Feb. 12, 1957 A. W. LOUCONY 2,781,091

VENETIAN BLIND HEADBAR AND HARDWARE THEREFOR

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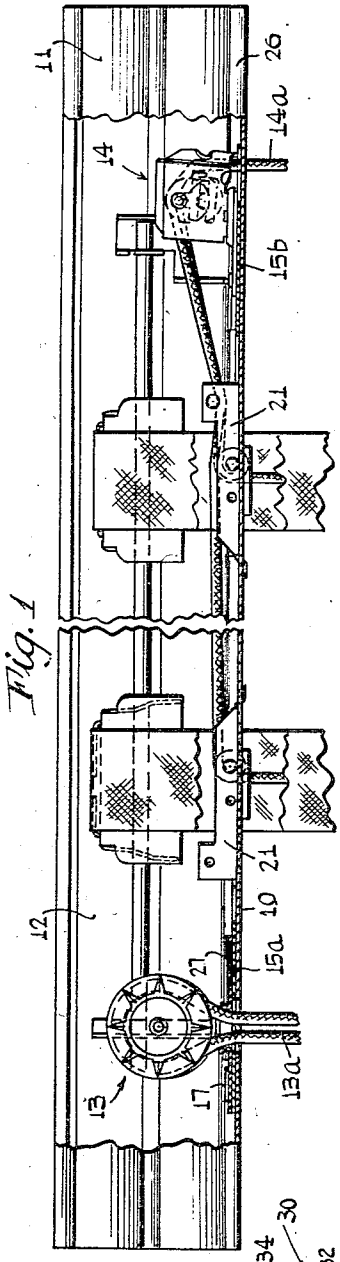


Fig. 1

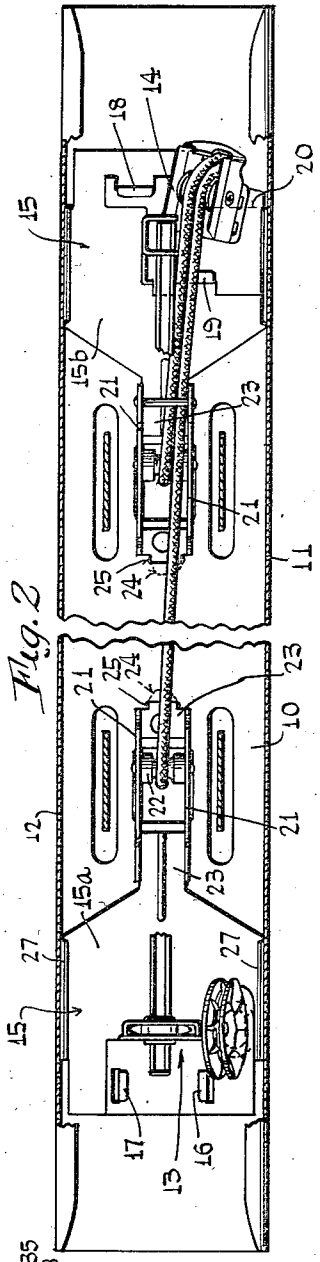


Fig. 2

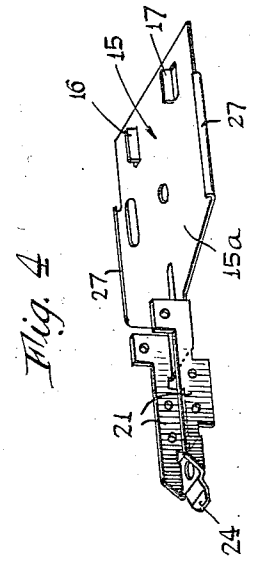


Fig. 4

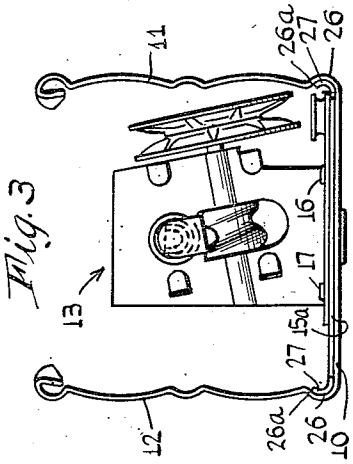


Fig. 3

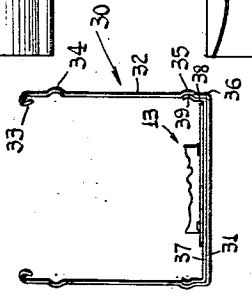


Fig. 5

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VENETIAN BLIND HEADBAR AND HARDWARE THEREFOR

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5 Claims. (Cl. 160—173)

This invention relates to Venetian blinds and more particularly to snap-in hardware therefor and is an improvement on the invention disclosed in my copending application Serial No. 316,930, filed October 25, 1952.

In my prior application snap-in fittings were provided for use in conjunction with a channel-shaped headbar of sheet metal. They were so arranged as to have a portion projecting upwardly to snap in place and engage under the rolled upper edge of the side walls of the headbar after which a tie bar was provided to hold the upper edges of the headbar against spreading and thus effectively lock the fixtures in place.

According to the present invention, the fixtures are snapped in and anchored adjacent the bottom of the channel, thus eliminating the upwardly extending part of the bracket and the tie bar for the headbar and providing a firm anchorage for the fitting. This is accomplished by providing the side walls of the headbar adjacent the bottom with means for engaging the edges of the fixture and holding it firmly adjacent the bottom, the side walls of the headbar yielding to permit the fixture to be snapped into position overlying the bottom.

While the means for holding the fitting in position may take many forms, in the illustrated forms of the invention it comprises an inwardly opened bead at or near the junctures of the side walls and the bottom, and on the plate opposite rounded edges adapted to snap into the bead. The rounded edges extend for a substantial length along the opposite sides of the fitting and thus firmly anchor the fitting to the headbar.

Some of the advantages of the present invention reside in the simplicity of construction and installation, the provision of a very secure and direct acting mounting for the fitting, the elimination of the tie bar for the ends of the side walls and the substantial saving made in the material for the plate for the fitting, the number and cost of the tools for making the same, and less operations in the manufacture.

Other features and advantages of the invention will be apparent from the specification and claims when considered in connection with the drawings in which:

Figure 1 shows a side view partly in section of the Venetian blind, headbar and operating mechanism.

Fig. 2 is a top view partly in section similar to Fig. 1.

Fig. 3 is an end view taken from the left of Fig. 1.

Fig. 4 is a perspective of one of the base plates.

Fig. 5 is a fragmentary end view similar in part to Fig. 3, but showing a form of the invention wherein the detent grooves are spaced slightly from the bottom corners of the channel headbar.

As shown in the drawings the headbar which extends for the full width of the blind comprises a bottom **10** and side walls **11, 12**. In the preferred form of the invention this is formed from thin, resilient, sheet metal. In practice, I have found that sheet metal of the nature of .018 thick is satisfactory.

In carrying out the present invention the tilter and the lift cord locking fittings **13, 14** are mounted adjacent each

end of the headbar and have the tilter cord **13***a* and lift cords **14***a* carried thereby. Each of the fittings includes a base plate **15**. The base plate blank as initially formed has all of the shapes and parts necessary to serve at either end of the headbar and can be formed by a single stamping tool. Thereafter those configurations which are unique to the particular unit to be attached thereto can be formed. For example, the base plate **15***a* for the tilter mechanism as shown in Fig. 4 has two ears **16, 17** struck upon which the tilter mechanism **13** is mounted and ears clamped over to lock it in position and the base plate **15***b* for the lift cord lock mechanism has ears **18, 19** struck up therefrom and bent over the lock the lift cord lock mechanism thereto and has a corner notch **20** for the passage of the cord. Both base plates have formed thereon bearing portions **21** for cord sheaves **22** formed on extension **23** which extension has a downwardly offset parallel attachment tab **24** at its end which fits into a slot or aperture **25** in the bottom **10** of the headbar and holds the end of the plate securely against the bottom.

In accordance with the present invention the plate is securely held in position overlying the bottom of the headbar by having means on the side walls of the headbar, adjacent the bottom, for grippingly engaging and holding the base plate in position. While this means may comprise inwardly projecting members of various constructions capable of yielding to permit the base plate to be snapped into position, in the form of the invention illustrated in Figs. 1 to 3 it comprises an inwardly opening bead **26** forming the juncture of the side walls **11, 12** and the bottom **10** and which provides a recess or socket extending therealong. If desired this bead may be made as a part of the ornamentation of the headbar. The edges of the plate are preferably formed with an elongate rolled portion **27** adapted to be snapped into the recess or socket formed by the open bead **26** and gripped thereby by the resilient action of the sheet metal side walls. It will be noted that the upper portion **26***a* of the bead forms, in effect, a camming surface which urges the plate downwardly and securely holds the plate against the bottom. The resilient side walls will yield when the plate is moved into place within the headbar so that it can be easily snapped into position overlying the bottom of the headbar and securely held in this position overlying the bottom by the gripping action of the side walls so that any forces incident to the operation of the tilter mechanism or the lift cord locking mechanism, acting at the bottom of the side walls, will not tend to distort the side walls so as to release the fittings.

Thus it will be seen that with the fitting mounting means of the present invention I have eliminated that portion of the base plate which was necessary to extend up to the top of the side walls. This not only reduces the amount of metal necessary for each fitting, but has reduced the number and cost of the tools for making the mounting plates and the number of operations involved. By holding the fitting by the base of the side walls I have eliminated the necessity of having a tie bar for holding the tops of the side against displacement. These savings are of substantial advantage in devices of this type.

Further, the anchoring of the fitting by the bottom of the wall in accordance with the present invention provides a simplified construction which can be readily installed by being snapped into position and, when in position, will be securely held on the headbar by a direct acting holding device.

Figure 5 illustrates another form of the invention wherein the base or anchorage plate for the cord fittings snaps into side-wall portions of the headbar which are spaced adjacent and slightly above the bottom corner folds of the headbar. In this figure a channel-shaped headbar **30** is provided, having a bottom wall **31** and side walls **32,**

the upper longitudinal edges of the latter having inward curls 33. The side walls 32 are provided with embossed outwardly projecting upper and lower beads 34 and 35, the lower beads 35 being spaced upwardly a short distance from the bottom corner folds 36 of the headbar. The headbar 30 supports a tilter 13 mounted on a base or anchorage plate 37 provided with a pair of upturned flanges 38 whose upper edge portions 39 are rounded to enable them to nest into the shallow grooves formed by the lower pair of beads 35. Thus the base plate 37 may be snapped into position and securely held therein with the rounded portions 39 of the flanges 38 retained by the inner walls of the beads 35, all in the manner already described above in connection with Figs. 1 through 4. The base plate 37 when being snapped into position spreads apart slightly the side walls 32, said side walls returning to their original shape as the rounded portions 39 of the plate are received in the grooves formed by the beads 35.

Preferably, in accordance with the invention, the beads 35 are unsymmetrical with respect to a horizontal central plane passing through them, said beads having their upper walls more sharply sloped from the vertical than their lower walls. The slope of the upper walls is sufficiently great to securely hold the rounded portions 39 of the base plate 37 and prevent accidental dislodgment of the plate once it has been snapped into its operative position.

This construction is of advantage where the headbars are formed of flat sheet metal which has first been coated or painted, since the rolling of the beads 34 and 35 may be carried out without marring the paint if the sheet metal is not formed too deeply and caused to slide or creep excessively over the surface of the dies.

Variations and modifications may be made within the scope of the claims and portions of the improvements may be used without others.

I claim:

1. In a Venetian blind having a sheet metal open-top headbar having a bottom and side walls and tilter and cord lock fittings having a bottom portion mounted therein adjacent each end, the improvement wherein the bottom portion of the fitting conforms to the bottom of the headbar and said side walls of the headbar are provided with resilient gripping means thereon adjacent the bottom to grip and hold the side edges of the fittings, said gripping means yielding to enable the fittings to be snapped into the headbar with the bottom portion of the fitting in face-to-face engagement with the bottom of the headbar so that downward pull on the fitting causes no relative movement between the bottom portion of the fitting and the bottom of the headbar to release the grip of the gripping means on the edge of the fittings in the headbar.

2. The invention as defined in claim 1 wherein the gripping means includes camming means acting downwardly on the edge of the fitting to urge the bottom portion of the fitting into engagement with the bottom of the headbar.

3. The invention as defined in claim 1 wherein the edges of the fitting comprise an elongate partially rolled portion and the gripping means comprises inwardly opening beads at the juncture of the side walls and bottom of the headbar.

4. The invention as defined in claim 1 wherein the gripping means comprises longitudinally extending, inwardly facing shallow grooves in the side walls of the headbar closely adjacent the juncture of the side walls and bottom of the headbar and said fittings have oppositely disposed, rounded detent portions nested into the shallow grooves of the side walls.

5. The invention as defined in claim 4 in which the grooves in the side walls of the head bar are unsymmetrical with respect to a central horizontal plane passing through the grooves, the upper inside walls of the grooves making a greater angle with the vertical than the lower inside walls of the grooves, said upper inside walls thereby securely holding the rounded detent portions of the fitting against accidental dislodgment.

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