Dec. 10, 1929. R. T. AXE 1,739,203

WINDOW AND CURTAIN ROLLER CONSTRUCTION

Filed Aug. 1, 1927

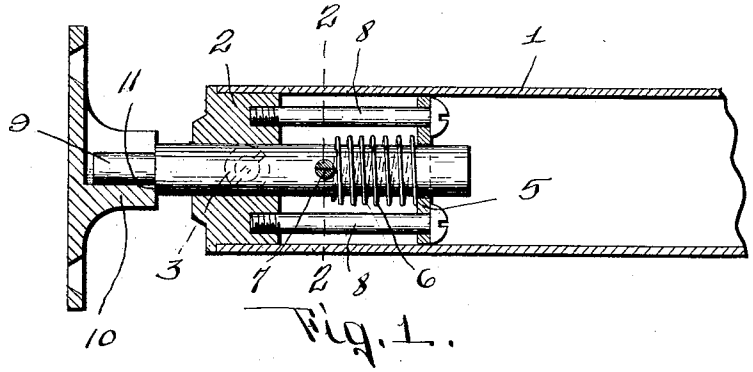


Fig. 1.

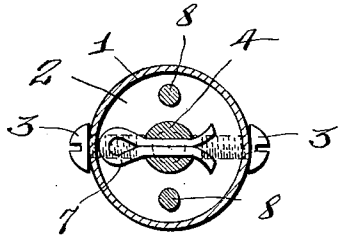


Fig. 2.

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UNITED STATES PATENT OFFICE

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WINDOW AND CURTAIN ROLLER CONSTRUCTION

Application filed August 1, 1927. Serial No. 209,722.

This invention relates to spring rollers such as are used for balancing wholly or partly or supporting railway car windows, curtains and the like, particularly heavy car windows and has for its object a particularly simple, compact and efficient construction whereby these rollers are readily adapted to be adjusted to window frames of different width within limits.

The invention consists in the novel features and in the combinations and constructions hereinafter set forth and claimed.

In describing this invention, reference is had to the accompanying drawings in which like characters designate corresponding parts in all the views.

Figure 1 is a fragmentary longitudinal sectional view of a roller embodying my invention and contiguous parts.

Figure 2 is a sectional view on line 2—2, Figure 1.

As will be understood by those skilled in the art, the dimensions of the window frames such as those of railway cars are intended to be of exactly the same width but in reality, vary more or less in width up to as much as a quarter of an inch or more and hence, a standard window frame which would require, if accurate, a roller say twenty-five inches long over all, might actually require a roller 25⅛ inches or 24⅞ inches long, the variances above given being merely for illustrative purposes.

This invention comprises a roller which is readily and automatically adjustable to the varying widths of the frame.

This roller construction comprises generally, a roller body or barrel having a detachable head at one end and an axle carried by the head and automatically adjustable axially thereof to conform to the width of the window frame and means self-contained with the detachable head for pressing the axle outwardly and permitting movement thereof inwardly.

1 designates the body or barrel of a roller which includes a suitable spring mechanism tending to turn the roller in one direction to wind thereon the cables which are connected to the window counter-balanced, over-balanced or under-balanced by the spring roller.

2 is the head detachably secured at one end of the roller, this head being in the form of a plug fitting the body and detachably secured in position in any suitable manner as by screws 3 extending through the wall of the body 1 and into the plug 2.

4 is the axle mounted in the head 2 and slidable axially therein.

The means for pressing the axle outwardly is self-contained with, or built as a unit with, the detachable head 2 and comprises a spring abutment 5 located in the barrel 1 and spaced apart from the head 2, means as one or more tie-pieces connecting the abutment 5 with the head 2 so that the abutment is a unit with the head and a spring 6 interposed between a shoulder 7 on the axle 4 and the abutment 5. The shoulder 7 is located between the head 2 and the abutment 5 and is detachable, it being here shown in the form of a split key extending through the axle 4. This shoulder when the spring is extended, limits the outward movement of the axle 4 and prevents displacement thereof out of the head 2.

The abutment 5 is a disk which fits the barrel 1 but is unsecured thereto and the abutment 5 is secured to the head 2 so that it is a unit therewith by tie-rods or screws 8. The outer end of the axle 4 is reduced and the reduced portion 9 is designed to fit into a bearing 10 secured to the window frame and the shoulder 11 at the base of the reduced portion abuts against the end of the bracket 10.

In use, a roller of standard length will accurately fit the window frame without rattling regardless of variations, within limits, of the width of the window frame.

Owing to the construction of the head 2 and the axle and spring mechanism therefor, the parts can be readily assembled as a unit and applied as a unit to the roller body.

What I claim is:

1. A roller of the class described comprising a body, a head at one end of the body and detachably secured thereto, a spring abutment within the body and spaced apart from the head and tie-means connecting the head and the abutment, an axle slidably mounted in the head and in the abutment, a shoulder on the axle between the head and the abutment and a

compression spring interposed between said shoulder and the spring abutment.

2. A roller of the class described comprising a body, a head at one end of the body and detachably secured thereto, a spring abutment within the body and spaced apart from the head and tie-means connecting the head and the abutment, an axle slidably mounted in the head and in the abutment, a shoulder on the axle between the head and the abutment and a compression spring interposed between said shoulder and the spring abutment, the spring abutment fitting the body of the roller.

In testimony whereof, I have hereunto signed my name, at Syracuse, in the county of Onondaga, and in the State of New York, this 27th day of July, 1927.

ROY T. AXE.