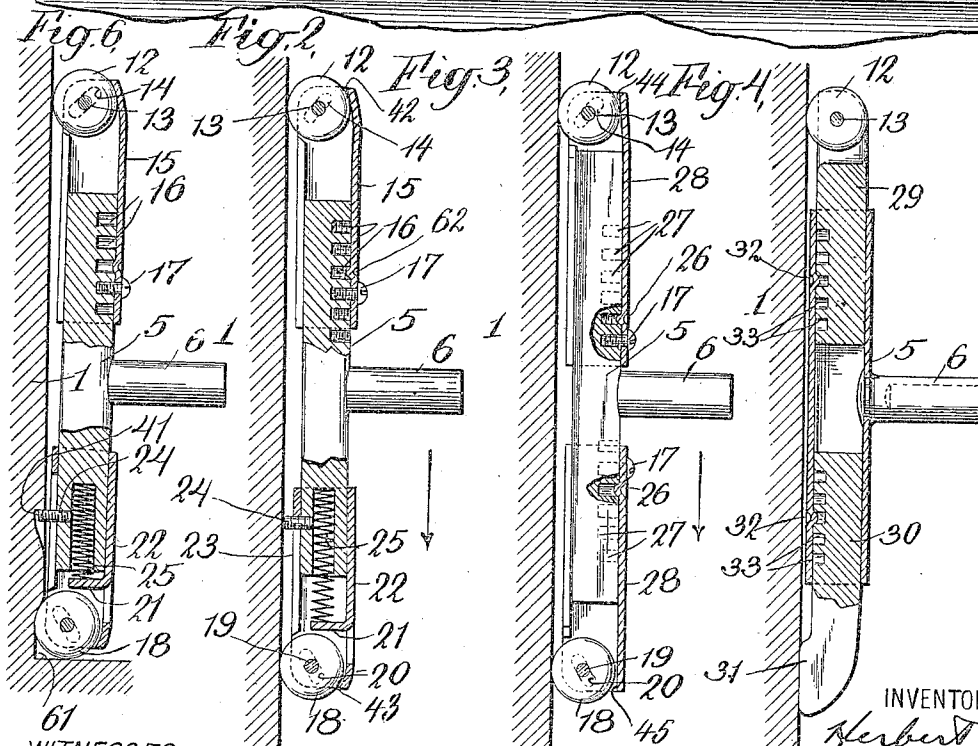
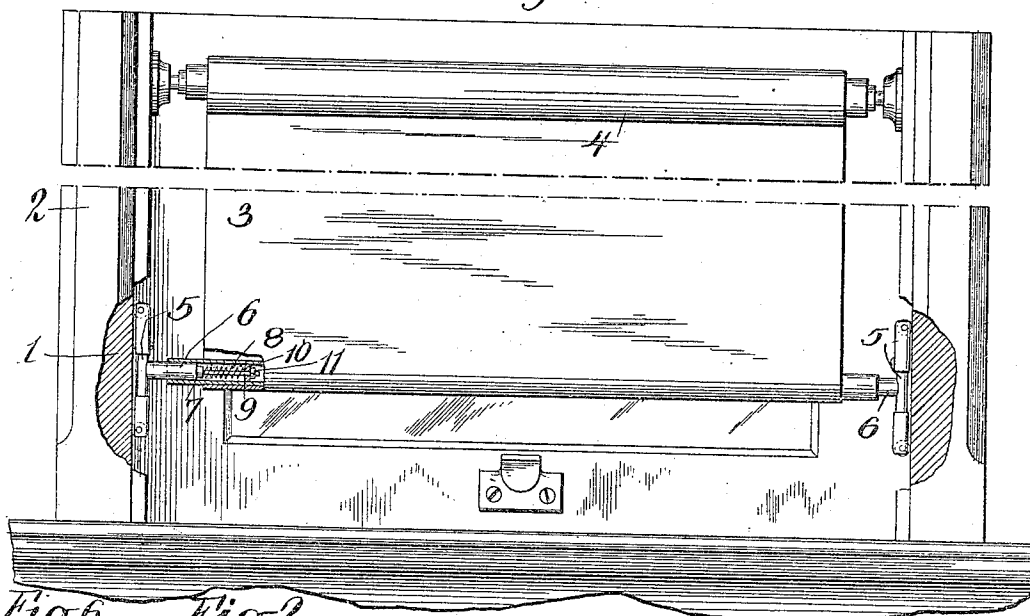


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CURTAIN FIXTURE.  
APPLICATION FILED NOV. 12, 1906.

957,346.

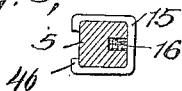
Patented May 10, 1910.

Fig. 1.



WITNESSES:  
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Fig. 5.



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# UNITED STATES PATENT OFFICE.

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## CURTAIN-FIXTURE.

957,346.

Specification of Letters Patent.

Patented May 10, 1910.

Application filed November 12, 1906. Serial No. 342,959.

*To all whom it may concern:*

Be it known that I, HERBERT E. KEELER, a citizen of the United States, and now a resident of the borough of Brooklyn, city of New York, county of Kings, 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 drawing, which forms a part of the same.

This invention relates to curtain fixtures and relates especially to fixtures provided with shoes that are extensible or adjustable in length to accommodate different widths of curtains, such, for instance, as are used in railway cars.

In the accompanying drawings showing illustrative embodiments of this invention and in which the same reference numerals refer to similar parts in the several figures, Figure 1 shows a fixture of this kind applied to a curtain. Fig. 2 is an enlarged view showing one construction of shoe. Figs. 3 and 4 are similar views showing other forms of shoe. Fig. 5 is a transverse section of the shoes indicated in Figs. 2 and 3. Fig. 6 is an enlarged view showing the form of shoe of Fig. 2 in locked position.

The posts 2 on either side of the window may be formed with suitable guideways 1 of any desired construction, such as the usual open-slotted form, so that the shoes of the fixtures may properly cooperate with the guideways. The curtain 3 is indicated as attached to a regular spring roller 4, preferably constantly acting and the curtain also carries at its lower end the curtain stick 7 which may be in the form of a tube. The shoes preferably reciprocate and are spring-pressed outward into proper cooperation with the guideways 1 and may be so mounted at either end of the curtain stick in any desired way. The spindles 6 secured to the shoes may be mounted within the apertures in the curtain stick so as to properly guide the shoes in their reciprocation and suitable springs 8 may be used to force the shoes apart. As indicated in Fig. 1 the rod 9 is secured to the spindle 6 and passes inward through a suitable collar 10 permanently secured in the curtain stick which is engaged by the head 11 on the rod so as to prevent undue outward movement of the shoe. In

this way the shoes of adjustable or variable length are pressed outward into sufficiently forcible engagement with the guideways to securely hold the curtain in any desired position and to assist in maintaining it in proper alinement as it is moved up and down during adjustment. The shoes may have the construction indicated in Fig. 2 in which the spindle 6 is shown as rigidly secured to the crosshead 5. This crosshead engages and supports the tip 15 or end portion of the shoe which in this case is in the form of a casing extending substantially around the crosshead, the flanges 46 in Fig. 5 giving firm engagement, but allowing the desired adjustment of the parts. Any desired adjusting and holding means may be used between these two parts. As indicated a series of holes 16, preferably threaded may be formed in one of them so as to be engaged by a suitable screw, such as 17, passing through the other part so as to firmly hold the two in proper adjusted position. A suitable catch, such as 26, in one of these parts may, however, engage holes or depressions in the other. The tip may carry adjacent its outer end a guiding member of any desired description to properly cooperate with the guideway.

As indicated in Fig. 2 a guide roll 12 may be mounted by its pivot 13 passing through suitable slots 14 in the tip. This guide roll when pressed against the guideway as the shoe moves downward, as indicated by the arrow, is pressed firmly into engagement with the grip 42 which exerts a strong frictional engagement upon its tread so that this trailing guiding member has its freedom of movement considerably restrained in this way. Such guiding member when it is the leading guiding member of the shoe tends to move away from the grip so that its freedom of movement is very considerably increased, as is indicated in the case of the roll 18 at the lower or leading end of the shoe, thus tending to promote the self-alining operation of the fixture, as is described in the Keeler Patent No. 714,110 of November 18, 1902. If desired also the tips or end portions of the shoe may be mounted on the crossheads so as to reciprocate freely and these tips in the form of casings, for instance, may be forced outward constantly

under spring action which tends to hold them in extended position, thus forming automatically spring extensible telescoping shoes. Such a form of tip 22 is indicated in Fig. 2 as being mounted on the lower end of the crosshead 5 so as to reciprocate with respect thereto, the extent of this reciprocation being limited by suitable pin-and-slot connections 23, 24 between these two parts. The spring 25 may be mounted in a suitable aperture in one of the parts and engage an abutment, such as 21, formed on the other, so as to normally force the tip and crosshead apart and hold them in the extended position indicated. Any suitable guiding member may be mounted in a tip of this construction, the guide roll 18 being indicated as mounted by its pin 19 in suitable inclined slots 20 in the tip so as to cooperate with the grip 43 in a similar manner to what has been already indicated.

If desired, a suitable locking pin or projection may be formed on the cross-head or other portion of the shoe, which may be effected by suitably extending the stop 24 so as to properly cooperate with locking means on the guideway such, for example, as the narrow recess 41, and thus retain the telescoping casing at the lower end of the shoe in its retracted or collapsed position. As is indicated in Fig. 6 when the shoe is forced downward to the bottom of the guideway the guiding member at the lower end of the shoe may be received in a suitable slot or depression 61 which allows the stop or locking member 24 to engage the bottom of the guideway. Then as the curtain stick is further pressed downward the telescoping ends of the shoes are forced into the retracted position indicated to such an extent that the pin 24 engages the locking recess 41 which maintains the parts in that position, thus holding the curtain stick securely in its extreme lowered position, as is desirable in many cases, such as in sleeping car service, in order to allow the curtain stick to be brought closer to the bottom of the window opening. It is, of course, understood that the spindles have sufficient play in the curtain stick to allow the slight canting or tilting of the shoe necessary to effect this locking action; and also that when the curtain is raised in the ordinary way by pressing upward on the curtain stick, the point at which this upward movement is transmitted to the spindle is so far out of the line of the locking pin and recess as to exert a considerable leverage and tend to tilt the shoes about their upper guiding members and thus in an obvious manner release the locking means; the locking pin 24 being normally entirely free from the guideway when the shoe is operating regularly as is indicated in Fig. 2. If desired also the crosshead may be provided at either end

with tips and guiding members of a similar construction. As indicated in Fig. 3 the crosshead may be provided with a series of holes or depressions 27 which may be threaded and the tips 28 may be in the form of hollow casings substantially embracing the ends of the crosshead and carrying suitable guiding members of any description to properly engage the guideway and exert in connection therewith the desired holding power. These tips may be adjusted and firmly held in any desired adjusted position with respect to the crosshead by such means as the screws 17 or catches 26 which may engage the holes indicated. In this way adjustable length shoes are formed which allow a standard construction of shoe to be used with curtains and windows varying considerably in width, since for the wider windows the adjustable shoes may be extended in length so as to properly support and align the curtain.

Fig. 4 indicates a construction of shoe in which the crosshead 5 is shown as a hollow casing within which the tips 29, 30 may fit and be properly guided during adjustment and firmly held in any desired adjusted position. Suitable holes or depressions 33 may be formed in these tips which are preferably of substantially rectangular cross-section and suitable catches 32 may be formed in the crosshead to properly cooperate with these depressions and hold the parts in adjusted position. As illustrative forms of guiding members which may be used with shoes of this description, a guide roll 12 is shown at the upper end of this shoe as rotating as freely as may be desired about its pivot 13 mounted near the end of the tip 29, or, if desired, a simpler guiding member 31 may be used and secured to the tip 30. Such a sliding block may be of any desired frictional material, such as brass or other metal or vulcanite, or of other more highly frictional material, and may have any desired length along the guideway, although the ends of the bearing face are preferably slightly rounded as indicated.

Having described the invention in this case, which comprises subject-matter taken from my co-pending application, Serial No. 97105, filed March 7, 1902, in connection with several illustrative embodiments of the same, to the details of which it is not limited, 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 curtain stick, shoes mounted to reciprocate on said stick, means to normally press said shoes apart into cooperation with guideways, said shoes comprising crossheads, tips provided with guiding members mounted on said crossheads to move longitudinally with respect thereto, springs between said tips and cross-

heads to form spring extensible telescoping shoes, guideways formed with slots to accommodate said guiding members and with locking means and locking members on said crossheads separated from one of the guiding members to engage said locking means and maintain said telescoping shoes in retracted position.

2. In curtain fixtures, a curtain stick, shoes comprising crossheads loosely mounted to reciprocate on said curtain stick, means to press said shoes apart, telescoping tips provided with guiding members mounted on said crossheads, spring acting means to automatically extend said telescoping shoes and locking means beyond said curtain stick to automatically lock said telescoping shoes in retracted position.

3. In curtain fixtures, a shoe comprising a crosshead, tips provided with guiding members secured to said crosshead, one of said tips having a limited telescoping connection with said crosshead, and a spring between said telescoping tip and crosshead to form an automatically extensible shoe.

4. In curtain fixtures, a curtain stick, shoes mounted on said curtain stick, means to normally press said shoes apart into co-operation with guideways, said shoes having tips mounted to slide thereon and means to normally force said tips apart into extended position forming automatically extensible shoes.

5. In curtain fixtures, a shoe comprising a crosshead, tips provided with guiding members secured to said crosshead, one of said tips being slidably mounted on said crosshead and a spring between said tip and crosshead to form an automatically extensible connection between them.

6. In curtain fixtures, a curtain stick, shoes mounted on said stick, said shoes being provided with telescoping spring-extensible portions to form longitudinally collapsible shoes.

7. In curtain fixtures, a shoe comprising a crosshead, tips provided with guiding members secured to said crosshead, one of said tips having a limited sliding connection with said crosshead and a spring between said tip and crosshead.

8. In curtain fixtures, a shoe comprising a crosshead, tips provided with guiding members secured to said crosshead, one of said tips having a limited telescoping connection with said crosshead, and a spring between said telescoping tip and crosshead to form an automatically extensible shoe.

9. In curtain fixtures, a shoe comprising a crosshead, tips provided with guiding members slidably mounted on said crosshead, the direction of movement of said tips being longitudinally of said shoe and means to allow an automatic variation in the distance between said tips during operation.

10. In curtain fixtures, a curtain stick, shoes each having separated guiding members mounted to reciprocate on said stick, means to normally press said shoes apart and force said guiding members into engagement with guideways, said shoes being provided with telescoping spring extensible portions carrying some of said guiding members to form longitudinally collapsible shoes.

11. In curtain fixtures, a shoe comprising a crosshead, tips provided with guiding members secured to said crosshead, one of said tips having a limited telescoping connection with said crosshead, and a spring between said telescoping tip and crosshead to form an automatically extensible shoe.

12. In curtain fixtures, a shoe comprising a crosshead and guiding members, one of said guiding members being formed on a tip having a telescoping connection with said crosshead, a spring between said tip and crosshead to form a telescoping collapsible shoe.

13. In curtain fixtures, a shoe provided with a telescoping spring extensible portion to form a longitudinally collapsible shoe.

14. In curtain fixtures, a shoe comprising a crosshead, tips provided with guiding members secured to said crosshead, one of said tips having a limited telescoping connection with said crosshead, a spring between said telescoping tip and crosshead to form an automatically extensible shoe, a locking projection on the outer face of said crosshead but within the plane passing through the outer faces of said guiding members and one of said tips being provided with means to secure said tip and crosshead in adjusted position.

15. In curtain fixtures, a shoe comprising a crosshead, tips provided with guiding members secured to said crosshead, one of said tips being slidably mounted on said crosshead and a spring between said tip and crosshead to form an automatically extensible connection between them.

16. In curtain fixtures, a shoe comprising a crosshead, tips provided with guiding members secured to said crosshead, one of said tips having a limited sliding connection with said crosshead and a spring between said tip and crosshead.

17. In curtain fixtures, a curtain stick, shoes mounted to reciprocate on said stick, means to normally press said shoes apart into co-operation with guideways, said shoes being provided with telescoping spring extensible portions to form longitudinally collapsible shoes.

18. In curtain fixtures, a curtain stick, guideways adjacent the path of said stick, shoes mounted to reciprocate on said stick, said shoes being provided with telescoping spring extensible portions to form longitudinally collapsible shoes and co-operating lock-

ing devices on said shoes and guideways to automatically lock said shoes in retracted position.

19. In curtain fixtures, a curtain stick, shoes mounted to loosely reciprocate on said stick, guideways adjacent the path of said stick, means to press said shoes apart and to engage the guideways, said shoes being provided with telescoping spring extensible portions forming longitudinally collapsible shoes, locking members on said shoes and cooperating locking means adjacent the lower portions of said guideways to automatically lock said shoes in retracted position when lowered.

20. In curtain fixtures, a curtain stick, shoes mounted on said stick, said shoes being provided with telescoping spring extensible portions to form longitudinally collapsible shoes the direction of collapsing movement of said shoe being longitudinally of such shoe.

21. In curtain fixtures, a curtain stick, shoes mounted on said curtain stick, means to normally press said shoes apart into cooperation with guideways, said shoes having tips mounted to slide thereon and be normally held outward in extended position forming automatically extensible shoes.

22. In curtain fixtures, a curtain stick, shoes mounted to reciprocate on said stick, said shoes being provided with telescoping spring extensible portions to form longitudinally collapsible shoes and locking devices

on said shoes to engage the guideways with which said shoes cooperate to automatically lock said shoes in retracted position.

23. In curtain fixtures, a curtain stick, shoes mounted to loosely reciprocate on said stick, means to press said shoes apart to engage the cooperating guideways, said shoes being provided with telescoping spring extensible portions to form longitudinally collapsible shoes and locking members on outer faces of said shoes to engage said guideways and automatically lock said shoes in retracted position.

24. In curtain fixtures, a shoe provided with a telescoping spring extensible portion permanently connected thereto to form a longitudinally collapsible shoe.

25. In curtain fixtures, a curtain stick, shoes mounted on said stick, each of said shoes comprising a plurality of members having relative movement longitudinally of said shoe to form a longitudinally collapsible shoe and locking means to automatically lock said shoes in collapsed position.

26. In curtain fixtures, a curtain stick, a longitudinally collapsible shoe comprising a plurality of members having collapsing movement longitudinally of said shoe and means to automatically lock said shoe in collapsed position.

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