

A CORD LOCK

The present invention relates to a cord lock for mounting in a blind headrail aperture.

Very many forms of such cord lock have been proposed in the past. The locks are usually used
5 to lock the lift cord which is used to raise and lower the blind. In recent years attempts have been made to simplify and reduce the cost of the cord locks by making them, at least in part, from a plastics material. One example of such a cord lock is
10 illustrated in the British Patent Specification 1 545 111. In this construction the body of the cord lock is made of a plastics material and the cord lock comprises two rollers, preferably made of metal, and between which the cord passes, these rollers
15 acting as a cord locking mechanism. The body of the cord lock includes a passage through which one or more cords may pass to and from the cord locking mechanism. The cords are separated by a pin or rod which spans the opening and extends longitudinally
20 outwardly beyond the body and has end portions engaged against the inside surface of the headrail to hold the cord lock in place. In this connection the cord lock is provided with a peripheral flange which abuts the outer surface of the headrail and this,

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together with the pin or rod fixedly retains the cord lock in the headrail.

Such a construction is of considerable advantage over known cord locks but has the rather
5 serious problem that the cord tends to wear the plastics material, by abrasion of the cord against the sides of the opening in the body.

It is now proposed, according to the present invention, to provide a cord lock for
10 mounting in a blind headrail aperture, said cord lock comprising a body with outer body portions shaped to overlap edges of said aperture, separate fixing means for cooperating with said body and with the headrail inner surface, fixedly
15 to hold said cord lock in place, a cord-locking mechanism mounted within said body and a passage in said body for passing at least one cord to and from said cord-locking mechanism, said body having locating means for cooperating with said
20 separate fixing means and said separate fixing means being formed by a generally U-shaped element, having two legs each of which is sized to bridge an exit opening of the passage, the arrangement of said locating means and said U-shaped element being such
25 that, in the mounted position of the cord lock in the headrail, at least one leg of said U-shaped

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element will run parallel to one edge of said exit opening and can serve as a wear resisting cord guide over which said at least one cord can pass, thereby to prevent said cord from causing abrasive wear on
5 said body.

The cord lock of the present invention provides a simple and inexpensive structure and at least one of the legs of the U-shaped element can lie adjacent an edge of the exit opening, to act as a
10 guide against which the cord may bear to prevent wear of the plastics material by the cord.

Advantageously, the cord lock is formed of a transparent plastics material and the U-shaped element is formed of metal. Transparent plastic
15 material is of advantage since it enables one to use the standard body for all blinds, irrespective of the colour of the headrail, because the cord lock will, because of its transparent properties, effectively take up the colour of the headrail. Unfortunately,
20 transparent plastics materials tend to be rather soft and with the construction of the present invention, the otherwise normally excessive wear is completely prevented.

In one embodiment of a cord lock according
25 to the present invention the locating means allow mounting of the U-shaped element in two different

positions, one for one orientation of the cord lock in the blind headrail and the other for a second orientation. Preferably the locating means comprise three holes in the body, in each of two walls, one on either side of the opening, one leg of the U-shaped element being 5 engagable in one of said holes in each wall in both positions of the element, to hold the cord lock in place in the headrail, the other leg being engagable in the second and third holes, respectively, to act as 10 said wear resisting cord guide.

In a simple construction, the holes are located at the apices of isosceles right-angled triangles.

One leg of the U-shaped element can be made 15 longer than the other, so that when one is changing from one orientation to the other, this leg can act as a pivot, facilitating the insertion of the other leg. The end of the longer leg will act to extend beyond the edge of the aperture on the inside of the 20 blind headrail to retain the cord lock in place.

In another embodiment, the locating means allow mounting of the U-shaped element in a position in which said two legs act jointly to hold said cord lock in place in the headrail and one leg and the 25 other leg respectively serve as a wear resisting cord guide for one and the other respectively of two

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opposite edges of said exit opening of the cord passage. In this way the same lock can be used without any modification in either orientation, i.e. at the left-hand or right-hand side of a headrail.

- 5 Preferably the cord lock further comprises an independent separator pin mounted on the body to bridge the exit opening of said passage at a central location parallel to the legs of the U-shaped element.

With the construction of the present invention,
10 the insertion of the U-shaped element effects in one manipulative step, the provision of a wear resistant part, along the side of the exit opening of the passage for the cord, and also the securing of the cord lock in the blind headrail.

- 15 In order that the present invention may more readily be understood, the following description is given, merely by way of example, reference being made to the accompanying drawings, in which:

Figure 1 is a perspective view of one
20 embodiment of cord lock according to the invention, with the U-shaped element shown removed from the cord lock body;

Figure 2 is a section through the lock of
Figure 1 and shown mounted in an aperture in a
25 headrail;

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Figure 3 is a view similar to Figure 2 shown mounted in an aperture on the other side of the headrail;

Figure 4 is an underneath plan of the
5 cord lock of Figures 1, 2 and 3;

Figure 5 is a view similar to Figure 3 illustrating a second embodiment of cord lock according to the invention; and

Figure 6 is an underneath plan of the cord
10 lock of Figure 5.

Referring first to Figures 1 and 2, the cord lock is shown comprising a body 10 inserted in an aperture 12 at the junction of the bottom and a side wall of a channel section venetian blind headrail
15 14, indicated in phantom. The body 10 is provided with an outer body portion in the form of a peripheral flange 16 shaped to overlap edges of the aperture 12.

A passage 18 is formed within the body 10 and mounted therein are a freely moveable toothed roller
20 pair 20 and a generally fixed roller 22, these being, in use, on substantially parallel axes.

At its lower end the passage 18 is provided with an opening 24 through which passes cords 25 to be locked, these cords passing over the roller 20,
25 and between rollers 20 and 22. The passage 18 is formed by side walls 26 and 28 and end walls 30 and 32.

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Formed in the two end walls 30 and 32 are three holes 34, 36 and 38, these being at the apices of isosceles right-angled triangles. Slidable engagable in these holes are the legs 44, 46 of a U-shaped metal element 40 having a web portion 42. The spacing between the two legs 44 and 46 is equal to the spacing between the hole 34 and the hole 36, or the hole 34 and the hole 38. Thus the U-shaped element can be inserted in the holes 34 and 36 as shown in Figure 2 or in the holes 34 and 38 as shown in Figure 3.

The leg 44 is longer than the leg 46 and is also longer than the maximum length of the flange 16 of the body 10. Thus as can be seen in Figure 4 the web 42 and the end 45 of the leg 44 extend beyond the flange 16. Thus, when inserted in the headrail as illustrated in Figure 2 or Figure 3 the element 40 can be used to retain the body within the headrail because it will be engaged against the inner surface of the headrail. The element 40 has three other functions. Firstly, it retains the roller pair 20 within the opening 18 and it also serves as a separator to separate the two cords 25. Finally, and more importantly, it prevents the cords 25 from abrading the body as the cords pass through the opening 24. and thereby prevents any wear to the body. This is particularly important if the body is formed of a

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plastics material, especially a transparent plastics material, such materials tending to be rather soft.

As mentioned, the lock can be mounted in the position of Figure 2 or the position of Figure 3 so
5 that it can either be at the left or right hand side of a head rail. The leg 44 is longer than the leg 46; conversion from one position to another is facilitated because one can insert the pin 44 first, in the hole 44 and then rotate or pivot the element
10 so that the end of the leg 46 engages in either the hole 36 or the hole 38.

In the modified structure shown in Figures 5 and 6, the body is substantially identical but the U-shaped element has a wider spacing between its
15 legs 54 and 56 so that these can be engaged in the holes 36 and 38, but not the hole 34. Again the length of the leg 54 is greater than the length of the peripheral flange 16 of the body so that the web 22 and the end 55 of the leg 54 project longitudinally
20 therebeyond, as in Figure 4. An independent separator pin 58 is engaged in the hole 34 and serves to separate the two parts of the cord 25. With this arrangement it is not necessary to adjust the position of the U-shaped element so that the same locks can be used
25 for left or right hand mounting.



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C L A I M S

1. A cord lock for mounting in a blind headrail aperture, said cord lock comprising a body with outer body portions shaped to overlap edges of said aperture, separate fixing means for cooperating with said body and with the headrail inner surface, fixedly to hold said cord lock in place, a cord-locking mechanism mounted within said body and a passage in said body for passing at least one cord to and from said cord-locking mechanism, said body having locating means for cooperating with said separate fixing means and said separate fixing means being formed by a generally U-shaped element, having two legs each of which is sized to bridge an exit opening of the passage, the arrangement of said locating means and said U-shaped element being such that, in the mounted position of the cord lock in the headrail, at least one leg of said U-shaped element will run parallel to one edge of said exit opening and can serve as a wear resisting cord guide over which said at least one cord can pass, thereby to prevent said cord from causing abrasive wear on said body.

2. A cord lock according to claim 1, wherein said locating means allow mounting said U-shaped element in two different positions, one for one

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orientation of the cord lock in the blind headrail and the other for a second orientation.

3. A cord lock according to claim 2, wherein the locating means comprise three holes in said body, in each of two walls, one on either side of the opening, one leg of the U-shaped element being engagable in one of said holes in each wall in both positions of the element, to hold the cord lock in place in the headrail, the other leg being engagable in the second and third holes, respectively, to act as a wear resisting cord guide.

4. A cord lock according to claim 3, wherein the holes are located at the apices of isosceles right-angled triangles.

5. A cord lock according to claim 3 or 4, wherein said one leg of the U-shaped metal element is longer than the other leg.

6. A cord lock according to claim 1, wherein said locating means allow mounting of said U-shaped element in a position in which said two legs act jointly to hold said cord lock in place in the headrail and one leg and the other leg respectively serve as the wear resisting cord guide for one and the other of the two opposite edges of said exit opening of the cord passage.

7. A cord lock according to claim 6, and further comprising an independent separator pin



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mounted on said body to bridge the exit opening of said passage at a central location parallel to the legs of said U-shaped element.

8. A cord lock according to any preceding
5 claim, wherein the body is formed from a transparent plastics material and the U-shaped element is formed of metal.

9. A cord lock substantially as hereinbefore described with reference to and as illustrated in
10 Figures 1 to 4 of the accompanying drawings.

10. A cord lock substantially as hereinbefore described with reference to and as illustrated in Figures 5 and 6 of the accompanying drawings.
