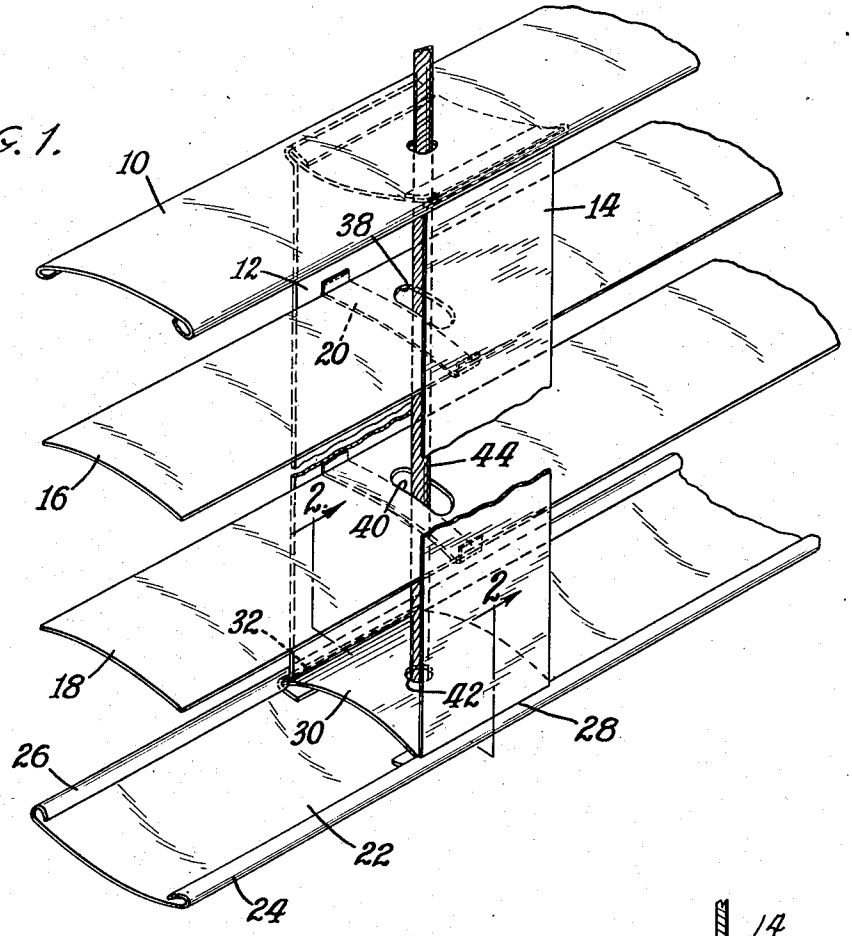
Oct. 30, 1951 E. F. THOMSON 2,573,163

VENETIAN BLIND RAIL AND TAPE FASTENER

Filed Dec. 7, 1945

FIG. 1.



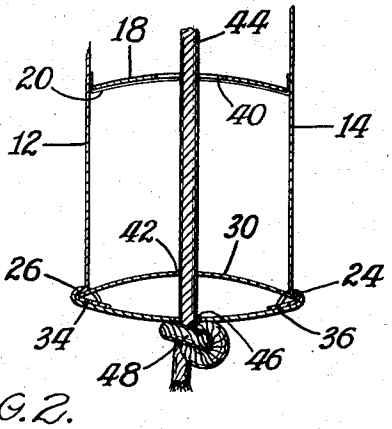


FIG. 2.

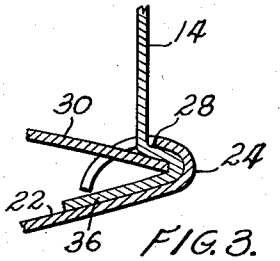


FIG. 3.

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VENETIAN BLIND RAIL AND TAPE FASTENER

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9 Claims. (Cl. 160—178)

1

This invention relates to a Venetian blind. More particularly, the invention relates to the bottom rail of a Venetian blind having metal slats and to a resilient clip engageable with the bottom rail for holding the blind tapes thereto.

One object of this invention is to provide an inexpensive metal bottom rail for a Venetian blind, which metal bottom rail harmonizes with steel slats while giving the appearance of completing the bottom of a Venetian blind. The conventional metal slats used in Venetian blinds are transversely curved in order to provide longitudinal rigidity for very light metal material. They constitute longitudinally elongated segments of a cylindrical surface and generally their concave face is positioned downwardly. My base rail has the same general curvature as the slats, but is inverted so that the concave surface is directed upwardly. The visual effect of this use of substantially the same transverse curvature on the bottom rail as is employed in the slats is a desirable visual symmetry between the lowermost slat and the bottom rail. Also, the reversal of the curvature so that the convex surface of the bottom rail is downward is to give a finished bottom appearance to the Venetian blind when viewed as a whole.

An additional object of my invention is to provide a very simple, yet attractive means for fastening the bottom rail to the tapes. This I effect by flanging upwardly and inwardly the front and rear edges of the bottom rail so as to form ridges under which something may be hooked. I then provide a flexible member having approximately the same transverse curvature as the slats and having a width approximating that of the tapes, which flexible member engages the front and back flanges of the base rail and holds between itself and the respective flanges the tapes. A strong grip is not needed because all the strength that is necessary is that required to support the bottom rail on the tapes. When the blind is raised, the cord lifts the bottom rail, no stress being added to the clip, although there is a piling up of the slats on the clip which serves to hold the clip more tightly in engagement with the tape bottoms and flanges of the bottom rail.

The accompanying drawing illustrates the present invention.

Figure 1 is a fragmentary perspective view of a Venetian blind in a lowered position; and

Figure 2 is a view taken on the line 2—2 of Figure 1.

Figure 3 is an enlarged cross sectional view of one of the lower corners of Figure 2, showing the

2

relationship between the notch of the terminal rail, the end of the tape, and the resilient clip.

Referring to the drawings, and particularly to Figure 1, the numeral 10 identifies a head assembly for holding the tapes which may assume any of many forms. The numerals 12 and 14 refer to the rear and front tapes at one side of the blind and the numerals 16 and 18 to the conventional metal slats having a curvature clearly illustrated in Figure 2. The slats are supported by textile cross members such as 20 in the conventional manner.

The bottom rail 22 of the present invention comprises an elongated cylindrical segment of sheet metal having substantially the same transverse curvature, see Figure 2, as the slat 18, but with the concave side turned upwardly. This bottom rail has formed along its front and rear edges upwardly and inwardly directed flanges 24 and 26. Notches 28 and 32 are cut on the inner edges of said flanges 24 and 26, respectively. These notches have a width approximating the width of the tapes to be used in the Venetian blind and are in vertical alignment with the tapes. They are cut back only a portion of the way into each flange so as to leave a crevice or slot between the uncut portion of the flange and the bottom rail. A resilient clip 30, preferably of metal, having substantially the same curvature in normal position as the transverse curvature of the slats or the bottom rail may be snapped into the notches 28 and 32 so as to seat in the slots or crevices and thereby hold the ends 34 and 36 of the tapes 12 and 14. Contraction of the clip 30 for either insertion or removal is easily effected. It is quite resilient and the purchase provided on the tapes need only be sufficient to hold the bottom rail to the tapes. It is manifest that the bottom rail may be fairly heavy and still be held to the tapes by the clip. Of course, a light weight bottom rail is preferred.

Extending downwardly through slots 38 and 40 in the slats 16 and 18, respectively, and through a hole 42 in the clip 30, is a conventional cord 44 which passes through a hole 46, see Figure 2, in the bottom rail 22 and terminates in a knot 48. When the Venetian blind is raised, the knot engages the under side of the bottom rail 22 and the slats are successively picked up as the bottom rail rises. The slats rest in part on the clip 30 and serve to hold it more firmly in the under side of the notches 28 and 32.

It will be appreciated that this bottom rail could be adapted to serve as a top rail, as suggested in Figure 1, and that the holding clip could be

similarly adapted. Where such a clip is used on an upper rail, it must be capable of holding the tapes very tightly, for all of the slats are supported from the tapes. In the claims, the expression "terminal rail" are used to identify either a top rail or a bottom rail.

It will also be appreciated that this type of tape holding clip, with or without the type of bottom rail disclosed, may be used on Venetian blinds employing non-metallic slats which are either transversely curved or flat. And it is to be understood that the tape holding clip need not have, in normal position, a curvature similar to the transverse curvature of the slats or any curvature for that matter since a flat, resilient piece of metal of the desired size may be flexed and snapped into tape-engaging position.

I claim:

1. A Venetian blind comprising tapes, sheet metal slats having a transverse curvature on a selected radius supported by said tapes, said slats being positioned so that their concave surfaces are directed downwardly, and a sheet metal bottom rail having a transverse curvature approximating that of the slats and with the concave surface disposed upwardly, the lateral edges of said bottom rail being turned upwardly and inwardly to form opposing flanges, and a resilient clip engaging said flanges, the ends of said tapes being secured between said flanges and said clip.

2. A Venetian blind comprising tapes, sheet metal slats having a transverse curvature on a selected radius supported by said tapes, the concave surfaces of said slats being directed downwardly, a sheet metal bottom rail having a transverse curvature approximating that of the slats and with the concave surface disposed upwardly, upturned flanges on the front and rear edges of said bottom rail, and means engageable with said flanges for holding the bottom ends of said tapes.

3. A Venetian blind comprising tapes, sheet metal slats having a transverse curvature on a selected radius supported by said tapes, the concave surfaces of said slats being directed downwardly, a sheet metal bottom rail having a transverse curvature approximating that of the slats and the concave surface thereof being disposed upwardly, upwardly and inwardly turned flanges on the front and rear edges of said bottom rail, transversely aligned notches, one in the forward and one in the rearward flange formed by cut backs therein, said notches having a width approximating that of the tapes to be used, and a resilient clip insertable into said notches engaging the cut back portion of the flanges and holding the bottoms of the tapes.

4. A Venetian blind comprising tapes, slats, and a bottom rail, said bottom rail having along its forward and rearward edges facing crevices into each of which may be inserted the lower end of a tape, and a resilient clip member having a front edge insertable into the forward crevice and a rear edge insertable into the rearward crevice, the resiliency of the clip urging said edges into said crevices for fastening said tapes therein.

5. A Venetian blind comprising tapes, slats, and a bottom rail, said slats and bottom rail being of substantially the same thickness, said bottom rail having along its forward and rearward edges facing notches into each of which may be inserted the lower end of a tape, and a curved clip of sheet material having two opposite, substantially parallel edges spaced from each other by a distance greater than the distance between the notches, said clip being resilient, thereby facilitating mounting said edges in said notches.

6. A terminal rail for a Venetian blind comprising an elongated member, a rearwardly directed crevice on the forward edge of said rail and having a width approximating that of the ladder tape used in the blind, a forwardly directed crevice disposed on the rear edge of the rail and facing the first crevice, and expansible means engaging both crevices to hold the ends of tapes therein.

7. A terminal rail for a Venetian blind comprising an elongated member made of sheet material and having a curved cross section, a flange inwardly directed along each long edge on the concave side of said member, a notch in each flange in facing relation to the other, and a resilient clip having opposite substantially parallel edges of a width substantially that of the notches and inserted therein.

8. A Venetian blind comprising a rail having lateral edges bent over to form inturned opposing flanges, a resilient clip having its opposite edges positioned adjacent said flanges, said rail being cut away in the area engaged by the edges of said clip to form apertures for tapes, and tapes having their ends positioned in said apertures, said resilient clip engaging said tapes and pressing the same against said flange to prevent accidental diplacement of said tapes.

9. A Venetian blind comprising a bottom rail having lateral edges bent upwardly and inwardly to form inturned opposing flanges, a resilient clip having its opposite edges positioned adjacent said flanges, said rail being cut away in the area engaged by the edges of said clip to form apertures for tapes, and tapes having their ends positioned in said apertures, said resilient clip pressing said tapes against said flanges to hold said tapes in place.

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