Oct. 27, 1936. L. F. HOFFMAN 2,058,793

WINDOW CHANNEL

Filed July 16, 1935

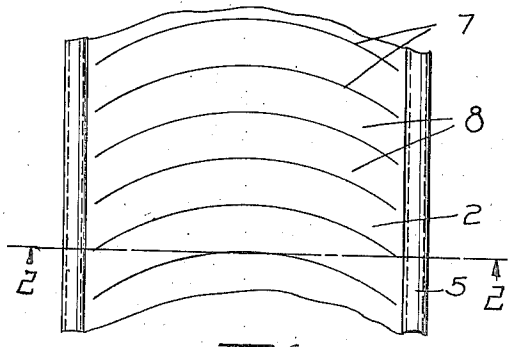


Fig-1

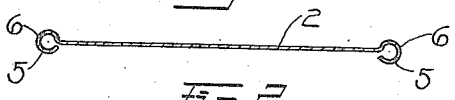


Fig-2

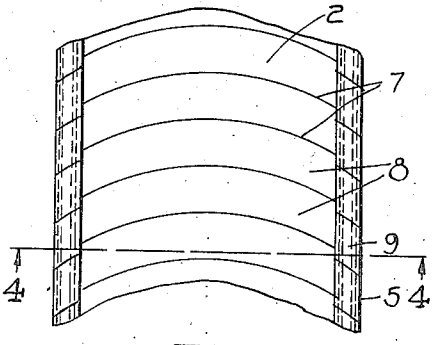


Fig-3

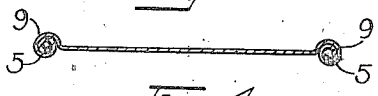


Fig-4

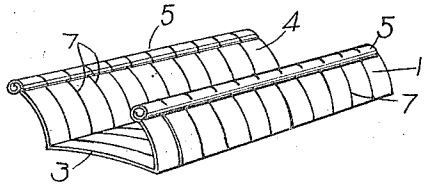


Fig-5

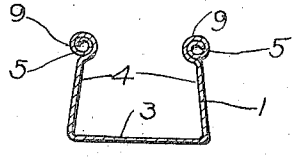


Fig-6

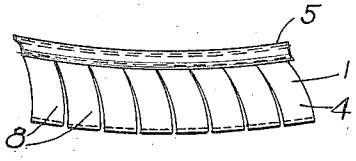


Fig-7

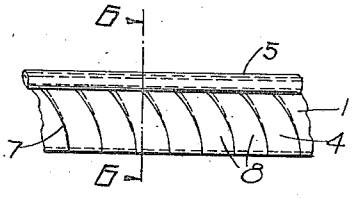


Fig-8

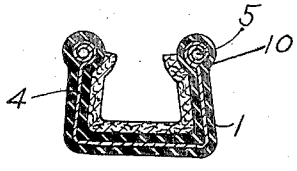


Fig-9

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UNITED STATES PATENT OFFICE

2,058,793

WINDOW CHANNEL

Louis F. Hoffman, Cleveland, Ohio, assignor of one-half to Modern Tool & Die Co., Cleveland, Ohio

Application July 16, 1935, Serial No. 31,665

3 Claims. (Cl. 296—44.5)

This invention relates to window channel and to the method of making same, and more particularly relates to flexible channel adapted to be readily seated in curved or irregularly shaped window frame openings or grooves, for cushioning and guiding the edges of sliding windows for motor vehicles and the like. The principal object of my invention is to provide a new and improved channel of this type which will have a maximum of flexibility.

Other objects and advantages of my invention will be apparent as the description is considered in connection with the accompanying drawing, in which:

Figure 1 is a plan view of a flat metal strip showing the transverse slits and the side edges partly rolled to form beads;

Figure 2 is a transverse section on the line 2—2 of Figure 1;

Figure 3 is a plan view of the metal strip showing the side edges rolled to form a double walled bead overlapping the slits;

Figure 4 is a cross section taken on the line 4—4 of Figure 3;

Figure 5 is a perspective view showing the beaded strip bent into channel or substantially U-shape;

Figure 6 is a section on the line 6—6 of Figure 8;

Figure 7 is a side view of the channel showing the manner in which the straps separate when the channel is flexed;

Figure 8 is a side view of the channel showing in dotted lines the normal overlapping relationship of the straps; and

Figure 9 is a cross sectional view of the channel showing the rubber and cloth covering in place.

Referring more particularly to the drawing, 1 denotes a window channel bent into conventional channel or substantially U-shape from a rectangular flat strip 2 of thin spring sheet metal. The channel 1 comprises a base or back portion 3, side walls 4 and rolled longitudinally disposed glass-engaging beaded edges 5.

Before the sheet metal strip 2 is bent into the channel or U-shape illustrated in Figure 1, the longitudinal marginal edges of the strip are rolled outwardly to form the inner walls 6 of the beads 5. The strip is also formed with a plurality of substantially transversely disposed parallel curved slits 7, extending approximately from one rolled edge to the other for imparting the desired flexibility to the strip. These slits are formed by a shearing cutter in any suitable stamping machine, not shown, and consequently no material is cut from the stock by the slitting operation, the curved edge of one strap 8, between the slits, being in abutting relation with respect to the curved edge of the next adjacent strap, for a purpose presently described. The curvature of the slits 7 is approximately on a one-inch radius.

After the inner walls 6 of the beads 5 and the arcuate slits 7 are formed, the longitudinal edges or strip 2 are rolled outwardly one more complete turn. This provides outer re-inforcing walls 9 for the beads 5, and causes the beads to roll over and upon the outer edges of the slits 7, thus re-inforcing the strip at these points. This second rolling operation causes the abutting straps to be crowded together in slightly overlapping relation, as best illustrated in Figures 7 and 8, thus providing for a relative sliding telescopic movement of these parts when the channel is flexed or bent in actual practice. The strip is finally pressed to substantially U-shape in a suitable bending machine, not shown, after the bead forming and slitting operations just described.

It will be noted that due to the curvature of the slits 7 and the close contact or abutting relationship between the curved edges of adjacent straps, the slightest crowding action has a tendency to cause the straps to overlap.

It is desirable that the entire channel be enveloped in a suitable coating 10 of sound absorbing and cushioning material. This coating which may consist of rubber, cloth or felt or of any combination of these or like materials, may be applied in a manner well known to workers in the art either before or after the channel has been bent to conventional shape.

Having thus described my invention, what I claim is:

1. A window channel comprising a substantially U-shaped structure having a base and a pair of side walls, said base and side walls being formed with sheared slits, to provide a plurality of substantially parallel straps, portions of the opposing edges of the straps on opposite sides of the slits being in substantially abutting relation with each other and portions of said opposing edges overlapping each other, and beads formed on the longitudinal edges of the side walls overlapping the ends of the said slits.

2. A window channel comprising a substantially U-shaped structure having a base and a

pair of side walls, said base and side walls being formed with spaced substantially transverse sheared curved substantially parallel slits, and beads formed on the longitudinal edges of the side walls overlapping the ends of said slits.

3. A window channel comprising a substantially U-shaped structure of spring sheet material, said channel having side walls and a base, the side walls and base of said sheet material being slit to form substantially transverse straps, certain portions of the opposing edges of the straps being in abutting relation with each other and other portions of opposing straps overlapping each other when the straps are subjected to crowding stresses.

LOUIS F. HOFFMAN.