No. 721,449. PATENTED FEB. 24, 1903.

H. E. KEELER.

CURTAIN FIXTURE.

APPLICATION FILED NOV. 1, 1902.

NO MODEL.

Fig. 1,

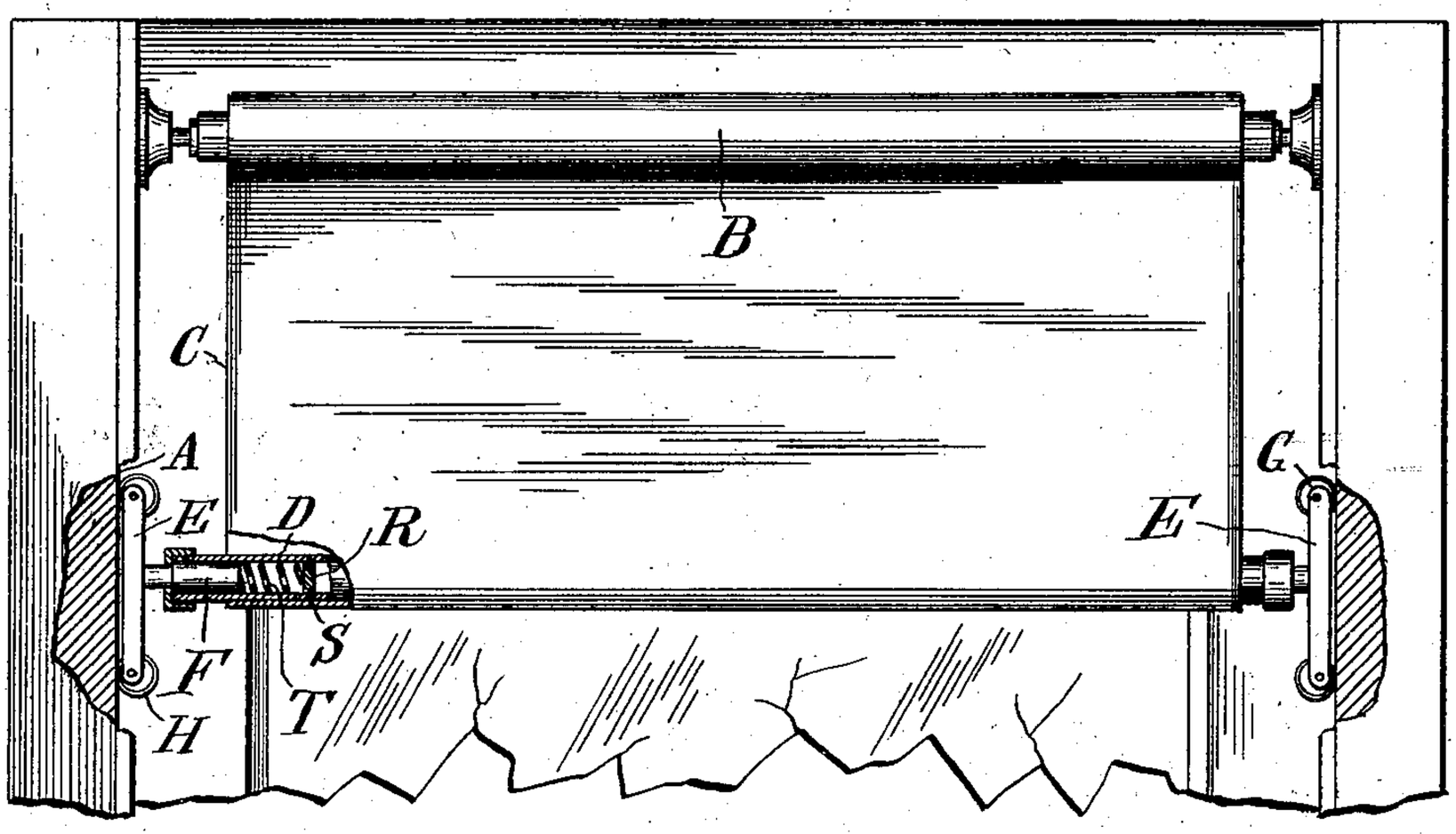


Fig. 2,

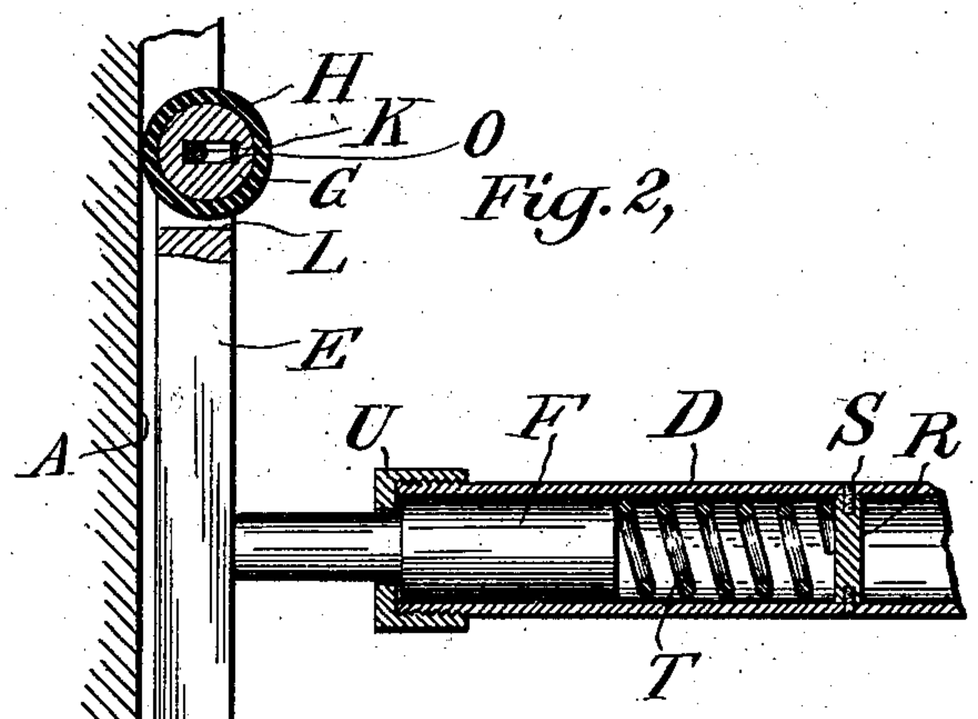


Fig. 4,

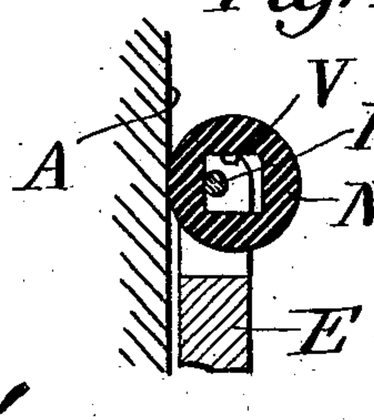
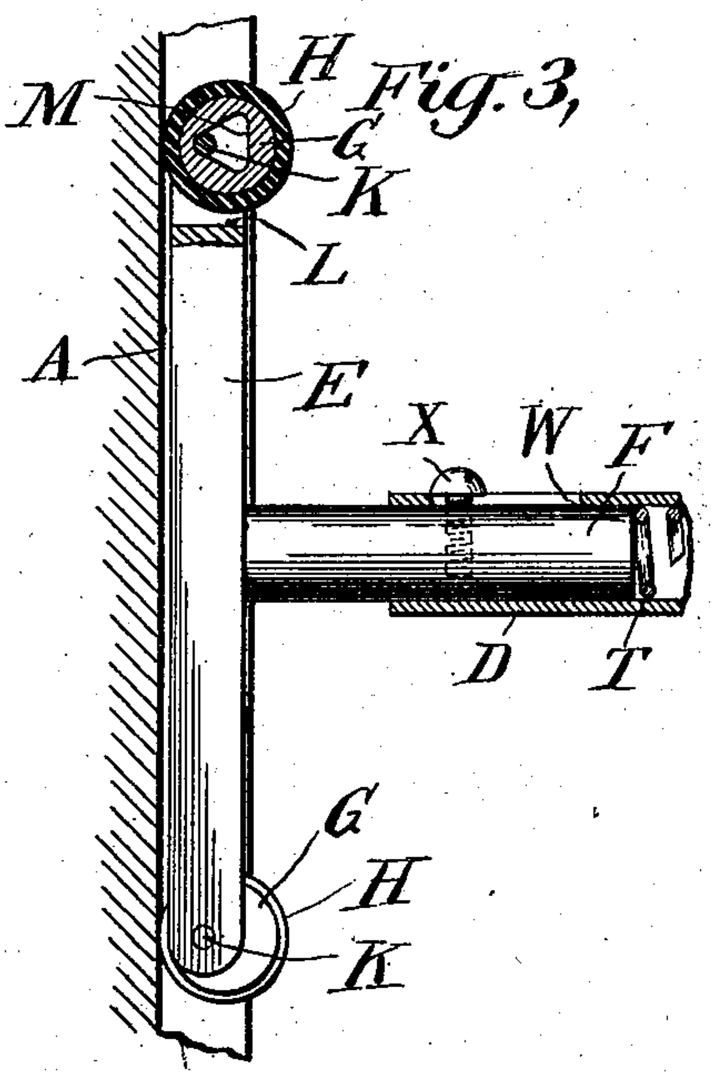


Fig. 3,



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CURTAIN-FIXTURE.

SPECIFICATION forming part of Letters Patent No. 721,449, dated February 24, 1903.

Application filed November 1, 1902. Serial No. 129,653. (No model.)

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 it relates especially to such curtain-fixtures as are employed to hold spring-actuated curtains in position as these curtains are used on railway-cars or in other places.

In the accompanying drawings, in which the same reference-letter refers to similar parts in the several figures, Figure 1 is an elevation, parts being shown in section, of an embodiment of this invention as applied to a spring-actuated curtain. Fig. 2 is a sectional detail view showing one shoe and the coöperating parts. Fig. 3 is a similar view showing a modified construction. Fig. 4 is a detail sectional view showing still a different construction.

In the embodiment of the invention shown in the drawings the curtain C, of usual construction, is attached to the ordinary spring-roller B. The guideways A extend on either side of the curtain, as is well known in this art. The curtain-tube D may be secured to the lower end of the curtain in any desired way, as by securing this tube in a pocket at the bottom of the curtain, as is indicated.

The shoes E, which coöperate with the guideways A on either side of the curtain, are secured to the curtain so that they are mounted to reciprocate transversely of the curtain and are preferably also accurately guided during this reciprocation. This may be accomplished by rigidly securing to the shoes E the plungers F, which fit accurately within the curtain-tube D, and which are thereby guided so as to accurately reciprocate transversely of the curtain. Each of these shoes is also preferably pressed outward into engagement with the guideways, the spiral spring T being indicated within the curtain-tube and acting upon the plunger F, the inner end of this spring being supported by the collar R, which may be secured in position by the screws or other fastening devices S. In order to prevent the plunger from coming out of the tube, a ferrule U may be used having an inwardly-projecting flange indicated, which extends inward over the end of the curtain-tube, and thereby prevents the plunger from coming out of the tube. This ferrule should be firmly secured to the curtain-tube, and this may be accomplished by the screw connection indicated in the drawings. It will be understood that the curtain-shoes need not be mounted on the curtain in this particular way, although it is desirable that they be mounted so as to reciprocate transversely of the curtain. These shoes may be mounted upon the curtain as is indicated in the patent to Keeler and Duncan, No. 689,195, dated December 17, 1901, or in any other desired way.

Rotating guiding members are mounted, preferably, at either end of the shoes, and these guiding members are mounted so as to rotate irregularly, and thereby force the shoes inward against the spring-pressure upon them. These rotating guiding members may take the form of circular rolls, as is indicated in the drawings, in which the rolls G are mounted at either end of each of the shoes E. This is because the distance between that portion of the tread of the guiding member in contact with the guideway from the point varies during the irregular rotation of the guiding member, so that, as will be readily understood, the plungers are forced inward at intervals against the spring action, and the curtain is thereby held securely in position at any desired point. This irregular rotation of the guide-rolls may be effected by using the construction shown in detail in Fig. 2 of the drawings. The guiding members are preferably formed with treads of gripping material, so that they engage the guideways sufficiently to insure the rotation of the rolls as the curtain-fixture is moved along the guideways. As indicated in Fig. 2, the tread H of gripping material is rigidly secured to the roll G, and this may be accomplished in any desired way. The roll is formed, as indicated, with the elongated non-circular pivot-opening O, within which the pivot K fits loosely, so as to allow the irregular rotation of the roll about this pivot. The roll at the other end of the shoe is mounted in an exactly-similar manner. If desired, how-

ever, the non-circular pivot-opening in the roll may take the form indicated in Fig. 3, in which this opening M is substantially triangular in form, the pivot K fitting loosely within it, so as to allow the irregular rotation of the roll caused by the contact of its tread H with the guideway. As shown in that figure, the plunger F is guided within the outer end of the curtain tube D and is pressed outward by the spring T indicated. This plunger is prevented from coming entirely out of the tube by the screw or pin X, which is securely fastened to the plunger and which passes through the slot or opening W in the curtain-tube. By this means the plunger is allowed the requisite freedom of movement, and yet is kept within the tube under all conditions. It will be understood, of course, that these rolls rotate in the slots L, formed at either end of the shoe. The roll may be, if desired, formed entirely of gripping material—such, for instance, as rubber, wood fiber, or other material — which will possess the requisite strength, and yet engage the guideways sufficiently firmly so as to be positively rotated by contact therewith. Fig. 4 shows the roll N formed in this way, and the roll is indicated in that figure as provided with a non-circular pivot-opening V, substantially square-shaped, in which the pivot P fits loosely to allow the irregular rotation of the roll.

It is of course understood by those familiar with this art that variations may be made in the form and proportions of parts without departing from the spirit of this invention. Furthermore, parts of this invention may be used without employing all of the same, and parts of this invention as disclosed herein may be employed in connection with other devices. I do not, therefore, wish to be limited to the disclosure which has been made in this case; but

What I claim as new, and what I desire to secure by Letters Patent, is set forth in the appended claims:

1. In a curtain-fixture, a spring-actuated curtain, a curtain-tube secured to said curtain, spring-pressed plungers mounted at either end of said tube, ferrules secured to said tube and projecting inward over the ends of the same to hold said plungers within said tube, shoes secured to said plungers, guideways on either side of said curtain with which said shoes coöperate, pivots in the ends of said shoes and rolls having treads of gripping material mounted on said shoes, said rolls being provided with elongated non-circular pivot-openings in which said pivots loosely fit.

2. In a curtain-fixture, a spring-actuated curtain, guideways adjacent said curtain on either side of the same, shoes secured to said curtain to reciprocate transversely of the same and to coöperate with said guideways, pivots in the ends of said shoes and rolls having treads of gripping material and being provided with elongated non-circular pivot-openings through which said pivots pass.

3. In a curtain-fixture, a shoe to coöperate with a guideway, said shoe comprising pivots at either end of the same and rolls provided with elongated non-circular pivot-openings through which said pivots loosely pass to allow the irregular rotation of said rolls.

4. In a curtain-fixture, a shoe to coöperate with a guideway, said shoe comprising pivots and rotating guiding members, provided with elongated non-circular pivot-openings through which said pivots pass, to be pressed into engagement with said guideway and to be rotated irregularly thereby.

5. In a curtain-fixture, a shoe to coöperate with a guideway, said shoe comprising pivots and rotating guiding members provided with non-circular pivot-openings in which said pivots loosely fit to allow the irregular rotation of said guiding members.

6. In a curtain-fixture, a shoe to coöperate with a guideway, said shoe comprising a pivot and a rotating guiding member having a non-circular opening in which said pivot loosely fits to allow the irregular rotation of said guiding member when pressed into contact with said guideway.

7. In a curtain-fixture, a spring-actuated curtain, guideways adjacent said curtain, shoes to coöperate with said guideways, means to mount said shoes on said curtain and to press them outward, pivots in said shoes and rotating guiding members having non-circular pivot-openings therein mounted on said pivots to be rotated irregularly by contact with said guideways.

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Witnesses:
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