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(54) Mounting bracket for a blind

(57) A component 1 has a horizontal support limb 3 with a hook-like flange 8 at one end. A retaining element 9 is pivotally secured to the support limb 3. The element 9 has a flat side 12, a projecting angular nose 13 and a downturned flange 15 for use in rotating the element. The trailing edge of the nose 13 is angled upwardly so that when the headrail is placed against the support limb the nose 13 enters a fixing groove in the headrail and applies an increasing pressure as the retaining element is rotated to grip the headrail between the nose and the support element. The opposite end of the support element is supported by a rib 6 pressed into the support limb. A grub screw 16 threaded into the retaining element 9 can be tightened against the support limb 3 to lock the element in position.

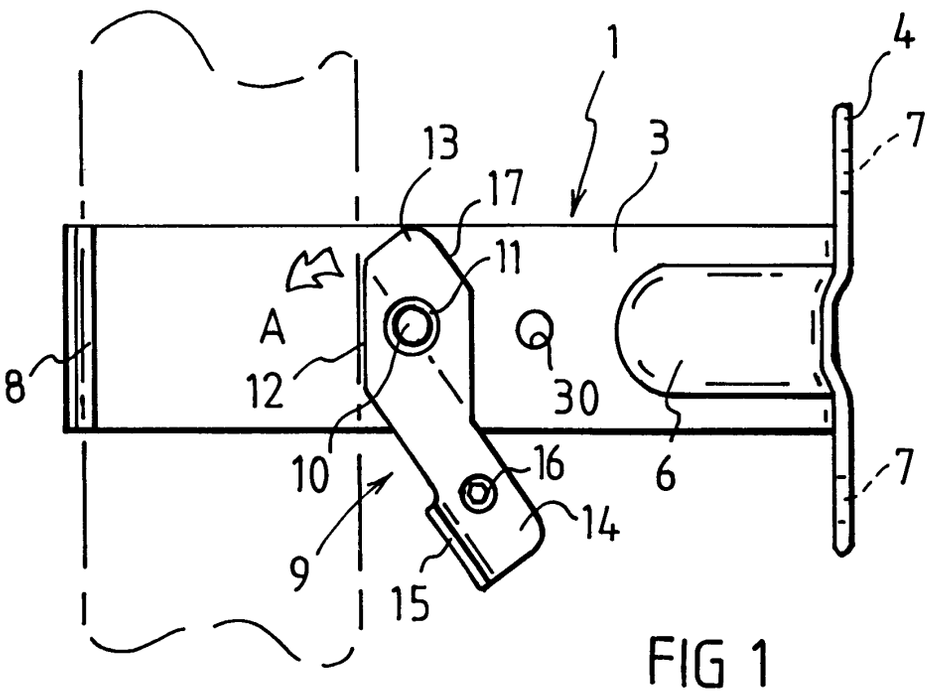

FIG 1

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Description

TECHNICAL FIELD OF THE INVENTION

[0001] This invention relates to mounting brackets for blinds such as vertical slat blinds or venetian blinds, in which the blind is suspended from a headrail.

BACKGROUND

[0002] A typical form of vertical slat blind is disclosed in GB 1 286 195. A series of vertical slats are suspended from trucks which slide within a headrail of inverted-channel section. The channel section is mounted by means of L-shaped brackets which engage a pair of grooves running along the external side faces of the headrail adjacent to its top wall. A horizontal limb of each bracket has a depressed hook-like tongue which engages in the rear groove whilst the free end of the limb has a depending lug through which a screw is inserted into the foremost groove.

[0003] The present invention seeks to provide a new and inventive form of mounting bracket.

SUMMARY OF THE INVENTION

[0004] The present invention proposes a mounting bracket for a blind of the kind which incorporates a headrail having opposed grooves, the bracket comprising a support limb which extends transversely across the headrail and has a hook formation which engages in one of the said grooves and a retaining element which can be pivotally moved to locate in the other groove.

[0005] The retaining element preferably has a nose which enters the groove upon rotation of the retaining element.

[0006] It is desirable that the bracket grips the headrail to resist longitudinal movement of the headrail. Although this could be achieved by gripping the side walls of the headrail between the nose and the hook formation it has been found that this can result in loosening of the cam in use. Thus, in a preferred form of the bracket, the surface of the nose which is opposed to the support limb has a cam surface which is inclined relative to the opposed surface of the support limb in the direction of rotation. Thus, as the nose rotates into the groove it applies an increasing pressure between the top of the groove and the top wall of the headrail to ensure a firm grip on the headrail and allow for variations in the wall thickness of the headrail due to manufacturing tolerances or the like.

[0007] The retaining element preferably includes a lever arm which projects at the opposite side of the pivot axis relative to the nose. The retaining element may be formed of sheet metal, in which case the lever arm preferably includes a depending flange for rotation of the retaining element.

[0008] The retaining element preferably includes a grub screw which can be tightened against the support arm to lock the retaining element against rotation when used in areas of high vibration or in public places where the grub screw acts as a tamper-proof device to make removal of the headrail more difficult by unauthorised persons.

[0009] The bracket will normally include a mounting limb which extends substantially perpendicular to the support limb, in which case the retaining element is preferably located between the mounting limb and the hook formation. The hook formation will usually be disposed at or adjacent to the free end of the support limb.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] The following description and the accompanying drawings referred to therein are included by way of non-limiting example in order to illustrate how the invention may be put into practice. In the drawings:

Figure 1 is a bottom view of a mounting bracket in accordance with the invention;

Figure 2 is a side view of the bracket; and

Figure 3 is a similar view to Fig. 2 but showing only part of the bracket secured to the headrail of a blind.

DETAILED DESCRIPTION OF THE DRAWINGS

[0011] Referring firstly to Fig. 1, the bracket comprises a component 1 which is formed of flat metal strip bent into an L shape to form a horizontal support limb 3 and a vertical mounting limb 4. The strength of the component is increased in the region of the bend by incorporating a shallow stamped rib 6 which extends longitudinally of both limbs 3 and 4. The vertical limb 4 has fixing holes 7 for securing the bracket to a wall or other vertical surface by means of screws or similar fixings (not shown).

[0012] The end of the component 2 which is remote from the mounting limb 4 is formed with a short downwardly-extending flange 8, extending across the width of the limb 3, and angled inwardly towards the limb 4 in a hook-like manner. In addition, a metal retaining element 9 is mounted on the underside of the limb 4 at a position which is intermediate between the flange 8 and the limb 4.

[0013] The retaining element 9 is also stamped from sheet metal and is pivotally secured to the support limb 3 by means of a rivet 10. As shown in Fig. 2, the rivet passes through a raised boss 11 which is stamped into the element 9 to space the retaining element from the support limb 3. Alternatively, a washer could be interposed between the retaining element 9 and the limb 3, although the use of a stamped boss is preferred since it simplifies assembly and minimises the number of components.

[0014] In Fig. 1 the retaining element 9 is shown in the position which is would occupy when the headrail of a vertical blind is offered up to the underside of the bracket, as indicated in outline in Fig. 1. It will be noted that the element 9 includes a flat side 12 which extends tangentially of the boss 11, parallel to the hook element 8 and relatively close to the boss. At one end of the straight edge 12 there is a projecting angular nose 13. At the opposite end of the edge 12 there is a projecting lever arm 14, one edge of which is downturned to form a flange 15 by which the retaining element can be rotated. A grub screw 16 is also screw-threaded into the arm 14 for locking the element 9 in position using a hexagonal key (see below).

[0015] When the nose 13 is viewed end-on as in Fig. 2, it will be seen that the trailing edge 17 of the nose, away from the straight edge 12, is angled upwardly by a few degrees so that the upper surface of the nose 13 is inclined relative to the lower surface of the support limb 3.

[0016] The bracket is used to mount an extruded headrail of the kind which is shown in section in Fig. 3. The headrail 20 is of inverted channel section with a top wall 21 and depending side walls 22 and 23 formed with inturned flanges 24 and 25 at their lower ends. The upper ends of the side walls are stepped inwardly relative to the edges of the top wall 21 to form opposed fixing grooves 26 and 27. In mounting the rail, one of the grooves 26 is engaged with the hook-like flange 8 and the rail is then rotated slightly to lie against the limb 3. The flat edge 12 of the element 9 ensures that the retaining element does not interfere with the wall 21. The element 9 can then be manually rotated in direction A (Fig. 1) using the flange 15, so that the nose 13 enters the groove 27. The thickness of the top wall 21 is such that as the element is progressively rotated the wall 21 becomes firmly gripped between the nose 13 and the support limb 3 due to the cam action produced by the inclined trailing edge 17.

[0017] When the top wall 21 is firmly gripped the lever arm 14 extends longitudinally of the limb 3. The free end of the lever arm 14 is supported by the rib 6 to ensure a good grip with slight dimensional variations due to manufacturing tolerances or wear.

[0018] A series of brackets will of course be used at spaced positions along the headrail.

[0019] In cases where the blind is installed in a public location, or in situations where there is a high level of vibration, the grub screw 16 can be tightened against the limb 3 to prevent movement of the retaining element.

[0020] To remove the head rail for cleaning or maintenance the retaining elements are rotated in the reverse direction to arrow A until the noses 13 are clear of the groove 27.

[0021] It will be seen in Fig. 1 that one or more additional holes 30 are provided in the support limb 3 for mounting the retaining element 9 at different positions along the limb 3 for use with different widths of head rail.

[0022] It will thus be seen that the bracket is inexpensive to manufacture, securely holds the headrail and permits the blind to be fitted and removed quickly and easily, the bracket is also more aesthetically attractive than existing brackets since there are no unsightly screws exposed at the front of the headrail, It will be appreciated that the features disclosed herein may be present in any feasible combination. Whilst the above description lays emphasis on those areas which, in combination, are believed to be new, protection is claimed for any inventive combination of the features disclosed herein.

Claims

1. A mounting bracket for a blind of the kind which incorporates a headrail having opposed grooves, the bracket comprising a support limb (3) which extends transversely across the headrail and has a hook formation (8) which engages in one of the said grooves,

   characterised by a retaining element (9) which can be pivotally moved to locate in the other groove.

2. A mounting bracket according to Claim 1, in which the retaining element has a nose which enters the groove upon rotation of the retaining element.

3. A mounting bracket according to Claim 1 or 2, in which the surface of the nose which is opposed to the support limb has a cam surface which is inclined relative to the opposed surface of the support limb.

4. A mounting bracket according to any preceding claim, in which the retaining element includes a lever arm which projects at the opposite side of the pivot axis relative to the nose.

5. A mounting bracket according to Claim 4, in which the retaining element is formed of sheet metal and the lever arm includes a depending flange for rotation of the retaining element.

6. A mounting bracket according to any preceding claim, in which the retaining element includes a grub screw which can be tightened against the support limb to lock the retaining element against rotation.

7. A mounting bracket according to any preceding claim, in which the mounting bracket includes a mounting limb which extends substantially perpendicular to the support limb.

8. A mounting bracket according to Claim 7, in which the retaining element is located between the mount-

ing limb and the hook formation.

9. A mounting bracket according to any preceding claim, in which the hook formation is disposed at or adjacent to the free end of the support limb.

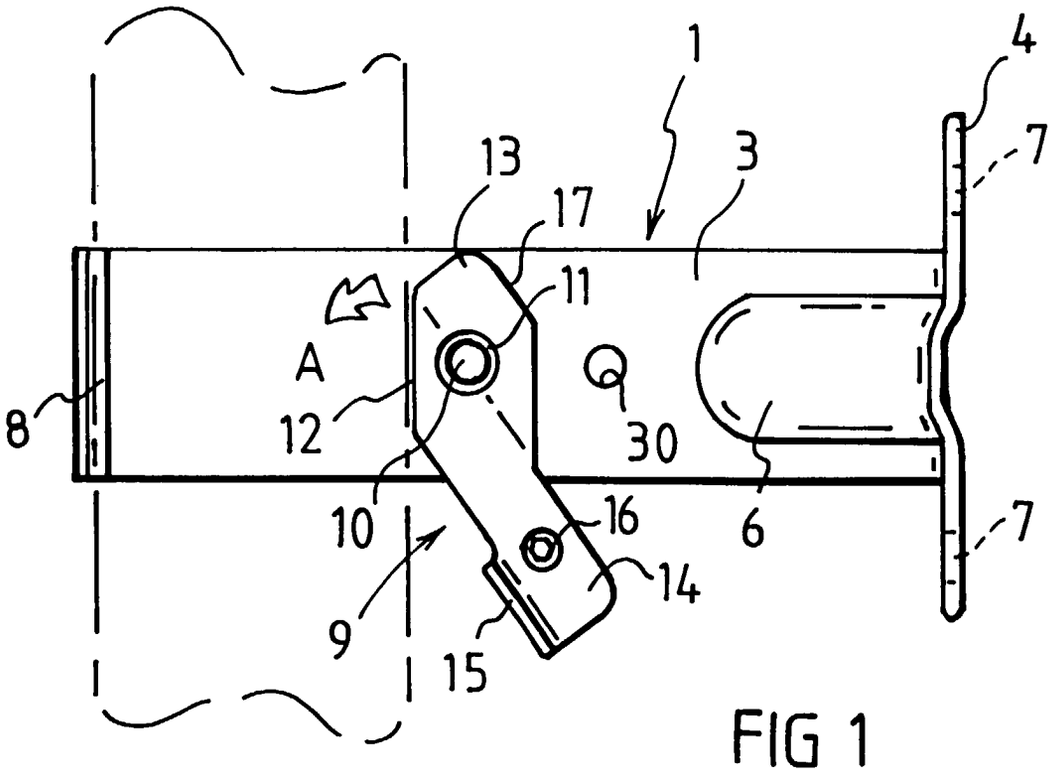

FIG 1

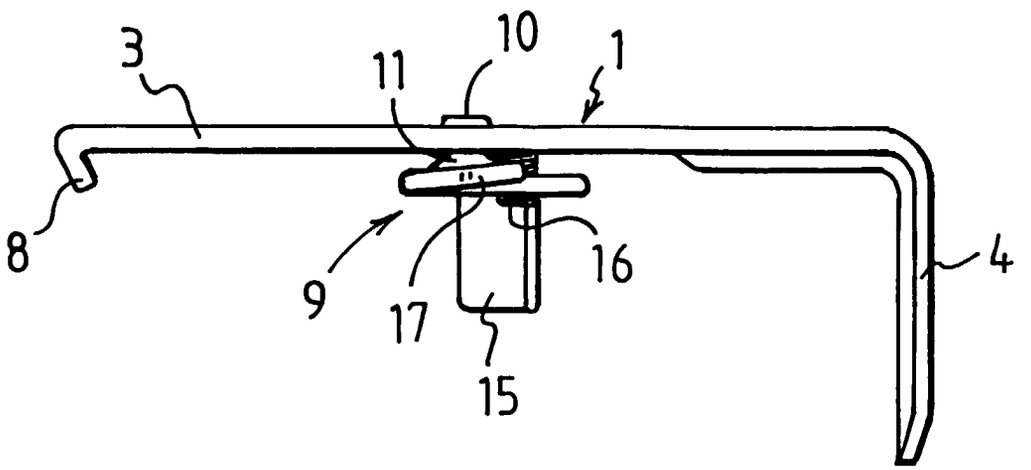

FIG 2

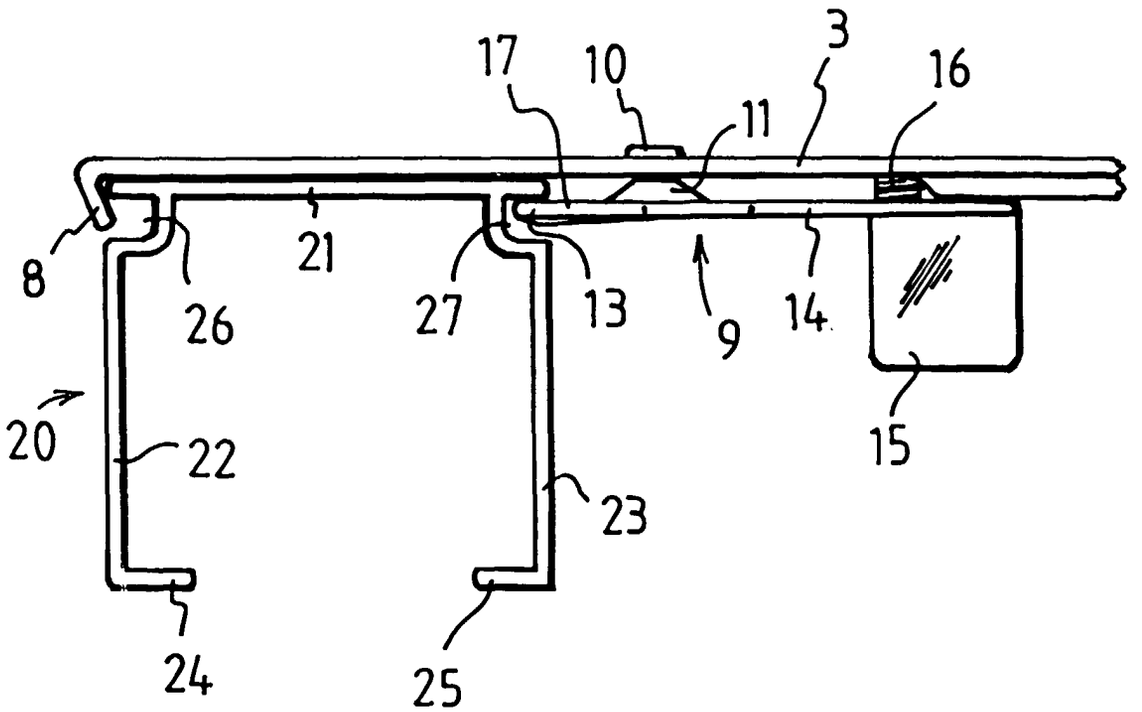

FIG 3