Dec. 11, 1923. 1,477,248

C. B. DAUGHERTY

ANTIRATTLING DEVICE

Filed June 23, 1922 2 Sheets-Sheet 1

Fig. 1.

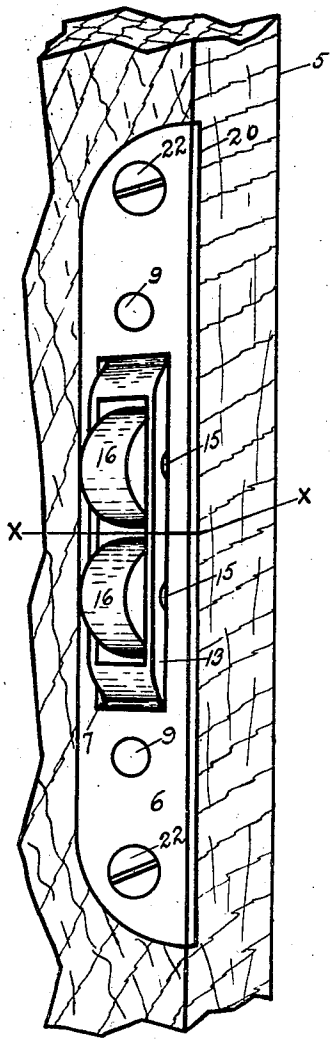


Fig. 2.

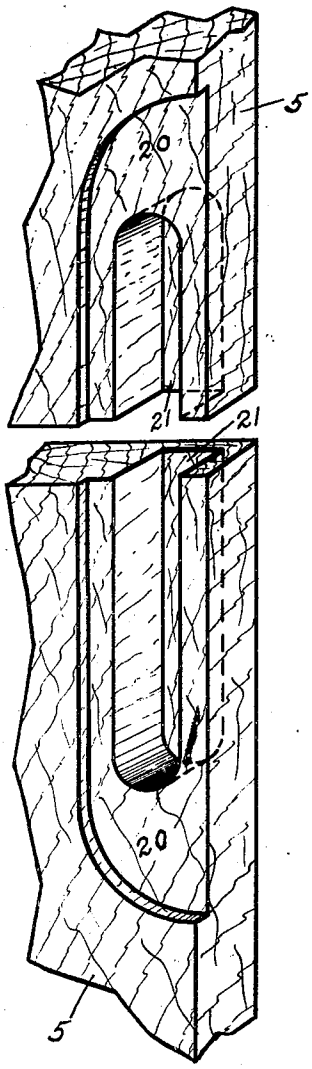
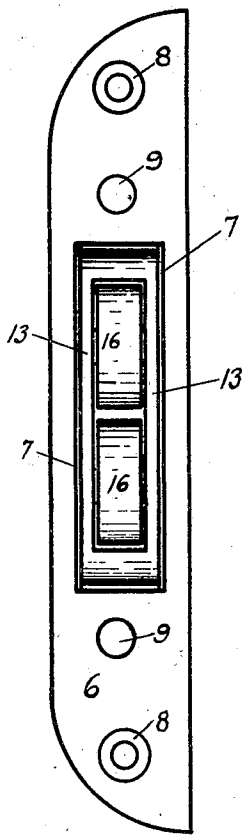


Fig. 4.



WITNESSES:
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Fig. 5.

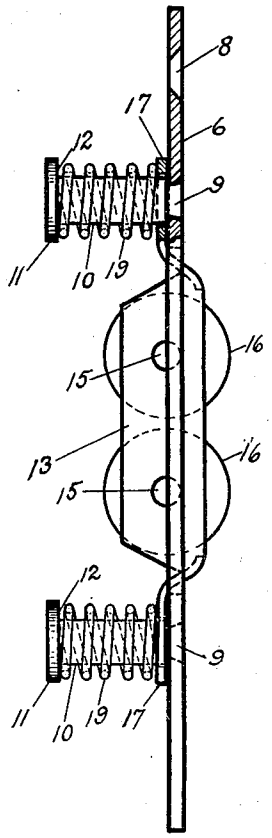


Fig. 7.

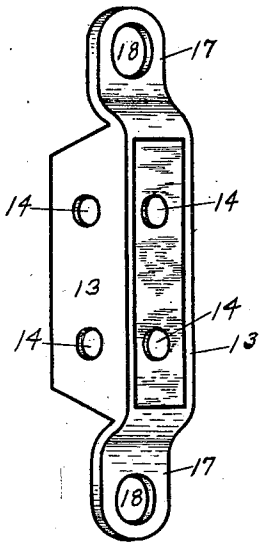


Fig. 6.

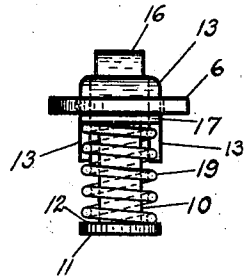
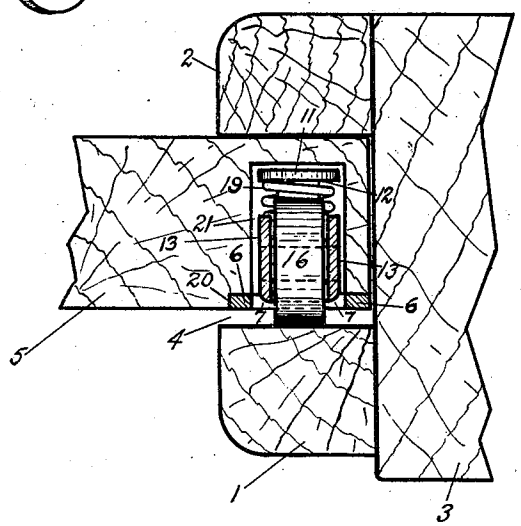


Fig. 3.



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UNITED STATES PATENT OFFICE.

CHALMER B. DAUGHERTY, OF DAYTON, OHIO, ASSIGNOR TO THE DAYTON MANUFACTURING COMPANY, OF DAYTON, OHIO, A CORPORATION OF OHIO.

ANTIRATTLING DEVICE.

Application filed June 23, 1922. Serial No. 570,508.

To all whom it may concern:

Be it known that I, CHALMER BENJAMIN DAUGHERTY, a citizen of the United States, and resident of Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Antirattling Devices, of which the following is a description, reference being had to the accompanying drawings, which form a part of my specification.

My invention relates to anti-rattling fixtures, more particularly to the type of mechanism commonly applied to window sashes in railway cars, ships, omnibuses, and other moving vehicles. The invention has for its objects to simplify such mechanism and to reduce the cost of its manufacture, as well as to reduce the cost of labor to apply the fixture for the service for which it is intended and, further, to not only reduce the cost of manufacture and installation but also to reduce to a minimum the number of parts and the cutting away of the sash to receive the fixture. To these ends my invention consists in the novel construction and combination of parts hereinafter more fully set forth and claimed.

The invention is illustrated in the accompanying drawings, which constitute a part of this specification and in which Figure 1 is a perspective view of a portion of a sash frame with my improved device mounted thereon. Fig. 2 is a broken perspective view of a portion of a sash frame showing mortise to receive the fixture. Fig. 3 is a cross section taken through line *x*—*x* of Figure 1, showing a portion of a sash frame with the device applied thereto and showing also the sash strips and post forming guideways in which the sash frame operates. Fig. 4 is a face view of the assembled device. Fig. 5 is a side view of the same showing one end partly in section. Fig. 6 is an end view of the assembled device. Fig. 7 is a perspective view of the roller carrier. In the said drawings like reference numerals indicate corresponding parts in all the figures thereof.

1, 2 represent inner and outer sash strips secured to a side-post or stanchion 3 and forming a guide-way 4 within which a sash 5 is vertically movable. 6 designates a face or supporting-plate having an opening 7 therethrough and being provided with screw holes 8, to receive screws by which the fixture is secured to the sash frame or other support to which the device is to be applied. To the plate 6 there is secured, at 9, preferably by riveting as shown in the sectional portion of Figure 5, one end of each of two posts or studs 10, which project laterally from and at right angle to the under side thereof and whose free ends terminate in enlarged heads or annular flanges 11, which form shoulders 12 for a purpose presently to be explained. 13 represents a roller carrier, made, preferably, of sheet metal to the form more clearly shown in Figure 7 and operative within the opening 7 in the plate 6, the side members of this carrier are perforated at 14 to receive bearings 15 upon which are mounted rollers 16.

At each end of the carrier 13 there is formed a member 17, designed to rest normally against the under side of the supporting-plate 6, these members, 17, are each provided with a perforation 18, by which means the carrier is movably mounted on the studs 10, springs 19 being coiled around the said studs between the under side of the members 17 and the shoulders 12, the function of these springs being to force the roller carrier forward.

The installation and operation of the above described fixture is as follows, it being obvious that the device while illustrated and described as attached to a sash may, with equal efficiency, be applied to either of the sash strips. To install the fixture the sash is mortised or recessed at 20 (Fig. 2) to receive the supporting-plate 6, the depth of the recess corresponding with the thickness of said plate, and counter-mortised at 21 to receive the operating mechanism and to allow free operation thereof without cutting away the edge of the sash, it is also to be observed that the mortising can all be done by machine and that no hand labor is required in connection therewith, the ends of the supporting-plate being shaped to conform to the cutter by which the recessing is done.

When the sash has been mortised to receive the device, as above described, the assembled fixture is inserted and secured in place by means of screws 22, and when thus applied the rollers 16 will project beyond the face of the sash a distance pre-determined by the members 17 whose forward movement is limited by the supporting-plate 6, as more clearly illustrated in Figure 5.

With the fixture applied to the sash in the manner just described the latter is placed in position with its outer face resting against the outer sash strip 2, the inner sash strip 1 is then secured to the stanchion 3 in proper position to allow the sash to move freely in the guide-way 4, it being understood that in positioning this strip the roller carrier is forced backward so that the rollers are under constant pressure against the adjacent side of the inner sash strip (see Fig. 3), thereby operating to force the sash against the outer sash strip, thus preventing the sash from rattling in its guide-way and excluding dust and drafts, while the rollers reduce friction to a minimum and offer practically no resistance to free movement of the sash.

The fixture may be applied at each corner of the sash, or at the upper corners only or they may be applied at such other locations and in such numbers as the size of the sash and other conditions may make desirable.

From the foregoing description of my invention it will be apparent that the objects sought to be accomplished thereby, as hereinbefore stated, have been fully achieved, and that the invention embodies a novel, useful and meritorious device for the purpose set forth.

I claim:—

An anti-rattling device comprising in its entirety the following combination of elements: a supporting plate having an opening therethrough adapted to receive a roller carrier, a plurality of guide studs one end of each of which is rigidly secured to said plate said studs projecting therefrom at right angle thereto and being wholly supported thereby, an annular flange rigidly secured to the free end of each of said studs, a roller carrier operative in said opening and having a plurality of rollers mounted thereon; said carrier having end members which extend under said plate and which are perforated to engage said studs upon which said carrier is thereby movably mounted, and springs coiled around said studs between said flanges and said carrier to force the latter toward said plate.

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Witnesses:
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