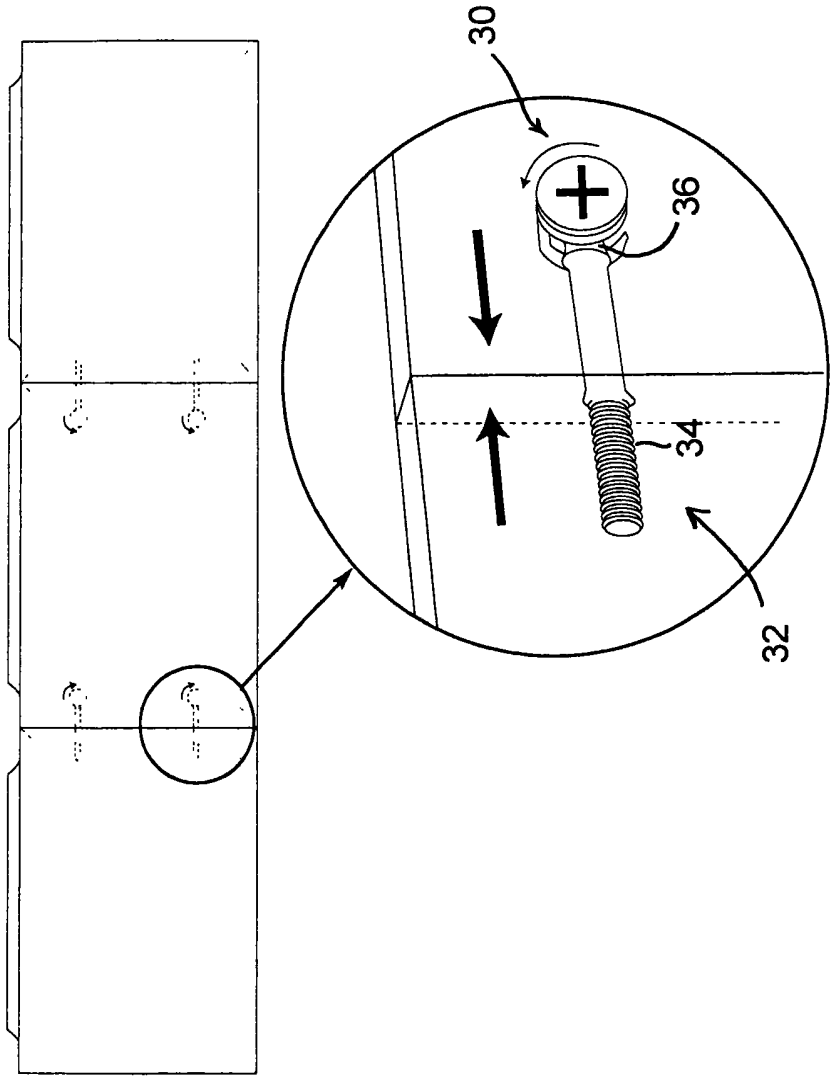


Figure 4

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Decorative Panel

This invention relates to a composite facing panel and particularly a composite bath panel.

Decorative panels are commonly used in domestic and commercial buildings. Such panels include those used to enclose the support frame of a bath. While a wide variety of single piece panels are available for such use they suffer the disadvantage of typically being about 2 metres in length. An object of the present invention is to provide panels comprising several shorter sections that can be assembled side by side. Such panel systems can be packaged in much more compact form so that they appeal to a wider proportion of the public, especially purchasers who need to take the goods home using vehicles that have relatively small boots or stowage capacity. Another object of the present invention is to provide a facing panel comprising several individual panel members where individual panel members can be readily attached or detached from each other.

In one aspect the invention comprises a facing panel system comprising at least a first panel member and a second panel member and means for joining said panel members together side by side.

Preferably the means for joining comprises a plurality of cams and dowels. Preferably the first panel member has pre-formed holes in the side edge of the panel that extend within the panel in a direction generally parallel to the face of the panel so as to allow the base portions of the dowels to be screwed therein; and the second panel member has a similar pre-formed holes that accepts the heads of said dowels when the panels are aligned side by side; further comprising cylindrical bores in the face of the second panel sized to accept cams such that upon insertion and turning of the cams, said cams engage the heads of the dowels and thereby pull the two panels together in side by side

relationship. Preferably, the dowels and cams are made of metal or a plastics material.

In another aspect the invention comprises a kit of parts comprising at least the first and second panel member with preformed holes as described in the preceding paragraph.

The system may comprise a bath panel with three panel members. Optionally, the bath panel may comprise three upper panel members and three lower panel members; said lower panel members providing a plinth. Each panel may have a thickness between 12 and 20 mm.

An embodiment of the invention will now be described by reference to the following diagrammatic figures in which:

Figure 1 shows a front view of a panel according to the present invention comprising three panel members;
Figure 2 shows an exploded view of a system according to the invention;
Figure 3 shows a rear view of the panel of Figure 2 with an additional plinth attached; and
Figure 4 shows a detailed view of the cam and dowel arrangement used to attach panel members in a side by side relationship.

Figure 1 shows a front elevation of bath side panel system according to an embodiment of the invention. The panel system 10 comprises three individual panels 12, 14 and 16 arranged in side by side relationship. Each panel optionally has an upper lip 18 shaped to fit under the rim of a bath. In addition each panel optionally has bevelled edges 20.

Individual panel members of the panel system are preferably held side by side using a metal cams and dowels. Such cams and dowels are commonly used to hold individual panels at right angles to each other. However, the base portion of the dowels are always screwed into a panel face. In contrast, in the present system the base portion of the dowels are screwed into pre-formed holes located along the side edge of the panel. This requires a different arrangement of holes in the individual panel members. The panel is preferably made of MDF with a PVC surface liner and is typically between 12 and 20mm thickness. It has, surprisingly been found that metal dowels screwed into the side of such panels have sufficient strength in use, and therefore that such dowels do not of necessity have to be screwed into the surface of a panel. Hence, used in this way metal cams and dowels can be used to join panels in side by side relationship; that is at 180° to each other rather than the normal 90°.

Referring to Figure 1, panel 12 is provided with pre-formed cylindrical bore holes 22 located in the side edge 24 of the panel; each hole having an axis in a direction substantially parallel to the surface of the panel. Panel member 14 has a cylindrical bore hole 26 in the side edge dimensioned to allow the head of a cam to pass freely therethrough said hole 26 exiting into a cam bore hole 28 said cam bore hole having an access perpendicular to the inner face of panel member 14.

Figure 2 illustrates a panel system according to the invention in a disassembled state and shows the positions in which metal cams 30 and metal dowels 32 are inserted within the panels.

The panel system of the invention can be readily assembled and disassembled. Thus, to assemble the system the base 34 of dowels 32 are screwed into the preformed bore holes 22 in the inner side edge of panel members 12 and 16. Members 12 and 16 with protruding dowel heads 36 are aligned with the sides

bore holes 26 of central panel member 14 and the panels are pushed together. Metal cams 30 are then inserted into each cam bore hole 28 and the cam members tightened as normal to engage the heads 36 and thereby pull the inner edges of panels 12 and 16 against the edges of central panel 14.

Optionally, the system may include a plinth. Thus, Figure 3 shows lower plinth members 38, 40 and 42 joined side by side using the arrangement described above. The upper front face of the assembled plinth is then secured to the lower rear face of main panel 10 by means of screws 44.

Wooden dowels 46 and locating holes in the side edges of the panels (see Figure 1) may also be provided to assist alignment during assembly and to provide additional rigidity.

Figure 4 shows an enlarged cross section of the edge of two adjoining panel and the arrangement of the cam 30, dowel 32 and bore holes within adjoining panels.

CLAIMS

1. A facing panel system comprising at least a first panel member and a second panel member and means for joining said panel members together side by side.

2. A system according to Claim 1 wherein said means for joining comprises a plurality of cams and dowels.

3. A system according to Claim 2 wherein the first panel member has pre-formed holes in the side edge of the panel that extend within the panel in a direction generally parallel to the face of the panel so as to allow the base portion of dowels to be screwed therein; and the second panel member has a similar pre-formed holes that accepts the heads of said dowels when the panels are aligned side by side; further comprising cylindrical bores in the face of the second panel sized to accept cams such that upon insertion and turning of the cams, said cams engage the heads of the dowels and thereby pull the two panels together in side by side relationship.

4. A system according to Claim 3 wherein the cams and dowels are made of metal or a plastics material.

5. A bath panel according to any of Claim 1 to 4 comprising three panel members.

6. A bath panel according to Claims 1 to 4 comprising three upper panel members and three lower panel members; said lower panel members providing a plinth.

7. A panel according to any preceding claim wherein each panel is between 12 and 20 mm thickness.

8. A kit of parts comprising at least the first and second panel member of the system according to Claim 3.

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Application No:	GB0507921.5	**Examiner:**	Eleanor Wade
Claims searched:	1-8	**Date of search:**	15 August 2006

Patents Act 1977: Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
X,Y	X:1-4,8 Y:5-7	GB2340480 A Cotswold Design see figures
Y	5-7	GB2352394 A Rivdal Developments see figures
Y	4-7	GB2251786 A American Standard see figures
Y	4-7	BE1010414 A Weich see figures

Categories:

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC^{X} :

A4N; E1D; F2M

Worldwide search of patent documents classified in the following areas of the IPC

A47K; E04G; F16B

The following online and other databases have been used in the preparation of this search report

EPODOC, WPI