Apr. 10, 1923. 1,451,359

J. E. CAMPBELL

SASH ANTIRATTLER

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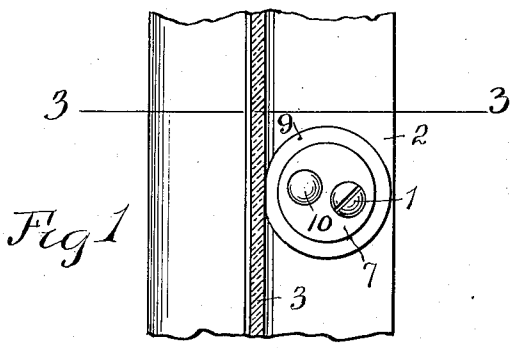


Fig 1

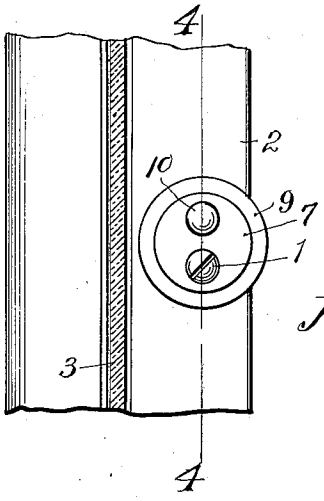


Fig 2

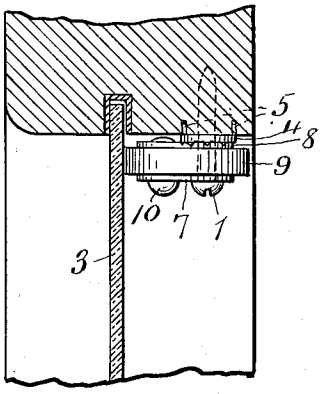


Fig 3

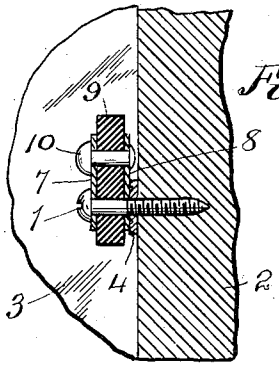


Fig 4

Fig 5

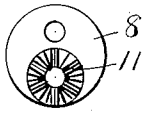


Fig 6

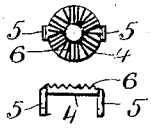


Fig 7

Witness:

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Inventor:
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UNITED STATES PATENT OFFICE.

JOSEPH E. CAMPBELL, OF ROSEDALE, KANSAS.

SASH ANTIRATTLER.

Application filed February 10, 1921. Serial No. 443,874.

To all whom it may concern:

Be it known that I, JOSEPH E. CAMPBELL, a citizen of the United States, residing at Rosedale, in the county of Wyandotte and State of Kansas, have invented a certain new and useful Improvement in Sash Anti-rattlers, of which the following is a specification.

My invention relates to improvements in sash anti-rattlers, and more particularly for sashes of closed automobiles.

In a closed automobile, the sashes slide in frames and these sashes are of glass with no surrounding sash-frames or borders. The frame facings are very narrow so that there is very little space for the placement of anti-rattling devices. Moreover in view of the fact that these anti-rattling devices must engage directly with the glass, the pressure applied cannot be great as otherwise the glass is liable to be broken under the strain imposed; moreover care must be taken that the glass is not scratched by the sash engaging element of the anti-rattling device.

One of the objects of this invention, therefore, is to provide an anti-rattler designed more particularly for closed automobiles and which will hold the sash effectively without danger of breakage or disfiguration.

Another object is to provide a device of the kind described which is simple, cheap to make, easily applied, durable, not liable to get out of order, which is attractive in appearance and will not mar the frame to which it is attached, and which is efficient in operation.

Further objects will appear from the detail description taken in connection with the accompanying drawing, in which:

Fig. 1 is a side elevation of my improved anti-rattler shown mounted in the anti-rattling position on a window frame.

Fig. 2 is a view similar to Fig. 1, showing the anti-rattler in the release position.

Fig. 3 is a cross section on the line 3—3 of Fig. 1.

Fig. 4 is a vertical sectional view on the line 4—4 of Fig. 2.

Fig. 5 is a side elevation of the inner clamping plate.

Fig. 6 is a side elevation of the washer, and Fig. 7 an edge view of the washer.

Similar reference characters designate similar parts in the different views.

Referring to the accompanying drawing, 1 designates a supporting member or bearing shank, preferably a wood screw, which is adapted to be screwed into a window frame 2, adjacent to a vertically slidable sash or glass plate 3, mounted in the window frame 2.

Mounted on the screw 1 is a washer or base 4 having one or more inwardly extending projections 5 adapted to enter the frame 2, to hold the washer from turning on the screw. The outer side of the washer 4 has in this embodiment a roughened surface 6, Figs. 6 and 7.

Rotatably mounted on the screw 1 is an outer plate or facing 7 and an inner plate or facing 8, between which is mounted a resilient member preferably a soft rubber disk 9, the facings terminating within the periphery of the disc, so that the latter extends beyond the facings. This disc and its facings are eccentrically and rotatably mounted on the screw 1 and which is adapted to be compressed between the plates 7 and 8, when the screw 1 is screwed to a pre-determined position in the window frame. Means such as a pin 10 which extends through the plates 7 and 8 and disk 9, is provided to hold the disk from turning relatively to the plates 7 and 8.

The disk 9 is adapted to be turned on the screw 1 from the release position shown in Fig. 2, to the position shown in Fig. 1, in which latter position the disk 9 will be adapted to engage and be compressed by the glass plate 3, so as to hold the latter from rattling in the frame.

The inner side of the plate 8 may be provided with a roughened surface 11, which engages the surface 6 of the washer 4 so as to hold the plate 8 and with it the disk 9 and plate 7 from accidental turning on the screw 1 when the disk has been adjusted to any position. The resiliency of the disk 9 serves to hold the plate 8 in releasable engagement with the washer 4.

In the operation of my invention, the parts having been assembled on the window frame in the manner described, the sash plate 3 may be held from rattling and also from accidental vertical movement, by swinging the disk 9 to the anti-rattling position shown in Fig. 1, in which position the disk 9 will be compressed against the plate 3, thereby preventing the sash from rattling. The re-

silient disk 9 will yield sufficiently, however, when in the anti-rattling position, to permit the sash being manually raised or lowered without having first to turn the disk from the locking position and without marring or defacing the sash.

It will, therefore, be seen that the invention accomplishes its objects. The device is easily put into place, so as to occupy a small space on the narrow frame facing of the automobile and when in position, it presents a neat appearance. The sash engaging element or disc being of rubber will not unduly strain the glass nor even mar the same. This rubber disc in its position between its facings acts as a cushion or spring, so that when the faced disc is rotated against the glass sash, the rubber is compressed to cause even wedging engagement therewith. This yield is permitted on account of the fact that the disc has a rubber bearing on the bearing shank, for the rubber can actually be displaced between the disc in a direction away from the sash and with respect to the bearing shank and with respect to even the rivet securing the facings and the disc together. Accordingly, the element can even be rotated still further from the position shown in Figure 1 until the rivet is in line with the bearing shank, which will cause maximum tensional engagement, as the effect is that of a toggle being straightened, so that a rotating pressure applied to the disc by even the finger and thumb will be sufficient to cause engagement of the rubber disc with the glass sash. This can be readily accomplished when the bearing shank or screw is loose; as soon, however, as the element has been properly positioned, the screw can be tightened and it then serves not only to clamp the faced disc to the frame, but also to clamp the disc between the facings. Accordingly the screw and the facings operate to brake the movement of the faced disc to the extent of the clamping action, which can be varied in accordance with the extent that the screw is tightened. Accordingly, while the disc can be readily rotated to secure a firm grip on the sash and to hold it firmly against rattling, it can also be braked or locked in engaging position so as not to be shifted by the vibration of the automobile and of the sash therein as is usually the case. This is especially true since not only is the disc braked against such movement, but in view of the fact that the axis about which the disc is rotatable is within the periphery of the disc, the latter can be placed so that the point of contact between the disc and the glass sash, where the pressure is the greatest, passes through the center of the disc as well as the axis of the bearing.

While, however, the element firmly holds the sash against rattling and while this element in turn is firmly held against shifting, nevertheless the structure is such that the sash can readily be raised or lowered; this can be accomplished not only on account of the fact that the pressure is a yielding one, but also on account of the fact that due to the nature of the construction a tangential movement of the sash with respect to the periphery of the disc is readily permitted, while radial movement is firmly but yieldingly opposed.

I do not limit my invention to the structure shown and described, as many modifications, within the scope of the appended claims, may be made without departing from the spirit of my invention.

What I claim is—

1. In a sash anti-rattler, a supporting member adapted to be mounted in a window frame, a washer mounted on said member and arranged to bear against said frame, two plates rotatably mounted on the supporting member, one having frictional engagement with the washer, and a resilient member eccentrically mounted on the supporting member and adapted to be clamped thereby between said plates, said resilient member being adapted to engage and to be compressed by a sash slidably mounted in said window frame, substantially as set forth.

2. In a sash anti-rattler, a screw adapted to be mounted in a window frame, two plates rotatable on the screw and movable one toward the other by the screw, and a resilient member eccentrically and rotatably mounted on the screw and adapted to be clamped between said plates, said resilient member being adapted to be engaged and compressed by a sash slidable in said window frame, substantially as set forth.

3. In a sash anti-rattler, a screw adapted to be mounted in a window frame, a washer mounted on the screw and provided with means for engaging the window frame to hold the washer from turning, two plates movable toward and from each other and rotatable on the screw, one of the plates having frictional engagement with the washer, a resilient disk eccentrically and rotatably mounted on the screw between and adapted to be compressed by said plates and adapted to engage and to be compressed by a sash slidable in the window frame, and means for holding said resilient member from turning relatively to said plates, substantially as set forth.

4. In a sash anti-rattler, supporting means adapted to be fastened to a window frame, two clamping plates rotatable thereon, one being movable toward and from the other, the other being adapted to exert pressure against the window frame, a resilient member eccentrically and rotatably mounted between said plates on said supporting means, said supporting means being arranged to force the movable clamping plate

toward the other clamping plate so as to compress said resilient member between said clamping plates, said resilient member serving to yieldingly press said other clamping plate toward said window frame, and means for holding the resilient member from relative turning between said clamping plates, substantially as set forth.

5. An anti-rattler for a sash sliding in a frame, comprising, a resilient disc, and a bearing shank passing eccentrically through the resilient body of said disc, adapted to support said disc for rotation eccentrically on said bearing and under tension on the frame, said disc being adapted upon such rotation for yielding wedging engagement with the sash.

6. An anti-rattler for a sash sliding in a frame, comprising, a resilient disc, and a clamping bearing passing eccentrically through the resilient body of said disc, adapted to support and rotatively brake said disc under tension on the frame and in yielding wedging engagement with the sash.

7. An anti-rattler for a sash sliding in a frame, comprising, a resilient disc, facings therefor terminating within the periphery thereof, and a bearing for rotatively supporting said disc and its facing eccentrically, adapted to hold said disc under tension on the frame and in yielding wedging engagement with the sash.

8. An anti-rattler for a sash sliding in a frame, comprising, a resilient disc, facings therefor terminating within the periphery thereof, and a bearing for rotatively and eccentrically supporting and clamping said disc between its facings, adapted to hold and rotatively clamp said disc under tension on the frame and in yielding wedging engagement with the sash.

In testimony whereof I have signed my name to this specification.

JOSEPH E. CAMPBELL.