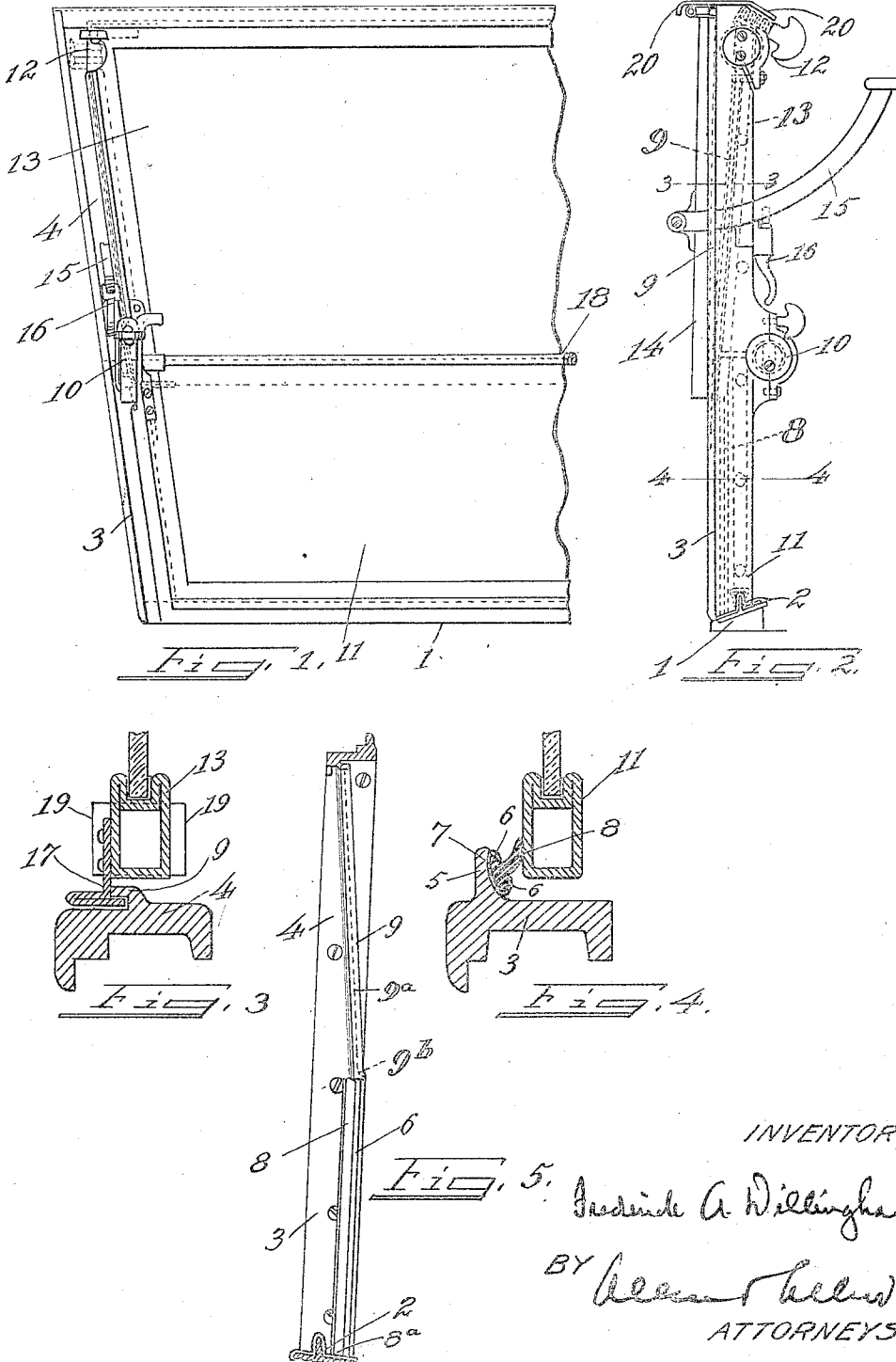


F. A. DILLINGHAM.
WINDSHIELD.
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1,383,191.

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WINDSHIELD.

1,383,191.

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To all whom it may concern:

Be it known that I, FREDERICK A. DILLINGHAM, a citizen of the United States, and a resident of Troy, Miami county, Ohio, have invented certain new and useful Improvements in Windshields, of which the following is a full, clear, and exact description, reference being had to the drawings forming part of this specification.

My invention relates to wind shields and more particularly to that type of windshield wherein the lower section has a limited side-wise movement in addition to the usual pivotal movement. It also relates to windshields having an additional glass, which may be swung out forwardly of the shield to act as a sort of roof, and prevent the accumulation of water on the upper shield section.

In windshield devices of this character, chiefly employed in closed automobile bodies, it is desirable to keep all rain and snow from access to the interior of the car. It is the chief object of my invention to prevent water or snow from entering around the side edges of the upper and lower sections.

With this in view I accomplish the object of my invention and other advantages to be noted by that certain construction and arrangement of parts to be hereinafter more specifically pointed out and claimed.

In the drawings,

Figure 1 is an inside front elevation of the device.

Fig. 2 is a side elevation thereof.

Fig. 3 is a section taken on the line 3—3 of Fig. 2.

Fig. 4 is a section taken on the line 4—4 of Fig. 2.

Fig. 5 is a side elevation of one of the side frame pieces.

The frame in which the shield is mounted has a base 1, which has mounted thereon the ridge plate 2, which forms a cross rib over which the lower shield is elevated and dropped so as to form a weather tight and rattle proof joint. This construction is familiar and is set forth in my Patent No. 1,255,394. The side pieces of the frame have a different form for the upper portion thereof than for the lower portion thereof.

Thus the lower portion of the side frame pieces 3 (Fig. 4) are formed with a pro-

jecting rib 5 on which is mounted a channel strip 6. The flanges of the channel strip are adapted to be bent over a weather strip, of rubber or like material having a base 7 to be clipped in place by the flanges and a flexible contact strip 8, which due to the conformation of the side frame projects angularly and inwardly toward the side of the wind shield. This strip 8 extends to the depth of the bridge 2 at its lower end 8^a and thus acts to seal the corners of the bridge joint of the lower shield section.

The upper portion of the side frame shown at 4 (Fig. 3) is formed with a laterally projecting flange 9 that serves to provide a groove in which the special strip on the upper shield section will engage, as will be described. This flange slants outwardly and the base 9^a of the channel formed thereby, is curved at 9^b so that it directs water away from the side joint of the lower shield section.

The trunnion 10 for the lower shield section 11 is shown and described in my Patent No. 1255394, above referred to, to which reference is hereby made. The trunnion 12 for the upper shield section 13 may be of any desired form, and makes up no particular part of this invention.

The weather guard section or outer upper section 14 is suitably hinged at the top of the frame, and swings outwardly therefrom. It is provided with arc-shaped arms 15, which project through slots formed in the side frame pieces, and are engaged by finger clamps 16 of any desired pattern, so as to retain said arc-shaped arms in any desired position.

The upper shield section is provided along its side edges with a roughly T-shaped strip of metal 17 suitably secured along the side piece of the shield section and adapted when the shield is in its normal closed position to engage in the channel formed in the upper frame piece by the flange 9.

When the upper shield section is closed, therefore, its side edges form a weather lock keeping out all water or snow and the movement of the said upper section is limited to outward movements only, since the lower section takes care of ventilation directed to the floor of the car body.

The lower shield section swings inwardly

only and when in its normal closed position rests over the rib formed at the base of the frame.

When the lower section is brought to this position it contacts with the rubber strip 8, which due to its direction of projection strikes the shield section before it gets to its lower-most position and is bent inwardly, forming a tight joint due to its compression into a bent position (Fig. 4).

A rubber piece 18 of any desired form is clipped over the upper edge of the lower shield, and serves as a weather strip for the contact of the upper and lower sections when both are closed, and the side pieces of the upper section have clipped over them rubber pieces 19, which wipe the side pieces of the lower section at the point of overlap of the upper section over the lower, at the outermost points wherein the strip 18 cannot reach due to the interference of the said side pieces of the lower section.

A curved top piece 20 is mounted at the lower edge of the top piece of the frame, and serves to divert the flow of water through the joint at the top of the frame.

As so constructed, a windshield is provided which has no point through which water or snow may penetrate, as every point of access is guarded and the whole, when closed, is in interlocked position or is sealed by tight compression of interposed strips of rubber or suitable compressible and resilient material. There is, furthermore, no continuous channel from the top to bottom of the shields which might conduct water in through the section corners.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a windshield, the combination with upper and lower shield sections, of side frame pieces, means interacting between the shield sections and the side frame pieces for forming abutment joints of the sections with the side frame pieces, with the abutment joint for the upper shield section terminating at its lower edge at a point located outwardly from the abutment joint for the lower shield section, whereby the water collected at the joint of the upper shield section will not flow into the joint of the lower shield section.

2. In a windshield, the combination with side frame pieces and a shield section, of an outwardly opening channel formed along the side frame pieces, inwardly projecting side strips on the shield section to engage in said channel, said channel being set at a slant with relation to the body of the side pieces, for the purpose described.

3. In a windshield, the combination with side frame pieces and a shield section, of a channel formed along the side frame pieces, means on the shield section to en-

gage in said channel, said channel being set at a slant with relation to the body of the side pieces and formed with its base, at the lower end thereof curved outwardly of the frame, for the purpose described.

4. In a windshield, the combination with a shield section and a frame, a bridge formed at the base of the frame, with which the lower shield section engages, and weather strip devices mounted at the sides of the frame, and extending along said side pieces and downwardly along side of the bridge to the base of the frame, whereby said strip devices will protect the side joint and the bottom corner of the shield section at the bridging point.

5. In a windshield, the combination with a shield section and a frame, a bridge formed at the base of the frame, with which the lower shield section engages, and weather strip devices mounted at the sides of the frame, and extending along said side pieces and downwardly along side of the bridge to the base of the frame, whereby said strip devices will protect the side joint and the bottom corner of the shield section at the bridging point, said strips comprising flexible members mounted to normally extend angularly with relation to the position to which they are forced upon a seating of the shield section over the bridge.

6. A side frame piece for windshield comprising a metallic bar having an upper abutment forming element projecting laterally therefrom and alined at a slant running from the outer edge of the piece at a median point thereof, and thence along the piece toward the top thereof, and a lower abutment forming element projecting laterally thereof, and running from a point between the outer and inner edges of the piece adjacent the lower terminus of the upper element and thence downwardly to the lower end of the piece.

7. A side frame piece for windshield comprising a metallic bar having an upper abutment forming element projecting laterally therefrom and alined at a slant running from the outer edge of the piece at a median point thereof, and thence along the piece toward the top thereof, and a lower abutment forming element projecting laterally thereof, and running from a point between the outer and inner edges of the piece adjacent the lower terminus of the upper element and thence downwardly to the lower end of the piece, said upper abutment forming element comprising a flanged member bent outwardly for forming an outwardly opened channel.

8. A side frame piece for windshield comprising a metallic bar having an upper abutment forming element projecting laterally therefrom and alined at a slant running from the outer edge of the piece at a median

point thereof, and thence along the piece toward the top thereof, and a lower abutment forming element projecting laterally thereof, and running from a point between the outer and inner edges of the piece adjacent the lower terminus of the upper element and thence downwardly to the lower end of the piece, said upper abutment forming element comprising a flanged member bent outwardly for forming an outwardly opening channel and said lower abutment forming element comprising a weather stripped abutment, the channel adapted to prevent inward movements of a shield section and the lower abutment to prevent outward movement of a shield section.

FREDERICK A. DILLINGHAM.