C. L. HOPKINS.

CURTAIN FIXTURE.

APPLICATION FILED SEPT. 22, 1906.

982,002.

Patented Jan. 17, 1911.

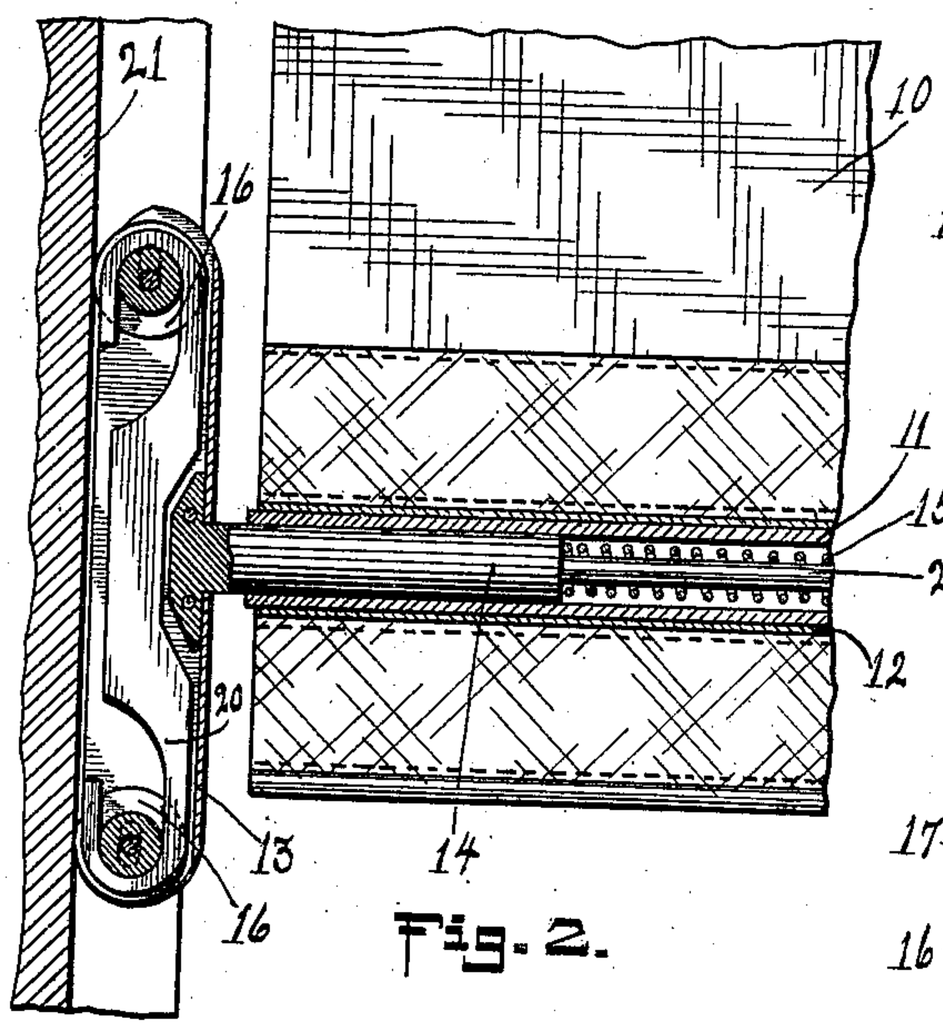

Fig. 2.

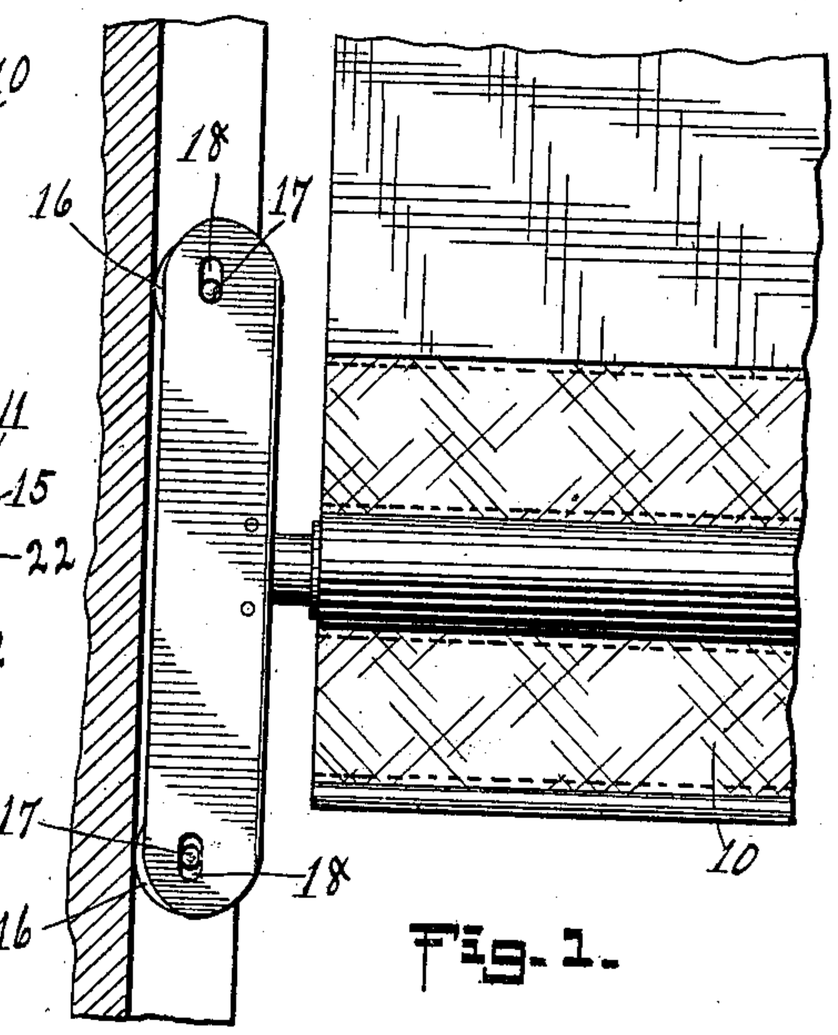

Fig. 1.

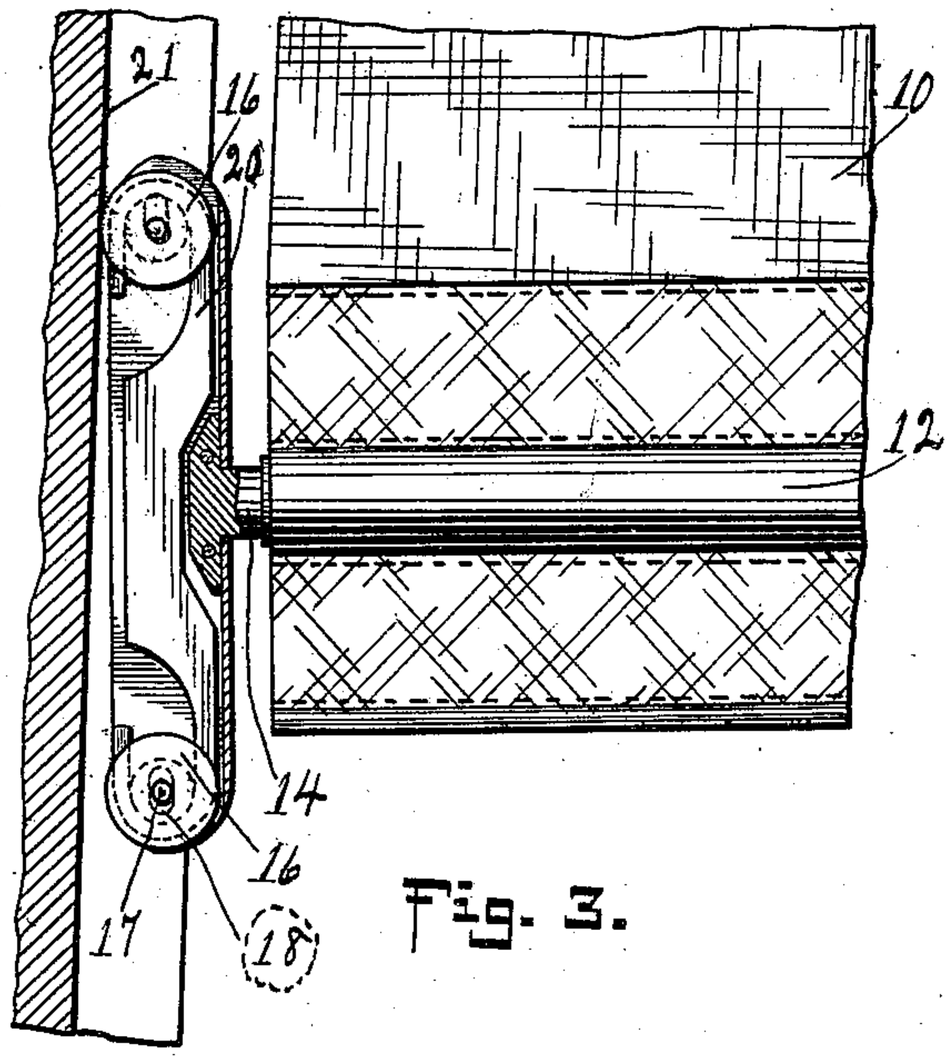

Fig. 3.

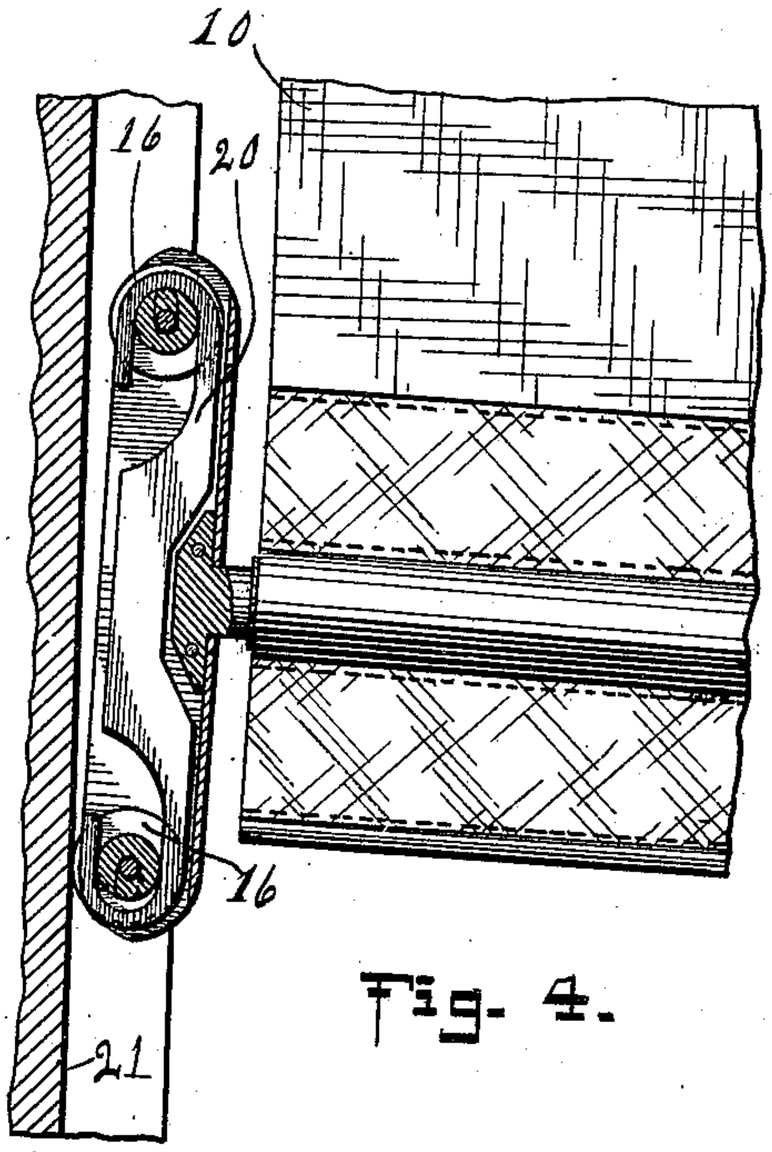

Fig. 4.

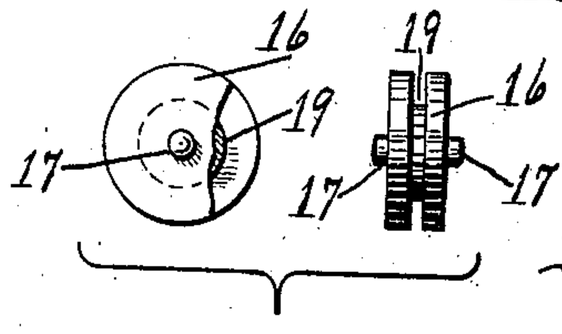

Fig. 5.

Witnesses
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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-FIXTURE.

982,002. Specification of Letters Patent. Patented Jan. 17, 1911.

Application filed September 22, 1906. Serial No. 335,677.

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-Fixtures, of which the following is a specification.

This invention relates to improvements in devices such as are applied to the lower ends of spring-actuated curtains, and which are adapted to guide the same and to hold them at any desired point of adjustment.

More particularly, this invention relates to that class of holding devices in which a tubular curtain stick is provided with heads adapted to be thrust outward by springs within the stick, these heads moving in guideways consisting of grooves in the window-casing and carrying means adapted to frictionally engage the window-casing so as to hold the curtain against the upward pull of the spring shade roller. These shade rollers are of the continuously acting type and exert a constant upward pull upon the shade or curtain.

The principal object of the present invention is the production of a device of the above-outlined class which is capable of maintaining itself in its proper horizontal position under the careless and unskilful handling to which such devices are subjected when used upon street and railway cars, and which is simple in construction and inexpensive to manufacture. To this end I extend the spring-pressed heads above and below the stick and mount in the ends of these elongated heads rollers or wheels adapted to be normally braked so as to be prevented from rotating, and to frictionally engage the bottoms of the grooves in the window-casing, whereby these wheels serve as friction holding means for preventing the curtain from ascending under the influence of the spring curtain-roller. The means by which the rollers or wheels are braked are adapted to act only when the rollers at both ends of a head are in contact with the window-frame, the effect of this being that when the roller at one end of a head is tilted away from the window-frame by the canting of the stick, the rollers are released and permitted to rotate, whereby the device is permitted to right itself.

In the drawings, Figure 1 is an elevational view of a fragment of a curtain and one of the heads of my curtain-holding and guiding device, the parts being in their normal or holding positions. Fig. 2 is similar to Fig. 1, except that some of the parts are shown in section. Fig. 3 shows the same parts, but in this figure the device is canted so that the wheel or roller at the lower end of the head is moved away from the window-frame. In Fig. 4, the head is shown with the wheel at the upper end thereof tilted away from the window frame. Fig. 5 shows on an enlarged scale, in edge and broken side elevation, the form of wheel used in this device.

In the several figures of the drawings, 10 is the curtain carrying the tubular stick 11 in the usual pocket 12. The head 13 is provided with a stem 14 fitting into the end of the stick 11 and pressed outward by the spring 15. In each end of the head 13 is mounted a roller or wheel 16, these wheels being provided with trunnions 17. The bearings in which these trunnions are supported are made in the form of slots 18, whereby the wheels are given a slight capacity for bodily movement in the head as well as having the usual rotary movement. Each of the wheels 16 is circumferentially formed with a groove 19.

Arranged within the head and adapted to have endwise movement therein is a yoke member 20, this yoke member having ends lying in the grooves 19 of the wheels 16 and serving to prevent movement of these wheels away from each other beyond defined limits. The length of the yoke member 20 is such that the wheels 16 are not permitted to move apart sufficiently so that the trunnions 17 of both of these wheels may be at the lower limits of their movement in the grooves 18. or, differently stated, the centers of the trunnions of the wheels are never as far apart as the centers of the slots 18.

Normally, the wheels tend to run downward in their bearings under the influence of the upward tendency of the curtain and the outward pressure of the spring 15 which thrusts the wheels against the window-frame 21. The wheel at the upper end of the head descends in its elongated bearings until its trunnions are at the lower ends of these bearings. The wheel at the lower end of the head tends likewise to descend in its bearings, but its trunnions are not permitted to reach the lower ends of these bearings be-

cause the yoke member 20 embraces both wheels and is short enough so that when the upper one of these wheels is at the limit of its movement in the downward direction the other is sustained by the yoke member instead of having its trunnions supported in the lower ends of the slots. The result of this is that the lower wheel exerts upon the upper a drag which brakes the latter and prevents rotation thereof, at the same time being itself braked by its engagement with the yoke-member. These wheels, being thus braked, act as friction-holding means while the device is in the normal or horizontal position and the wheels are both pressed squarely against the window-frame 21. When it is attempted to raise the curtain by placing the hand under one end of the stick and giving an upward thrust, a very slight tilting of the fixture suffices to carry the lower wheel of the head at the opposite end of the device away from the window-frame. When this occurs the downward drag exerted by the lower wheel upon the upper wheel is removed and the upper wheel is permitted to revolve. This end of the device is thereupon pulled up by the spring curtain-roller until the device stands level, whereupon the wheels are again braked. In practice the device ascends practically level if pushed up by a force applied under one end of the stick, the lower wheel being but very slightly withdrawn from the opposing surface of the window-frame. When a downward pull is given at one end of the fixture, the upper wheel of the head at the opposite end of the device is withdrawn from the window-frame, the device riding upon the other or lower wheel. The latter moves up in its bearings to the upper ends of the same, as shown in Fig. 4, and thereby releases itself from the yoke-member 20. Thereupon this end of the device falls by gravity and the device rights itself. In practice, the release of the wheel upon which the device is caused to ride when the fixture is canted occurs so quickly that the fixture descends practically level when drawn down by one end. If the device be grasped at a point about midway between its ends and drawn down it will descend for a short distance without resistance, the rollers moving up in their bearings. When the rollers have moved up as far as possible, the upper wheel will drag upon the lower through the yoke-member 20, and both wheels will be braked. The wheels may now be slid along the window-frame in lowering the curtain. Preferably, however, inwardly projecting rods 22 will be secured to the stems 14 of the heads and the usual pinch handles will be provided at the inner ends of these rods. When such pinch handles are provided the heads will simply be retracted from the window casing to adjust the curtain up or down in a manner well known in this art.

I claim as my invention:

1. In a curtain fixture, the combination of a stick, a head at the end of the stick extending above and below the latter said head having bearings therein, means for pressing the head outwardly, a wheel carried at each end of the head in said bearings, the latter adapted to permit bodily movement of the wheels lengthwise of the head, and means connecting and frictionally engaging both of said wheels and limiting the extent of separation thereof to a distance less than the extent of separation permitted by said bearings, substantially as described.

2. In a curtain fixture, the combination of a stick, a head at the end of the stick extending above and below the latter and provided at its ends with elongated bearings extending longitudinally of the head, means for pressing the head outwardly, wheels having trunnions mounted in said elongated bearings of the head, and a continuous connecting member between and frictionally engaging said wheels and limiting the extent of separation of the axes thereof to a distance less than the distance between the lower ends of said elongated bearings, substantially as described.

3. In a curtain fixture, the combination of a stick, a head at the end of the stick, said head being elongated and having bearings therein, a wheel in said head above the plane of the stick, a wheel in the head below the plane of the stick, said wheels engaging the bearings in the head, said bearings adapted to permit movement of each wheel in a direction lengthwise of the head, and a yoke member adapted to embrace said wheels whereby one of said wheels may drag upon the other of said wheels and retard the latter in its rotation.

4. In a curtain fixture, the combination of a stick, a head at the end of the stick extending above and below the latter and provided at its ends with elongated bearings extending longitudinally of the head, means for pressing the head outwardly, peripherally grooved wheels having trunnions mounted in said elongated bearings of the head, and a connecting yoke member having bent ends engaging the peripheral grooves of said wheels whereby to limit the extent of separation of the latter, substantially as described.

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