

H. E. KEELER.
CURTAIN FIXTURE.

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978,379.

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Fig. 1,

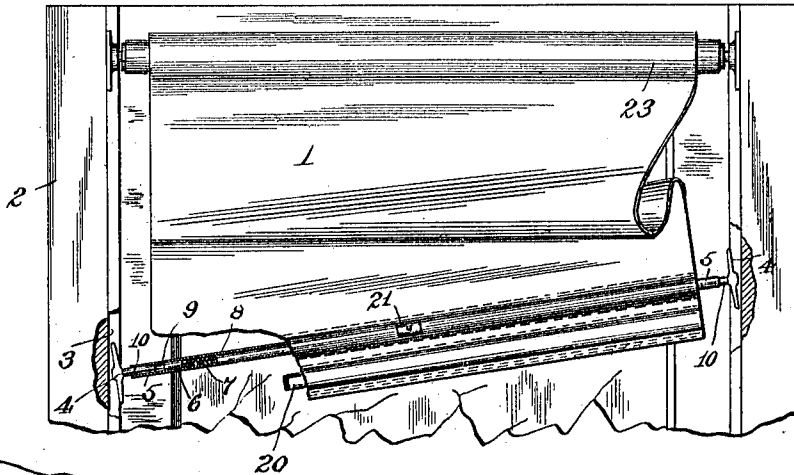


Fig. 2,

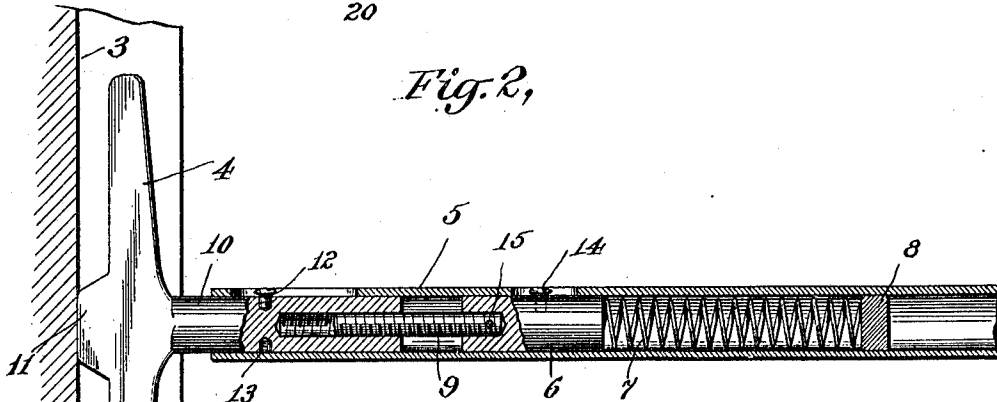


Fig. 3,

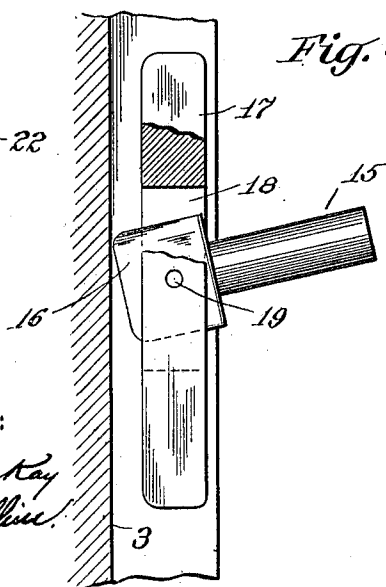
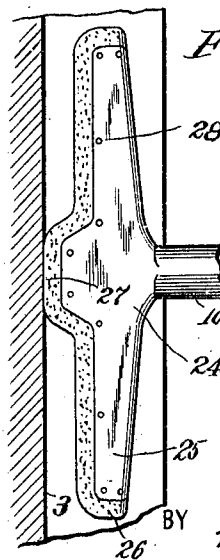


Fig. 4,



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CURTAIN-FIXTURE.

978,379.

Specification of Letters Patent.

Patented Dec. 13, 1910.

Application filed November 7, 1904. Serial No. 231,701.

To all whom it may concern:

Be it known that I, HERBERT E. KEELER, a citizen of the United States, and a resident of New York city, in the county and State of New York, have invented certain new and useful Improvements in Curtain-Fixtures, of which the following is a specification, taken in connection with the accompanying drawings, which form a part of the same.

This invention relates to curtain fixtures and relates especially to fixtures which are employed in connection with spring-actuated curtains in railway cars and other similar positions.

In the accompanying drawings in which the same reference numeral refers to similar parts in the several figures, Figure 1 is a front view showing an embodiment of this invention applied to a curtain. Fig. 2 is an enlarged sectional view of part of the same. Fig. 3 is a similar enlarged sectional view of a modified construction. Fig. 4 is a similar view of a further modification.

In the illustrated embodiment of this invention, a curtain 1 is shown as secured at its upper end to the ordinary spring roller 23 mounted at the top of the window opening. Suitable guideways 3 in the form of grooves or otherwise are formed in the posts 2 adjacent the curtain so as to guide the fixture in its operation. In the lower end of the curtain there is firmly secured the weighting bar 20 preferably having sufficient weight in connection with the curtain fixture to substantially counterbalance the upward pull of the spring roller throughout the range of action of the curtain. The curtain stick 5 is also secured to the lower end of the curtain in a suitable pocket formed therein or otherwise and if desired this curtain stick may be accurately and firmly secured in position by the use of the plate 21 which is placed on the outside of the curtain and which is screwed or otherwise firmly secured to the curtain stick in the manner indicated. The curtain stick may be given the tubular form indicated and as shown in Fig. 1 carries at either end suitable shoes 4 which cooperate with the guideways.

As is shown in detail in Fig. 2 the shoe 4 is mounted upon the spindle 10 entering the curtain stick and the hole in the stick also carries the plunger 6 which is practically an

extension of the spindle and connected thereto by the stem 9 rigidly secured to the plunger by the screw connection and pin 15 and having an adjustable screw connection with the spindle as indicated. The spindle and shoe are normally forced outward toward the end of the stick and thus the two shoes forced apart by the holding spring 7, the inner end of which engages the plug 8 in the curtain stick. The extent of reciprocation of the spindle and shoe is preferably limited by the guide screw 14 engaging the plunger 6 and operating in a suitable slot in the curtain stick. The extent to which the shoe is forced outward is also made adjustable by any suitable means. When the alining screw 12 is removed the spindle may be screwed in or out on the stem and when in the desired position the screw may be inserted through the alining slot indicated in the tube and screwed into one of the threaded openings 13 in the spindle, thus maintaining the shoe in desired position when forced outward and also preventing any rotation of the shoe relative to the stick. In this way the shoe is mounted on the curtain stick so as to have a limited adjustable reciprocation without rotation with respect thereto, being normally pressed outward under the action of the holding spring. This feature of having both the spring-pressed shoes mounted in the curtain stick so as to have a limited reciprocation without rotation with respect thereto is shown in my co-pending application, No. 152,152, filed April 11, 1903. Both the shoes are preferably mounted on the curtain stick so that they are not allowed rotation with respect thereto, but it is not necessary that both the shoes have the adjustable spring-pressed mounting which has just been described. If desired, however, both shoes may be mounted at the ends of the curtain stick by the means which has just been described in detail.

The shoes 4 which are preferably elongated, are indicated as being provided with retaining members 22 which are adapted to remain in the guideways and thus guide the ends of the fixture during its adjustment and the shoes are also provided with holding members such as 11, which preferably project considerably beyond the plane of the retaining members so as to readily engage the guideways when the fixture is level and under these conditions exert sufficient pressure

against the guideways under the spring action described or otherwise so as to securely maintain the curtain in adjusted position. As soon, however, as the curtain is tilted into an inclined position, as is indicated in Fig. 1, the holding members no longer actively engage the guideways and since these holding members project sufficiently beyond the rest of the face of the shoe, including the retaining members there is no active holding engagement between the shoes and the guideway when the curtain is canted to any considerable extent, the extent to which the shoes are pressed outward being so adjusted as to give the proper holding action, and also to effect the release of the shoes from active holding contact under the desired conditions. In this canted position the curtain at once tends to resume a horizontal position when released under the influence of the upward action of the curtain roller and the downward tendency of the fixture due to the weight of the parts, the retaining members of the elongated shoes remaining in the guideways and being guided by their lateral faces, and retaining the fixture and curtain in the desired plane. When the curtain falls entirely or substantially into level position the holding members once more actively engage the guideways and effectually prevent any further movement, holding the curtain in adjusted position. Furthermore, even if the curtain is so unusually manipulated as to throw one of the shoes entirely out of its guideway, the other shoe which naturally remains in its guideway under these conditions maintains the alinement of the curtain stick and the displaced shoe so that when released the displaced shoe tends to fall back into the guideway in proper position and the stick and displaced shoe cannot rotate about the axis of the stick so that the shoe can become wedged or locked in a transverse position across the guideway.

The extent of the projection of the holding members beyond the rest of the shoe should, of course, be made such as to give the requisite clearance when the particular fixture is in inclined position and the holding members should, of course, be made of such material and be provided with such surface as to give in connection with the guideways the desired degree of holding power. If desired, the holding members may be faced with leather, rubber or other gripping material, as is shown in Fig. 4 where the shoe 24 is provided with the holding member 27 of leather or similar material secured in the slotted or similar casing 25 by suitable rivets 28. This arrangement gives the requisite holding power with a less outward pressure of the shoes against the guideways. Furthermore, if desired, the retaining members 26 may be formed of similar

relatively soft material which is sometimes advantageous in preventing under all circumstances the denting or marring of expensive woodwork and for this purpose the soft materials should be arranged substantially flush with the lateral faces of the head. Such heads are, of course, provided with a spindle 10 and are mounted in the curtain stick as has been described.

Fig. 3 indicates a modified form of shoe in which the spindle 15 is secured to a holding member 16 of any desired material to actively engage the guideway and hold the curtain in adjusted position. The retaining members 17 in this instance are formed of metal or any other desired material and this cross-head is provided with the slot 18 in the center for the accommodation of the holding member 16 which is secured thereto by a suitable pivot 19, the holding member being preferably lightly engaged by the lateral faces of the slot 18 so that excessive angular displacement of the parts is prevented.

It is, of course, understood that those familiar with this art may make many modifications in the form, proportion and numbers of parts of this device, parts of the same may be employed without using the whole and parts may be used in connection with other devices without departing from the spirit of this invention or losing the advantages of the same. I do not, therefore, desire to be limited to the details of the disclosure which has been made in this case, but

What is claimed as new and what it is desired to secure by Letters Patent is set forth in the appended claims.

1. In curtain fixtures, a spring-actuated curtain, guideways adjacent said curtain, a curtain stick and a weighting bar secured to said curtain, elongated shoes mounted at either end of said stick so as not to rotate with respect thereto and coöperating with said guideways, projecting holding members on said shoes to actively engage said guideways, retaining members on said shoes to prevent the angular displacement of said shoes, a spring in said stick to press said shoes apart and means to limit the extreme distance between said shoes so that when the curtain is canted to any considerable extent the holding members are entirely released from active engagement with said guideways while said retaining members prevent the angular movement of said shoes with respect to the axis of said curtain stick.

2. In curtain fixtures, a spring-actuated curtain, guideways adjacent said curtain, a curtain stick mounted in said curtain, elongated shoes mounted at either end of said stick so as not to rotate with respect thereto, means to press said shoes apart and means to limit the extreme distance between said

shoes, said shoes being provided with holding members projecting beyond the outward faces of said shoes to actively engage the guideways when the curtain is level and said shoes being entirely released from active holding engagement with said guideways when said fixture is tilted.

3. In curtain fixtures, a spring-actuated curtain, guideways adjacent said curtain, a curtain stick mounted in said curtain, elongated shoes mounted at either end of said stick, means to force said shoes apart, means to limit the extreme distance between said shoes, each shoe being provided with a holding member projecting beyond the outer face of the shoe to be forced outward into active holding engagement with the guideway when the fixture is level and to be entirely released from active engagement with the guideway when the fixture is tilted.

4. In a curtain fixture, a spring-actuated curtain, guideways adjacent said curtain, a curtain stick mounted in said curtain, shoes mounted at either end of said curtain stick held against rotation with respect thereto and cooperating with said guideways, spring acting means to force said shoes apart, adjustable means to limit the extreme distance between said shoes while allowing their reciprocation, each of said shoes being provided with separated retaining members and with a holding member substantially in line with said curtain stick projecting outward beyond the plane of said retaining members and being pressed outward into active holding contact with said guideways when said fixture is level and said shoes being released from holding contact with said guideways when said fixture is tilted.

5. In curtain fixtures, a spring-actuated curtain, guideways adjacent said curtain, a curtain stick secured to said curtain, elongated shoes having spindles engaging said curtain stick at either end of the same and having a pin and slot connection therewith, means to force said shoes apart, means to limit their extreme distance from each other, said shoes having holding members to be forced into active holding contact with said guideways when said curtain is level.

6. In curtain fixtures, a spring-actuated curtain, guideways adjacent said curtain, a curtain stick mounted in said curtain, elongated shoes mounted at either end of said curtain stick without rotation with respect thereto and cooperating with said guideways, one of said shoes being provided with a spindle having a pin and slot connection with said curtain stick, a plunger forming an extension of said spindle and adjustably connected therewith, means to limit the extent of the reciprocation of said plunger and a spring engaging said plunger to normally force said shoes apart.

7. In curtain fixtures, a curtain stick hav-

ing a hole formed therein, a shoe provided with a spindle fitting into said hole, said spindle having a threaded opening, a plunger in the hole in said curtain stick and having a threaded stem secured thereto fitting into the opening in said spindle, a spring engaging said plunger and normally forcing it outward, a pin and slot connection between said plunger and said curtain stick to limit the outward movement of said plunger and shoe, there being a slot in said curtain stick and a cooperating hole in said spindle and a screw removably secured in said hole to prevent the rotation of said shoe with respect to said stick and said screw allowing the relative adjustment of said spindle and plunger when removed.

8. In curtain fixtures, a curtain stick having a hole, a shoe formed with a spindle fitting into said hole, a plunger in said hole and adjustably connected with said spindle, said plunger having a pin and slot connection with said curtain stick and being normally forced outward, said plunger having means to limit its reciprocation with respect to said stick and means to prevent the rotation of said spindle with respect to said stick.

9. In curtain fixtures, a curtain stick having a hole, a shoe having a spindle fitting into said hole, a plunger in said hole and adjustably connected with said spindle, said plunger having means to normally force it outward and having means to limit its reciprocation and to prevent its rotation with respect to said stick and means to prevent the rotation of said shoe with respect to said stick.

10. In curtain fixtures, a curtain, guideways adjacent said curtain, a curtain stick secured to said curtain elongated shoes having spindles engaging said curtain stick at either end of the same, one of said shoes having a pin and slot connection with said stick, means to force said shoes apart and to limit their extreme distance from each other, said shoes having holding members to be forced into active holding contact with said guideways when said curtain is level.

11. In curtain fixtures, a curtain, open guideways adjacent said curtain, a curtain stick secured to said curtain, an elongated shoe mounted on said curtain stick and normally projecting vertically therefrom and a pin and slot connection to prevent relative rotation between said shoe and curtain stick, the guideway cooperating with said elongated shoe being non-confining and allowing said shoe to freely tilt out of said guideway.

12. In curtain fixtures, a curtain, open guideways adjacent said curtain, a curtain stick secured to said curtain and having a hole, an elongated T-shaped shoe cooperating with said guideways and having a spindle fitting into said hole and a pin and slot slid-

ing connection between said spindle and said curtain stick, the guideway cooperating with said elongated shoe being non-confining and allowing said shoe to freely tilt out of said guideway.

13. In curtain fixtures, a curtain, open guideways adjacent said curtain, a curtain stick secured to said curtain, elongated shoes mounted at either end of said stick and normally projecting vertically therefrom, one of said shoes having a pin and slot sliding connection with said stick, and means to force said shoes apart, said guideways being non-confining and allowing the elongated shoes to freely tilt out of said guideways.

14. In curtain fixtures, a spring-actuated curtain, guideways adjacent said curtain, a curtain stick and a weighting bar secured to said curtain, elongated shoes mounted at either end of said stick so as not to rotate with respect thereto and cooperating with said guideways, projecting holding members on said shoes extending outward from the plane of said shoes to actively engage said guideways, retaining members on said shoes located on each side of the holding members to prevent the angular displacement of said shoes, a spring in said stick to press said shoes apart and means to limit the extreme distance between said shoes so that when the curtain is canted to any considerable extent the holding members are entirely released from active engagement with said guideways while said retaining members prevent the angular movement of said shoes with respect to the axis of said curtain stick.

15. In curtain fixtures, a spring-actuated curtain, guideways adjacent said curtain, a curtain stick mounted in said curtain, elongated shoes mounted at either end of said stick so as not to rotate with respect thereto, means to press said shoes apart and means to limit the extreme distance between said shoes, said shoes being each provided with a holding member projecting beyond the outward faces of said shoes and substantially in line with the curtain stick to actively engage the guideways when the curtain is level and said shoes being entirely released from active holding engagement with said guideways when said fixture is tilted, and retaining members on the shoes adapted to engage with guideways only when the curtain is tilted.

16. The combination with a casing provided with guideways and a shade having a shade-bar, of holding means carried by the ends of said bar, each of said holding means including a friction-head adapted for contact with the bottom of the respective guideways when the shade-bar is in its normal or horizontal position, and means to prevent disengagement of the holding-fixtures from the guideways when the shade-bar is in a tilted position, said means being constructed and arranged so that they will not simultaneously contact with the bottoms of the respective guideways in any position of the shade-bar.

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Witnesses:

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JAMES N. CATLON.