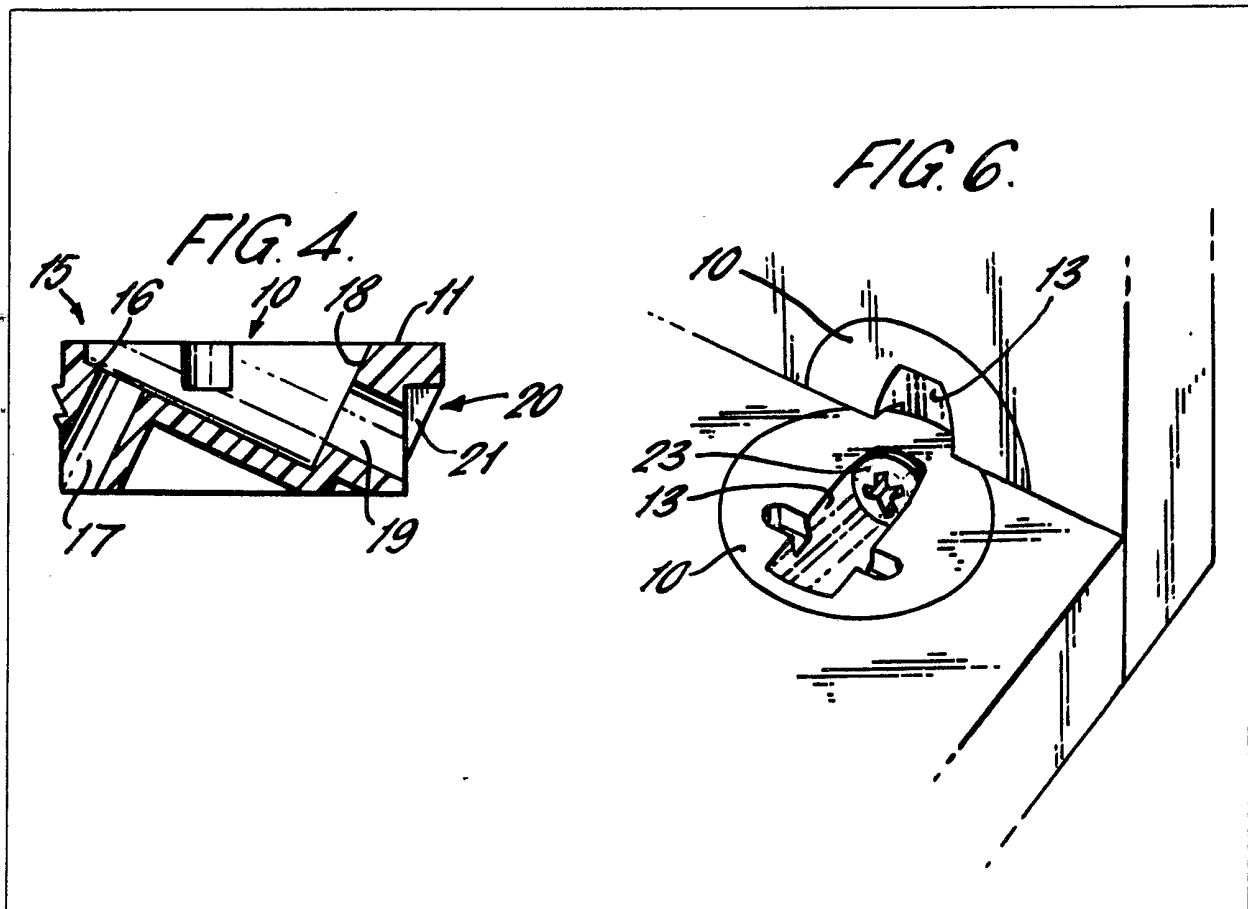


(21) Application No 8006737
(22) Date of filing
28 Feb 1980
(43) Application published
9 Sep 1981
(51) INT CL³ F16B 12/16
(52) Domestic classification
F2M 201 226 276 B2
(56) Documents cited
GB 1544732
US 4160610A
US 4089614A
FR 2344738A
(58) Field of search
F2M
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(54) Furniture joint fittings

(57) The joint fitting comprises two similar cylindrical members (10) for insertion in respective bores in two components to be secured together. Each cylindrical member has a cruciform shaped recess formed in one side (11) thereof and, on the outer periphery of the member, a bevelled seating (20) located adjacent one end of the recess (13). The joint is assembled with the bearing surface (20) of one of the members engaged in a part (16) of the recess (13) in the other member and a screw (23) located in bore (19) in the recess (13) of the one member is screwed into bore (17) in the recess of the other member to lock the members rigidly together with the axis extending with the members at right angles to each other.



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FIG. 1.

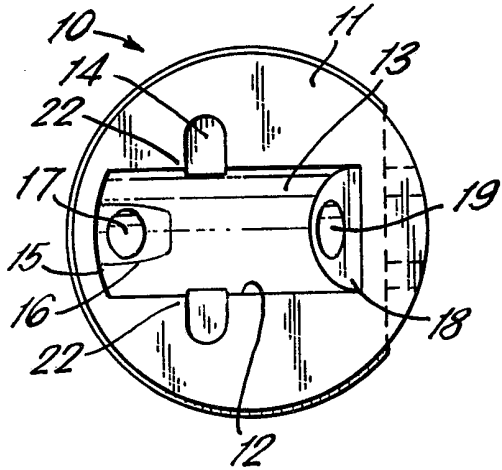


FIG. 2.

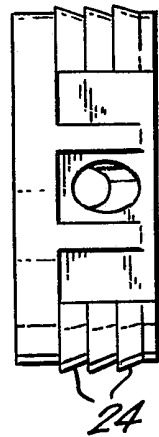


FIG. 3.

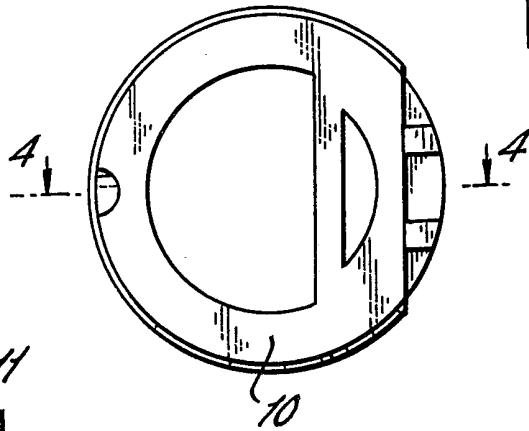


FIG. 4.

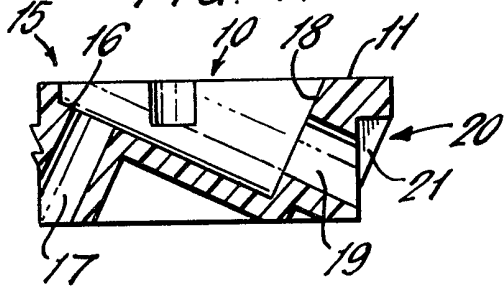


FIG. 6.

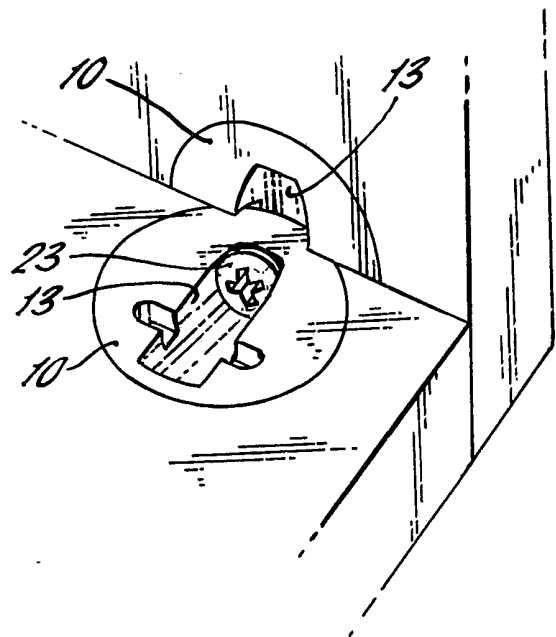
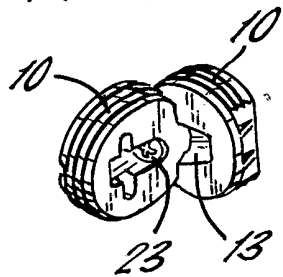


FIG. 5.



SPECIFICATION

Joint fittings

5 This invention relates to joint fittings particularly although not exclusively for securing panels such as furniture components together.

The invention provides a joint fitting comprising a cylindrical member for insertion in a bore in one element of a two component joint, the cylindrical member having a recess in one side thereof shaped to provide a seat to receive and support the periphery of a similar member and the periphery of the member having a shaped bearing portion to engage in the recess of a further similar cylindrical member so that when the bearing portion of one member is located in the seat in the recess of another member, the members are supported by each other with their respective axes at a required angle to each other and a fastening for extending from the recess in one of the members through the bearing portion in the periphery thereof into the seat in the other member to fix the two members together.

The following is a description of one specific embodiment of the invention, reference being made to the accompanying drawings in which:

30 *Figure 1* is a plan view of a joint member; *Figure 2* is a side view of the member; *Figure 3* is a under-plan view of the member;

35 *Figure 4* is a section on the line 4-4 on Fig. 3;

Figure 5 is a perspective view of two joint members assembled to form a complete joint; and

40 *Figure 6* is a perspective view of two panels secured together by a joint as illustrated in Fig. 5.

Figs. 1 to 4 show a one-piece moulded plastics joint member 10 which, with a similar member forms a joint for use for example between two panels of wood or similar material secured together at right angles.

The joint member has a cylindrical periphery and one end of the member 11 has a cruciform shaped recess 12 in one side thereof, the upright of the cross being indicated at 13 and the cross-piece at 14. The cross-piece 14 of the cruciform shaped recess is located nearer one side 15 of the recess than the other and a seating is formed indicated at 16 at that end of the recess to receive a part of the periphery of a similar joint member to support the member at right angles to the first member. The seating 16 is illustrated in greater detail in Fig. 4 of the drawings and it will be seen to have an inclined bottom face from which a screw hole 17 extends downwardly through the member to open out at the peripheral edge of the other side of the member.

65 The other end 18 of the main part 13 of

the cruciform shaped recess has a screw hole 19 extending from the end of the recess through the peripheral wall of the member where the wall has a bevelled bearing surface 20 to engage in the recessed seating 15 of the other member to form the joint. The periphery of the cylindrical member is cut away on either side of the bevelled bearing portion 20 to form recesses 21 in which the corners 22 between the main part 15 and cross-piece 14 of the recess engage when the member is assembled with another member to assist in supporting the member.

Two cylindrical member are fixed together with the bevelled bearing portion 20 of one of the members located on the seating 16 of the other member as illustrated in Fig. 5 of the drawings. The members are secured together by means of a self tapping screw 23 which is screwed through the bore 19 in one of the members and into the bore 17 of the other member to fix the two members together with their axes extending mutually perpendicular to each other.

90 The outer surface of the cylindrical member 11 is formed with barbed shaped peripherally extending ridges 24 which face towards the side of the member in which the recess 12 is formed. The member is intended to be a press fit in a panel to which the joint is to be applied and the ridges engage the bore and resist extraction of the member from the bore.

Reference is now made to Fig. 6 of the drawings which illustrates two panels 25, 26 fixed together at right angles to each other by the joint. One of the members 10 is located in a bore 27 adjacent an edge of one panel 25 in which it is located with the bevelled bearing face 20 of the member 10 exposed at the edge of the panel. The other member 10 is located in a bore 28 spaced from the periphery of the panel 26. The panels are assembled with said edge of the panel 25 engaging a surface of the other panel 26 and with the peripheral bearing portion of one of the cylindrical members exposed at the edge of the member engaging in the seating in the recess 12 of the other member. The self-tapping screw 23 is then driven through the bore 19 in the one member and into the bore 17 in the other member to fix the two members together. The length of the screw 23 is such that it projects from the bore 17 into the panel behind the member to assist in holding the member in the panel.

The members are formed from a high density plastics by injection moulding and can be fitted to panels to be assembled by automatic machinery which first drills suitably sized bores in the panels and then inserts the cylindrical elements or the members can be inserted manually after manual boring operations. The panels so fitted with cylindrical members can be then assembled or can be supplied for subsequent assembly in knock-

down form.

CLAIMS

1. A joint fitting comprising a cylindrical member for insertion in a bore in one element of a two component joint, the cylindrical member having a recess in one side thereof shaped to provide a seat to receive and support the periphery of a similar member and the periphery of the member having a shaped bearing portion to engage in the recess of a further similar cylindrical member so that when the bearing portion of one member is located in the seat in the recess of another member, the members are supported by each other with their respective axes at a required angle to each other and a fastening for extending from the recess in one of the members through the bearing portion in the periphery thereof into the seat in the other member to fix the two members together.
2. A joint fitting as claimed in claim 1 wherein the cylindrical member is formed with a cruciform shaped recess and the seat for the periphery of a further cylindrical member is formed by the cross-piece of the recess and the adjacent end part of the recess.
3. A fitting as claimed in claim 2 wherein the bearing portion formed on the periphery of the cylindrical member to engage in the recess of a further member comprises a bevelled face formed on the periphery of the member.
4. A joint as claimed in claim 3 wherein the peripheral surface of the member is formed with recesses on either side of the bevelled face in which the corners of the side of the cylindrical member between the cross piece and the main part of the cruciform shaped recess engage.
5. A joint as claimed in any of claims 2 to 4 wherein the bearing portion is formed on the outer periphery of the cylindrical member adjacent the end of the cruciform shaped recess remote from the seating and a bore is provided from said end of the cylindrical recess through the bearing portion to receive the fastening for securing the member to another member.
6. A fitting as claimed in claim 5 wherein the fastening comprises a screw the head of which is located in the recess in which it extends through the bore in the member, the seating in the member having a bore to receive a screw from another member for fixing the two members together.
7. A fitting as claimed in any of the preceding claims wherein the periphery of the cylindrical member is formed with spaced circumferentially extending barb section ridges facing towards the side of the member formed with a recess to grip and hold the member in a bore which is to form part of a joint.
8. A joint fitting substantially as described comprising two such cylindrical members for

insertion in bores in two elements to be secured together and a screw for fixing the two members together when located in the elements.

9. A joint fitting substantially as described with reference to and as illustrated in the accompanying drawings.
10. A two part joint fitting substantially as described with reference to and as illustrated in the accompanying drawings.

CLAIMS (30 March 1981)

1. A joint fitting comprising a pair of identical cylindrical members for insertion in bores in respective parts of the two component joint, each cylindrical member having a recess in one side thereof shaped to provide a seat to receive and support the periphery of the other member and the periphery of each member having a shaped bearing portion to engage in the recess of the other member so that when the bearing portion of one member is located in the seat in the recess of the other member, the two members are supported by each other with their respective axes at a required angle to each other and a fastening device is provided for extending from the recess in one of the members through the bearing portion in the periphery thereof into the seat in the other member to fix the two members together at said required angle.
2. A joint fitting as claimed in claim 1 wherein each cylindrical member is formed with a cruciform shaped recess and the seat for the periphery of a further cylindrical member is formed by the cross-piece of the recess and the adjacent end part of the recess.
3. A fitting as claimed in claim 2 wherein the bearing portion formed on the periphery of each cylindrical member to engage in the recess of the other member comprises a bevelled face formed on the periphery of the member.
4. A joint as claimed in claim 3 wherein the peripheral surface of said member is formed with recesses on either side of the bevelled face in which the corners of the side of the cylindrical member between the cross-piece and the main part of the cruciform shaped recess engage.
5. A joint as claimed in any of claims 2 to 4 wherein the bearing portion is formed on the outer periphery of said cylindrical member adjacent the end of the cruciform shaped recess remote from the seating and a bore is provided from said end of the cylindrical recess through the bearing portion to receive the fastening for securing the member to another member.
6. A fitting as claimed in claim 5 wherein the fastening comprises a screw the head of which is located in the recess in which it extends through the bore in the member, the seating in the member having a bore to receive a screw from the other member for

fixing the two members together.

7. A fitting as claimed in any of the preceding claims wherein the periphery of each cylindrical member is formed with spaced circumferentially extending barb section ridges facing towards the side of the member formed with a recess to grip and hold the member in a bore which is to form part of a joint.

8. A joint fitting substantially as described with reference to and as illustrated in the accompanying drawings.

Printed for Her Majesty's Stationery Office
by Burgess & Son (Abingdon) Ltd.—1981.
Published at The Patent Office, 25 Southampton Buildings,
London, WC2A 1AY, from which copies may be obtained.