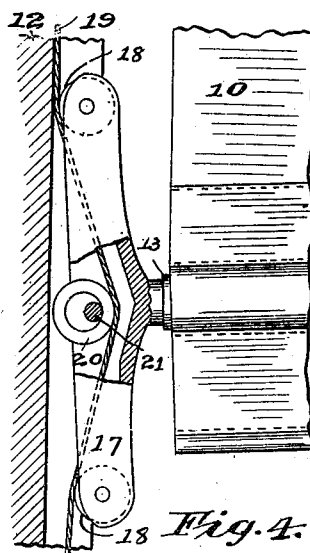
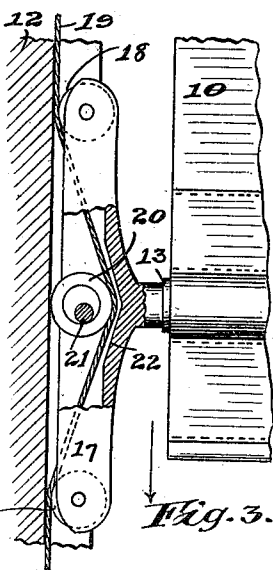
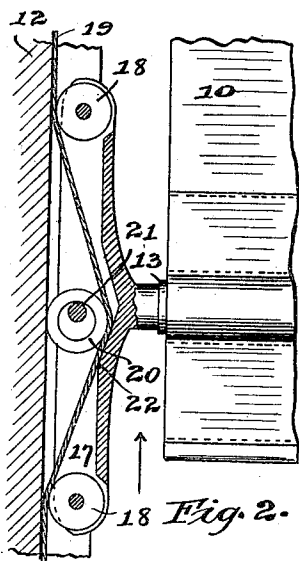
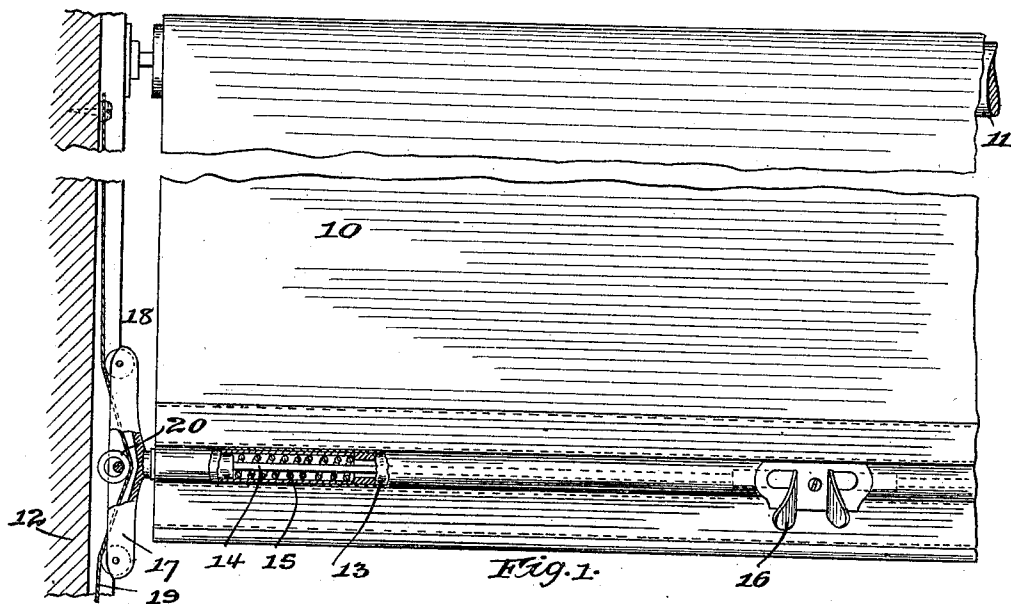


C. L. HOPKINS.
CURTAIN HOLDING DEVICE.
APPLICATION FILED OCT. 30, 1905.

972,450.

Patented Oct. 11, 1910.

2 SHEETS—SHEET 1.



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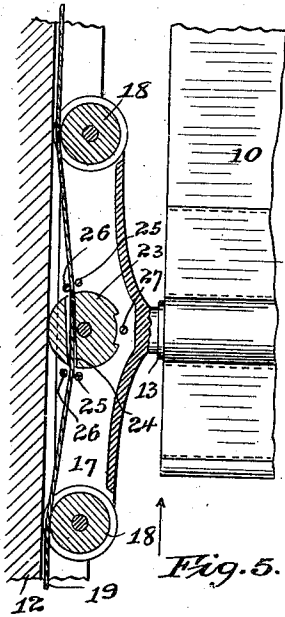


Fig. 5.

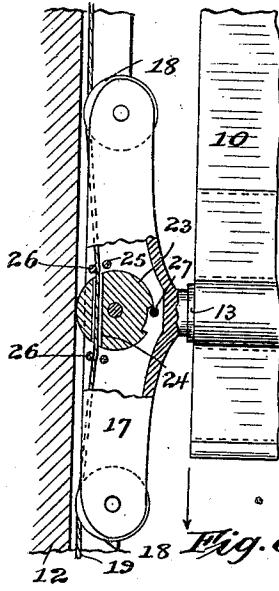


Fig. 6.

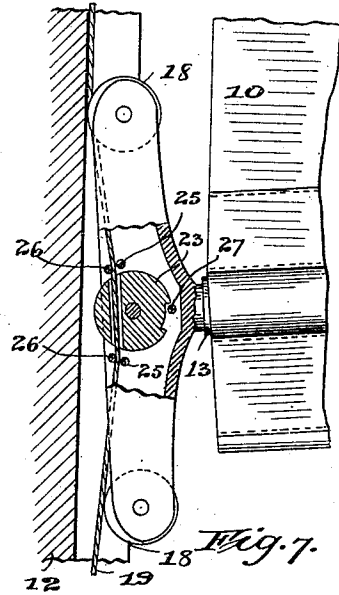


Fig. 7.

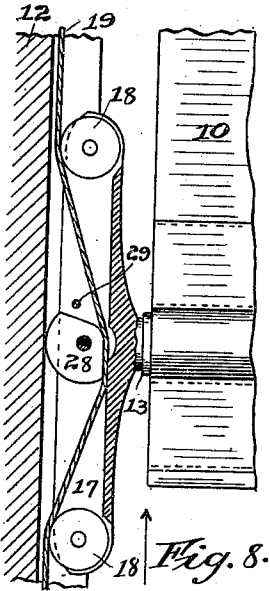


Fig. 8.

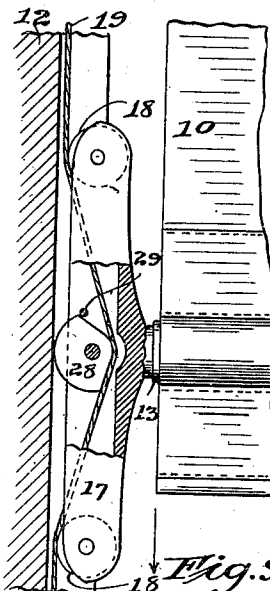


Fig. 9.

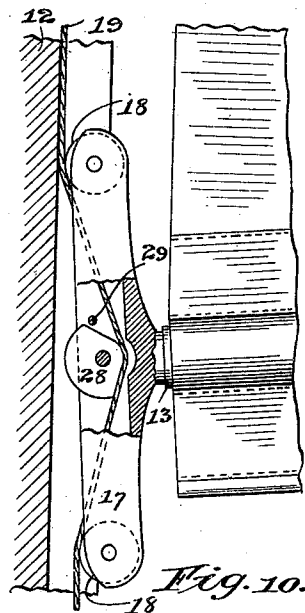


Fig. 10.

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UNITED STATES PATENT OFFICE.

CHARLES L. HOPKINS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE CURTAIN SUPPLY COMPANY, OF NEWARK, NEW JERSEY, A CORPORATION OF NEW JERSEY.

CURTAIN-HOLDING DEVICE.

972,450.

Specification of Letters Patent.

Patented Oct. 11, 1910.

Application filed October 30, 1905. Serial No. 285,026.

To all whom it may concern:

Be it known that I, CHARLES L. HOPKINS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Curtain-Holding Devices, of which the following is a specification.

This invention relates to that class of devices which are employed in connection with a spring-actuated curtain, to guide the latter and to hold it at any point at which it may be left, and more particularly to that class of curtain guiding and holding mechanisms wherein a curtain stick is provided at its end, with heads adapted to travel along grooves on or in the window frame as the curtain is raised or lowered.

The objects of this invention are to provide a device of this class in which the heads or tips are prevented from leaving the grooves when improperly handled by flexible bands extending vertically along the window frame, which is of simple construction, easily applied to car windows or similar openings, and in which there is little or no destructive wear upon the bands.

In the carrying out of my invention I provide a curtain stick at or near the lower edge of the curtain. This stick will preferably be carried in a pocket formed in the material of the curtain. At each end of the stick I provide a head which projects into the groove and travels along the latter as the curtain is raised or lowered. This head is forced outwardly, or toward the bottom of the groove by spring means, preferably located within the stick, which is made hollow for this purpose. I also provide a flexible band, which may consist of a flat tape, extending along the window frame and having its ends secured above and below the stick. This band passes through the head and is adapted to be gripped by suitable instrumentalities within the head to restrain the curtain and its holding device against the upward pull of the spring curtain roller. The gripping instrumentalities are adapted to act only on an upward movement of the curtain, and are without holding power to resist a force tending to move the curtain and holding device downwardly. This feature is a desirable one as it makes the device more fully capable of maintaining itself in its proper horizontal position under improper

manipulation by inexperienced or careless persons, as will be hereinafter explained. This feature is regarded as the most important characteristic of the invention.

In the accompanying drawings I have shown a preferred form of my invention and some of the modified forms which the invention may take.

Figure 1 is a broken elevational view, partly in section, of a curtain fitted with my improved curtain holding device, and part of the window frame. The stop at one side of the groove is broken away to expose the head to view. In this figure the parts of the device are shown in the relative positions they will assume when the device is released by the manipulation of pinch handles which are provided for that purpose and will be described below; Fig. 2 shows a corner of the curtain and a head in vertical longitudinal section. The head is here shown as being moved upwardly along the groove, the holding means being operative and tending to resist upward movement; Fig. 3 shows a corner of the curtain and a head in elevation, part of the head being broken away to show the interior mechanism. In this figure the head is represented as being moved downwardly along the groove, the holding means being inoperative and permitting the head to move freely down along the groove; Fig. 4 is a view similar to Fig. 3 but showing the head and its holding mechanism as they appear when the device is canted into an abnormal position; Figs. 5, 6 and 7 correspond to Figs. 2, 3 and 4, and show a modified form of the invention; and Figs. 8, 9 and 10 show another modification.

In the several figures 10 is the curtain mounted upon the spring roller 11. This roller exerts a constant tendency to wind up the curtain, as is customary with curtains for railway cars.

12 is the side-post of the window frame.

The curtain stick 13 is tubular and is provided with a rod 14 slidably arranged within the stick and adapted to be forced outwardly by a spring 15. This rod is preferably provided with a pinch handle 16 at its inner end, by means of which it may be retracted against the force of the spring 15. At the outer end of the rod 14 is the head 17 which is extended above and below the stick and is provided at each end with an anti-friction roller 18, upon which the head may

ride when the device is canted out of a horizontal position. The band 19 extends vertically along the window frame and is secured thereto at each end in any preferred manner. In the head, about midway between the anti-friction rollers, is a movable member adapted to grip the band. In the preferred form of the invention, shown in Figs. 1, 2, 3 and 4, this movable gripping member is in the form of a ring 20. This ring is loosely placed in the head and is prevented from falling out of the latter as well as limited in its movement by a pin 21. The back of the head is formed on its inner side with an incline 22. The band 19 passes through the head in front of the anti-friction rollers 18 and behind the ring 20 and is gripped between the ring and the inclined back of the head upon upward movement of the tip. Referring to Fig. 2, it is seen that the ring 20 will move downwardly relatively to the head until it engages the band 19 and will grip the latter between itself and the back of the head. When force is applied to the device tending to move it downwardly, the ring moves upwardly relatively to the head as far as permitted by the pin 21 and the band is released. When the device is canted the head rides on one of the anti-friction rollers and the ring 20 is moved out of engagement. This releases the band and permits the device to right itself under the influence of the spring roller in a well known manner.

In the use of devices of this kind by the public the curtain is often raised or lowered by grasping the stick at one end and pushing up or pulling down. When it is attempted to raise the curtain by pushing up one end of the stick the other end receives the whole of the upward pull of the spring roller, the result being that the device tends to ascend level if it is in any degree a self-righting device. When, however, the curtain is lowered by pulling down upon the stick at one end the opposite end of the device is not assisted, except by the weight of the device, to move downwardly, and maintain the device level. Consequently there is more tendency for the fixture to be thrown out of the grooves under these circumstances. This trouble is sometimes overcome by weighting the bottom of the curtain, but this is objectionable in many cases. The object in the present invention of providing holding means which do not hold when the curtain is moving downwardly is to enable the head at the end of the stick opposite the end grasped by the hand of the operator to descend rapidly, so that there will be no tendency for the device to stick and become canted when the curtain is drawn down by grasping the stick at one end.

I prefer to provide the rods 14 with pinch handles, as shown in Fig. 1, as many per-

sons will use them in adjusting the curtain, thus preventing excessive wear upon the band which might result if the device were always pushed up against the restraining force of the holding means.

In the modified form of the invention shown in Figs. 5, 6 and 7 the gripping member consists of a wheel or roller 23 adapted to have a limited rotation and having a passage-way 24 through which the band passes. The band in this case consists of a round cord or cable, and is guided through the passage-way in the wheel by pins 25, 25 and 26, 26. The wheel 23, being pressed into engagement with the window frame by the spring within the stick, will rotate as far as permitted to when the device moves along the grooves. Under the upward pull of the spring curtain roller the wheel 23 will tend to rotate as shown in Fig. 5 and will engage the band at two points, pressing it against one of the upper pins and one of the lower pins. This action causes the device to remain stationary and against the upward pull of the spring curtain roller. When the device is drawn down the wheel 23 will rotate in the opposite direction as far as permitted and will assume the position shown in Fig. 6. A pin 27 is adapted to prevent rotation of the wheel beyond the point at which the passage-way in the wheel is perpendicular. When in this position the band may pass freely through the wheel 23 and the device is permitted to run down. When the device is canted into an abnormal position the head may assume the position shown in Fig. 7, and the band passes freely through the wheel 23, permitting the device to right itself.

Another modification is shown in Figs. 8, 9 and 10. In this form of the device the band consists of a flat tape. The gripping member consists of a roller 28 having portions cut away to form flat surfaces upon the roller. The band passes behind the roller, between the latter and the back of the head, and is adapted to be gripped between the back of the head and one of the flattened sides of the roller when the roller is rotated in one direction. When the roller is rotated in the other direction this flat side is turned out of engagement with the band, the latter being released and the device moving along the groove easily. A pin 29 limits the rotation of the roller in this direction. When the device is canted into an inclined position the head will assume the position shown in Fig. 10, the band will be released, and the device will right itself.

Other modifications may suggest themselves to the mechanic, but

What I claim as of my invention and desire to secure by Letters Patent is:

1. In a curtain-holding device, the combination of a curtain stick, a head at the

end of the stick, a band passing longitudinally through the head, said head having retaining means adapted to engage said band and means in the head adapted to normally engage the window frame and, when the curtain stick is raised, to clamp said band against the retaining means on said head.

2. In a curtain-holding device, the combination of a curtain stick, a head at the end of the stick, a band passing longitudinally through the head, said head having retaining means adapted to engage said band and means in the head adapted to normally engage the window frame and, when the curtain stick is raised, to clamp said band against the retaining means on said head, and, when the curtain stick is lowered, to release its hold upon said band.

3. In a curtain-holding device, the combination of a stick, a head at the end of the stick, said head having retaining means thereon, a band, and rotary means in the head adapted to normally engage the window frame and to automatically clamp the band against said retaining means when the head is moved along the band in one direction, and adapted to automatically move

out of holding engagement with the band when the head is moved along the band in the opposite direction.

4. In a curtain-holding device, the combination of a curtain stick, a head at the end of the stick, said head having retaining means thereon, a band passing longitudinally through the head, means in the head adapted to normally engage the window frame and, when the curtain stick is raised, to clamp said band against said retaining means by virtue of the rotary movement of the means engaging said window frame, and anti-friction rollers on the head above and below said frame engaging means.

5. In a curtain fixture, the combination of a stick, a head at the ends of the stick, a band passing through the head, the head being formed with an incline on its rear wall, and a rotary member adapted to move down relatively to the incline and to grip the band between itself and the incline on upward movement of the curtain.

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Witnesses:

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FREDERICK C. GOODWIN.