No. 721,448. PATENTED FEB. 24, 1903.

H. E. KEELER.

CURTAIN FIXTURE.

APPLICATION FILED SEPT. 4, 1902.

NO MODEL.

Fig. 1.

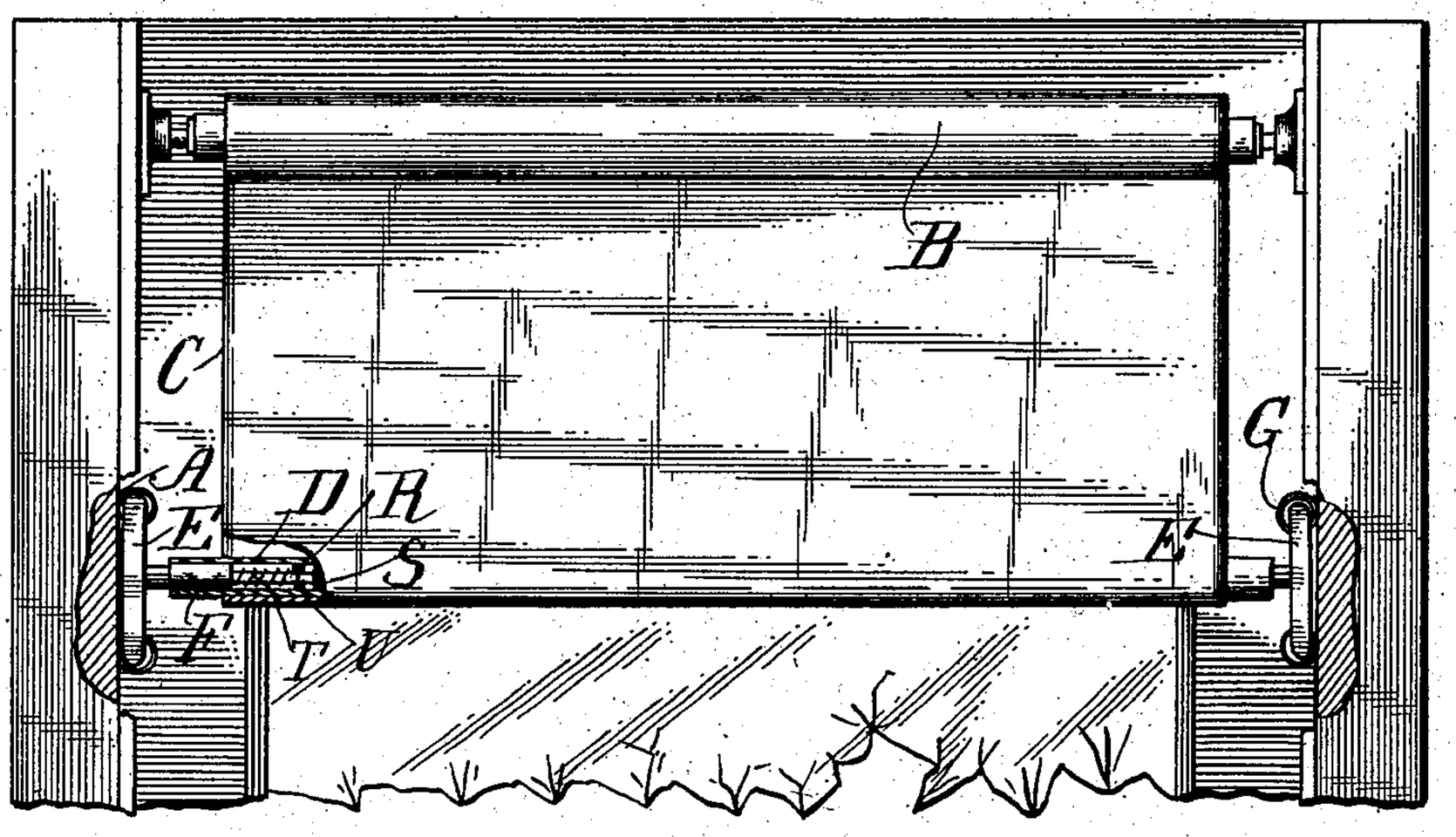


Fig. 2.

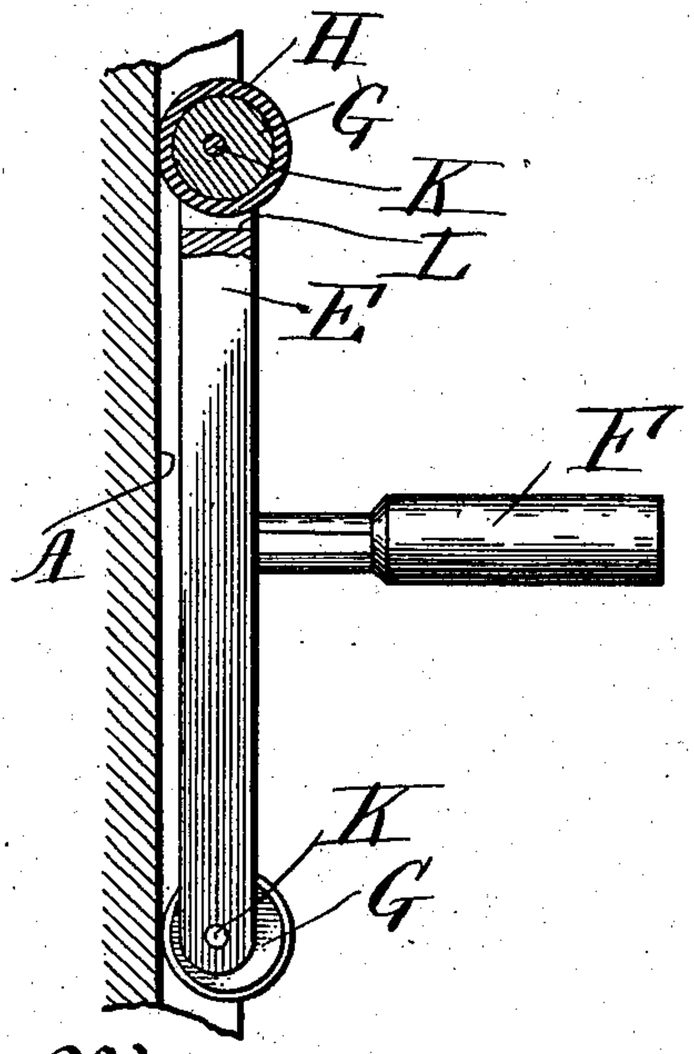
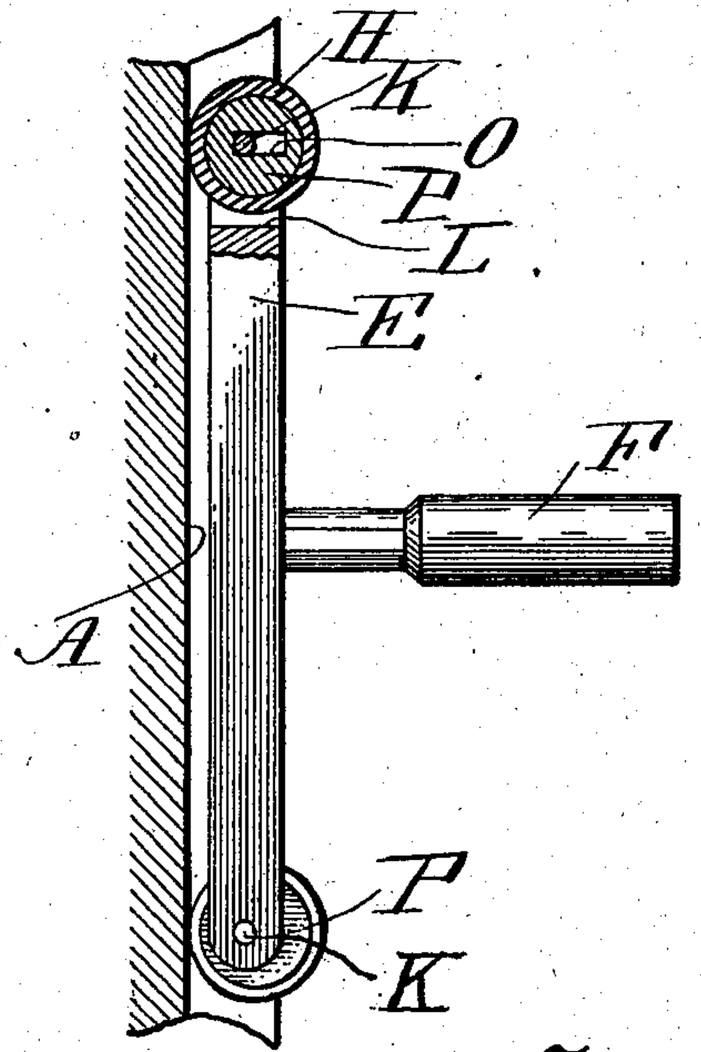


Fig. 3.



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UNITED STATES PATENT OFFICE.

HERBERT E. KEELER, OF NEW YORK, N. Y.

CURTAIN-FIXTURE.

SPECIFICATION forming part of Letters Patent No. 721,448, dated February 24, 1903.

Application filed September 4, 1902. Serial No. 122,022. (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.

This invention relates to curtain-fixtures, and relates more especially to such curtain-fixtures as are employed in railway-cars and which serve to securely hold a spring-actuated curtain in any desired position.

In the accompanying drawings, in which the same reference characters refer to similar parts of the several figures, Figure 1 is a front view, partly in section, showing one embodiment of this invention as applied to a curtain. Fig. 2 is a detail view on a larger scale, showing one form of foot used in this curtain-fixture in connection with the coöperating guideway. Fig. 3 is a similar view of another form of foot.

In the embodiment of this invention shown in the drawings the two posts on either side of the window are provided with suitable grooves or guideways A, with which the curtain-fixture coöperates. The curtain C is mounted upon a spring-roller B of ordinary construction secured at the top of the window, this spring-roller being preferably constantly acting to maintain the curtain in proper condition. The curtain-tube D is securely fastened in the curtain, preferably near the bottom edge of the same, and the two shoes E are by this means mounted so that they are accurately guided in reciprocating transversely of the curtain and are also preferably spring-pressed outward into engagement with the guideways. The shoes E are provided with the plungers F, forming a rigid part of the same, and these plungers fit accurately within the curtain-tube D, so as to guide the shoes in this manner during their reciprocation. A light rod R is preferably secured in a rigid manner to each one of the plungers F. This rod projects at its inner end through the collar U, which may be firmly secured to the curtain-tube in any desired way, and the stop S on the inner end of the rod R prevents the plunger and shoe from being pushed too far outward under the action of the spring T indicated. It is not necessary, however, that the shoes be mounted in the curtain-tube in this manner. They may, if desired, be secured to the curtain in any desired way. For instance, they may be mounted as disclosed in the patent to Keeler and Duncan, No. 689,195, of December 17, 1901. Each shoe is provided at either end of the same with a guide-roll G, preferably having a tread of gripping material and mounted to rotate eccentrically or irregularly about its pivot in contact with the coöperating guideway, so that by this means the rotation of these guide-rolls forces the corresponding plunger inward against the pressure of the spring T, the spring in this manner resisting the rotation of the guide-rolls and having the proper strength to hold the curtain securely in any desired position. As is indicated in Fig. 2, the guide-roll G is provided with the tread H, of gripping material, rigidly secured to this guide-roll in any desired manner and preferably formed of rubber, leather, or similar material. The guide-roll may, however, be formed of any desired material which grips the guideway sufficiently to insure the proper engagement of the roll therewith. As is indicated in Fig. 2, this guide-roll rotates freely about the pivot K, which is fast in the shoe at one end of the same, the guide-roll at the other end of the shoe being mounted in an identical manner. It will be seen that the pivot-hole in the guide-roll is displaced from the center of the roll, the amount of this displacement from the center being sufficient so that the guide-rolls shall rotate with sufficient eccentricity or irregularity to properly hold the curtain in position. The shoe may, however, be constructed as indicated in Fig. 3, in which the guide-roll P is shown, preferably having a tread H secured thereto of suitable gripping material. This guide-roll is provided with an elongated bearing-slot O, by which the guide-roll is mounted to rotate eccentrically or irregularly about the pivot K, the guide-roll P at the other end of this shoe being of identical construction and similarly mounted. It will be seen that when the curtain provided with shoes of this character is moved in the ordinary operation of the same the guide-rolls are rotated eccentrically, since

they grip the guideways sufficiently to cause the rotation of the guide-rolls in a positive manner. Because of the eccentric rotation of these guide-rolls, however, the plungers are forced inward at certain periods of the rotation of the rolls against the action of the springs T, which normally tend to force the plungers and shoes outward into contact with the guideways. The force of these springs is so adjusted that their action is sufficient to hold the curtain securely in any desired position by normally forcing the shoes into the outward position indicated in the drawings, in which the pivots on which the guide-rolls are mounted are forced outward as far as possible toward the guideways A. In this manner it will be seen that the curtain is securely held in any desired position, and, furthermore, it is possible at any time by operating the curtain in the ordinary manner to insure its ready movement, the guide-rolls under these conditions traveling along the guideway with an eccentric rotation.

It is of course understood that many modifications may be made in the curtain-fixture which has been disclosed herein. Many variations may be made by those skilled in the art in the proportions of the various parts of this device, and, furthermore, other parts may be substituted for those indicated under certain conditions. I do not, therefore, wish to be limited to the disclosure which I have made in this case; but

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

1. In a curtain-fixture, a spring-actuated curtain, a curtain-tube mounted at the lower end of said curtain, shoes having plungers secured thereto, said plungers fitting within said tube to guide said shoes with respect thereto, rods secured to the inner ends of said plungers, stops on the ends of said rods, collars secured to said tube to limit the outward movement of said shoes by coöperating with said stops and springs to normally force said shoes outward, guide-rolls having treads of gripping material eccentrically mounted at either end of each of said shoes, guideways adjacent said curtain with which said guide-rolls coöperate to cause the eccentric rotation of said guide-rolls as they are moved along said guideways to force said shoes inward against the action of said springs.

2. In a curtain-fixture, a spring-actuated curtain, guideways adjacent said curtain, a curtain-tube secured to said curtain, spring-pressed shoes mounted to reciprocate in said tube, each of said shoes being provided with pivots at either end of the same and guide-rolls having treads of gripping material and eccentrically mounted about said pivots, to cause said guide-rolls when rotated eccentrically by movement along said guideways to force said shoes inward against the pressure of said springs.

3. In a curtain-fixture, a spring-actuated curtain, guideways adjacent said curtain, spring-pressed shoes mounted to reciprocate with respect to said curtain to coöperate with said guideways, said shoes being provided at either end of the same with gripping eccentrically-mounted guide-rolls to be rotated eccentrically by contact with said guideways.

4. In a curtain-fixture, a spring-actuated curtain, guideways adjacent said curtain, spring-pressed shoes secured to said curtain to coöperate with said guideways, said shoes being provided with eccentrically-mounted guide-rolls to be rotated eccentrically by contact with said guideways as they move along the same to force said shoes inward.

5. In a curtain-fixture, a shoe having pivots at either end of the same and guide-rolls having gripping-treads mounted to rotate eccentrically about said pivots.

6. In a curtain-fixture, a shoe to coöperate with a guideway, said shoe being provided with guide-rolls at either end of the same mounted to rotate eccentrically with respect to said shoe.

7. In a curtain-fixture, a guideway, a shoe having irregularly-rotating guiding members mounted therein to coöperate with said guideway, each of said guiding members being formed with a periphery, the distance of the portion of which in contact with said guideway from the axis of said guiding member varies as said guiding member is rotated.

8. In a curtain-fixture, a guideway, a shoe to coöperate with said guideway and guiding members mounted to rotate irregularly in said shoe by contact with said guideway, the distance of the portion of the periphery of each of said guiding members in contact with said guideway from the axis of said guiding member varying as said guiding member is rotated.

9. 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, springs to press them outward and guiding members mounted to be rotated irregularly in said shoes by contact with said guideways, the distance of the portion of the periphery of each of said guiding members in contact with said guideway from the axes of said guiding members varying as said guiding members are rotated.

10. 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, guide-rolls having gripping-treads mounted in said shoes to rotate eccentrically with respect thereto, the distance from the portions of the treads of said rolls in contact with said guideways from the axes of rotation of said rolls varying as said rolls are rotated by engagement with said guideways.

11. 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, rotating guide members mounted to rotate eccentrically in said shoes, the distance of the portions of the peripheries of said guiding members in contact with said guideways from the axes of rotation of said guiding members varying as said guiding members are rotated by engagement with said guideways.

12. In a curtain-fixture, a shoe to coöperate with a guideway and guiding members mounted to rotate eccentrically in said shoe, the distance of the portion of the periphery of each of said guiding members in contact with said guideway from the axis of rotation of said guiding member varying as said guiding member is rotated by engagement with said guideway.

13. In a curtain-fixture, a spring-actuated curtain, guideways adjacent said curtain, shoes mounted to coöperate with said guideways, means to mount said shoes on said curtain and springs to press them outward, and irregularly-rotating guiding members mounted on said shoes to coöperate with said guideways, each of said guiding members being formed with a periphery, the distance of the portion of which in contact with said guideway from the axis of said guiding member varies as said guiding member is rotated.

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