

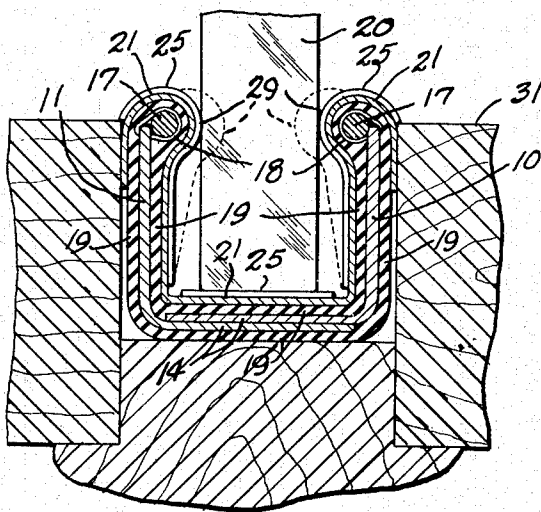
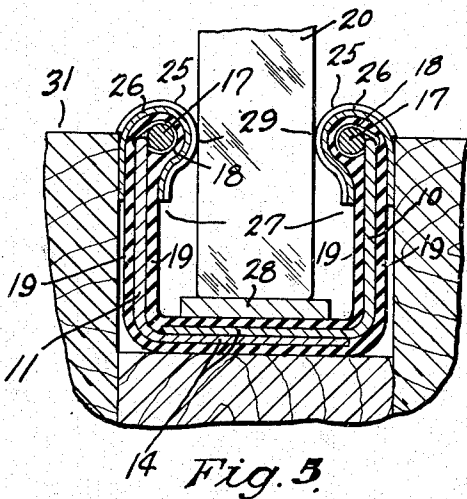
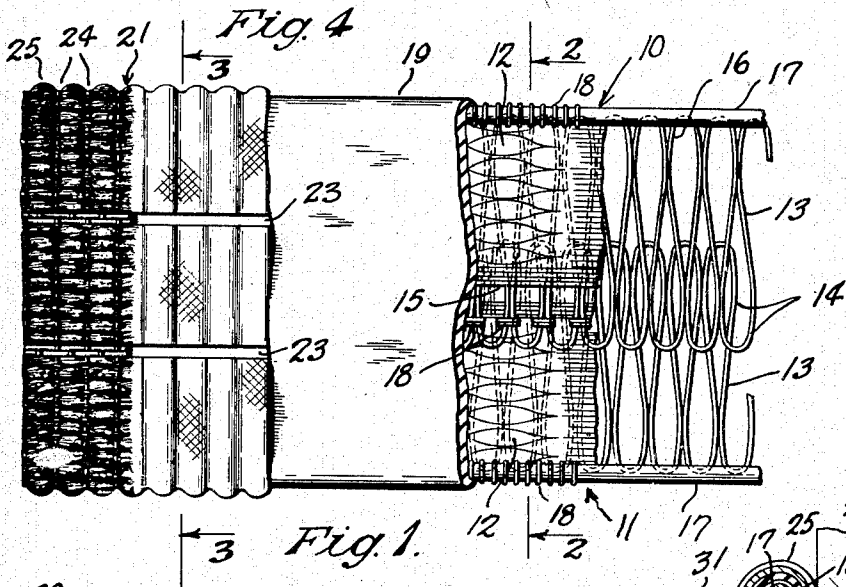
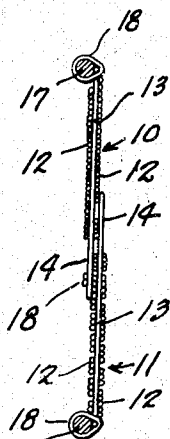
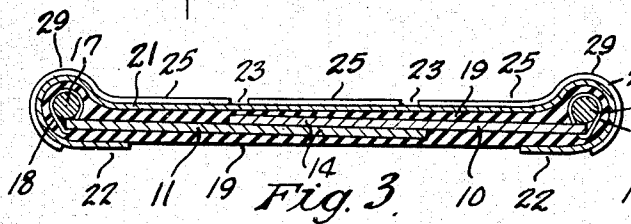
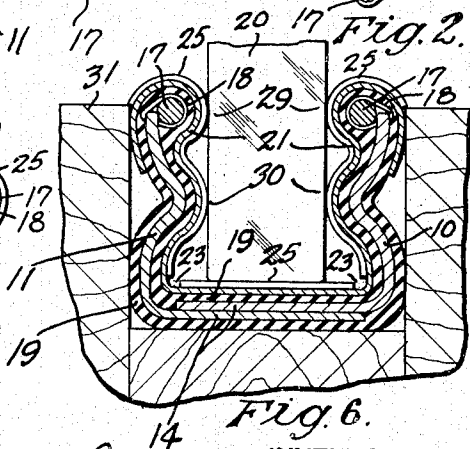
June 18, 1940.

L. SPRARAGEN

2,204,630

WINDOW GUIDE CHANNEL

Filed Nov. 17, 1938



INVENTOR
Louis Spraragen
BY
Wooster & Davis
ATTORNEYS

UNITED STATES PATENT OFFICE

2,204,630

WINDOW GUIDE CHANNEL

Louis Spraragen, Bridgeport, Conn., assignor to
Bridgeport Fabrics, Incorporated, Bridgeport,
Conn., a corporation of Connecticut

Application November 17, 1938, Serial No. 240,951

4 Claims. (Cl. 296—44.5)

This invention relates to window guides, and more particularly a channel guide such as is used for example as a support and guide for the windows of automobiles and other vehicles.

5 An object of the invention is to provide an improved construction for such articles whereby it is of light weight, may be manufactured at low cost, will properly guide and maintain the window indefinitely without becoming distorted or bent out of shape, and will resiliently grip the opposite sides of the glass to prevent it rattling or becoming loose in use.

10 It is also an object to provide a construction which may be easily assembled and can be readily bent to follow curved edges of the windows and to conform to the outlines of the window frames.

15 With the foregoing and other objects in view I have devised a construction illustrated in the accompanying drawing forming a part of this specification. It is, however, to be understood that various changes and modifications may be employed within the scope of the invention.

In this drawing:

20 Fig. 1 is a plan view of my improved guide in a flat condition with parts broken away to more clearly show the construction;

Fig. 2 is a transverse section thereof substantially on line 2—2 of Fig. 1;

25 Fig. 3 is a transverse section on an enlarged scale taken substantially on line 3—3 of Fig. 1;

Fig. 4 is a transverse section showing the guide bent to channel shape and applied in a window frame for supporting and guiding the window;

30 Fig. 5 is a similar view showing a somewhat modified construction; and

Fig. 6 is a similar view showing a still further modification.

Referring first to Figs. 1, 2 and 3, the guide construction is built up in the flattened condition. It may be used as a window guide either in this flat condition or bent up to channel shape as shown in Figs. 4, 5 and 6. It comprises a pair of side or strengthening members 10 and 11 each of which is a woven member composed of fiber warp thread 12, such for example as cotton or other suitable fiber threads or yarns, and weft members 13 of resilient or spring wire interwoven with the warp threads 12.

These weft wires are preferably looped back and forth and are continuous as shown forming loops 14 at their inner longitudinal edges which preferably extend somewhat beyond the inner edges 15 of the fiber warps, although not neces-

sarily so. They also form loops 16 at their outer or free edges. They are preferably woven with two wires in a single pick of the warp threads, although this is not necessarily so, but it is preferred as it permits the use of a greater number of weft wires and gives greater stiffness which holds the shape better in the finished channel.

Along the outer edges of each of the stiffening members 10 and 11 is a stiffening wire 17. This wire is secured along the edge of the stiffening member by sewing it thereto by means of threads 18 which are looped about the wire and the loops 16 of the stiffening member. This wire could be secured to the stiffening member by other means but it is preferably secured by this sewing as it is less costly and is less difficult to perform than would be the looping of the wires 13 about the stiffening wires.

In assembling the guide a pair of these stiffening members 10 and 11 are secured together at their inner longitudinal edges, which is preferably done by overlapping these inner longitudinal edge portions as shown in Figs. 1 and 2 and then securing or bonding them together. This may be done in various ways such for example as stapling, cementing or stitching as indicated at 19. It will be seen that this overlapping of the two stiffening members is at the center of the guide when it is in the flat condition, and it thus forms the bottom of the guide when it is bent to the channel shape as shown in Figs. 4, 5 and 6. This connected overlapped arrangement forms a stiffer and more rigid base for the center of the guide or the base for the channel.

After the two stiffening members are assembled and secured or bonded together at their inner edge portions they are covered with a covering or coating of latex or rubber composition or other plastic material 19. This may be applied by dipping into this plastic composition or otherwise applying it to the connected stiffening members. This plastic of more or less fluid mixture is preferably latex with vulcanizing ingredients. This might be self vulcanizing in that it vulcanizes itself after a time without heating, or it might have an accelerator, or it might be vulcanized by heating. This plastic dip or mixture forms a flexible cover to cover and enclose the fibers of the stiffening members and bond them together to thus protect them from rust and the elements, and to make them weatherproof or weather resistant.

When the guide is bent to the channel shape the spring or resilient wires, preferably steel, tend

to press the sides in against and engage the side surfaces of the glass 20 more firmly, and they are preferably bent with the free edges normally closer together, as indicated by the dotted lines in Fig. 4, so that when the glass is inserted the sides are pressed outwardly placing the spring wires under tension so that the sides are firmly and yieldingly held against the sides of the glass, giving a firm grip which properly guides the glass and holds it against any danger of rattling or becoming loose.

After the woven stiffening members 10 and 11 are covered with the plastic, latex or rubber material 19 by dipping or otherwise, and this covering has been dried, it is preferably covered with a woven fabric outer covering 21. This may cover the entire strip or it may cover the front or inner side and extend around over the opposite reinforced edge portions and be secured to the back of the strip as shown at 22 in Fig. 3. If preferred one or more of the warp threads may be omitted at the points 23 about where the bend will occur to form a sort of hinge between the base and the sides to permit easier bending to shape and prevent deforming of the material at the bend, or if preferred separate strips may be used, these strips being either of the same or different materials. This woven fabric cover may be secured to the flexible rubber covering 19 by rubber cement or other suitable adhesive, or it could be sewed to the strip. This fabric may be woven with the weft threads 24 of a relatively wide distance apart so that the fiber warps between them will bulge outwardly to form ribs or cushions 25 to provide cushion guides at the sides of the glass, or pile threads may be woven to form this cushion.

In the modified form of Fig. 5 this woven cloth covering comprises relatively narrow strips 26 wrapped around the free stiffened edge portion only, and extending inwardly therefrom a short distance as indicated at 27. In this case it is preferred to provide at the bottom of the channel a longitudinal strip of felt or cloth 28 to give a cushion guide for the edge of the glass. This may be cemented or otherwise secured to the bottom of the channel. It will be seen that the stiffening wires 17 and the covering therefor provide longitudinally extending inwardly projecting side guides or pads 29 for the sides of the glass. The stiffening sides of the channel between this edge guide and the base of the channel may be bent inwardly as indicated at 30, Fig. 6 forming an additional longitudinal guide for the glass between the edge guides 29 and the base of the channel.

In Figs. 4, 5 and 6 the window frame in which the channel is mounted is shown conventionally

at 31. As suggested above this guide may be used in the flat condition as shown in Figs. 1, 2 and 3 as the side guides for the glass, as well as in the channel shape as in Figs. 4, 5 and 6.

This makes a guide construction which gives a yielding resilient pressure against the sides of the glass to prevent its rattling or working loose in use, and the interior, particularly the stiffening side members are effectively protected against rust, moisture and the weather by the continuous covering or coating 19 of the flexible rubber or latex composition.

Having thus set forth the nature of my invention, what I claim is:

1. A channel shaped window guide comprising a pair of longitudinally extending stiffening members each comprising fibre warps and resilient wire wefts forming loops at the inner edges of the stiffening members, said inner edge portions of said members being overlapped and secured together against lateral separation, and said members being covered with a flexible rubber composition.

2. A channel shaped window guide comprising a pair of longitudinally extending stiffening members each comprising fibre warps and resilient wire wefts forming loops at the inner edges of the stiffening members, stiffener wires extending longitudinally along the outer edges of said members and secured thereto, the inner edge portions of said members being overlapped and secured together against lateral separation, and a flexible covering of a rubber composition enclosing said members and bonded thereto.

3. A channel shaped window guide comprising a pair of longitudinally extending stiffening members each comprising fibre warps and resilient wire wefts forming loops at the inner edges of the stiffening members, means for securing the inner edge portions of said members together against lateral separation, stiffener wires secured along the outer edges of said members, a coating of flexible rubber composition on said members and bonded thereto, and a fabric covering extending over the outer edges and cemented to said coating.

4. A window guide comprising a pair of longitudinally extending stiffening members comprising fibre warps and resilient wire wefts, the inner edge portions of said members being overlapped and secured together against lateral separation, stiffener wires sewed to said members along the outer edges thereof, a vulcanized flexible rubber continuous coating covering said members, and a fabric covering enclosing the outer stiffened edge portions forming guide cushions.

LOUIS SPRARAGEN.