June 12, 1962 R. J. CAYTON 3,038,534

VERTICAL VENETIAN BLINDS

Filed July 12, 1960

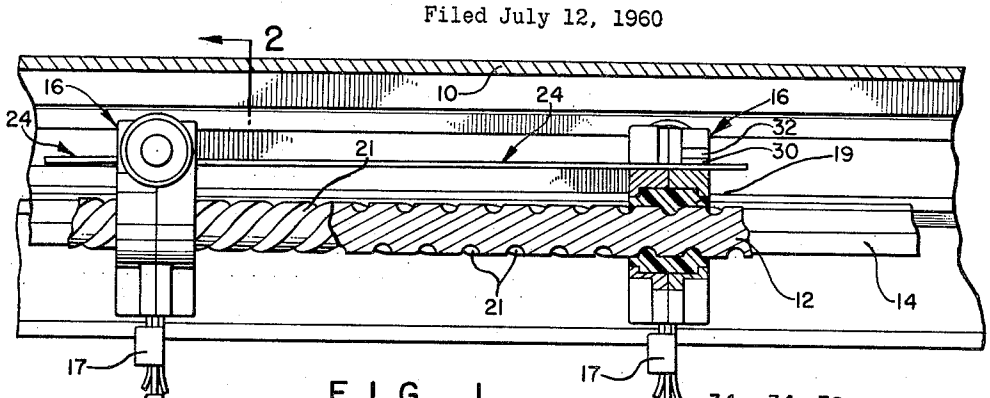

FIG. 1.

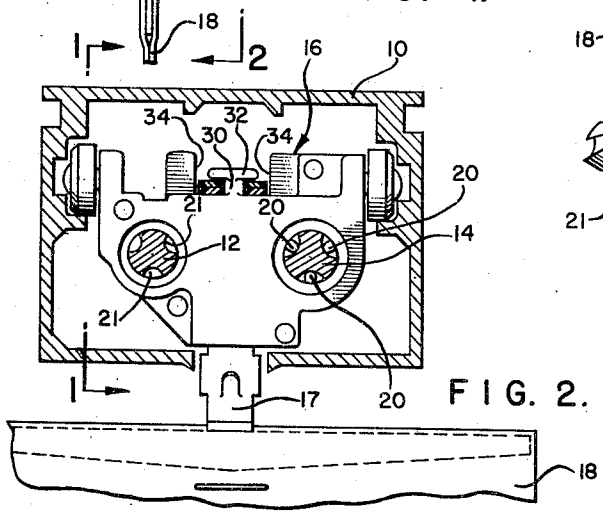

FIG. 2.

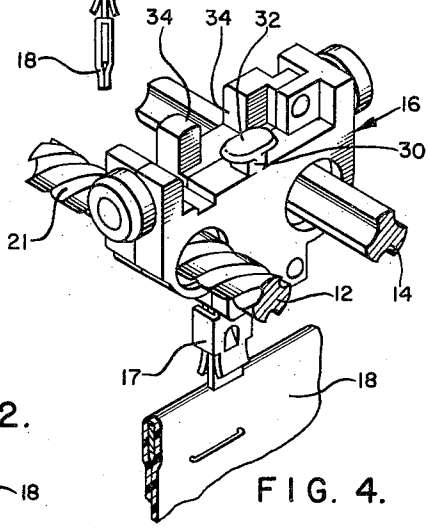

FIG. 4.

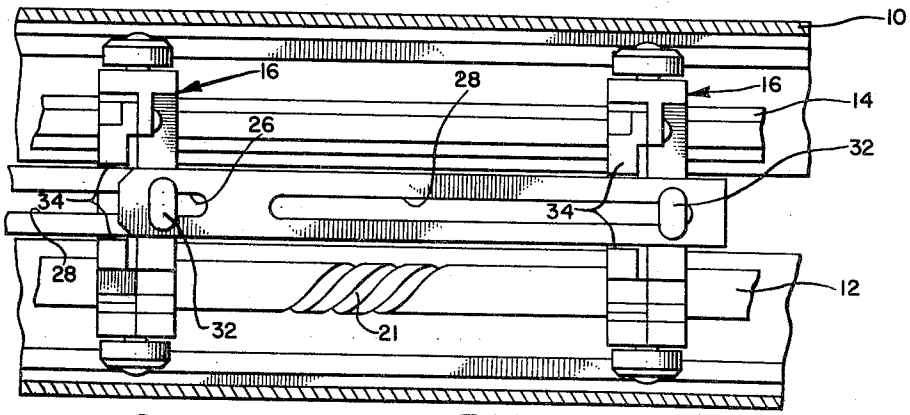

FIG. 3

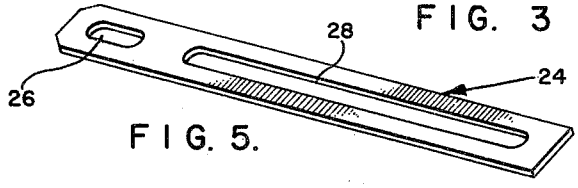

FIG. 5.

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VERTICAL VENETIAN BLINDS

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2 Claims. (Cl. 160—173)

This invention relates to an improved tie means for vertical Venetian blinds.

In a vertical Venetian blind frequently a series of slat-supporting trucks are supported for traversing movement to open and close the blind. To vary the space between trucks, tie means are utilized which tie successive trucks to one another and permit a variance in the distance between such trucks. This invention relates to such tie means.

It is an object of this invention to provide means for tying adjacent trucks in a vertical Venetian blind together to permit varying the space between such trucks.

It is a further object of this invention to provide such tie means wherein binding or other malfunctioning thereof is eliminated.

Still a further object of this invention is to provide tie means which will stabilize the trucks during movement, and insure their moving in a straight line during traversing.

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

In the drawings:

FIGURE 1 is a side elevation with parts broken away of a blind embodying this invention.

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

FIGURE 3 is a top plan view.

FIGURE 4 is a perspective of one of the trucks.

FIGURE 5 is a perspective of the tie strap.

This application is a continuation-in-part of my prior application Serial No. 569,802, filed March 6, 1956, entitled Vertical Venetian Blinds.

A channel **10** open at the bottom is placed in a window frame and carries therein suitable means (not shown) for rotatably supporting a pair of rods **12** and **14**.

A series of trucks **16** are mounted upon said rods. Rod **14** passes through each truck and meshes through proturberances **20** with a gear mounted upon hook **17** whereby rotation of said rod **14** rotates slat **18** also mounted upon hook **17** to open or close the blind as described in the above referred to application.

Rod **12** likewise passes through each truck **16**. The lead truck is provided with a sleeve **19** which meshes with the spiral grooves **21** in said rod **12** so that upon rotation of the rod the truck progresses in either direction depending upon the direction of rotation of rod **12**.

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In traversing these trucks when one of the rods, particularly rod **14**, becomes dirty, the trucks have a tendency to ride out of line and jam. This binding is eliminated by the tie means utilized.

A tie strap **24** is utilized to attach each intermediate truck to the next successive truck and the last of these trucks to the lead truck. The strap is formed of any suitable material such as a tough plastic or metal and has a pair of slots formed therein, one of which **26** is short and the other **28** is elongated.

Each truck has a lug **30** projecting upwardly therefrom which lug has a head **32** formed thereon. Each truck also has a pair of guide surfaces **34** formed thereon spaced from one another, a distance slightly larger than the width of strap **24**. Thus lug **30** of one truck is placed in slot **28** and lug **30** of the next truck is placed in slot **26**. The guide surfaces **34** permit slight pivoting of strap **24** to avoid rigidity of the blind but limit same to avoid binding or other malfunction of the tie straps and of the trucks.

When the blind is traversed either open or closed the lug in slot **26** is free to move therein until striking an extremity thereof thereby permitting the trucks to be drawn together or apart.

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. In a Venetian blind having vertical slats supported from traversing trucks slidably supported on guiding and driving means, the combination of; a link interconnecting each truck and an adjacent truck; each said links having means at one end thereof connecting it to one of said trucks; means on each truck defining a pair of opposed parallel guide surfaces extending along and engaging respectively opposite edges of said link; said guide surfaces being of substantial length in a direction longitudinally of said link whereby to limit pivotal movement of said link about said one truck, said surfaces also slidably engaging the edges of a link connected to an adjacent truck.

2. A Venetian blind as defined in claim 1 wherein each said trucks is provided with a portion overlying said links to retain the same thereon.

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