May 4, 1954 H. S. ROSENBAUM 2,677,419

FIXTURE FOR VENETIAN BLINDS

Original Filed April 22, 1948 2 Sheets-Sheet 1

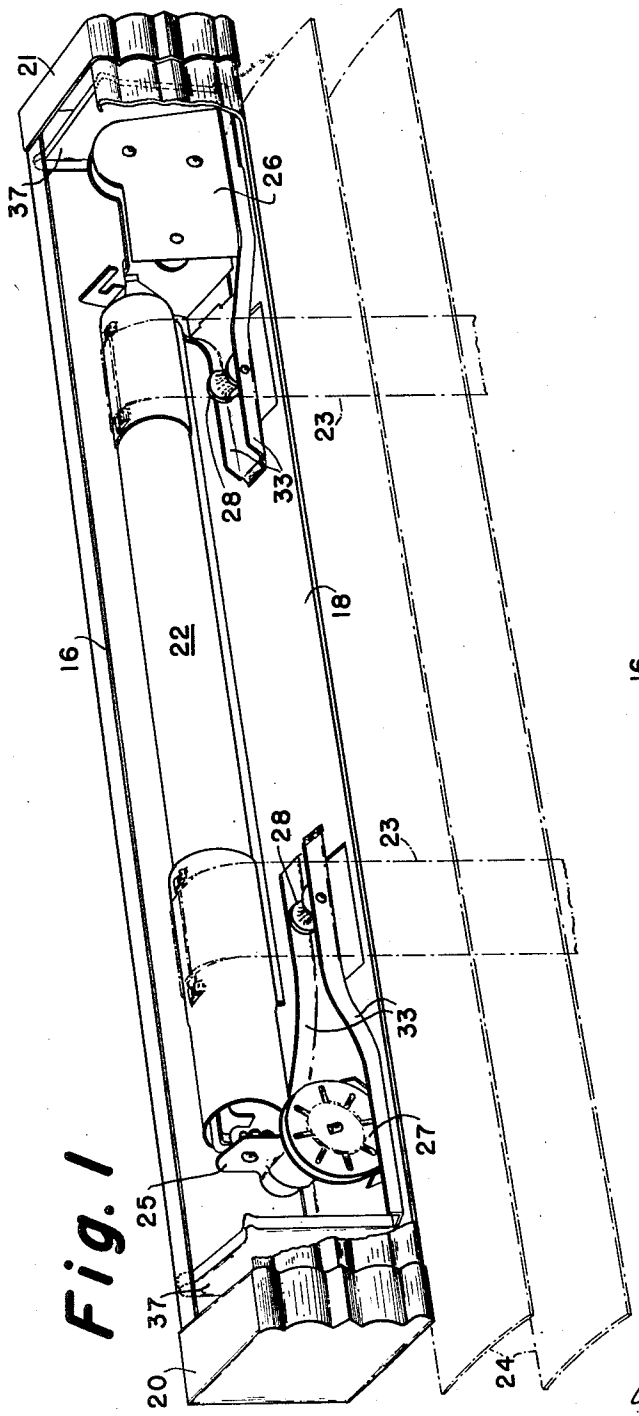


Fig. 1

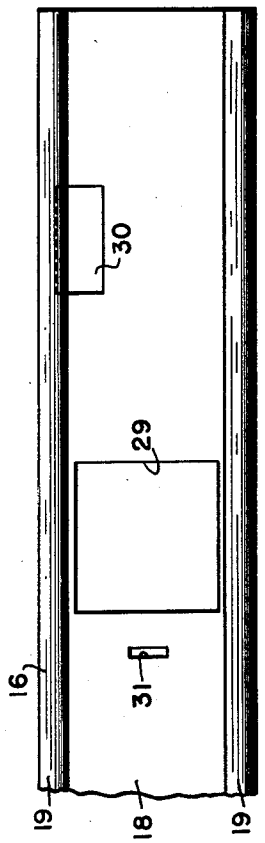


Fig. 2

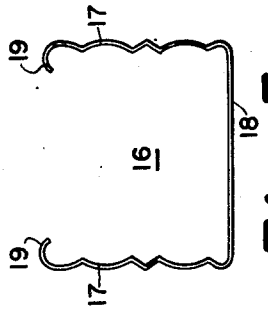


Fig. 3

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FIXTURE FOR VENETIAN BLINDS

Original Filed April 22, 1948 2 Sheets-Sheet 2

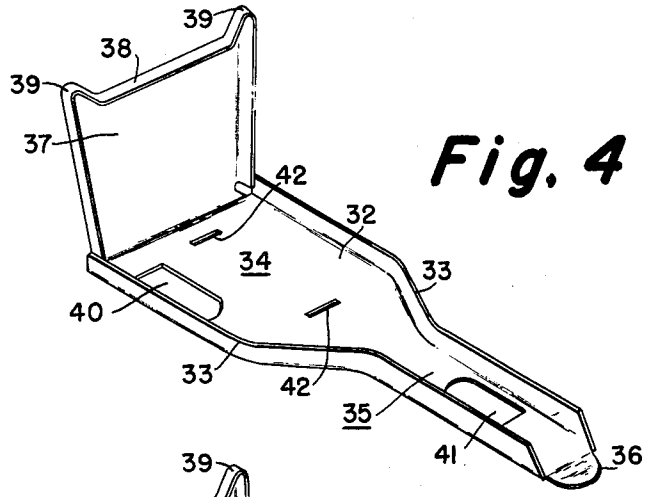


Fig. 4

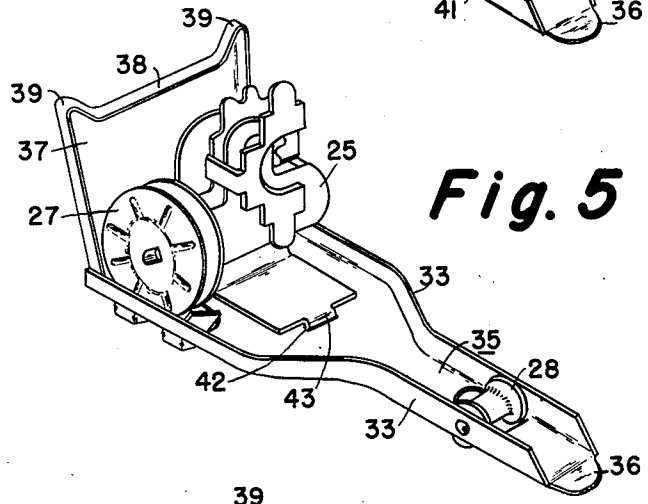


Fig. 5

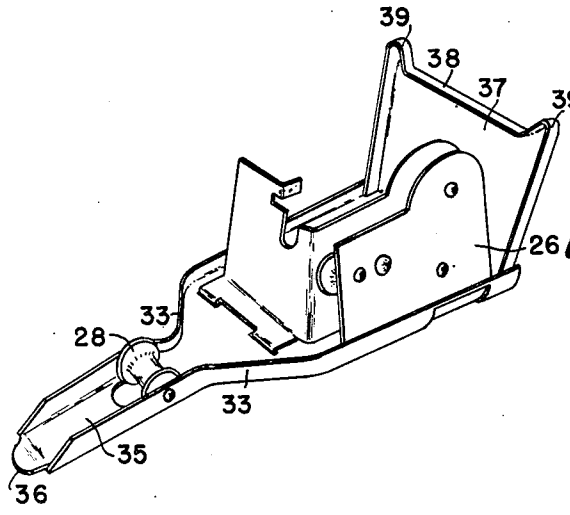


Fig. 6

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UNITED STATES PATENT OFFICE

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FIXTURE FOR VENETIAN BLINDS

Harry S. Rosenbaum, Baltimore, Md.

Original application April 22, 1948, Serial No. 22,622. Divided and this application September 13, 1952, Serial No. 309,467

2 Claims. (Cl. 160—173)

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My inventions relate to fixtures for Venetian blinds, particularly those having a headrail which both supports and conceals the mechanism for operating the blind. They relate particularly to metal blinds of this type and to fixtures for supporting or assembling the blind operating mechanism.

Metal blinds of the type to which my inventions particularly relate generally have a headrail in the form of a U-shaped channel which supports on its base the mechanism for operating the blind, the outer side of the U concealing the operating parts. The operating parts include a tilt roller to which the slat tapes are secured and a mechanism for rotating the roller to tilt the slats of the blind. The headrail also carries a cord lock which holds the cord for raising and lowering the blind in any desired position and several pulleys which guide the cords for raising and lowering the blind. If the blind is of substantial length the channel also carries intermediate supports for the tilt roller. All of these parts, with the exception of the cords and tapes, are made of metal. It, therefore, has been the practice to completely fabricate metal Venetian blinds at the factory. The channels, tilt rollers, and slats are all cut to length and these parts, together with operating mechanism have been permanently secured to each other as by welding, rivets, presses, etc.

There are many different sized windows and, therefore, retail dealers of Venetian blinds (generally small concerns) have had to carry in stock quantities of blinds in different sizes in order to supply customers promptly with the particular size which the customers require. Thus, although it has until recently been the custom to supply metal Venetian blinds in only one shade, a local dealer has had to stock in quantity more than two hundred different widths. In many instances, the capital and storage requirements have been almost impossible for a small dealer to meet. This situation has recently been aggravated by the fact that metal Venetian blinds are now manufactured and sold in several different colors.

I have devised fixtures for metal Venetian blinds and particularly for the operating parts thereof whereby a local dealer can assemble the blinds himself. A manufacturer can supply to the dealer channels for the headrails and tubing for the tilt rollers in long lengths and also operating mechanism or "hardware" such as cord locks, tilting mechanism, pulleys, etc. The dealer may cut the channels and tubing for the rollers to the

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required length and, using fixtures which I have invented, assemble the complete headrail in his own shop. This assembly can be done without presses, welding or riveting machines such as are usually available only in factories. In fact, the assembly can be done without any tools at all. Since the local dealer can make up blinds complete with headrails to any size required and in a very short time he does not have to carry large numbers of different sized blinds on stock. By virtue of my inventions, the dealer carries only long lengths of headrail channels and tubing for the tilt rollers in quantities proportional to the size of his business.

This application is a division of my application, Serial No. 22,622, filed April 22, 1948, on which Patent No. 2,620,866 issued December 9, 1952. That application discloses the subject-matter of this application, but claims only the tilt roller and associated parts which I have invented. This application is directed to the fixtures which I have invented for installing the cord locks, tilters and associated parts within the headrails.

In the accompanying drawings, I have illustrated present preferred embodiments of my inventions in which—

Figure 1 is a perspective view of a headrail for a Venetian blind having a U-shaped channel with parts broken away to show the manner in which my fixtures are used in a headrail;

Figure 2 is a partial plan view of the channel forming the headrail;

Figure 3 is an end view of the channel;

Figure 4 is a perspective view of a fixture which I have designed for installing operating mechanism in the channel forming the headrail; and

Figures 5 and 6 are perspective views of different operating mechanisms which may be installed on the fixture illustrated in Figure 4.

A headrail for a metal Venetian blind comprises a channel 16 which, as shown in Figure 3, is generally U-shaped, having sides 17 and a base 18, the upper edges of the sides having inwardly and reversely curved flanges 19 to increase the rigidity of the sides. Installation brackets 20 and 21 are fitted over each end of the channel to secure the headrail adjacent the top of and between the sides of a window frame.

The channel 16 supports on its bottom 18 and adjacent each end mechanism for operating the blinds. Such mechanism comprises a tilt roller designated generally by the reference number 22 to which are secured tapes which carry and space the blind slats, the tapes and a few of the slats being indicated in chain lines in Figure 1 at 23

and 24 respectively. The roller 22 is supported at one end by conventional tilting mechanism 25 and at the other end by a conventional cord lock mechanism 26. The tilting mechanism is actuated by rotation of a wheel 27, the wheel being rotated by a cord passing around it and extending down from the headrail to easy reaching position. The slats are raised and lowered by cords which pass from points on the bottom rail of the blind adjacent the tapes up over pulleys 28 in the headrail through the cord lock 26 and down to a point where they can be reached. For clarity of illustration, these cords are not shown in Figure 1 since their ararngement and operation is well known. A large square opening 29, a smaller rectangular opening 30 and a slot 31 are cut in the bottom 18 of the channel at both ends of the channel as shown in Figure 2. The opening 29 allows the tapes 23 to pass through the channel 16 to the tilt roller 22 to which they are connected. The opening 30 provides passage through the channel for the cords which operate the blind and the slot 31 is used to secure the tilting mechanism and the cord lock to the channel 16 as will be hereinafter described.

Figure 4 illustrates a fixture which I have devised for securing operating mechanism such as the tilting mechanism and the cord lock to the channel. The fixture comprises a base 32, both sides of which have upwardly extending flanges 33 which add rigidity to the base. A portion 34 of the base has sufficient width to support operating mechanism, for example, the tilting mechanism, and at the same time approximate the distance between the flanges 19 on the channel 16. Another portion 35 of the base is reduced in width to such an extent that the side flanges 33 adjacent this portion may be used to support and hold in alignment rollers for guiding the cords which raise and lower the slats such as the rollers 22 (see Figures 1, 5, and 6). A downwardly and outwardly extending tongue 36 is formed on one end of the base 32. An end plate 37 extends upwardly from the opposite end of the base, preferably the end adjacent the wider portion 34 of the base. This plate increases slightly in width from its lower edge against the base 32 to its upper edge 38. The upper edge of the plate has two upwardly extending projections 39, which as shown in Figure 4, are on opposite top corners of the plate. As shown in Figure 4, the edges of the plate 37 may be flanged for extra rigidity.

The base 32 has openings 40 and 41 cut therein to align with the openings 29 and 30 cut in the channel so that cords for operating blinds can pass through the base of the fixtures. Slots 42 are also cut in the base to provide means for fastening operating mechanism to the base. As shown in Figures 5 and 6, the tilting mechanism 25 and the cord lock 26 may be secured to the fixture 32 by tongues 43 which extend from their bases through the slots 42 and are bent over in presses to permanently secure the mechanism to the fixture.

A Venetian blind manufacturer may assemble the operating mechanisms to the fixture 32 and supply these assemblies to the retail dealer. The retail dealer will assemble them in a headrail in the following manner. A channel 16 is cut to the required length and the openings 29, 30 and 31 are cut therein near each end of the channel, as shown in Figure 2. The dealer then inserts the tongue 36 of each fixture into one of the slots 31 and presses the opposite end and the plate

37 down between the flanges 19 of the channel. It should here be noted that the portion 34 of the base 32 of the fixture is only slightly less in width than the distance between the flanges 19 so that pressing the fixture downwardly in the channel tends to spring the sides 17 of the channel outwardly. When the bottom edge of the plate 37 contacts the bottom of the channel, the sides 17 of the channel spring inwardly over the projections 39 on the top of the plate, the projections engaging the inner surface of the inwardly and reversely curved flanges 19. The tongue 36 and the flanges 19 of the channel in conjunction with the projections 39 securely hold the fixture and the operating mechanism which it supports in the proper position in the channel. The plate 37 not only holds the fixture in this position but also laterally reinforces the sides of the channel.

By means of my inventions a metal Venetian blind can readily be assembled by a local dealer. As noted above, he can obtain from the manufacturer channels for the headrails. He may also obtain "hardware" such as tilting mechanism and cord locks, these latter two operating mechanisms being permanently affixed at the factory to the fixtures 32, installation brackets, tapes, slats and clips. When he receives an order for a blind of a particular size, he can cut the channel to the appropriate length and fasten the tilting mechanism and the cord lock in the headrail channel as described above. Thereafter, he can assemble a tilt roller and install it in the headrail as described in my copending application, Serial No. 22,622. The tilt roller as installed is shown at 22 in Figure 1 of the drawings referred to herein. Thereafter, the tapes are secured to the tilt roller as described above and the cords necessary for operating the blind are threaded through the slats of the headrail in the conventional manner.

Thus, by virtue of my inventions, all of the parts necessary to make up metal Venetian blinds may be made in a factory at the low cost made possible by mass production techniques. At the same time, the retail dealer can assemble these parts without tools and produce Venetian blinds having the same appearance and sturdiness of blinds heretofore assembled in final form only at factories. The dealer is not required to carry large quantities of different sizes of fully fabricated blinds in stock or maintain machines and equipment such as are usually found only in factories.

While I have described certain present preferred embodiments of my inventions, it is to be understood that they may be otherwise variously embodied within the scope of the following claims.

I claim:

1. A fixture for a headrail of a Venetian blind in which the headrail is in the form of a channel having inwardly and reversely turned flanges along its edges, said fixture comprising a base having upturned flanges along its sides, a portion of the base having a width less than but approximating the distance between the inwardly turned flanges of the channel, said base portion being adapted to support mechanism for operating the blind, the balance of the base decreasing in width whereby the upturned side flanges are adapted to support and hold in alignment pulleys for operating cords, a plate extending upwardly from one end of the base and having projections for engaging the inwardly turned flanges on the

channel, and a tongue extending from the opposite end of the base and adapted to fit into a slot cut in the base of the channel.

2. A fixture for a headrail of a Venetian blind in which the headrail is in the form of a channel having along its edges flanges turned inwardly and reversely in wide open curves, said fixture comprising a base adapted to support mechanism for operating the blind, a plate extending upwardly from one end of the base and having projections at its upper end for engaging the inwardly turned flanges on the channel, the width of the base and of the plate at its lower end being less than the distance between the inner edges of the flanges on the channel, the projections being spaced from each other and from the base a sufficient distance whereby they pass under

the wide curves of the flanges along the sides of the headrail and are locked in the recesses formed by the flanges when the base of the fixture rests on the base of the headrail channel, and a tongue extending from the opposite end of the base and adapted to fit into a slot cut in the base of the channel.

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