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I. JABLIN

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VENETIAN BLIND

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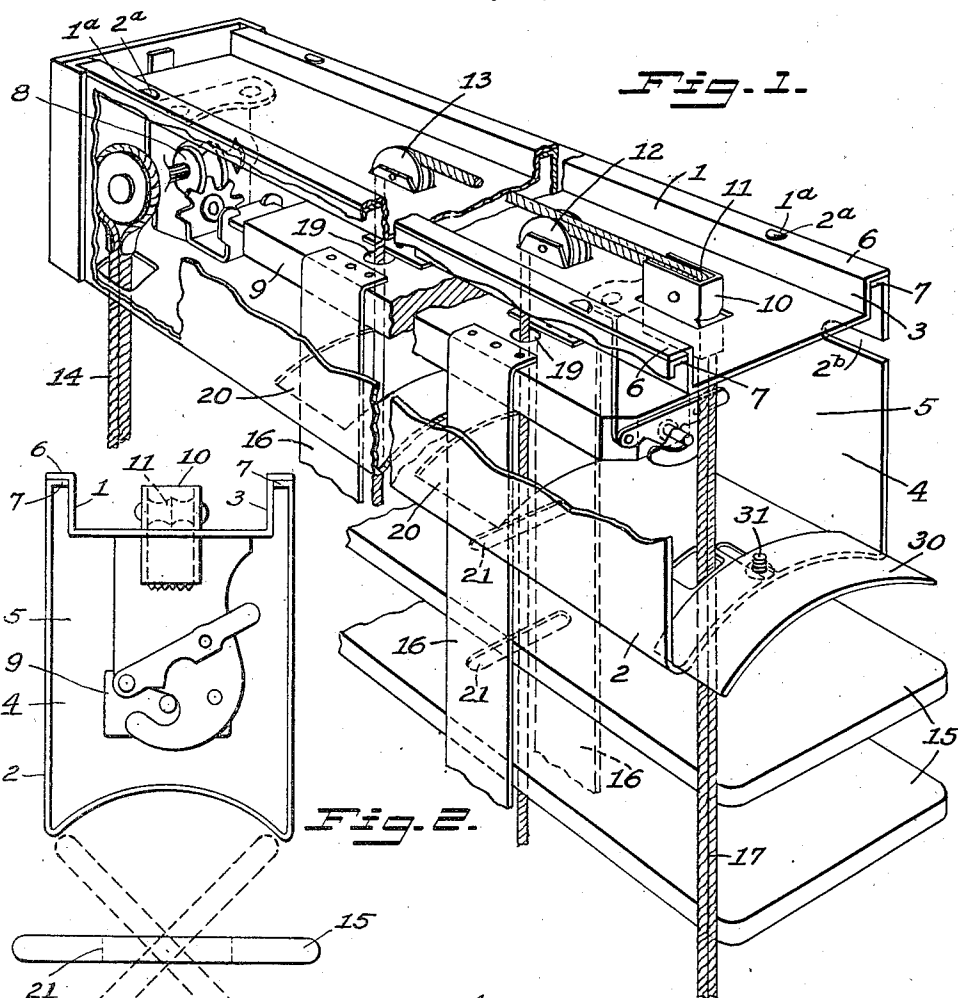


Fig. 1.

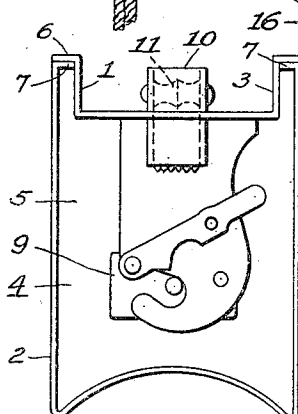


Fig. 2.

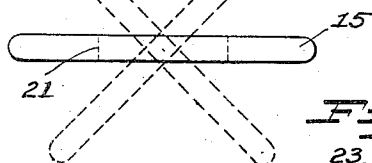


Fig. 4.

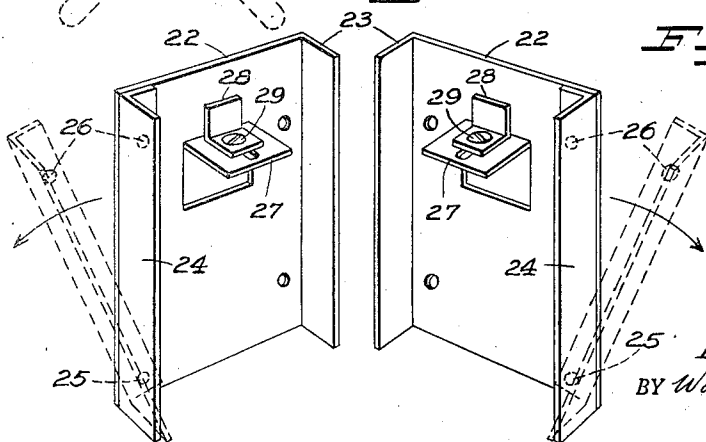


Fig. 5.

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UNITED STATES PATENT OFFICE

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VENETIAN BLIND

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12 Claims. (Cl. 160-168)

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This invention relates to improvements in Venetian blinds and more particularly to the construction and mounting of a head rail of such blinds.

Among the important features of the invention may be mentioned the following:

The head rail is formed of two sheet metal sections that are separably combined to provide a closed housing chamber for the operating mechanism of the blind, to protect the same from exposure to weather conditions and against the entrance and accumulation of dust therein.

One of the rail sections serves as a removable closure for the other section, in which the housing chamber is formed, and also as a supporting carrier for the blind-operating mechanism contained in the chamber, an arrangement that greatly facilitates assembly of the mechanism and makes it readily accessible for inspection and available for repair.

The rail section in which the blind-operating mechanism is housed, has a bottom formation such as to provide clearance for free and full arcuate movement of the adjoining edge of the upper blind slat, when the slats are tilted to close the blind, and at the same time obstruct and prevent the objectionable passage of light through the cleared path in which the slat moves.

In order to enter the head rail with its suspended blind in the window frame brackets, the inner side wall of the rail section in which the housing chamber is formed, is notched at opposite ends to a depth sufficient to provide clearance for the inner wall of the rail past support members of the brackets, enabling the rail to be moved inward between the brackets, far enough to center it on the bracket supports upon which it rests, with the ends of the rail closure section engaging the supports. To compensate for any slight variation between the length of the rail and the distance between the sides of the window frame and prevent resulting endwise movement of the rail, end clamps are provided in part with the brackets, which are adjustable to engage the rail ends and hold the rail securely in position on the brackets.

Other structural features not specially mentioned above will be brought to attention in the detail description that follows.

The accompanying drawing will serve to illustrate a construction suitable for carrying my invention into effect but, it will be understood, that no limitations are intended by this showing, other than are imposed by the appended claims.

In the drawing—

Fig. 1 is a view in perspective of a head rail

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constructed in accordance with my invention, portions of the casing being broken away to show the enclosed blind-operating mechanism.

Fig. 2 is a view in elevation of the open right hand end of the head rail, as it appears in Fig. 1, the tilting of the blind slats being indicated by dotted lines and

Figs. 3 and 4 are detail perspective views of the right and left hand window frame brackets by which the rail is supported.

Referring now to the drawing, the head rail casing, as shown, is formed of two sheet metal sections 1 and 2, shaped and given channelled form throughout their length, to different depths, as indicated at 3 and 4, and bolted, riveted or otherwise secured together to provide a closed housing chamber 5 for the operating mechanism of the blind.

The upper shallower section 1, as shown, serves as a closure for the housing chamber 5, by having its channelled portion 3 entered in telescoping relation in the upwardly opening channel 4 of the lower section 2 to a depth limited by engaging edge flanges 6 and 7, with which both sections are provided. Struck up lugs 2^a from the flanges of the lower section, passing through slots 1^a in the flanges of the upper section, are bent over and serve to secure the sections together.

In addition to serving as a closure for the housing chamber, as above described, the section 1 serves further as a carrier support for the blind-operating mechanism, by having the greater portion of such mechanism suitably mounted on its under side and depending therefrom in suspended relation in the housing chamber. As shown, the worm gearing 8, tilt rail 9, cord lock 10 and grooved roller 11, are bracketed to the section 1, and the grooved rollers 12 and 13 are mounted in openings between lugs struck up from the body portion thereof, the construction and arrangement being such as to form a single assembly of the blind-operating parts, with the head rail casing section as the supporting carrier for the same.

As the blind-operating mechanism shown is of the conventional form, well known in the art, it will not be necessary to describe it in detail. It will suffice for a complete understanding, to point out that the looped cord 14, at the left, in Fig. 1, serves in the usual manner, when one side or the other of the loop is given a downward pull, to tilt the slats 15 and open or close the blind, through the resulting action of the worm gearing 8, tilt rail 9, and the tapes 16, attached to the tilt rail and carrying the slats of the blind. The looped cord 17, at the right, serves, as is customary, to raise and lower the blind, the

cord of the loop running through a cord lock 10 and over the grooved rollers 11, 12 and 13, thence downward through spaced apart openings 19, 20 and 21, in the tilt rail 9, head rail section 2 and blind slats 15, to a weighted bottom rail of the blind (not shown) to which the ends of the looped cord are attached.

The above described head rail is removably bracketed to opposite sides of the window frame, with the blind suspended therefrom in the usual manner to shade the window. The window frame brackets employed are preferably of the form shown in Figs. 3 and 4.

Right and left hand brackets are required for corresponding sides of the window frame and excepting this difference, the brackets are of identical construction. They consist, as shown of a back plate 22, bent up at one side to provide a fixed flange 23 and at the opposite side, there is a movable flange 24, pivoted to the back plate at 25. A stamped-out rounded projection 26, near the free end of the movable flange snaps into an opening in the back plate to yieldingly retain the flange in normal position. Centrally and near the upper end of each back plate there is a stamped-out lug 27, on which the ends of the section 1, of the head rail rest and are supported, when the rail is placed in position on the brackets.

Assuming the brackets to be secured on opposite sides of the window frame, the first step in placing the head rail, with its suspended blind, in position, is to swing the movable flanges 24 of the brackets outward about their pivots, as indicated in dotted lines in Figs. 3 and 4, to provide clearance for the entrance of the rail. As the lugs 27, 27, would interfere with the direct entry of the rail, further clearance is provided by end notches 2^a, 2^b, formed in the inner side wall of the rail section 2, which enable the rail to be moved inward between the brackets to center it thereon, with the ends of the closure section 1, resting on the lugs 27. With the rail now supported on the brackets, the flanges 24, 24 are swung back and snapped into position, locking the rail in position.

To prevent endwise movement of the head rail, after being entered and locked in the brackets, end clamps 28 are provided on each lug 27. The clamps are adjusted and set, by means of a screw and slot connection 29 with the lugs, to engage opposite ends of the head rail as the latter is moved inward between the brackets, as above described.

As the length of the head rail is ordinarily made somewhat less than the distance between the back plates of opposite brackets, openings are left at the bottom of the rail between the ends thereof and the back plates and as such openings are objectionable in giving the bracketed rail an unfinished appearance, bottom extension plates 30 are employed to close the openings and are adjustably secured by a screw and slot connection 31 to the bottom of the rail section 2, as shown at the right in Fig. 1.

To prevent an objectionable passage of light between the upper edge of the upper blind slat and the bottom of the head rail, when the slats are tilted to close or partially close, the blind, as indicated by dotted lines in Fig. 2, and at the same time provide clearance for the arcuate travel of the upper edge of the blind slat, a raised bottom formation is provided between the bottom edges of the rail section 2, which permits free movement of the slat and effectively ex-

cludes the light. This raised bottom formation may be given any form desired but is preferably concave, the curve extending from edge to edge and conforming to the arc of travel of the upper edge of the blind slat.

As the construction, operation and many important advantages of the invention will be apparent from the foregoing, it will not be necessary to further describe the same.

I claim:

1. A head rail casing for a Venetian blind formed of two sections, one of the sections being channeled to provide a housing chamber for the operating mechanism of the blind and the other section serving as a closure for the housing chamber and as a carrying support for the blind-operating mechanism contained in the chamber.

2. A head rail casing for a Venetian blind formed of two sections, channeled and combined to form a closed housing chamber for the operating mechanism of the blind, one section serving as a closure for the channel of the other section and as a supporting carrier of the blind-operating mechanism contained in the chamber.

3. A head rail casing for a Venetian blind formed of two sections, channeled and combined to form a closed housing chamber for the operating mechanism of the blind, the channeled portion of one section being entered in the channel of the other section as a closure for the same and serving as a supporting carrier for the blind-operating mechanism contained in the chamber.

4. A head rail casing for a Venetian blind consisting of two channeled and flanged sections combined to form a housing chamber for the operating mechanism of the blind, the channeled portion of one section serving as a closure for the housing chamber by being telescoped into the channel of the other section to a depth limited by the engaging flanges of the sections, the said closure section serving further as the supporting carrier of the blind-operating mechanism contained in the chamber.

5. A head rail casing for a Venetian blind consisting of two sections channeled to different depths and combined to form a housing chamber for the operating mechanism of the blind, the shallower channeled section serving as a closure for the channeled housing chamber in the other section by having its channeled portion telescoped into the chamber with the channel thereof opening upward and having the cord for raising and lowering the blind extending through the channel.

6. A head rail casing for a Venetian blind, as defined in claim 5, in which the shallower channeled section serves as a carrying support for the operating mechanism of the blind.

7. A head rail casing for a Venetian blind, as defined in claim 5, in which the shallower channeled section has the blind raising, lowering and tilting mechanism mounted on its lower side and removable with the same for inspection and repair.

8. A head rail casing for a Venetian window blind formed of two sections, brackets at opposite sides of the window frame between which the aforesaid sectional head rail casing is adapted to be entered and removably supported, the casing sections being channeled to different depths and assembled to form a housing chamber for the operating mechanism of the blind which chamber is closed at the ends by the aforesaid rail-supporting brackets, the shallower channeled section serving as a top closure for

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the channeled housing chamber in the other section by having its channeled portion telescoped into the chamber to a limited depth with its channel opening upward.

9. A head rail for a Venetian blind adapted to be entered between and removably supported by brackets secured on opposite sides of a window frame, the rail being shorter than the distance between the brackets and having suitable extension means adjustable to extend the rail ends at the bottom of the rail to the brackets.

10. In a Venetian blind assembly, a head rail having a raised bottom formation between the bottom edges thereof that provides clearance above the edges for the arcuate movement of the upper blind slat as the slats are tilted to close

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the blind and prevents the passage of light through the cleared path.

11. In a Venetian blind assembly, a head rail having a concaved bottom formation that provides clearance for the arcuate movement of the upper blind slat as the slats are tilted to close the blind and prevents the passage of light through the cleared path.

12. In a Venetian blind assembly, a head rail having a curved bottom formation that substantially conforms to the arc of travel of the upper edge of the upper blind slat as the slats are tilted to close the blind and prevents the passage of light between the upper slat and the head rail.

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