Jan. 31, 1933. C. P. SCHLEGEL 1,895,688

WINDOW CHANNEL

Filed May 6, 1932

Fig. 1

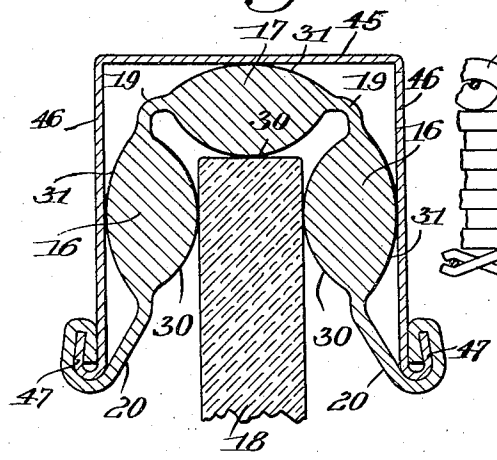


Fig. 3

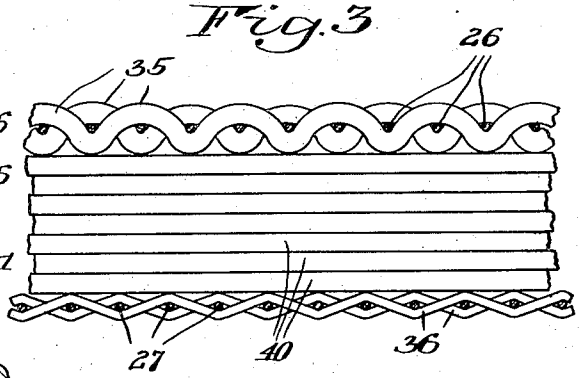


Fig. 4

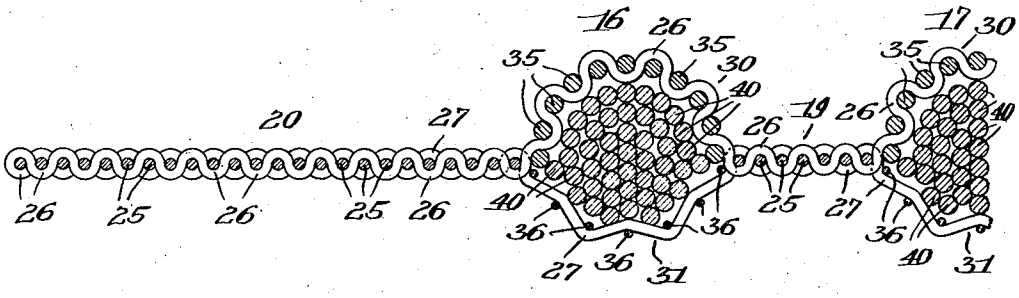


Fig. 2

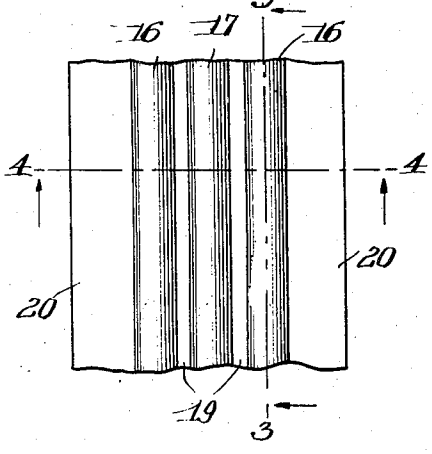
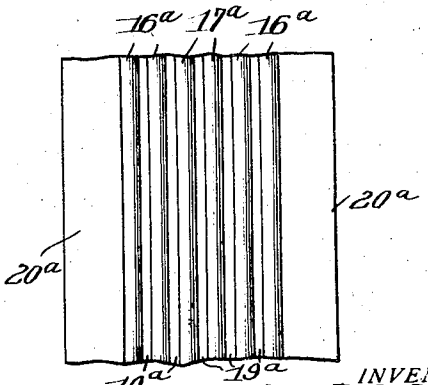


Fig. 5



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UNITED STATES PATENT OFFICE

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WINDOW CHANNEL

Application filed May 6, 1932. Serial No. 609,632.

This invention relates to window channels such as those used to hold and guide a sliding glass sash, and pertains more particularly to the channel lining which resiliently supports and cushions the sash in the channel. One object of the invention is the provision of a lining of the class described which is simple in construction, inexpensive to manufacture, and effective in use.

Another object is the provision of an economical channel of the above character constructed to provide cushioning pads arranged to engage and resiliently support a sliding glass sash, and adapted for use with materials of a relatively inexpensive nature.

A further object of the invention is the provision of a lining of this kind formed with tubular resilient cushioning portions having woven surfaces of a durable and friction reducing character for contacting with the glass sash, and provided with resilient fillers or cores.

A still further object is the provision of such a lining woven to form two or more tubular portions filled with a resilient material, with flexible parts intermediate said tubular portions to facilitate bending of the lining into channel shape, and with marginal portions for attachment to suitable stiffening and supporting means to hold the lining in shape and in position in the window runway.

To these and other ends the invention resides in certain improvements and combinations of parts, all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of the specification.

In the drawing:

Fig. 1 is a sectional view taken transversely of the window channel showing a channel lining constructed in accordance with one embodiment of the invention;

Fig. 2 is a face view of the lining in open or extended position before being placed in the channel, showing the position of the various cushioning pads;

Fig. 3 is an enlarged fragmentary sectional view taken through one of the cushioning pads substantially on line 3—3 of Fig. 2 showing the relation of various members comprising the pad;

Fig. 4 is an enlarged fragmentary sectional view taken transversely of the lining, illustrated in Figs. 1 and 2, substantially on the line 4—4 of Fig. 2, and

Fig. 5 is a view similar to Fig. 2 showing another modification of a channel lining.

The same reference numerals throughout the several views indicate the same parts.

Window runway channels with various types of linings are known, but some of these linings are so constructed as to be lacking in durability, while others require materials of a comparatively expensive character. It is the object of the present invention to provide a suitable lining for this purpose which is efficient in operation, durable in construction, and comparatively inexpensive to manufacture and install.

Referring now to the drawing, the lining, in the present embodiment, is in the form of a strip of textile material bent into channel shape, and woven to form cushioning pads 16 and 17, hereafter described, which are arranged to resiliently support and cushion a sliding glass sash 18. Flexible parts or breaks 19 are provided intermediate the pads to facilitate the bending of the strip into channel form for insertion in the window runway. The pads 16 are preferably terminated short of the free edges of the strip to provide thin flexible marginal portions 20 for attachment to suitable stiffening, and supporting means, hereafter described, to hold the lining in shape and in position in the runway.

Referring now to Fig. 4, there is shown an enlarged fragmentary sectional view of the strip from which the channel lining is formed. This strip is of a textile material

and comprises warp or longitudinal strands 25 and weft or cross strands 26 and 27 interlocked with the warp strands in any known or suitable manner. At predetermined portions, the strip is woven to provide the cushioning pads 16 and 17, which, in the present invention, are of a tubular construction formed in a manner to be presently described.

In the preferred embodiment of the invention, the tubular portions or pads 16 and 17 are formed by weaving the strip, at predetermined portions, to provide a tubular construction with spaced upper and lower plies 30 and 31 respectively, as shown in Fig. 4. The plies 30 of the tubular portions are arranged to extend inwardly to engage the glass sash 18, while the plies 31 extend outwardly to engage the lining supporting member, as shown in Fig. 1. In the detailed construction illustrated in Fig. 4, only two adjacent weft strands are shown, one forming the upper ply and the adjacent strand forming the lower ply. This is for the purpose of clearness only, as it is to be understood that a multiplicity of weft strands, such as 26 and 27, are employed to form a continuous tubular woven portion extending the full length of the strip, as indicated for example in Figs. 2 and 5. By means of this construction, the strip is woven to form tubular portions which, with the filler means hereafter described, provide cushioning pads of substantial thickness for supporting and cushioning a sliding glass sash.

In a channel lining of the class described, it is desirable to provide the tubular portions with durable and friction reducing sash engaging surfaces. To this end, the warp strands 35, which cooperate with the plies 30, are preferably of relatively heavy material densely arranged, as shown in Figs. 3 and 4, and cooperate with the weft strands 26 to provide a smooth, durable, closely woven surface on which the sash 18 may easily slide. The outer or channel engaging surface of the pads, on the other hand, receives little or no wear and may, therefore, be formed with a looser or more open surface construction. For this reason and to reduce the cost of such linings, the warp strands 36 which engage the weft strands 27 of the plies 31 are preferably of smaller diameter and less densely arranged than the warp strands 35, as clearly illustrated in Fig. 4. The strands 36 may also be of a less expensive character than the strands 35 so as to further reduce the cost of such a lining.

The present invention also provides resilient filling means for the tubular portions or pads 16 and 17. This filling means preferably comprises strands 40 of an inexpensive material such, for example, as cotton arranged between the plies 30 and 31, in the manner clearly illustrated in Figs. 3 and 4. These strands extend the full length of the strip and not only support the tubular portions, but also provide a resilient filler of an inexpensive character. By means of this construction, the cost of manufacturing channel lining is materially reduced.

It is apparent from the above description that by providing a filler of less expensive material the cost of such a channel lining is materially reduced. The fillers also cooperate with and reinforce the tubular portions to provide cushioning pads of substantial thickness which resiliently support the glass sash and hold it against vibration. While these cushioning pads are adapted for use with materials of an inexpensive nature, the sash engaging surfaces thereof are pleasing in appearance, durable, and of a friction reducing quality.

Fig. 5 shows a modified channel lining, in the form of a strip of textile material, provided with six spaced cushioning pads 16*a* and 17*a* which are similar to, but are narrower than, the pads 16 and 17 above described. Narrow breaks 19*a* are provided between the pads, and thin marginal portions 20*a* extend outwardly beyond the pads 16*a* and are arranged to be held by suitable stiffening and supporting means, hereafter described. The pads 16*a* and 17*a* are disposed on the sides and bottom, respectively, of the window runway, and are constructed in the same manner as the pads 16 and 17 above described. While Figs. 2 and 5 show a channel lining provided with three and six tubular portions respectively, this is by way of illustration only, and it is to be understood that any number of such portions may be used.

The lining above described may be reinforced by any suitable stiffening and supporting means such, for example, as the channel member illustrated in Fig. 1. This channel member is preferably of rigid sheet material formed to provide a bottom 45 and side walls 46. The free edges of the side walls are reversely bent to form flanges 47 arranged to engage and hold the marginal portions 20 or 20*a* to retain the lining in position in the channel member. The rigid channel member with its cushioning lining is disposed and held in place in a suitable groove formed in the window frame of the vehicle.

It is apparent from the above description that the present invention provides an efficient channel lining which is of a durable nature and adapted for use with inexpensive materials. In addition, the sash engaging portions of the strip are of a wear resisting and friction reducing quality, and are supported by a filling of permanently resilient cushioning material. Such a lining affords the advantageous features of the more expensive linings, and at the same time is adapted for use with materials of an inexpensive nature so as to provide a lining ca-

pable of being manufactured at a minimum of cost.

While certain embodiments of the invention have been disclosed, it is to be understood that the inventive idea may be carried out in a number of ways. This application is therefore not to be limited to the precise details described, but is intended to cover all variations and modifications thereof falling within the spirit of the invention or the scope of the appended claims.

I claim:

1. A window runway comprising a textile strip arranged in channel shape and woven to provide tubular portions, and filler means in said portions, for supporting and cushioning a sliding glass sash.

2. A window runway comprising a textile strip arranged in channel shape and woven to provide tubular portions and thin marginal portions, filler means in said tubular portions, for supporting and cushioning a sliding glass sash, and stiffening and supporting means for said marginal portions.

3. A window runway comprising a textile strip arranged in channel shape and woven to provide three or more tubular portions arranged to engage the faces and a side edge of a sliding glass sash, filling means in said portions, for supporting and cushioning said sash, and stiffening and supporting means for said strip.

4. A window runway comprising a textile strip arranged in channel shape and woven to provide spaced tubular portions disposed on the walls of said runway to resiliently support and cushion a sliding glass sash, flexible parts intermediate said portions to facilitate the bending of said strip into channel shape, flexible marginal portions on said strip, and stiffening and supporting means for said marginal portions.

5. A window runway comprising a textile strip arranged in channel shape and woven to provide spaced tubular portions disposed on the walls of said runway, filler means within and supporting said tubular members to provide cushioning pads of substantial thickness arranged to support and cushion a sliding glass sash, flexible parts intermediate said portions to facilitate the bending of said strip into channel shape, flexible marginal portions on said strip, and stiffening and supporting means for said marginal portions.

6. A window runway comprising a strip of textile material arranged on the inner faces of said runway, said strip being woven at predetermined portions with spaced upper and lower plies, and filler means in the form of a plurality of textile strands disposed between said plies to support and cushion a sliding glass sash.

7. A window runway comprising a strip of textile material arranged on the inner faces of said runway, said strip being woven at predetermined portions with spaced upper and lower plies, filler means in the form of a plurality of textile strands disposed between said plies to support and cushion a sliding glass sash, flexible parts intermediate said portions to facilitate the bending of said strip for insertion in said runway, flexible marginal portions on said strip, and stiffening and supporting means engaging said marginal portions to retain the strip in position in the runway.

CHARLES P. SCHLEGEL.