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VENETIAN BLIND

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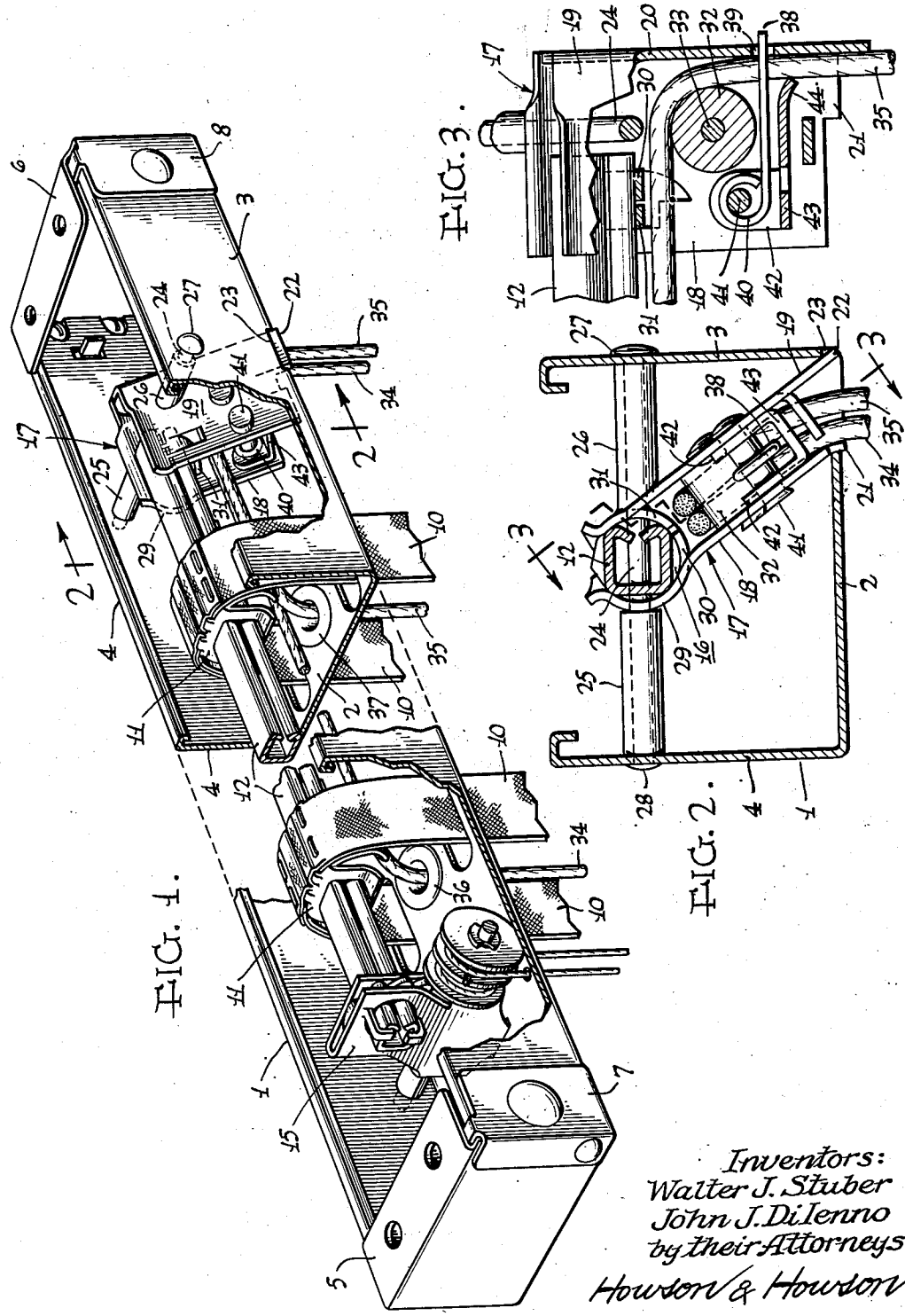


FIG. 1.

FIG. 2.

FIG. 3.

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VENETIAN BLIND

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3 Claims. (Cl. 160—173)

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This invention relates to new and useful improvements in Venetian blinds, and more particularly to such blinds which are fabricated entirely of metal except for the usual fabric tapes and the tilt and elevating cords, and is a division of application Serial No. 122,192, filed October 19, 1949, which issued December 25, 1951, as Patent Number 2,580,252.

One object of the invention is to provide a novel bracket for supporting the tilt shaft and elevating cord locking mechanism of a Venetian blind which is of highly simplified sheet metal construction capable of being produced in mass production at very low cost.

A further object of the invention is to provide the foregoing objective by construction and arrangement of parts which is entirely foolproof and highly efficient in operation and use.

These and other objects of the invention and the various features and details of the construction and operation thereof are hereinafter fully set forth and described with reference to the accompanying drawings, in which:

Fig. 1 is a view in perspective of a head casing structure embodying the present invention, with a portion of said casing broken away to better illustrate certain features of the invention;

Fig. 2 is an enlarged sectional view taken on line 2—2, Fig. 1; and

Fig. 3 is a sectional view taken on line 3—3, Fig. 2.

Referring now more particularly to the drawings, the Venetian blind construction of the present invention comprises a head casing 1 adapted to be installed in a window frame in the customary position below the underside of the top rail thereof and between the left and right hand side rails.

As shown, for example in Fig. 2, the head casing 1 is of channel shape in cross-section and includes a bottom panel 2, front panel 3 and a rear panel 4. The opposite ends of the head casing 1 are supported in hanger brackets 5 and 6 respectively, which are fixedly secured to the underside of the window frame top rail and provided with outwardly facing hinged portions 7 and 8 which may be opened and closed to permit insertion and withdrawal of the head casing 1 with respect to the said hanger brackets.

The usual spaced slats and bottom rail of the blind (not shown) are supported in the conventional manner by pairs of spaced ladder tapes 10, the upper ends of which are attached to drum segments 11 that in turn are mounted upon a tilt shaft 12 within the casing 1.

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The tilt shaft 12 preferably is fabricated of sheet metal and is of tubular construction having a generally quadrilateral or square cross-sectional configuration. At its left-hand end the tilt bar 12 is rotationally supported in the head casing 1 by a tilt mechanism bracket generally designated 15. The other, or right-hand, end of the tilt shaft 12 is rotationally supported in an upper rounded socket portion 16 of a bracket which is generally designated by the reference numeral 17. As shown in Figs. 1, 2 and 3 of the drawings, the bracket 17 comprises parallel side wall portions 18 and 19 joined together at their outer edges by an end wall portion 20. The bracket 17 is mounted in the head casing 1 with its side walls 18 and 19 obliquely disposed, for example, as shown in Fig. 2.

The lower end of the bracket 17 is anchored in respect to the bottom panel 2 of the head casing 1 by means of lugs 21 and 22 on the side walls 18 and 19, which lugs 21 and 22 project downwardly through a suitable opening 23 formed in the head casing bottom panel 2, and the upper end of the bracket 17 is supported by means of a pin 24 which passes entirely through the shaft supporting socket portion 16 thereof and through the front and rear panels 3 and 4 of the head casing, suitable spacer sleeves 25 and 26 being provided on the pin 24 for the purpose of appropriately supporting the upper end of the bracket 17 with respect to the head casing side panels. The pin 24 is fixedly secured in the described relation and against displacement from the head casing by a head portion 27 at one end thereof which is adapted to outwardly overlie the casing front panel 3 and the other end of the pin 24 is upset so as to overlie the casing rear panel 4, as indicated at 28.

The socket portion 16 of the bracket 17 which supports the tilt shaft 12 is formed by an offset rounded portion 29 in the bracket side wall 18 and by pressed out arcuate fingers 71 and 72, respectively, pressed out from the said wall 18 and the other wall 19 of the bracket. As shown in Figs. 2 and 3, the pin 24 passes through the socket portion 16 of bracket 17 in an endwise relation with respect to the tilt shaft 12 so that, in addition to its previously described function, the said pin 24 serves also as a stop to prevent longitudinal displacement of the tilt shaft 12 in the right-hand direction with respect to Figs. 1 and 3.

Rotationally mounted intermediate the bracket walls 18 and 19 is a roller or wheel 32. The wheel 32 is mounted upon a fixed shaft 33 that is secured in and spans the space between the

side walls 18 and 19. The usual pair of parallel elevating cords 34 and 35 are trained around the wheel or roller 32 and passed downwardly between the bracket side walls 18 and 19 adjacent the end wall 20 and then outwardly through the opening 23 in the bottom panel 2 of the head casing 1. In the other direction the cords 34 and 35 extend from the wheel or roller 32 longitudinally through the head casing 1 and then downwardly through suitable grommeted openings 36 and 37 provided in the head casing bottom panel 2 between the respective pairs of ladder tapes 10 and through which the pull cords 34, 35 extend downwardly through the usual slats with their lower ends attached to the bottom rail of the blind in the usual manner.

Within the bracket 17 and below the wheel or roller 32 the cords 34 and 35 are maintained in relatively separated side by side relation to each other by means of a finger 38 the outer end of which extends between said pull cords and outwardly through an opening 39 provided in the end wall 20 of the said bracket 17. At its other or inner end the finger 38 is bent to form an eyelet 40 which is loosely mounted upon a cross-pin or shaft 41 that has its opposite ends secured in the bracket side walls 18 and 19.

Also pivotally mounted on the cross-pin or shaft 41 are the upstanding ear portions 42 of a locking latch 43 having a projecting portion provided with a downwardly curved end 44 which is adapted to engage the elevating cords 34 and 35 and clamp the same between said edge 44 and the bracket end wall 20 when pull on the elevating cords is released. In order to elevate the slats the freely hanging portions of the elevating cords 34 and 35 are pulled downwardly in the usual manner and when the desired elevation of the blind has been attained the cords 34 and 35 are simply released so that the drag exerted by the cords on the locking latch 43 causes the latter to be pivoted slightly in the counterclockwise direction and thereby clamp the cords between its edge 44 and the end wall 20 of the bracket 17.

While certain embodiments of the present invention have been illustrated and described herein, it is not intended to restrict the invention to such disclosures, and changes and modifications may be made therein and thereto within the scope of the following claims.

We claim:

1. In a Venetian blind having a head casing, a bracket comprising spaced parallel side walls and a connecting end wall mounted in rearwardly inclined relation in the blind head casing with its side walls extending longitudinally of said casing, a rounded socket portion defined by the upper portions of the bracket side walls and extending longitudinally of the head casing, a tilt shaft having one end thereof rotationally supported in said bracket socket portion, a wheel rotatably mounted between the bracket side walls below the socket portion therein and over which the elevating cords of the blind are adapted to be trained and extend adjacent said bracket end wall, and latch means pivotally mounted intermediate said bracket side walls below said wheel and extending in the direction of the bracket and wall, said latch means being operable upon movement of the elevating cords in one direction to engage and clamp the same against the bracket end wall to prevent further movement of said elevating cords in said one direction.

2. In a Venetian blind having a head casing, a bracket comprising spaced parallel side walls and a connecting end wall mounted in rearwardly inclined relation in the blind head casing with its side walls extending longitudinally of said casing, a rounded socket portion defined by the upper portions of the bracket side walls and extending longitudinally of the head casing, a tilt shaft having one end thereof rotationally supported in said bracket socket portion, a wheel rotatably mounted between the bracket side walls below the socket portion therein and over which the elevating cords are adapted to be trained, and a finger pivotally mounted between said bracket side walls and extending in a generally horizontal direction below said wheel and between the elevating cords to maintain the same in relatively spaced relation.

3. In a Venetian blind having a head casing, a bracket comprising spaced parallel side walls and a connecting end wall mounted in rearwardly inclined relation in the blind head casing with its side walls extending longitudinally of said casing, a rounded socket portion defined by the upper portions of the bracket side walls and extending longitudinally of the head casing, a tilt shaft having one end thereof rotationally supported in said bracket socket portion, a wheel rotatably mounted between the bracket side walls below the socket portion therein and over which the elevating cords are adapted to be trained and extend adjacent said end bracket wall, a finger pivotally mounted between said bracket side walls and extending in a generally horizontal direction below said wheel and between the elevating cords to maintain the same in relatively spaced relation, and latch means pivotally mounted intermediate said bracket side walls below said wheel and extending in the direction of the bracket end wall, said latch means being operable upon movement of the elevating cords in one direction to engage and clamp the same against the bracket end wall to prevent further movement of said elevating cords in said one direction.

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