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GB 2348233 A
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US 5803563 A
US 4217012 A

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(54) Abstract Title
Hinged end barrier for tambour door tracks

(57) To facilitate installation and prevent sliding tambour door overrun, a tambour door arrangement includes a barrier member 18 associated with a track 10 through a hinge 20. The barrier 18 is moulded with the track 10. In order to install a tambour door in the arrangement the barrier 18 is held in an open position Fig 1. The barrier member 18 is displaced about the hinge 20 into a closed position Fig 5, such that the door is retained from leaving the track at the end to which the barrier 18 is secured. Typically, two track arrangements are assembled with one another such that the tracks 10 of each are substantially aligned and contiguous with respective barrier members 18 preventing a door on one track 10 when slid over shooting to the other track 10.

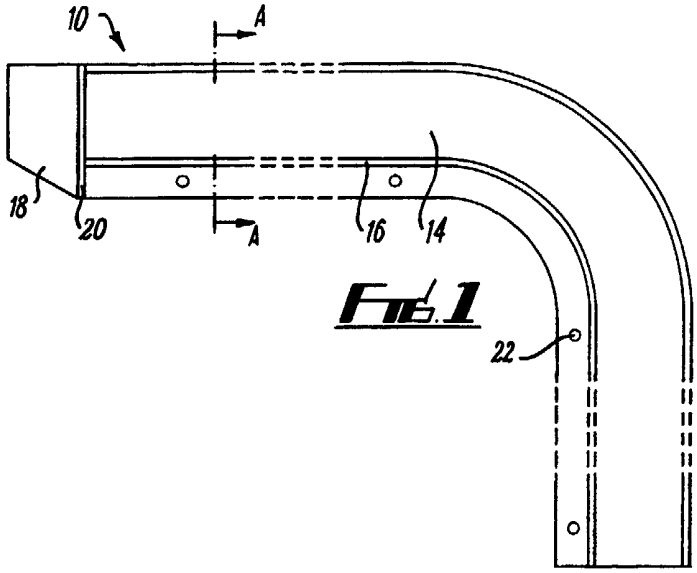

FIG.1

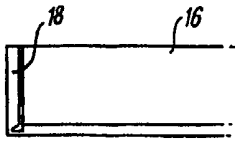

FIG.5

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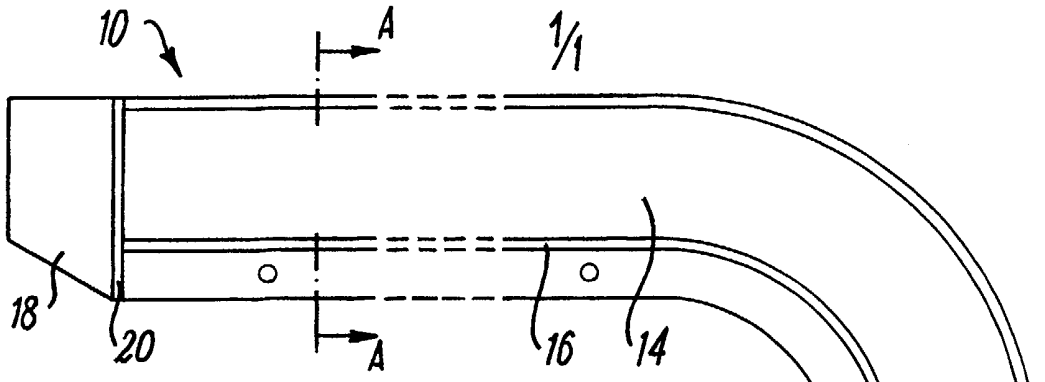

FIG. 1

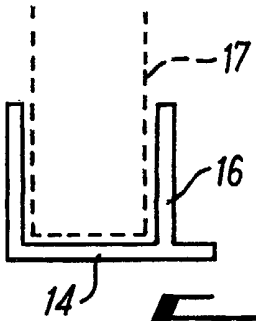

FIG. 2

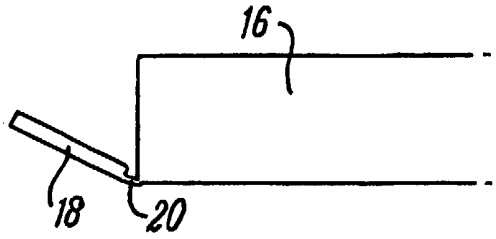

FIG. 3

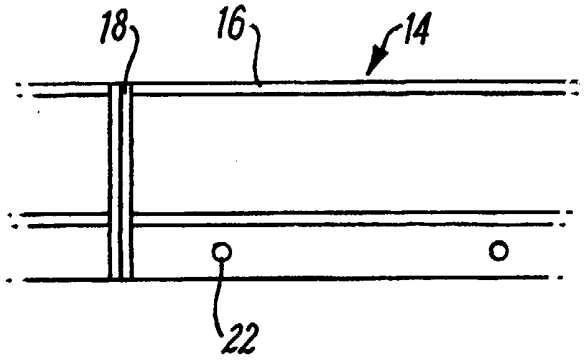

FIG. 4

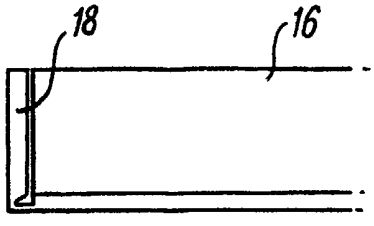

FIG. 5

Track Arrangement

The present invention relates to tambour door track arrangements, and particularly, but not exclusively, to track arrangements for use in furniture.

A common form of tambour door assembly includes a track in which the edge of the door runs as the door is opened and closed. The door is constructed of parallel, articulated slats, allowing the track to be curved, to take the door out of sight when open. Conventionally, two pairs of tracks are arranged to support two doors which meet at a central position. This gives rise to the problem of a door possibly overshooting the end of its own track.

The present invention provides a tambour door track arrangement comprising a track along which a tambour door is guided, during use, and a barrier member at one end of the track, the barrier member having an open position in which the tambour door is free to be removed from or engaged with the track, and a closed position in which the tambour door is retained by abutment with the barrier member in engagement with the track, the barrier member and the track being permanently attached together during use.

The barrier member and the track may be formed as a unitary component, such as by moulding.

The barrier member is preferably hingeable between the open and closed positions.

The track may be a channel which is closeable at an end thereof by means of the barrier member moving to the closed position.

The track arrangement may comprise two tracks as aforesaid, for respective doors, the tracks being positioned to cause the barrier members to abut when in their closed position, thereby retaining each other in their closed position.

Embodiments of the present invention will now be described in more detail, by way of example only, and with reference to the accompanying drawings, in which:-

Fig. 1 shows a length of track with a barrier member in a first position;

Fig. 2 is a cross section through the track of Fig. 1 at the line A-A;

Fig. 3 is a side view of the end of the track with the barrier member in a first position;

Fig. 4 is the plan view of the track with the barrier member in second position, adjacent to the corresponding stop arrangement; and

Fig. 5 is a side view of the track with the barrier member in a second position.

In the present specification, all references to directions are based on the assumption that the tracks are horizontal, and provided at the top and bottom of doors which have vertical tambour slats and meet at a vertical line when closed. However, it is to be understood that other orientations may be used in practice, and these references to particular orientations are not to be seen as limiting the scope of the invention in any way.

Fig. 1 shows a track arrangement for use in supporting and guiding the edge of a tambour door. The arrangement includes a track 10 which has a base 14 and side walls 16 (as can be seen in Fig. 2), together forming a channel along which the edge of a tambour door may slide, as illustrated by ghosted lines 17 in Fig. 2. This type of track is used in the construction of furniture, for example office furniture, for which sliding doors are required.

At one end of the track 14 there is provided a barrier member 18. The barrier member 18 is connected to the track member 14 by a hinge 20.

Accordingly, the barrier member 18 can hinge between two positions. In one position, illustrated in Figs. 1 and 3, the end of the channel is left open by the barrier member 18, thus allowing a tambour door to be readily introduced into the track 10, or removed from it, by moving the door through the open end of the track 10.

Once the doors are located within the track 14 the barrier 18 is moved to its second position (see Fig. 5). In this position, the barrier member 18 is closing the end of the track 10, so that a tambour door will be prevented from leaving the track 10. Thus, the barrier member 18 is able to act as an end stop against which a tambour door may abut when fully closed, stopping the door against further movement, or from leaving the track 10.

In this example, the track 14, the barrier 18 and the hinge 20 are integrally formed by injection moulding. This provides for ready formation of the hinge 20 as a live hinge formed by a localised reduction in the thickness of the material forming the unitary component.

It is convenient if the component is so formed that the arrangement 10 naturally assumes the open position (Fig. 3). This is to allow the sliding doors which are located within the track 14 to be easily mounted and removed.

When in use with an arrangement having two tambour doors which meet when closed, two tracks are placed adjacent to each other so that their ends meet at the position at which the doors are required to meet. This can most clearly be seen in Fig. 4. In order to bring the tracks together as shown in Fig. 4, it is necessary for the barrier members 18 to be in their closed position. Thereafter, the barrier members are trapped between the adjacent tracks, thus being prevented from re-opening, and providing stops which limit movement of tambour doors in the two tracks.

However, in the event that a tambour door is required to be removed or re-introduced, either of the tracks may be distorted until the tracks are no

longer in alignment, freeing the barrier members 18 to open and release the tambour door. This operation is facilitated by forming the tracks of relatively supple material.

Distortion is prevented in normal use by fixing the track to the furniture by means of mounting holes 22 in flanges along the outside of the channels, allowing the use of screws, bolts etc., for fixing to the furniture.

The arrangement described therefore provides secure retention of the tambour doors when the barrier members are closed, as shown in Fig. 4. However, the tambour doors can readily be released, as described above. During this operation, loss of a barrier member is prevented, and correct positioning of the barrier members is assumed, because they are not separate items (which would be small and thus prone to loss, or difficult to position), but are permanently attached to the remainder of the track.

Many variations and modifications can be made to the apparatus described above, without departing from the scope of the present invention. In particular, the stop arrangement need not be of unitary construction with the track, but could be attached in another manner, such as by means of adhesive. The barrier member may be of a different material to the track. The hinge is shown as being in a horizontal axis in the same plane as the base of the track but the barrier member could alternatively be hinged along the vertical axis in the plane of one of the walls of the track.

Whilst endeavouring in the foregoing specification to draw attention to those features of the invention believed to be of particular importance it should be understood that the Applicant claims protection in respect of any patentable feature or combination of features hereinbefore referred to and/or shown in the drawings whether or not particular emphasis has been placed thereon.

Claims

1. A tambour door track arrangement comprising a track for guiding a tambour door and a barrier member associated at one end with the track, the barrier member being displaceable from an open position in which a tambour door is free to be removed from or engaged with the track, and a closed position in which a tambour door is retained by abutment with the barrier member from leaving the track at that end, the barrier member and the track being held together in the closed position during use.

2. An arrangement as claimed in claim 1 wherein the barrier member and the track comprise a unitary component.

3. An arrangement as claimed in claim 2 wherein the unitary component is formed by moulding.

4. An arrangement as claimed in any of claims 1, 2 or 3 wherein the barrier member is associated with the track through a hinge mounting in order to be displaceable between the open position and the closed position.

5. An arrangement as claimed in any preceding claim wherein the track has a channel profile and the barrier member when in the closed position extends across that channel profile.

6. An arrangement as claimed in claim 5 wherein the barrier extends fully across the channel profile at the end of the track.

7. An arrangement as claimed in any preceding claim wherein a closure is provided at the other end of the track.

8. An arrangement as claimed in claim 7 wherein the closure comprises a further barrier member similar to the barrier member as claimed in an arrangement in accordance with any of claims 1 to 6.

9. An assembly as claimed in any preceding claim wherein the arrangement includes mounting means to one side of the track.

10. An arrangement as claimed in claim 9 wherein the mounting means comprises spaced mounting apertures appropriately located along the length of the track.

11. An arrangement as claimed in claim 9 or 10 wherein the track is curved and the mounting means is secured to a side of the track which includes an inner wall of the curved track.

12. A tambour door track assembly comprising two tambour door track arrangements as claimed in any preceding claim whereby the arrangements are located adjacent one another such that ends of their respective tracks are substantially aligned and contiguous.

13. An assembly as claimed in claim 12 wherein the barrier members of each respective track arrangement abut one another when in their respective closed position in order to mutually co-operate to retain the barrier members in that closed position.

14. A tambour door track arrangement substantially as hereinbefore described with reference to the accompanying drawings.

15. A tambour door track assembly substantially as hereinbefore described with reference to the accompanying drawings.

16. Any novel subject matter or combination including novel subject matter disclosed herein, whether or not within the scope of or relating to the same invention as any of the preceding claims.

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Application No: GB 0101207.9
Claims searched: 1 - 15

Examiner: David P Maskery
Date of search: 14 June 2002

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.T): A4B (B8A1, B9B4) E1J (JEG, JEX)

Int Cl (Ed.7): E06B (1/52, 9/08, 9/11, 9/17, 9/56, 9/58)

Other: Online; EPODOC, JAPIO, WPI.

Documents considered to be relevant:

Category	Identity of document and relevant passage		Relevant to claims
Y	GB 2348233 A	(WAIVIS) See figs 3 & 4 and page 4 line 28	2, 3, 9, 11 - 13
X, Y	US 5823645	(DARLING) See figs 2a to 3c and column 6 line 6 - 65.	X 1, 5 - 11 Y 2, 3, 12, 13
X, Y	US 5803563	(WOODWARD) See Figs 3 & 4,and column 2 lines 57 - 68.	X 1, 5 - 7 Y 2, 3, 9, 11 - 13
Y	US 4217012	(KLAUS) See fig 7	9, 11

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.