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R. J. CAYTON

3,054,446

VERTICAL VENETIAN BLINDS

Filed June 30, 1960

FIG. 1.

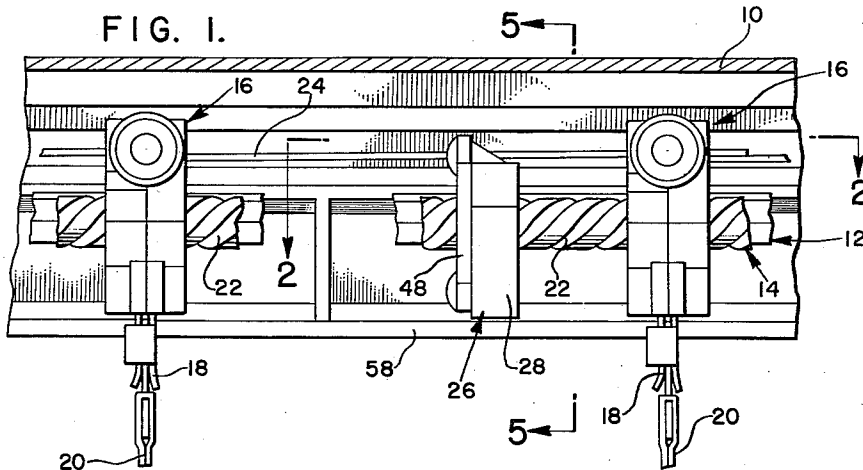


FIG. 2.

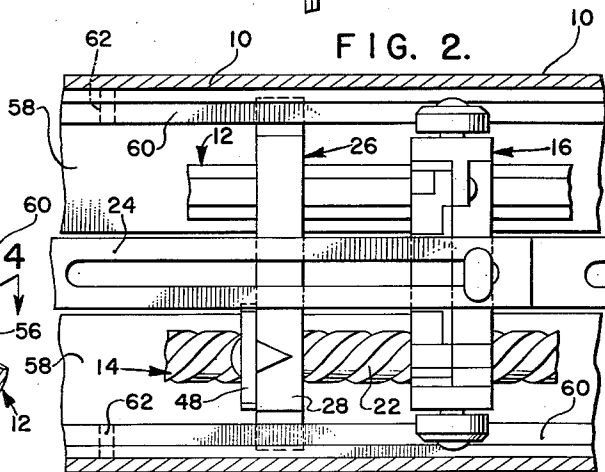


FIG. 3.

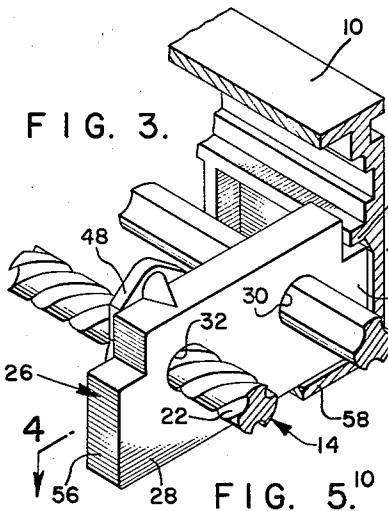


FIG. 4.

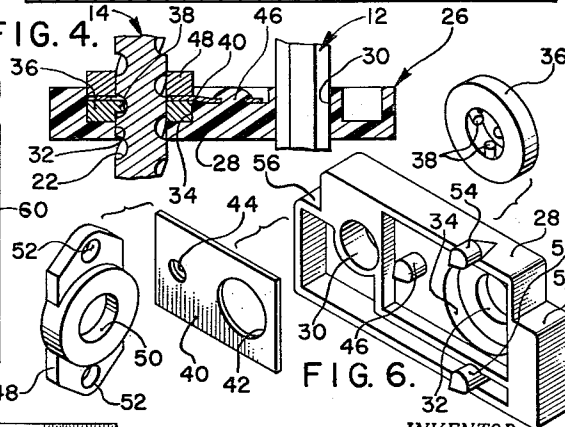


FIG. 5.

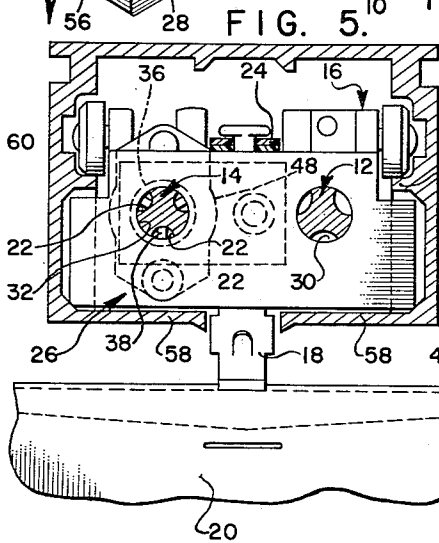


FIG. 6.

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3,054,446

VERTICAL VENETIAN BLINDS

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4 Claims. (Cl. 160—173)

This invention relates to an improved rod-supporting mechanism for a vertical Venetian blind.

In a vertical Venetian blind of the type having a series of slat-supporting trucks which are traversed on a rod or several rods, frequently the rods are required to span a considerable distance. It is therefore desirable to provide a support mechanism at various points along the rods to prevent sagging of same and the resultant malfunctioning of the blind.

It is an object of this invention to provide rod supports which may be positioned at predetermined positions along a span of rods to support same during traversing of a vertical Venetian blind.

It is a further object of this invention to provide such a mechanism which will not interfere with or modify the traversing of the blind.

It is still a further object of this invention to provide such mechanism which may be readily installed or removed without alteration of the blind itself.

Other objects and advantages will be readily apparent from the following description.

In the drawings:

FIGURE 1 is a fragmentary side elevation of a blind embodying this invention.

FIGURE 2 is a view taken along line 2—2 of FIGURE 1.

FIGURE 3 is a perspective of the rod support mechanism.

FIGURE 4 is a view taken along the line 4—4 of FIGURE 3.

FIGURE 5 is a view taken along line 5—5 of FIGURE 1.

FIGURE 6 is a diagrammatic view of the components of the rod support mechanism.

A channel 10 is positioned within a window frame and contains means (not shown) for rotatably supporting a pair of rods 12 and 14. Supported upon these rods are a series of slat supporting trucks 16 through which each rod passes.

Each truck 16 has a gear therein which is mounted on hook 18 which in turn supports a slat 20 which gear is rotated by rotation of rod 12 to rotate the slats in the blind. This structure is more fully described in my co-pending application Serial No. 569,802 filed March 6, 1956 entitled Vertical Venetian Blinds.

Rod 14 likewise passes through each truck which is free to slide along the rod. The lead truck, that is the truck at the center of two sections of blinds, is utilized or the one at the movable end of the blind if a single section is used is provided with projections which enter the spiral grooves 22 of rod 14 so that said lead truck will move along rod 14 as same is rotated in accordance with the direction of rotation of said rods.

Upon movement of said lead truck towards the stationary end of the blind it engages the next adjacent truck and so forth moving all of the trucks to the open or traversed position. Upon movement of the lead truck in the opposite direction the remaining trucks are connected thereto by straps 24 as more fully described in the above identified application and hence are successively moved to the closed position. It is apparent that with the trucks in the closed position a large span of unsupported rods 12 and 14 are exposed. This invention is concerned with means for supporting said rods.

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The supporting member is generally designated 26 and has a housing 28 with a pair of openings 30 and 32 there-through through which rods 12 and 14 pass. Housing 28 has recess 34 which receives rod engaging member 36 therein. Member 36 has internal protuberances 38 which mesh with grooves 22 in rod 14. Member 36 is likewise free to rotate in recess 34. A leaf spring 40 has an opening 42 therethrough to pass rod 14 and a second opening 44 to fit stud 46 in housing 28. A cap 48 has an opening 50 therethrough accommodating rod 14 and a pair of openings 52 to fit studs 54. The cap 48 when put in place bears against spring 40 which in turn applies sufficient frictional resistance to rotation of member 36 that rotation of rod 14 will move the rod support mechanism 26 therealong.

Housing 28 has a pair of opposed flanges 56 formed thereon which are supported in channel 10 by the in-turned lower edges 58 of same and longitudinal ribs 60 formed therein. Also provided in channel 10 is a stop 62 which when support member 26 has reached the desired position abuts same. This resistance to further movement of support member 26 is sufficient to overcome the frictional resistance to rotation of member 36 in housing 28 whereby same will rotate upon further rotation of rod 14.

If more than one rod support 26 is utilized several stops 62 may be positioned along channel 10 and flanges 56 notched or slotted to pass selected stops and abut others thereby spacing the rod supports at desired intervals along the channel.

While what hereinbefore has been described as the preferred embodiment of this invention, it is readily apparent that alterations and modifications may be resorted to without departing from the scope of this invention and such alterations and modifications are intended to be included within the scope of the appended claims.

I claim:

1. A rod supporting device in a vertical Venetian blind of the type having a drive rod rotatably supported within a channel comprising: a series of carriages supported within said channel each having an opening therein through which said rod passes, tie means interconnecting said carriages, a housing positioned between adjacent carriages having an opening through which said rod passes, clutch means in said housing for engaging said rod and moving said housing along said rod upon rotation of said rod, frictional engaging means within said housing frictionally engaging said clutch means with said rod, stop means in the path of said housing limiting movement thereof and overcoming said frictional engaging means.

2. A rod supporting device in a vertical Venetian blind of the type having a drive rod rotatably supported within a channel comprising: a series of carriages supported within said channel each having an opening there-through through which said rod passes, tie means interconnecting said carriages, a housing positioned between adjacent carriages having an opening through which said rod passes, a rod engaging element rotatably supported within said housing, means within said housing frictionally resisting rotation of said rod engaging element within said housing whereby rotation of said rod moves said housing along said rod, stop means in the path of said housing limiting movement of said housing thereby overcoming said frictional engaging means.

3. A rod supporting device in a vertical Venetian blind of the type having a drive rod rotatably supported within a channel comprising: a series of carriages supported within said channel each having an opening therein through which said rod passes, tie means interconnecting said carriages, a housing positioned between adjacent carriages having an opening through which said rod

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passes, a rod engaging element rotatably supported within said housing, spring means within said housing resisting rotation of said rod engaging element within said housing whereby rotation of said rod moves said housing along said rod, stop means in the path of said housing limiting movement of said housing and overcoming said spring engaging means.

4. A rod supporting device in a vertical Venetian blind of the type having a drive rod rotatably supported within said channel comprising: a series of carriages supported within said channel each having an opening therein through which said rod passes, tie means interconnecting said carriages, a housing positioned between adjacent carriages having an opening through which said rod

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passes, means within said housing for engaging said rod whereby rotation of said rod moves said housing along said rod, a spring in said housing urging said last mentioned means into engagement with said rod and stop means in the path of said housing limiting movement from said housing and overcoming said spring permitting said housing to cease travel upon said rod.

References Cited in the file of this patent

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