

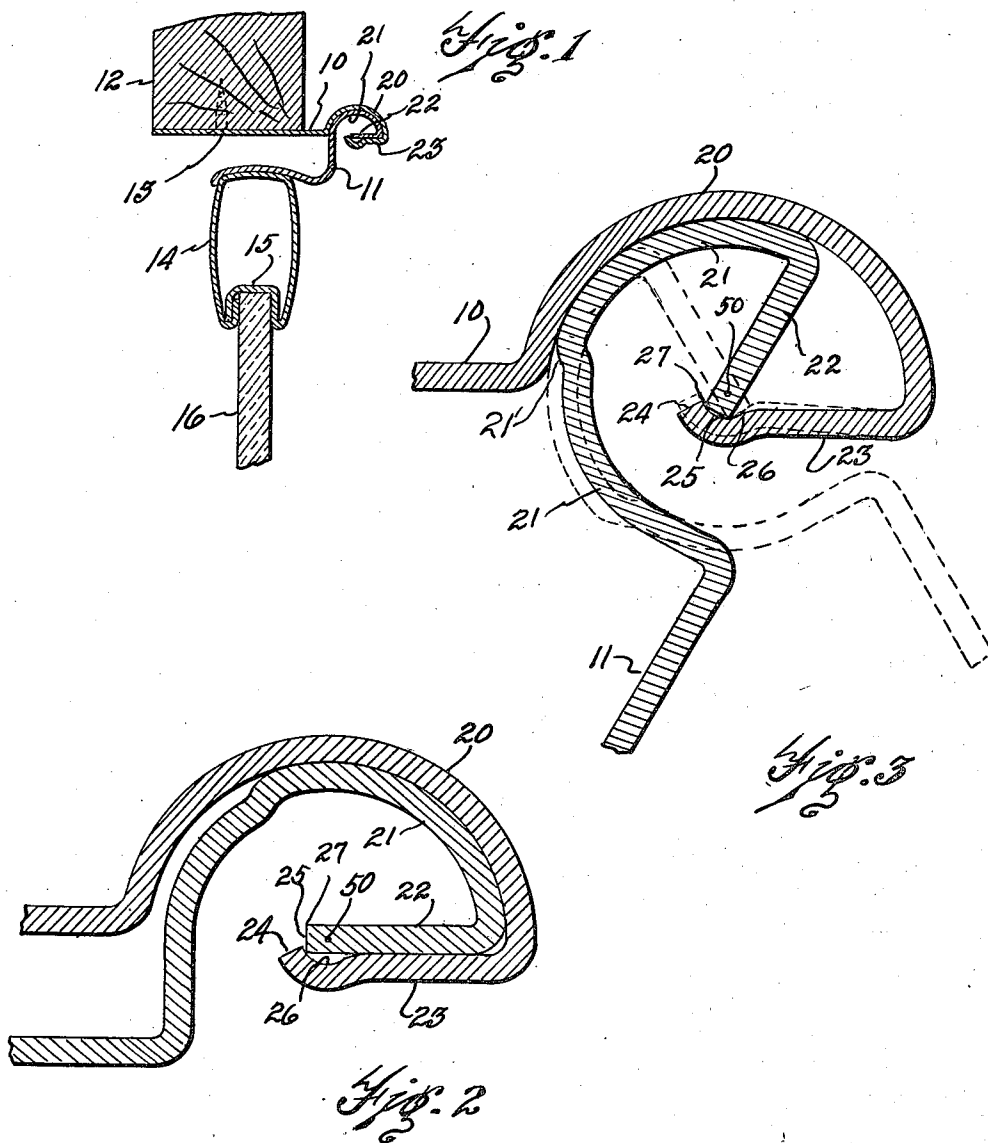
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WINDSHIELD HINGE

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WINDSHIELD HINGE.

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The present invention relates to hinges and more specifically to hinges particularly adapted to connect the movable portion of a windshield of a vehicle to the stationary frame portion.

Among the objects of the invention is a hinge of the character described which shall be dust and water tight.

Another object is a hinge which shall be free from objectionable looseness with consequent noise throughout its ordinary range of movement.

Still another object is a hinge which shall be more economical to produce and assemble than those heretofore known and used.

With these and other objects in view as will be readily apparent to those skilled in the art the invention consists in a hinge of sheet metal produced in the form shown in the drawings and in such modifications or variations thereof as will come within the scope of the claims hereunto appended.

In the drawings,

Fig. 1 shows a section through a hinge and portions of the frame and windshield.

Fig. 2 is a similar view on an enlarged scale, omitting the frame and windshield, and showing the hinge closed.

Fig. 3 is a view similar to Fig. 2 but showing the hinge about 60° open, and, in dotted lines, in released position.

As indicated, the hinge consists of the two parts 10 and 11, each being a metal strip of a length equal to the length of the hinge, the part 10 being secured to the stationary frame 12 as by screws 13, and part 11 being secured to the movable frame 14 as by spot welding or otherwise. In the present instance the latter frame is a tubular metal frame of sheet metal having a groove 15 for the glass 16.

The hinge proper consists of longitudinal beads 20 and 21 on the edges of strips 10 and 11 respectively. The bead 21 is substantially semicircular in section with its outer edge 22 turned inwardly substantially radially of the bead.

The bead 20 is also substantially semicircular in section and has its outer edge 23 turned inwardly to substantially parallel the intumed edge 22 of bead 21. The two arcs are such that when the hinge is in closed position, the one embraces the other as indicated in Fig. 2 and in such position these arcs can be considered as described from the same center 50 which center is located a short

distance from the edge 25 of the intumed portion 22 of bead 21.

It will be noted that the edge 24 of intumed portion 23 extends beyond the edge 25 of part 22 and that there is a groove 26 along the former edge. This groove 26 will be approximately arc shaped in section and as it is described from the same center point 50 as portions 20 and 21, having a radius equal to the distance from this center point 50 to one corner 27 of the edge 25.

In the production of the hinge, the part 23 when produced alone will be given a slight upward bend as indicated in dotted lines in Fig. 3 so that it will press the parts 20 and 21 tightly together in closed position and continue to exert such pressure until the hinge opens beyond the usual range.

As the hinge is opened the part 21 slides within part 20 moving around center point 50. At the same time the edge 25 slides in groove 26 about the center point 50 until the parts reach approximately the position shown in Fig. 3. Further movement permits end 25 to pass out of the groove 26 and releases the parts so that they may be slid endwise relatively and thus separated.

As indicated in Figs. 2 and 3, the bead 21 will preferably be offset as at 21' longitudinally so that the portion which is exposed to view, when in open position, will not rub against the inside of bead 20. This provision allows all of the parts exposed either in open or closed position to be enameled or otherwise coated with a suitable finish without the latter becoming rubbed off with use.

It will of course be understood that the hinge may be formed without offsetting from the frames as shown and it is contemplated to produce hinges without such offset. The location of the hinge proper with respect to the frames 12 and 14 is, however, only a matter of design and does not affect the hinge function.

While the beads have been described as substantially semicircular, it should be noted that more or less than a semicircle may be used, depending upon the desired opening of the hinge, a shorter arc not permitting as great a movement without releasing as is permitted by a greater arc. In the specific form an opening of the hinge through an angle of about 60 degrees is permitted.

Now having described the invention and the preferred form of embodiment thereof, it

is to be understood that the said invention is not to be limited to the specific details as herein described and illustrated but only by the scope of the claims which follow.

5 I claim:—

1. A hinge consisting of a pair of metal plates each having a bead adjacent one edge, and having said edge turned in, the bead and inturned edge of one of said plates being of such dimensions as to embrace the bead and inturned edge of the other of said plates and contact therewith substantially throughout when said hinge is in closed position, the outer inturned edge extending beyond and
10 over the inner inturned edge.

2. A hinge consisting of a pair of metal plates each having a bead adjacent one edge, and having said edge turned in, the bead on one of said plates being arc-shaped in cross section with the inturned edge radial of said arc, the center of said arc being within said edge and a short distance therefrom, the bead on the second plate being also arc-shaped and concentric with the first bead
20 and having its inturned edge parallel with

the first mentioned edge when the hinge is closed but extending beyond and over the latter, said arcs being of such dimensions as to contact with each other.

3. A hinge consisting of a pair of metal plates each having a bead adjacent one edge, and having said edge turned in, the bead on one of said plates being arc shaped in cross section with the inturned edge radial of said arc, the center of said arc being within said edge and a short distance therefrom, the bead on the second plate being also arc-shaped concentric with the first bead and having its inturned edge parallel with the first mentioned edge when the hinge is closed but extending beyond the latter, said arcs being of such dimensions as to contact with each other, the second mentioned edge being provided with a groove also arc-shaped in section and concentric with but opposite to said
40 beads and having a radius equal to the distance of said center point from the first mentioned edge.

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