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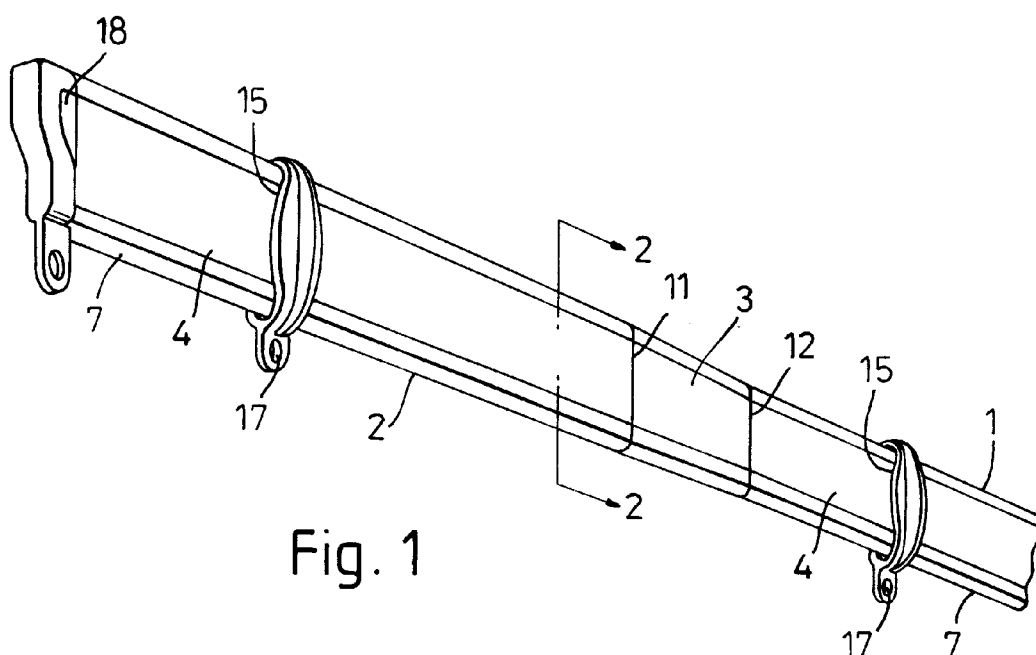
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Barker, Brettell & Duncan
138 Hagley Road
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Birmingham B16 9PW (GB)**(54) Curtain track**

(57) A curtain track of variable length comprises at least two telescopically interconnected track members (1,2). The track members (1,2), conveniently of channel section, are adjustable relative to one another to vary the working length of the track, and are each adapted to have gliders (15) slidable therealong for carrying curtains. Ramp means (3) between the track members allow the gliders (15) to slide from one track member to the other. The track members (1,2), preferably of channel section, can be of lengths appreciably shorter than the longest working length of the curtain track to which

they can be extended, thus enabling the track members (1,2) to be stored and packaged more compactly than a single track of the extended length. End stops (18) are provided to restrain the gliders (15) from sliding off the ends of the curtain track. Mountings (23) attach to the track members (1,2) to fix the curtain track to a supporting surface, each mounting (23) having a rotatable component (25) which can be readily turned into and released from frictional securing engagement with a respective one of the track members (1,2) to hold the mounting (23) and track member (1,2) together.

**Fig. 1****EP 0 801 920 A1**

Description

This invention relates to a curtain track.

Conventionally a curtain track, whether for a single track system, in which one or more curtains are supported on the same track, or a double track system, in which curtains are supported on separate parallel tracks to be drawn together in an overlapping relationship, is provided in one piece. Tracks can be in a range of lengths. For long lengths storage and packaging for sale present problems, and the lengths of the tracks can make them unwieldy to handle for carrying and mounting for use.

According to the present invention a curtain track is provided which is of variable length and comprises at least two telescopically interconnected track members which are adjustable relative to one another to vary the working length of the track, are each adapted to have gliders for carrying curtains slidable therealong, and have ramp means therebetween whereby gliders can slide from one track member to the other.

The track members can be of lengths appreciably shorter than the longest working length of the curtain track to which they can be extended. They can be stored and packaged more compactly than a single track of the extended length, and may be handled in a compact state until fitted for use.

By the telescopic interconnection of the track members the working length of the curtain track can be readily adjusted as required for use.

Preferably the track members are made of a generally channel section, or at least the outer one of the members is of a generally channel section. The track members may be made of a suitable, relatively stiff, plastics material, conveniently by extrusion. They may be made of metal.

The track members may be formed to have gliders slidingly embrace their exteriors. Gliders having a generally C-shaped body may be used with the curtain track. They may have hooks and/or eyes for the attachment of curtains. Gliders may be provided in combination with the track members, or they may be supplied separately.

The ramp means may comprise a tapering member which fits on the inner one of the track members against the adjacent end of the outer track member. A sleeve form of tapering member may fit around the inner track member. Such a tapering member may be a friction sliding fit on the inner track member and/or it may have provision for clamping it to that member when the track members have been adjusted to a required working length of the curtain track. In the preferred channel section form of the track members formed to have gliders slidingly embrace their exteriors, the tapering member tapers gradually from a size and shape complementary to the exterior of the outer track member down to a size and shape complementary to the exterior of the inner track member. A smooth transition is thus provided between the exteriors of the two track members for the glid-

ers to slide easily along from the one track member to the other, in either direction. As an alternative the ramp means may be provided by tapering the external surface of the adjacent end of the outer track member down to the external surface of the inner track member.

End stops may be provided for attachment to the free ends of the track members to restrain gliders from sliding off the opposite ends of the curtain track. For the channel section forms of the track members, the end stops preferably have tongue portions which are a tight push fit in the channels of the track members to retain the end stops to the track members. Additionally or alternatively, the end stops may have one or more location elements which, on location of the end stops in the track members, engage with a mating element or elements provided on the track members to retain the end stops to the track members. The location element or elements may comprise a button or buttons provided on flexible portions of the end stops which, on location of the end stops in the track members, engage in a complementary hole or holes formed in the track members. The end stops may or may not have hooks and/or eyes for attachment of curtains to them. Again, the end stops may be provided in combination with the track members, or they may be supplied separately.

Mountings may be provided in combination with, or separately for releasable attachment to, the track members. Preferably the mountings are of one form suitable for effective attachment to either one of the track members. For the preferred channel section forms of the track members, the mountings preferably each comprise a rotatable component which can be entered into the channel of either one of the track members and which by eccentricity, or the provision of formations or parts thereon, can be tightened into frictional securing engagement with the channel to hold the mounting and track member together. Each mounting may have an attachment component by which it is fixed, for example by a screw, to a supporting surface for the curtain track, and on which the rotatable component is rotatable for tightening in the channel of either one of the track members. The rotatable component may have cams of different sizes respectively for engagement in differently sized channels of the track members. A lever may be incorporated into the rotatable component whereby the component can be readily turned into and out of tightened engagement with the channel of either track member.

There may be more than two of the track members. There may, for example, be an intermediate track member with opposite ends of which end track members are telescopically interconnected. A plurality of track members in two mating cross-sectional sizes may be arranged alternately with one cross-sectional size of track member slidingly interconnected with the other cross-sectional size of track member.

An embodiment of the present invention will now be described, by way of example only, with reference to the

accompanying drawings, in which:

Figure 1 is a perspective view of one end portion of a curtain track, and fittings, in accordance with the invention;

Figure 2 is an enlarged cross section through the curtain track on line 2 - 2 of Figure 1,

Figures 3 and 4 are respectively an enlarged end view and longitudinal cross-section through a ramp member of the curtain track;

Figure 5 is a side view of a glider slidable on the curtain track;

Figure 6 is a front view of an end stop, and

Figure 7 is an exploded perspective view of a mounting of the curtain track.

As shown in Figure 1, the curtain track comprises two telescopically interconnected, inner and outer, track members, 1 and 2 respectively, and a ramp member 3. The track members 1, 2 are formed as extrusions of a stiff plastics material, preferably UPVC and the ramp member 3 is a moulding of a stiff plastics material, preferably polypropylene.

The two track members 1, 2 are of a modified narrow C-shape in cross-section, as shown in Figure 2, each having a flat front wall 4 with a slightly recessed front face 5, forwardly curved top and bottom walls, 6 and 7 respectively, and flat, aligned, rear flanges 8 extending towards one another and separated by an opening 9. The inner track member 1 is a free sliding fit in the channel of the outer track member 2.

The ramp member 3, Figures 3 and 4, is a sleeve of narrow generally D shape in cross-section, shaped and dimensioned internally to be complementary to the exterior of the inner track member 1 on which it is a frictional sliding fit. A front wall 10 of the ramp member is indented to mate with the recessed front face of the inner track member. At one, wider, end 11 the exterior of the ramp member 3 is of complementary shape and dimensions to the exterior of the outer track member 2. From that wider end 11 the exterior of the ramp member tapers down gradually to its opposite, narrower, end 12 to almost the external shape and dimensions of the inner track member. Thus when the ramp member is positioned on the inner track member so that its wider end 11 is abutting against the adjacent end of the outer track member, its exterior provides a smooth, gradual transition from the exterior of the outer track member to the exterior of the inner track member.

Formed in a rear wall 13 of the ramp member are two spaced, arch-shaped, tabs 14 which are positioned to be engaged over the insides of the rear flange 8 of the inner track member so as to increase the frictional

grip of the ramp member on the inner track member.

Glide 15 are provided to be slidable along the curtain track, on both track member 1, 2, the ramp member 3 enabling the gliders to slide from one track member onto the other. Each glider is of a generally known form comprising, as shown in Figure 5, a C-shaped externally ribbed, body 16 which extends around the exteriors of the track members at the front, top and bottom walls and a ring 17 at the bottom of the body for the attachment of a curtain by a separate hook.

At opposite ends of the curtain track end stops 18 are attached. Each end stop 18, as shown in Figure 6, has a body 19 formed with a ring 20 for attachment of a curtain. Integral with and projecting from the body 19 is tongue 21 which inserts into the channel of the respective track member 1, 2 as a friction fit. Lateral fin formations 22 on the tongue 21 bear on opposite surfaces of the track members inside the channel to assist in providing the friction fit. Each end stop 18 may also have a button (not shown) attached to a flexible member provided centrally on the tongue 21. The button snaps into engagement with a complementary circular hole formed in the end portion of the track member.

The curtain track is mounted on a supporting surface for use by means of mountings 23 which are attached to the curtain track adjacent its two ends and at spaced positions along its length. Each mounting 23 comprises, as shown in Figure 7, an attachment component 24 and a rotatable component 25. The attachment component 24 comprises a base flange 26, which fits against the supporting surface, and a central cylindrical boss 27 projecting from a front face of the base flange 26. There is an axial plain bore hole 28 through the boss 27. The rotatable component 25 comprises a tubular cylindrical body 29 having integral elongated, generally rectangular, parallel, cams 30, 31 of different sizes at its opposite ends. The cylindrical body 29 extends centrally between the cams 30, 31. Its bore 32 is of complementary diameter to the boss 27 and is divided into two halves by a central annular partition 33. Each half of the bore 32 is of a length corresponding to the length of the boss 27, which can be received into either half of the bore for the rotatable component to be rotatable on the boss. A self-tapping screw 34 retains the rotatable component to the attachment component 24, in whichever half of the bore 32 the boss 27 is engaged, and is used to secure the mounting to the supporting surface. The shank of the screw 34 is inserted through the annular partition 33 in the bore of the body 29 and the plain bore hole 28 of the boss, and screwed into the supporting surface until its head abuts against the partition. In an alternative arrangement separate screws may be used for fixing the attachment component 24 to the supporting surfaces, plain holes being provided in the base flange 26 for that purpose. Diametrically opposed wings 35 on the outside of the cylindrical body 29 enable the rotatable component to be rotated by hand on the boss 27 of the attachment component 24.

One cam 30 is of a length to fit with a tight friction fit across the width of the channel of the inner track member between the top and bottom walls 6, 7 of that member. The other cam 31 is of a length to fit with a tight friction fit across the width of the channel of the outer track member between that member's top and bottom walls 6, 7. The widths of the two cams 30, 31 are similar, being such as to enable them to be passed through the opening 9 between the rear flanges 8 of the track members. The larger cam 31 has a reinforcing rib 36 all around its periphery.

Each mounting 23 is capable of being attached to either one of the track members 1, 2. It is simply a matter of locating the rotatable component the appropriate way round on the boss so that the respective cam to be engaged in the channel of the relevant track member is remote from the base flange 26 of the attachment component.

The gliders 15, end stops 18 and the attachment and rotatable components 24, 25 of the mountings 23 are all conveniently made as mouldings of a stiff plastics material, for example polypropylene.

When setting the curtain track for use, it is adjusted to the length required for the curtains that are to be hung from it. The mountings 23, adjusted for attachment to the respective track members, are fixed to the supporting surface by the screws 34 and the rotatable components turned so that the cams 30, 31 are disposed horizontally. The curtain track can then be offered to the mountings for the operative cams to be received into the channels of the track members. By rotating the rotatable components on the bosses to bring the cams into a vertical attitude, or substantially so, the operative cams jam in the channels so as to retain the curtain track securely on the mountings.

A suitable number of the gliders 15 for the curtains to be hung is located on the curtain track. They can slide freely on both track members and pass from one track member to the other along the ramp member 3. The end stops 18 fitted to ends of the track members retain the gliders on the curtain track. Curtains can then be attached to the gliders and end stops by hooks attached to the curtains and engaged in the rings 17, 20 of the gliders and end stops. The curtain track may be supplied already assembled and fitted with the gliders and end stops at the time of purchase leaving only adjustment of the length of the curtain track to the required working length to be done by the installer, fixing of the mountings and attachment of the curtain track to them for use.

Claims

1. A curtain track of variable length characterised in that the track comprises at least two telescopically interconnected track members (1,2) which are adjustable relative to one another to vary the working length of the track, are each adapted to have gliders

(15) for carrying curtains slidable therealong, and have ramp means (3) therebetween whereby gliders (15) can slide from one track member to the other.

2. A curtain track according to claim 1, characterised in that at least the outer track member (2) is of a generally channel section.

3. A curtain track according to any preceding claim, characterised in that the track members (1,2) are formed to have gliders (15) slidably embrace their exteriors.

4. A curtain track according to claim 4 as dependant from any preceding claim, characterised in that gliders (15) are provided in combination with the track members (1,2).

5. A curtain track according to claim 4 as dependent from claim 3, characterised in that the gliders (15) have a generally C-shaped body (16).

6. A curtain track according to any preceding claim, characterised in that the ramp means (3) comprises a tapering member which fits on the inner one of the track members (1) against the adjacent end of the outer track member (2).

7. A curtain track according to claim 6, characterised in that the tapering member (3) is of sleeve form to fit around the inner track member (1).

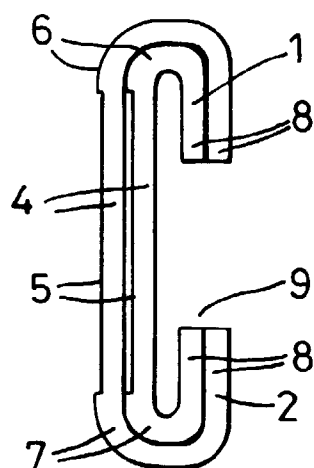
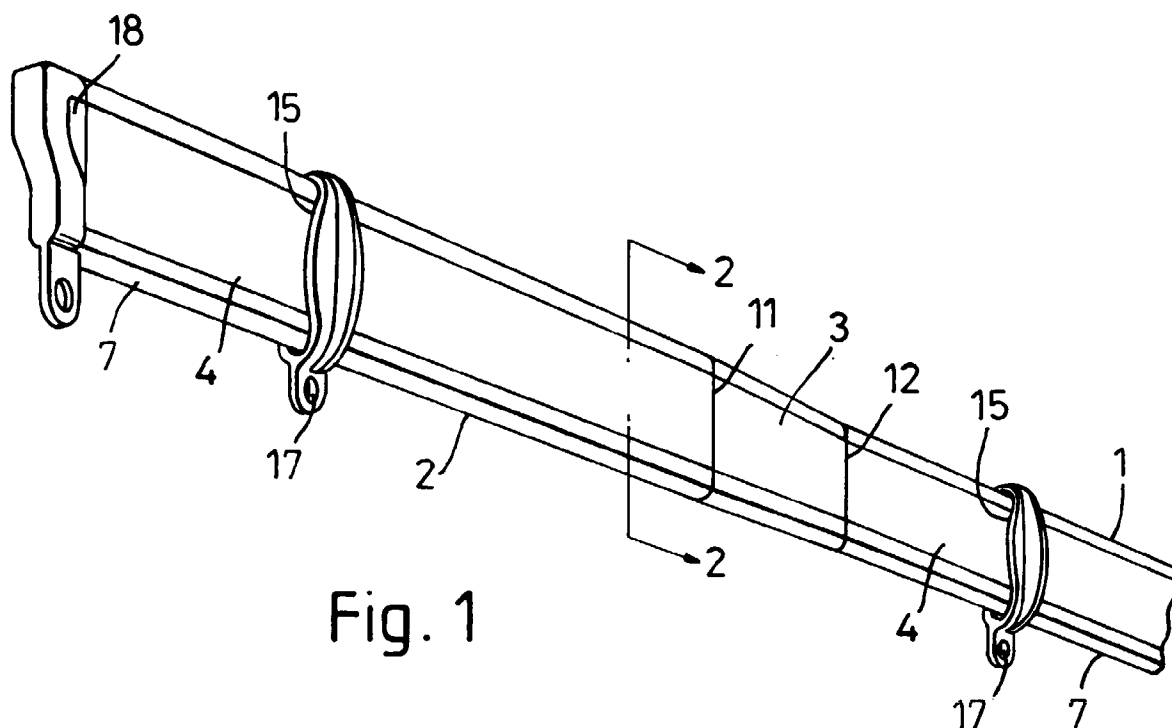
8. A curtain track according to claim 7, characterised in that the tapering member (3) is a friction sliding fit on the inner track member (1) and/or has provision for clamping to that member when the track members (1,2) have been adjusted to a required working length of the curtain track.

9. A curtain track according to claim 6 as dependent from claim 2, characterised in that the tapering member (3) tapers gradually from a size and shape complementary to the exterior of the outer track member (2) down to a size and shape complementary to the exterior of the inner track member (1).

10. A curtain track according to any of claims 1 to 5, characterised in that the ramp means are provided by tapering the external surface of the adjacent end of the outer track member (2) down to the external surface of the inner track member (1).

11. A curtain track according to any preceding claim, characterised in that end stops (18) are provided for attachment to the free ends of the track members (1,2) to restrain gliders (15) from sliding off the opposite ends of the curtain track.

12. A curtain track according to any preceding claim, characterised in that mountings (23) are provided in combination with the track members (1,2), for releasable attachment to the track members. 5
13. A curtain track according to claim 12, characterised in that the mountings (23) are of one form suitable for effective attachment to either one of the track members (1,2). 10
14. A curtain track according to claim 12 or claim 13 as dependent from claim 2, characterised in that both track members (1,2) are of a generally channel section and the mountings (23) each comprise a rotatable component (25) which can be entered into the channel of either one of the track members (1,2) and can be tightened into frictional securing engagement with the channel to hold the mounting (23) and track member (1,2) together. 15 20
15. A curtain track according to claim 14, characterised in that the rotatable component is eccentrically rotatable for the component to be tightened into frictional securing engagement with the channel. 25
16. A curtain track according to claim 14, characterised in that the rotatable component (25) has formations or parts (30,31) provided thereon, whereby the component (25) is tightened by rotation into frictional securing engagement with the channel. 30
17. A curtain track according to claim 16, characterised in that the rotatable component (25) has cams (30,31) of different sizes respectively for engagement in differently sized channels of the track members (1,2). 35
18. A curtain track according to any of claims 14 to 17, characterised in that a lever (35) is incorporated into the rotatable component (25) whereby the component can be readily turned into and out of tightened engagement with the channel of either track member (1,2). 40
19. A curtain track according to any preceding claim, characterised in that there is more than two of the track members. 45
20. A curtain track according to claim 19, characterised in that there is a plurality of the track members in two mating cross-sectional sizes arranged alternately with one cross-sectional size of track member slidingly interconnected with the other cross-sectional size of track member. 50 55



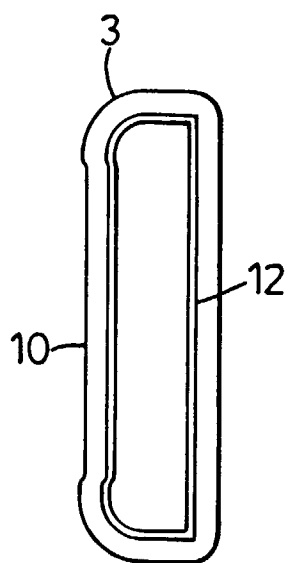


Fig. 3

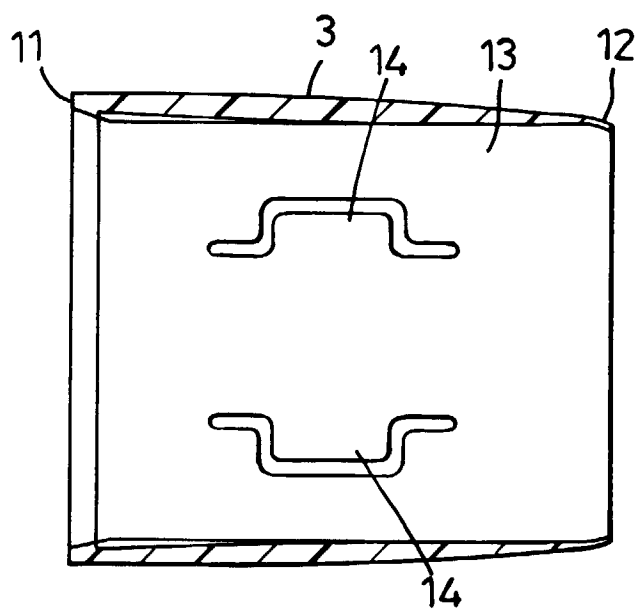


Fig. 4

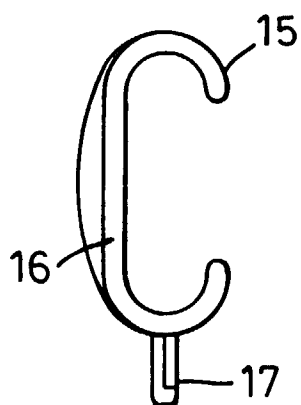


Fig. 5

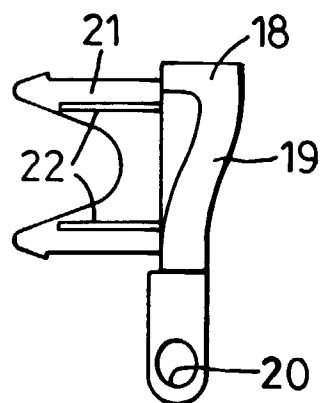


Fig. 6

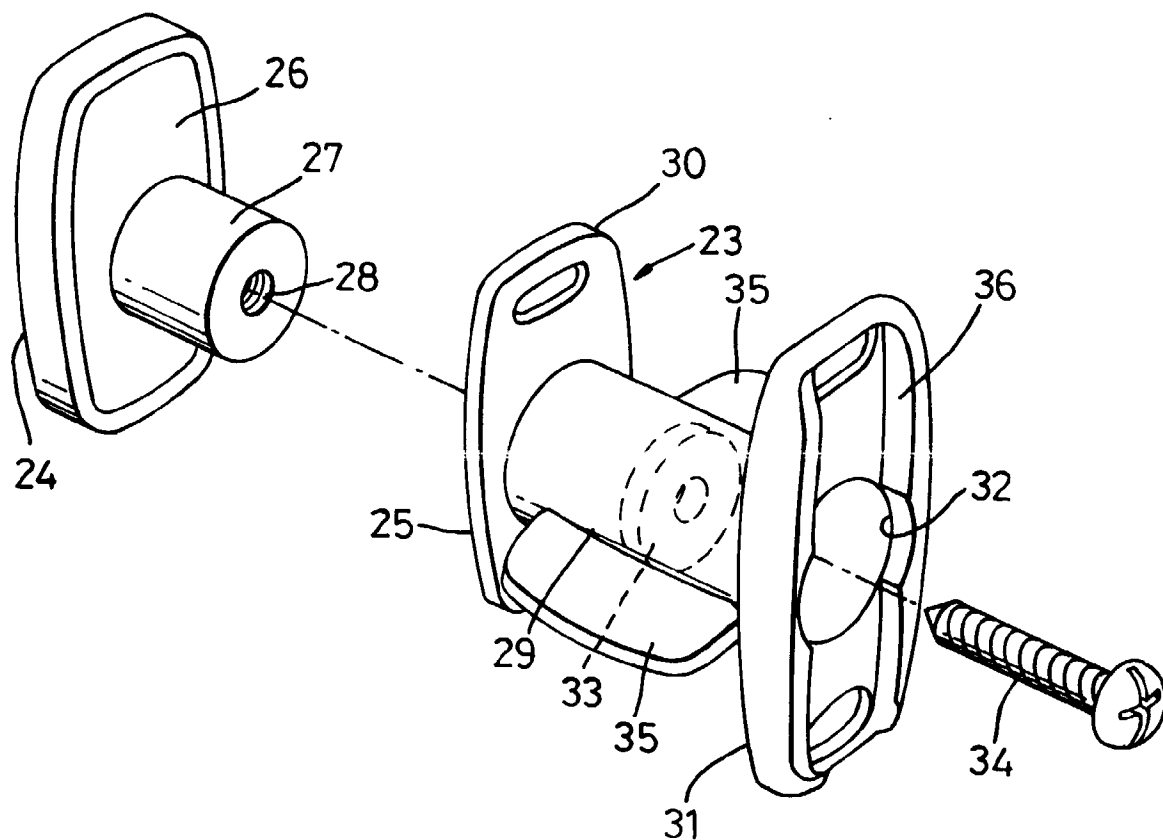


Fig. 7



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EUROPEAN SEARCH REPORT

Application Number
EP 97 30 2474

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.6)
X	CH 433 625 A (S. F. JENSEN) * the whole document *	1,3-11	A47H1/022
X	GB 2 190 283 A (GRABER INDUSTRIES INC.) * the whole document *	1,3-7, 9-12	
Y	---	13	
Y	GB 276 385 A (C. STAFFORD) * the whole document *	13	
A	---	1,2	
A	DE 11 52 789 B (VOSSLOH-WERKE GMBH) * the whole document *	13	
X	DE 109 327 C (A. SCHEFFLER) * the whole document *	1-4,12	
X	DE 747 108 C (H. BERGFELD) * the whole document *	1,2	
Y	---	13,19,20	TECHNICAL FIELDS SEARCHED (Int.Cl.6)
Y	FR 1 565 572 A (M. ASSAEL) * the whole document *	13	A47H
Y	FR 1 485 362 A (P. ROUSSEAU) * the whole document *	19,20	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 8 July 1997	Examiner Delzor, F
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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