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1,992,413

SIDE WING BRACKET

Filed Aug. 18, 1930

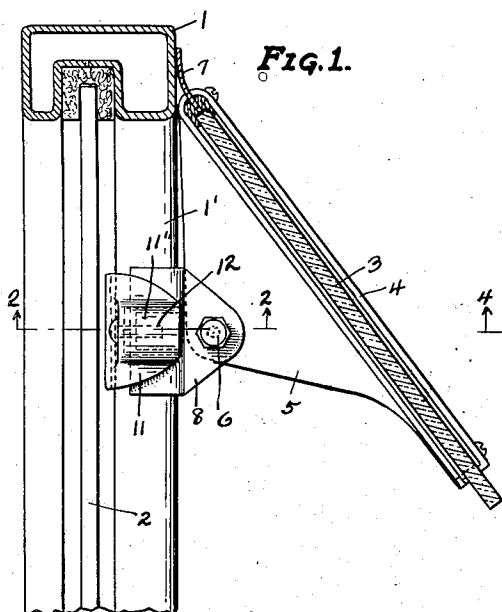


Fig. 1.

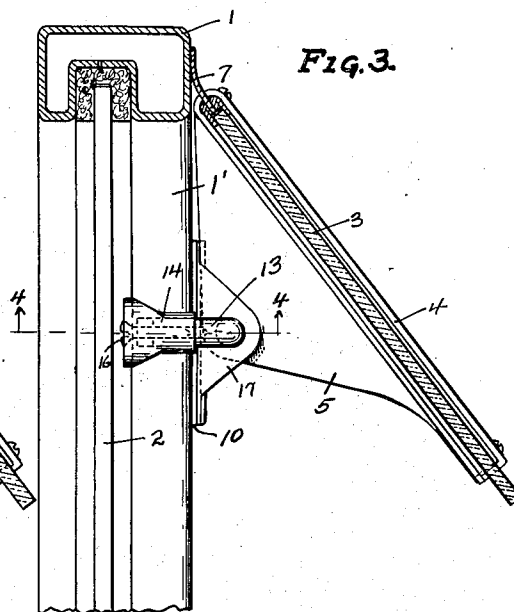


Fig. 3.

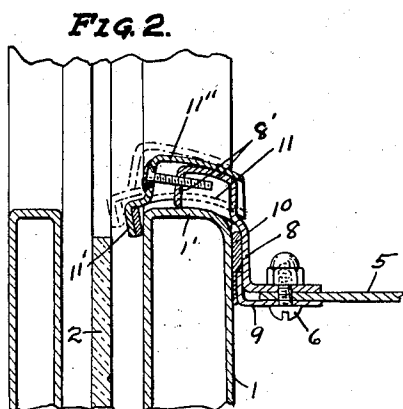


Fig. 2.

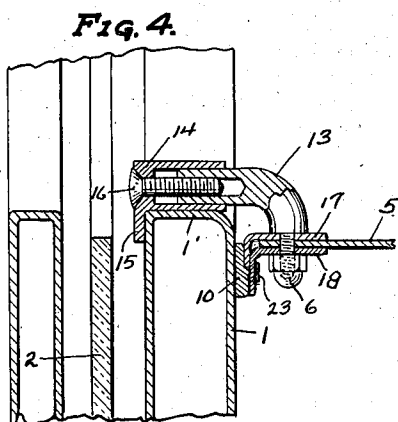


Fig. 4.

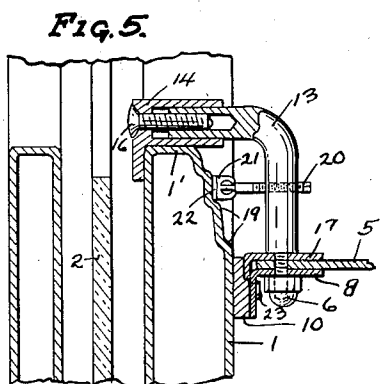


Fig. 5.

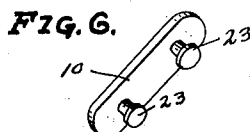


Fig. 6.

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UNITED STATES PATENT OFFICE

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SIDE WING BRACKET

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9 Claims. (Cl. 296—84)

This invention relates to air deflectors or the so-called side wings as used on automobiles, particularly cars of the closed body type.

The object of the invention is to provide a construction in such wings which will permit easy and quick application to a car door, which will firmly hold the wings in place without drilling holes in the door or using bolts; and also which will be flexible in permitting attachment of the wings to be readily applied to doors of various mold constructions, and all without interfering with the sliding glass panels of the doors.

Such side wings as are in contemplation are usually attached to the outer sides of both forward doors of the automobile body, but as they are both the same only one is shown in the drawing accompanying this disclosure, though several modifications of the bracket are shown.

In the drawing Fig. 1 is a horizontal cross section taken through a closed body door with one of my improved wings clamped in place on the edge of the window sill or opening.

Fig. 2 is a vertical section of Fig. 1 as seen from the line 2—2 thereof.

Fig. 3 is a view similar to that of Fig. 1 but showing a modified construction of the attaching bracket.

Fig. 4 is a vertical section of Fig. 3 as seen from the line 4—4 thereof.

Fig. 5 is a view similar to that of Fig. 4 and showing a similar bracket but with an additional feature to compensate for unusual moldings as found on the edges of some door window openings.

Fig. 6 is an enlarged perspective view of the rubber gripping pad used on the brackets.

Briefly described the invention comprises a special clamping bracket for side wings which firmly grips the edge of the door to the outer side of the window glass and thus avoids drilling and tapping the doors as generally required owing to the almost universal use of sheet steel doors on modern automobiles, and also overcoming the use of vertical braces heretofore applied within the window openings in some forms of wing attachment.

In Figs. 1 and 2 the attaching brackets (the lower one only being shown) which grip the upper and lower edges of the window opening, are made entirely of sheet metal, while in Figs. 3 to 5 a rigid angle arm is employed as part of the structure.

In all figures 1 is the metal shell of the door, 1' the sill or upper edge of the window opening lying to the outer side of the sliding glass 2 of the win-

dow, while 3 is the glass plate of the side wing held at its upper and lower edges in channel frames 4 provided with a horizontally extending triangular member 5 vertically pivoted by a bolt 6 or otherwise to an attaching bracket to provide a tight friction joint so that the wing will remain at various points of adjustment, either from the position shown with a rubber strip 7 lying against the forward stile of the door or window, or to any other position.

The attaching bracket in Figs. 1 and 2 comprises an L-shaped piece of sheet metal 8 positioned at one side of the member 5, an angle piece 9 at the other side clamping the member 5 between them, a rubber or other pad or strip 10 positioned between the door and members 8 and 9, and an arcuate clamping member 11 overlying member 8 provided with a door gripping flange 11' and a shouldered boss 11'' through which passes a screw 12 engaging a threaded hole in a similar boss 8' formed on member 8 and covered by the boss 11'' of member 11.

A rubber, felt, or other padding strip is also carried by flange 11' so as to prevent slipping of the flange when tightened up against the door, and a strip of protective material may be placed between member 8 and the door if desired to prevent marring.

The arcuate form of members 8 and 11 fitting over one another also the similar form of the bosses, together with the stiffening effect of the bosses draws the clamping edge 11' down toward the door edge or sill in tightening the screw as from the dotted position of member 11 indicated, and the overlying arcuate portion of 11 on 8 prevents outward tilting of the clamping flange 11' so that when such clamps are tightened on both upper and lower edges of the door opening they will support the shield or wing against any possibility of jarring loose, the stiffness of the plate glass wing itself contributing against displacement of the clamps as neither clamp can tilt or rock bodily on the slightly rounded sill or window opening as usually found on automobile doors.

The curved form of clamping member 11 as seen in plan in Fig. 1 permits slight pivoting of the member on the axis of screw 12 to accommodate any out of parallelism of the upper and lower edge of the window opening.

In the construction shown in Figs. 3 and 4 an L-shaped stiff arm 13 replaces the arcuate bracket plate 8 while a saddle member 14 replaces member 11. This member 14 is flattened to rest on the door and has a door gripping flange 15 which may or may not be padded as described,

and member 14 is drilled to receive the rounded end of the L arm 13 which in turn is tapped to receive a tightening screw 16 extending through member 14.

5 At its outer end L arm 13 is shouldered and reduced to form bolt 6 which passes through member 5 as well as two plates 17, 18 lying on opposite sides of it and forming the outer gripping jaw padded at 10 as in the first construction described.

10 Ordinarily I make stiff arm 13 with a short outer run, but sometimes the door molding is oddly formed as at 19 in Fig. 5 and I then employ a longer arm to reach below the molding and additionally employ a screw 20 extending through the vertical run of the L arm so as to impinge a step of the molding and preferably provide the end of the screw with a swivel block 21 preferably padded as at 22.

20 A feature of my improved bracket is the manner of attaching the rubber gripping pads 10 which consist in molding these pads with soft rubber button-like protuberances 23 as shown in Fig. 6, and which protuberances are sprung through openings in the adjacent metal of the bracket.

30 Having thus described my invention it will be seen to provide for the simple attachment of automobile side wings without drilling, tapping or mutilating the doors in any way yet able to conform to the shape of the door openings and resulting in a firmly attached wing which is proof against accidental displacement in use.

I claim:

35 1. Means for attaching a side wing to automobile windows fitted with a sliding glass, which comprises clamping members engaging the horizontally extending edge of the opening to the outer side of the glass, and a screw accessible only from the side of the clamping members adjacent the glass arranged for drawing said members together in a direction substantially perpendicular to the plane of the glass.

40 2. Means for attaching a side wing to automobile windows fitted with sliding glass, which comprises clamping members engaging the edge of the opening to the outer side of the glass, means for drawing said members together in a direction substantially perpendicular to the plane of the glass, and a gripping pad between the door and a clamping member provided with a protuberance extending into a hole in the member.

55 3. Means for attaching a side wing to automobile windows fitted with sliding glass, which comprises clamping members engaging the edge of the opening to the outer side of the glass, means for drawing said members together in a direction substantially perpendicular to the plane of the glass, and a gripping pad between the door and a clamping member provided with a resilient button extending into a hole in the member.

60 4. Means for attaching a side wing to automobile windows fitted with sliding glass, which comprises clamping member engaging the edge of the opening to the outer side of the glass, means for drawing said members together in a direction

substantially perpendicular to the plane of the glass, and a soft rubber gripping pad between the door and a clamping member provided with a plurality of resilient buttons extending into holes in the member.

5 5. In a side wing for automobile windows, a substantially U-shaped supporting clamp adapted to grip the outer and inner vertical walls of that portion of the window sill lying to the outer side of the glass, additional clamping means engaging the outer wall of the sill, and means for adjusting the pressure of said additional clamping means independently of said U-shaped clamp.

10 6. In a side wing for automobile door windows, a substantially U-shaped supporting clamp adapted to overlie the edge of the window sill and grip inner and outer side walls thereof, and a screw clamp passing through one leg of the U arranged to impinge the outer side of said sill to compensate for molding forms thereof.

20 7. Means for attaching a side wing to automobile windows fitted with sliding glass comprising an outer and an inner clamping member adapted to grip the outer and inner vertical walls respectively of that portion of the window sill lying to the outer side of the glass adjacent the window opening, a projection on each of the clamping members respectively formed to extend in a direction across the edge of the sill defining the window opening, said projections arranged to telescopically engage each other for axially sliding movement, a screw engaging the projections for effecting such movement, said screw accessible for turning only from the side of the inner clamping members adjacent the glass.

35 8. Means for attaching a side wing to automobile windows fitted with sliding glass comprising an outer and an inner clamping member adapted to grip the outer and inner vertical walls respectively of that portion of the window sill lying to the outer side of the glass adjacent the window opening, said members each provided with means extending transversely across the sill formed to engage one within the other for slidable movement relatively in a direction transversely of the sill and screw means for effecting such movement accessible only from within the window.

40 9. In combination with an automobile door provided with a window fitted with sliding glass, a substantially vertically extending side wing disposed outside the window, said side wing extending at its upper and lower ends above and below the upper and lower edges of the window opening respectively, means for supporting the side wing on the door in said position comprising clamping members carried at the upper and lower ends of the side wing and projecting laterally from one side of the wing, said clamping members provided with means adapted to grip the outer and inner walls of the upper and lower horizontally extending portion of the window sill lying to the outer side of the window glass at the upper and lower edges of the window opening, said screws associated with said clamping members accessible only from the inside of the door.

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