No. 853,551. PATENTED MAY 14, 1907.

H. E. KEELER.

STAY ROLLER FOR CAR DOORS AND FOR OTHER PURPOSES.

APPLICATION FILED FEB. 7, 1907.

Fig. 1,

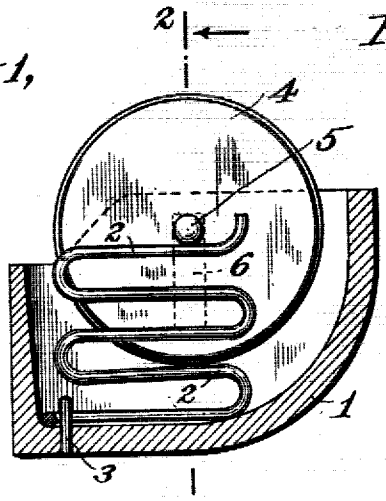


Fig. 2,

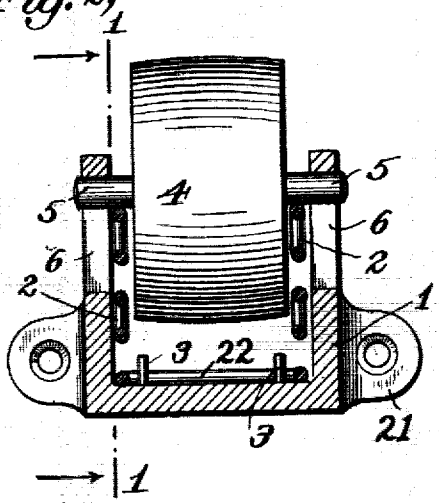


Fig. 3,

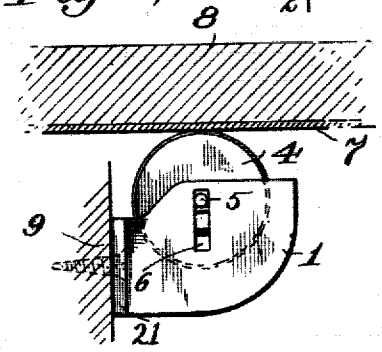


Fig. 4,

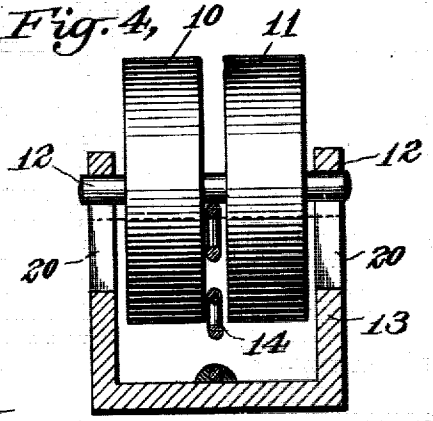
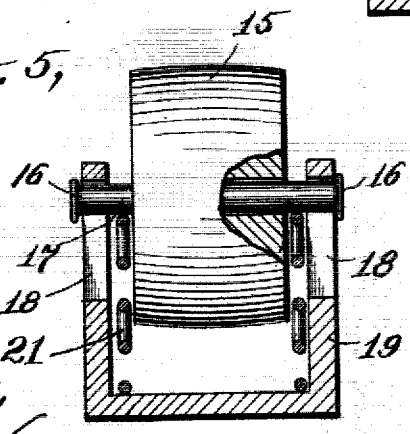


Fig. 5,



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STAY-ROLLER FOR CAR-DOORS AND FOR OTHER PURPOSES.

No. 853,551. Specification of Letters Patent. Patented May 14, 1907.

Application filed February 7, 1907. Serial No. 356,193.

To all whom it may concern:

Be it known that I, HERBERT E. KEELER, a citizen of the United States, residing in the city and State of New York, have invented certain new and useful Improvements in Stay-Rollers for Car-Doors and for other Purposes, of which the following is a specification, taken in connection with the accompanying drawings.

This invention relates to rollers for the doors of railway cars and the like for preventing rattling and for holding the same in lateral alinement as they are operated.

In the accompanying drawings showing illustrative forms of this invention, Figure 1 is a transverse sectional view along the line 1—1 of Fig. 2. Fig. 2 is a longitudinal section of the same along the line 2—2 of Fig. 1. Fig. 3 shows the device as applied to a door. Fig. 4 is a sectional view of a modified form and Fig. 5 is a similar view showing still another illustrative form.

In the illustrative form of device shown in Figs. 1, 2 and 3, the casing 1 may be made of cast brass or any other desired material, and is preferably provided with the attaching ears 21 and with suitable guiding slots 6, which may, as indicated in Fig. 2, extend entirely through the sides of the casing to provide means for slidingly and rotatably mounting the roll. The roll 4 is preferably formed of wood, fiber or some other substantially rigid material, although in some cases compacted leather or the like is desirable to promote the noiseless action of the device. The roll is provided with a suitable axle or pivot which may be a separate piece 5, passing through the roll and secured thereto, although of course, in some cases where the body of the roll is made of metal, the pivot may be integral therewith. The pivot 5 is guided in the slots 6 in the casing so that the roll is bodily movable with respect thereto, and spring-pressed outward so as to be held in operative position. For this purpose, the duplex spring 2 may be used, the two portions of which joined by the heel 22 are arranged on either side of the roll, between the roll and the adjacent face of the casing, so as to engage the roll pivot. The spring 2 is also preferably given the reflexed form indicated in Fig. 1, so as to have a comparatively uniform action throughout a considerable range and at the same time make the device compact. Suitable retainers for the spring which may be in the form of pins 3 may be arranged within the casing to securely hold the spring in proper position with respect to the casing so that its free ends properly engage the pivot.

As indicated in Fig. 3, the device is secured on the jamb 9 of the door by suitable screws engaging the attaching ears, so that the roll properly engages the plate 7 which is preferably arranged on the door 8 in the path of the roll. Then, as the sliding door is opened or shut the spring-pressed roll holds it in proper position with respect to the guides and by this lateral spring pressure prevents the rattling of the door.

A device having a double roll is indicated in Fig. 4, the two sections 10, 11 of the roll being mounted on the pivot 12 in any desired manner and being preferably spaced apart somewhat so as to allow the reflexed spring 14 to be located between them. The spring as indicated, engages the pivot at its free upper end while the lower end of the spring may be secured to the casing by solder or by any other suitable retaining means. The roll and pivot are thus in this instance bodily movable, the pivot being guided in suitable slots 20 in the casing. Fig. 5 shows still another form of device in which the casing 19 is indicated as provided with suitable slots 18 to guide the roll pivot 17. In this instance the pivot is loosely arranged within the roll 15, so that it does not necessarily revolve with it, and suitable collars may be arranged on the pivot to co-operate with the roll or the casing to retain the pivot in proper position, the collars 16 being indicated as formed at the ends of the pivot and integral therewith, which may be conveniently done by heading or otherwise. The spring 21 is shown in this instance as of a duplex reflexed character, engaging the casing and the roll pivot on the sides of the roll. These forms of the device may be, of course, similarly mounted so as to act in an analogous manner in connection with a car door or the like.

Having described this invention in connection with several illustrative embodiments thereof, to the details of which it is not, of course, to be limited, what is claimed as new and what is desired to be secured by Letters Patent is set forth in the appended claims.

1. In stay rollers for car doors, a casing provided with retaining means and guiding slots, a roll having a pivot operating in said slots, and a duplex reflexed spring engaged by said retaining means and held within said

casing and having its reflexed portions on both sides of said roll and engaging the pivot thereof.

2. In stay rollers for car doors, a casing provided with guiding means, a roll, substantially inclosed by said casing and provided with means coöperating with said guiding means, to have bodily and rotary movement with respect to said casing and a reflexed spring located in said casing and resisting such bodily movement of said roll.

3. In spring controlled rollers, a casing provided with guiding slots, a roll having a pivot operating in said slots, and a spring located in said casing and acting between said casing and roll pivot.

4. In spring controlled rollers, a casing provided with guiding slots, a roll having a pivot located in said slots, and a spring on both sides of said roll between the same and the adjacent sides of said casing to yieldingly engage said pivot.

5. In spring controlled rollers, a casing provided with guiding slots, a roll having a pivot operating in said slots to allow said roll to have bodily and rotary movement with respect to said casing and a reflexed spring located in said casing and acting between said casing and said roll pivot.

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