Sept. 17, 1946. P. MESNEL 2,407,671

GUIDEWAY FOR SLIDING WINDOWS

Filed Aug. 2, 1939

Fig. 1.

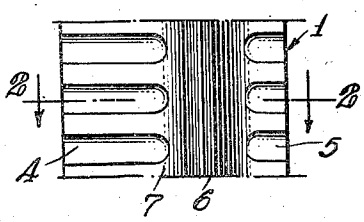


Fig. 2.

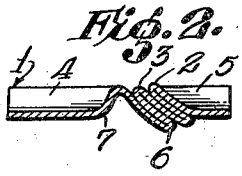


Fig. 3

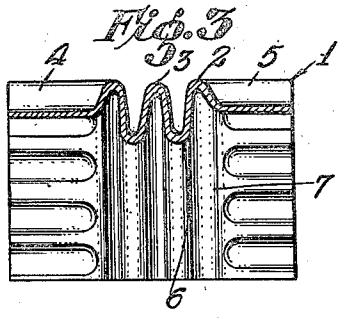


Fig. 4.

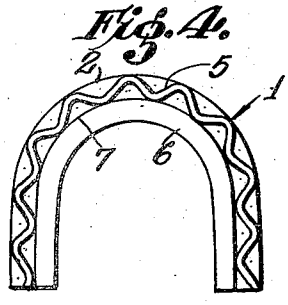
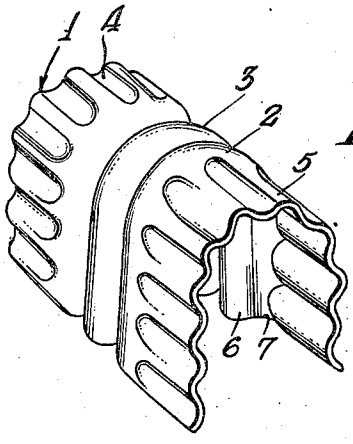


Fig. 5.



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Patented Sept. 17, 1946 2,407,671

UNITED STATES PATENT OFFICE

2,407,671

GUIDEWAY FOR SLIDING WINDOWS

Pierre Mesnel, Colombes, France; vested in the Alien Property Custodian

Application August 2, 1939, Serial No. 287,893
In France August 5, 1938

3 Claims. (Cl. 296—44.5)

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This invention relates to channels and guides for both sliding and stationary for windows on automobiles and the like, and to the manufacture thereof.

Hitherto guides for sliding windows, in particular for automobiles, have been delivered by the manufacturer to the body-maker in the form of a more or less long, generally straight strip. The operative entrusted with the mounting, shapes said strip according to the contour of the window opening to be fitted, after having cut it to proper length, and then fixes it to the frame of the window opening. This mounting work requires a certain amount of skill on the part of the operative, particularly when he is required to fit window openings having a curved contour, such as those of the modern streamlined automobiles.

In practice, it frequently occurs that instead of making the guide accurately follow the rounded contour of the opening, the operative bends it rather too abruptly, so that angular bends are formed that are subsequently detrimental both to the correct sliding of the window and to the appearance of the car body.

The present invention overcomes these drawbacks, and involves manufacturing, in the factory, in their final shape, the channels which are intended to be used to guide and support windows, especially for automobiles.

In the ensuing description, which merely discloses a non-limitative example of the invention, reference is had to the accompanying diagrammatical drawing, in which,

Fig. 1 is a plan view of the metal core of a contour ribbon made according to the invention;

Fig. 2 is a longitudinal section of the same along 2—2 of Fig. 1;

Fig. 3 is a similar section in expanded condition;

Fig. 4 is an end elevation of such a core forming a guide channel;

Fig. 5 is a perspective view of a portion of such a strip.

Throughout the views, the same numerals indicate the same or like parts.

In practicing the invention, a metal core, ribbon or strip of suitable width, generally indicated at 1 is initially bent, rolled or folded longitudinally to U-section by known mechanical means (not shown). A group of one or more parallel transverse intermediate folds 2, 3, 6, 7, etc., are formed as shown in Figs. 1 and 2, and then the two portions on opposite sides of said transverse folds are embossed with longitudinal corrugations or flutings 4, 5, etc., the intermediate folds being at first compacted toward one end of the strip as best seen in Fig. 2. Thereafter, the strip is elongated longitudinally to open and erect the transverse intermediate folds so that they will assume the shapes and relative arrangement shown in section in Fig. 3. The strip or ribbon can then be bent to the desired cross section and cut to form proper length channels to fit any given window opening, or the bending into a U-shape or other appropriate cross section may be done before the operation of expanding the intermediate folds is performed.

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If desired, the transverse folds may first be made open and expanded as shown in Figs. 3–5 and then compacted preparatory to bending the strip into the desired U-shape or other cross section to constitute a window channel or the like. The sequence of the operations does not constitute essence of the invention.

The invention is not strictly limited to guides for sliding windows proper, but also extends to a related article known as contour ribbon or water-tight joint, which is used for holding and guiding the sliding windows of automobiles. Two such flat contour ribbons, arranged parallel, perform the same function as a guideway of channel-shaped cross-section. In addition to guiding windows, such shaped ribbons or strips may be used for guiding sliding panels made of sheet metal, wood or the like for roof openings in automobile bodies.

A contour ribbon provided with a metal core according to the invention is remarkable, in particular, for the ease with which it can be constrained, even by hand, to follow the most varied contours, the radii of curvature of which may be very small. The corrugated end bands impart to the ribbon considerable flexibility and, in combination, the intermediate folds or beadings prevent any unintended bending or twisting of the ribbon. The contiguous positions of the beadings facilitate mounting of the ribbon accurately and quickly since the shaping of the ribbon does not substantially modify the relative positions of the beadings, which may be considered as secured to each other, and as determining the general shape of the ribbon as a whole.

The presence of the transverse folds imparts to the ribbon the property of retaining its shape, so that, for example, when it has been shaped, it suffices to fix it at a few points in order to secure it conformably to the surface to which the channel only is fitted.

It has been found that guide channels manufactured according to the invention have a certain degree of flexibility at the points at which they are bent or curved, while their straight portions retain their original rigidity. The channels can, therefore, be readily fitted by hand to window openings whose contour is not exactly that for which channels were intended and which have straight portions disposed at different angles with respect to each other.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, the same is capable of variation and modification, without departing from the spirit of the invention. I therefore do not wish to be limited to the precise details of construction set forth or of the operations described, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having now fully described my invention, I claim:

1. A contour guideway for sliding windows and the like, comprising an elongated channel shaped sheet metal strip formed at intervals along its length with sets of contiguous transversely extending folds and on at least one side of each set of folds with a plurality of longitudinally extending corrugations, the ends of said corrugations adjacent to said sets of folds terminating contiguous to the related outer fold.

2. A contour guideway for sliding windows and the like, according to claim 1, wherein said longitudinal corrugations and transverse folds are parallel and contiguous to each other.

3. A contour guideway, according to claim 1, wherein said transverse folds and said longitudinal corrugations are related to each other at right angles.

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