Sept. 19, 1933. J. S. REID 1,927,651

CHANNEL SHEATH

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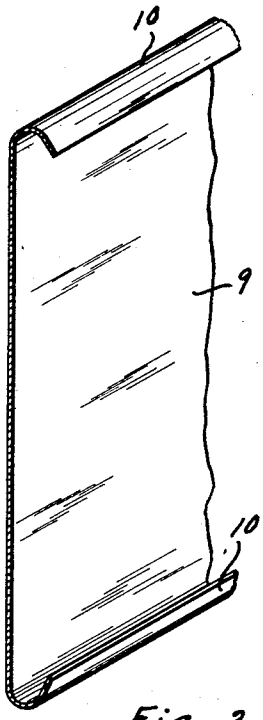


Fig. 2

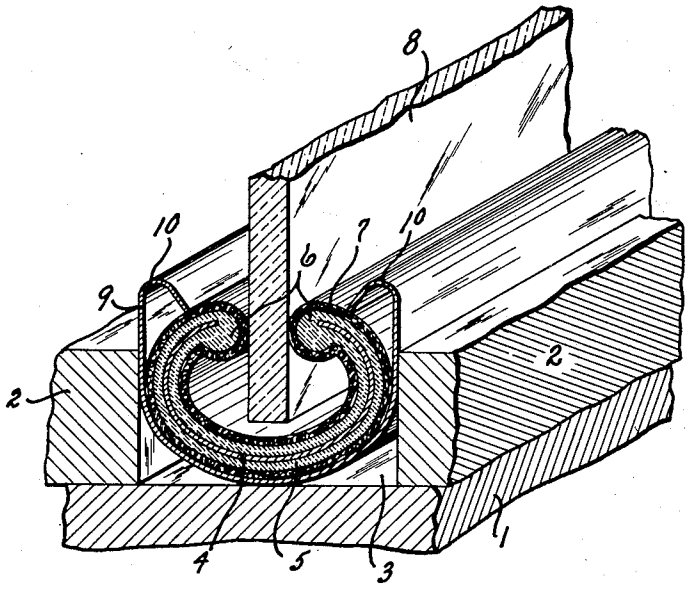


Fig. 1

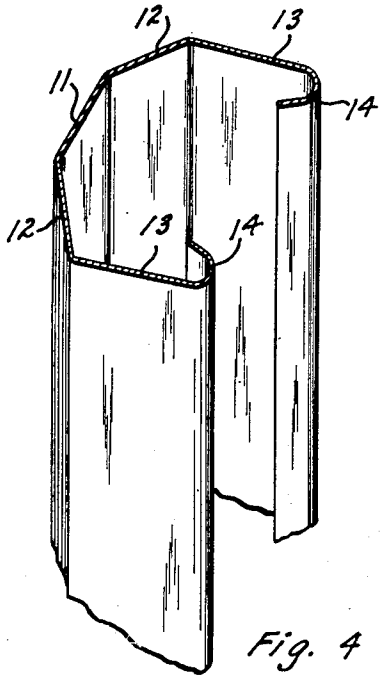


Fig. 4

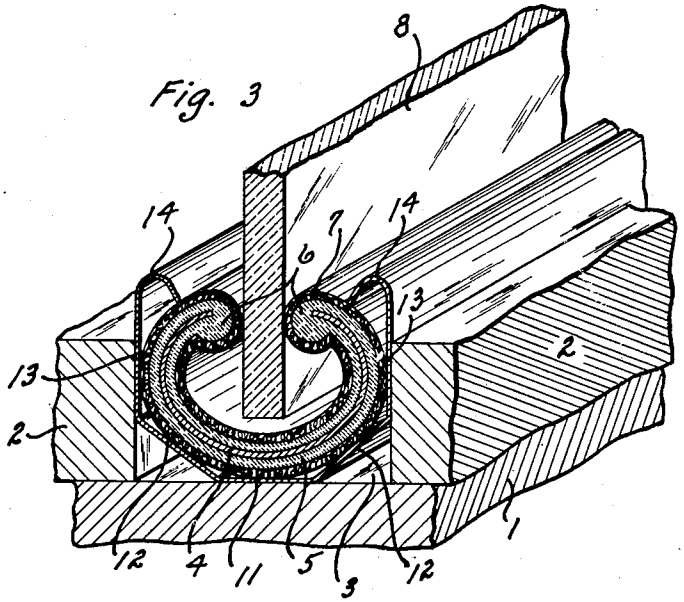


Fig. 3

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CHANNEL SHEATH

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2 Claims. (Cl. 296—44.5)

My invention relates to a guideway or channel structure for the edges of a glass pane and is particularly adapted for use in the door or window frames of vehicles, although it is not limited thereto. More particularly, my invention relates to the combination of a channel member of the above type and a sheath structure for such member.

One object of my invention is to provide a guideway or channel for the opposing side edges of a vertically movable pane of glass which provides a means for gripping the side surfaces of the glass to prevent lateral movement thereof under normal conditions, but will permit ready vertical movement of the pane of glass, together with a sheath structure adapted to cover and protect the entire outer surface of the channel or guideway, the sheath structure being also adapted to conceal the free edges of the channel.

Another object of my invention is to provide a sheath structure for covering a channel of the above type which serves not only as a protecting means for the outer surface of the channel but, at the same time, serves as a means for locking the channel member in the groove in which it is disposed when in operative position.

Still another object of my invention is to provide a sheath structure that not only serves as a protecting means for the channel member and as a means for concealing the free edges of the channel member, but also serves as a means for strengthening the member.

Various other objects of my invention will appear in the following detailed description and one embodiment thereof may be seen in the accompanying drawing wherein similar characters of reference designate corresponding parts, and wherein;

Fig. 1 is a perspective view showing a guideway or channel member and a sheath constructed in accordance with my invention, the combination being disposed within a groove that forms a part of a door or window frame and containing a pane of glass.

Fig. 2 is a perspective view of the sheath structure shown in Fig. 1.

Fig. 3 is a view similar to Fig. 1, but showing a modified form of sheath structure.

Fig. 4 is a perspective view of the sheath structure shown in Fig. 3.

In the drawing, I have shown a section 1 of a door or window frame provided with spaced members or rabbets 2 that, together with the frame 1, form the usual groove 3 for the reception of a frame surrounding a pane of glass or for the reception of guideways or channel members for such glass. As shown in Figs. 1 and 3, a guideway or channel member consisting of a metallic core 4 that is substantially C-shaped in cross section and made up of a length of metallic strip bent into the desired form with its free ends adjacent each other, a covering 5 of suitable wear resisting and weather protecting material, such as rubber, that is of a greater thickness over the free ends of the metallic core to form beads 6, and another covering 7 of a fabric material, such as felt, is disposed within the groove 3.

Such guideways or channel members when used alone are objectionable in that the fabric material collects dust and dirt and becomes more or less permanently dingy and dirty in appearance. This is particularly true of the free ends of the channel member that are visible to an ordinary observer. Therefore, in accordance with my invention, to protect the fabric on the free ends of the channel member side walls as well as to protect the fabric over the entire outer surface of the channel member to provide means for locking the channel member in the groove 3 and to give the channel member additional strength, I provide a suitable sheath 9 adapted to surround the channel member and protect the same without interfering with the usual operation of the channel member as a guideway for the glass pane 8.

As shown in Fig. 2, the sheath member 9 preferably consists of a flat sheet of relatively thin and resilient metallic material having its opposing ends or edges bent as at 10. In the use of this sheath structure, the sheath 9 is placed over the groove 3 and the channel member or guideway is placed on the flat portion thereof intermediate the bent end portions 10. Then the edge of a pane of glass 8 is placed thereupon and the sheath structure 9 and the channel member or guideway are forced downwardly into the groove 3 whereby the sheath structure is bent to surround the channel member with the bent end portions 10 engaging the free ends of the channel member and forming beads as shown in Figs. 1 and 3, and the free ends of the channel member resiliently engaging opposite sides of the pane.

As hereinbefore stated, the metallic core 4 consists of a length of metallic strip bent until it is substantially C-shaped in cross section with its free edges adjacent each other. With this construction, the guideway or channel member and the sheath structure 9 being resilient, upon

being inserted into the groove 3 as hereinbefore described, will maintain themselves within the groove without additional fastening means. Further, a pane of glass having its one side edge inserted into the guideway or channel member shown in Figs. 1 and 3 will be gripped in the free edges of the channel member and maintained in position in such manner as to prevent lateral movement of the pane but to permit ready vertical movement thereof.

Referring to Figs. 3 and 4 of the drawing, I have shown a modified form of sheath structure wherein the body portion of the sheath itself is of an angular form with a flat portion 11 adapted to rest on the surface of the frame 1, flat portions 12 adapted to bear against the side surfaces of the channel member or guideway along a portion of the length of such surface, flat portions 13 also adapted to bear against the side surfaces of the channel member and bead portions 14, similar to the bead portions 10 for engaging the opposing free ends of the channel member. With this type of sheath structure, it is apparent that the sheath structure would have to be partially shaped before being inserted in the groove 3.

With the construction shown in Figs. 1 and 3, I have provided a sheath structure embodying numerous advantageous features. For instance, I have provided a sheath structure in which the channel member or guideway fits and which is adapted to cover and protect the entire outer surface of the channel member or guideway. I have also provided a sheath structure of such nature that the opposing free ends of the channel or guideway which are adapted to grip the opposing side edges of the pane of glass 8 when a channel member and pane are inserted in the groove 3 of such nature that the opposing free ends of the channel member will be concealed from the view of an ordinary observer, the beads or bent portions of the sheath structures serving this purpose.

In addition to the advantageous features hereinbefore mentioned, I have provided a sheath structure which inherently increases the strength of the channel member or guideway inasmuch as the sheath structure entirely surrounds and grips the channel member when the channel member and sheath structure are inserted in a groove 3. Further, the resiliency of the sheath structure which causes the opposing edges thereof to tend to spring outwardly to their original position when inserted in a groove surface to lock both the sheath structure and the channel member firmly within the groove 3. Further advantageous features will be readily apparent.

What I claim is:

1. In combination with a window frame having a generally channel-shaped groove, of a window-receiving channel structure adapted to be arranged in said groove and having a base and a pair of yielding side walls, the free outer end portions of said side walls being turned laterally toward each other for yieldingly receiving a window pane therebetween, and a separate, resilient sheet metal sheath for said channel structure, said sheath having a base and a pair of side walls the base of said sheath being adapted to be interposed between the bottom of said groove, and the base of said channel structure and the side walls of said sheath being adapted to be interposed between the sides of said groove and the side walls of said channel structure, the free outer end portions of said sheath side walls projecting outwardly beyond the side walls of said groove and the side walls of said channel structure and terminating in inwardly converging flanges which yieldingly engage the laterally turned free outer end portions of said channel structure side walls in spaced relation to the glass-receiving ends thereof.

2. In combination with a window frame having a generally channel-shaped groove, of a window-receiving channel structure adapted to be arranged in said groove and having a base and a pair of yielding side walls, the free outer end portions of said side walls being turned laterally toward each other for yieldingly receiving a window pane therebetween, and a separate, resilient sheet metal sheath for said channel structure, said sheath having a base and a pair of side walls, the base of said sheath being adapted to be interposed between the bottom of said groove and the base of said channel structure and the side walls of said sheath being adapted to be interposed between the sides of said groove and the side walls of said channel structure, the free outer end portions of said sheath side walls projecting outwardly beyond the side walls of said groove and the side walls of said channel structure and terminating in inwardly converging flanges which yieldingly engage the laterally turned free outer end portions of said channel structure side walls in spaced relation to the glass-receiving ends thereof, said sheath side walls, which engage the side walls of said groove, being disposed in generally parallel relation, whereby there is no liability of said sheath turning in said groove.

JAMES S. REID.