Dec. 27, 1932. O. C. RITZ WOLLER. 1,892,374

ANTIRATTLER DEVICE FOR DOORS

Filed May 10, 1930

Fig. 1.

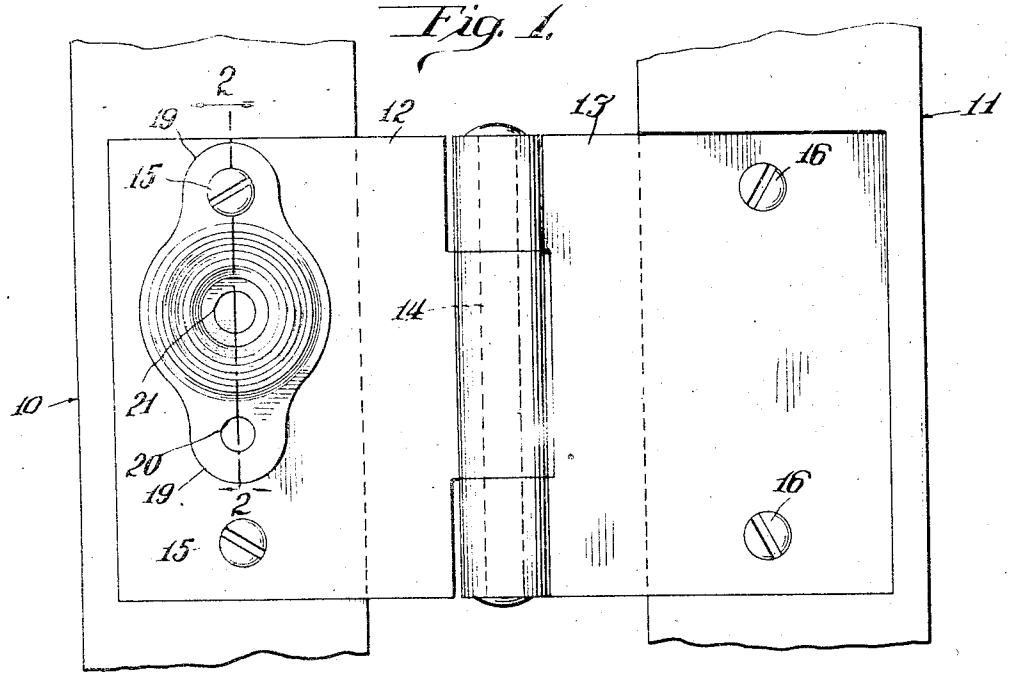


Fig. 2.

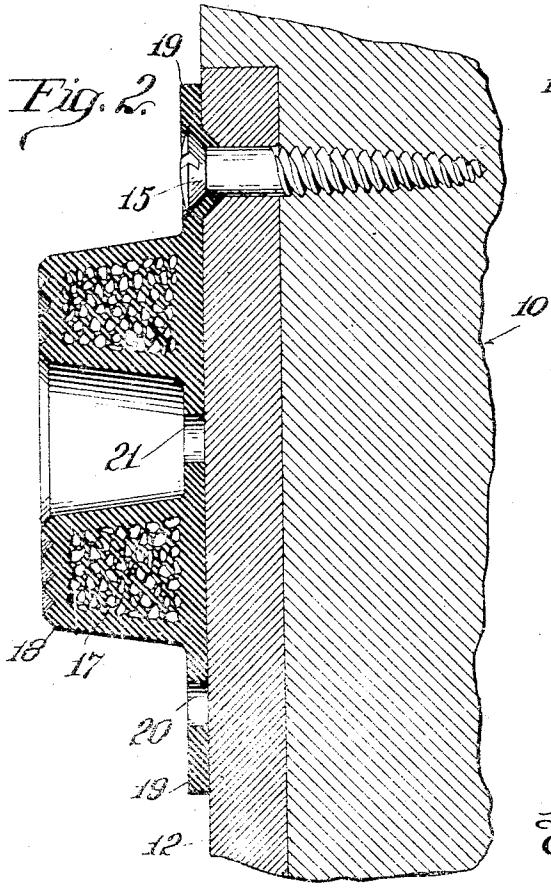
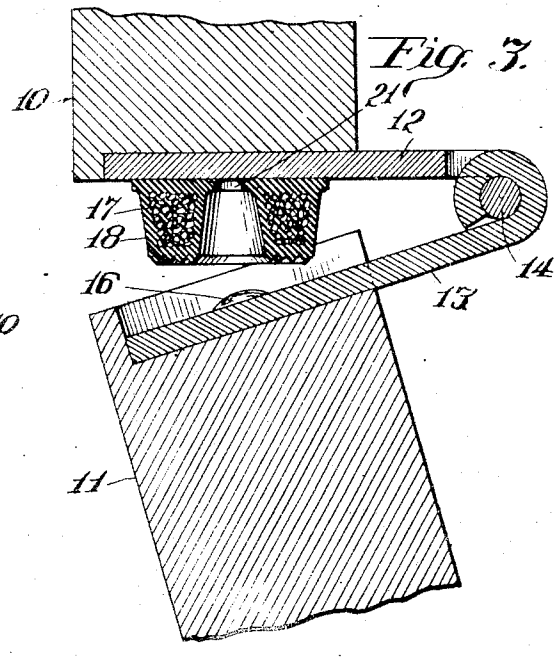


Fig. 3.



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UNITED STATES PATENT OFFICE

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ANTIRATTLER DEVICE FOR DOORS

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My invention relates to anti-rattler devices for doors and particularly to devices of this type arranged for use in connection with the doors of automobiles. It is one of the objects of my invention to provide a device of this type which may be quickly and easily applied to doors not originally equipped with such devices, the arrangement being such that anyone can readily make the installation without the necessity for any drilling or other cutting operations and by the use of only the simplest and most common tools.

To this end, it is one of the objects of my invention to provide a device of this type in the form of a pad which may be applied to the face of one of the hinge plates, preferably through the medium of one of the screws by which such hinge plate is secured in position. It is another object of my invention to provide an improved form of pad by which a pneumatic action is attained and assured for providing the desired cushioning and sound deadening effect.

It is another object of my invention to improve devices of this type in sundry details hereinafter pointed out. The preferred means by which I have accomplished my several objects are illustrated in the drawing and are hereinafter specifically described. That which I believe to be new and desire to cover by Letters Patent is set forth in the claims.

In the drawing,—

Fig. 1 is a face view of my improved device in position upon the face of a hinge plate;

Fig. 2 is an enlarged sectional view, being taken substantially at line 2—2 of Fig. 1; and

Fig. 3 is a horizontal sectional view through the parts shown in Fig. 1 but with the door turned to changed position.

Referring now to the several figures of the drawing, in which corresponding parts are indicated by the same reference characters, 10 indicates a door post or the door post portion of a wall such as that comprising one side of the body of an automobile, such post having a door 11 mounted thereon through the medium of a hinge comprising plates 12 and 13 of any approved form pivotally connected together through the medium of a hinge pin 14. In the construction shown, the hinge plate 12 is connected in position upon the post 10 by means of wood screws 15, while the hinge plate 13 is connected upon the door 11 by the use of wood screws 16.

As is best shown in Fig. 2 of the drawing, my improved anti-rattler device comprises a core member 17 in the form of a ring formed of cellular rubber, the form of cellularity being such that the air is incapable of escaping therefrom. The ring 17 of cellular rubber is encased within a covering member 18 formed of ordinary compact rubber, such covering member being preferably molded directly about the ring 17 so as to completely enclose such ring. As is clearly shown in said Fig. 2, the covering member 18 is formed so as to comprise tabs 19 at opposite ends extending beyond the ring 17, each of the tabs 19 being provided with an opening 20 therethrough for the insertion of a screw or other means for securing the device in position upon the face of the hinge plate 12. In the construction illustrated, the upper tab 19 of the device is secured in position by means of one of the screws 15 by which the hinge plate 12 is normally held in position upon the post 10.

In the construction shown, an opening 21 is also provided through the center of the device through the hard rubber portion thereof projecting inwardly beyond the body of the ring 17, whereby the device as a whole may be secured in position by the use of such opening 21 in lieu of one of the openings 20 if desired. By this arrangement comprising the three openings 20 and 21, I am enabled readily to attach the device in position upon any ordinary type of hinge arrangement.

With my improved device in position upon the face of one of the hinge plates of a door as illustrated in Fig. 3 of the drawing, when the door is closed, the cooperating hinge plate is brought into engagement with the outer face of the device so as to compress the device as a whole between the two plates of the hinge so as to obtain a very considerable pressure by pneumatic action outwardly against

the door away from the hinge plate 12. As a result of such pressure, the door 11 is kept from rattling. By reason of my improved construction in which the pneumatic action depends upon air entrapped within a cellular core portion of the device, the action of the device is rendered positive, and the strength and life of the device are very greatly increased.

While I prefer to employ the form of construction as shown in my drawing and as above described, it will be understood that I do not limit my invention to the form shown except so far as the claims may be so limited by the prior art, it being understood that changes might well be made in the form of the device without departing from the spirit of my invention.

I claim:—

1. A device of the class described comprising, in combination, a member of cellular rubber, a sheet of relatively compact rubber on the rear face of said member and projecting at least one point beyond the adjacent portions of the member serving as a base for attaching said device in operative position, and cover means of relatively compact rubber formed integrally with said sheet and serving with said sheet to encase said member completely so as to prevent the escape of air therefrom, whereby the device offers strong and constant resistance to compression when squeezed between cooperating pressure-applying parts.

2. A device of the class described comprising, in combination, a ring of cellular rubber, a sheet of relatively compact rubber on the rear face of said ring and serving as a base for attaching said device in operative position, and cover means of relatively compact rubber formed integrally with said sheet and serving with said sheet to encase said ring completely so as to prevent the escape of air therefrom, whereby the device offers strong and constant resistance to compression when squeezed between cooperating pressure-applying parts.

3. A device of the type described, comprising in combination a ring of cellular rubber tapering toward one face on its periphery and flaring toward the same face on the inside surface, a sheet of relatively compact rubber on the broader face of said ring and projecting beyond the adjacent portions of the ring for providing a base for attaching the device in operative position, and cover means of relatively compact rubber formed integrally with said sheet and serving with the sheet to enclose the ring for preventing the escape of air therefrom and for reenforcing the ring laterally while at the same time permitting free compression of the ring rearwardly.

OLIVER C. RITZ WOLLER.