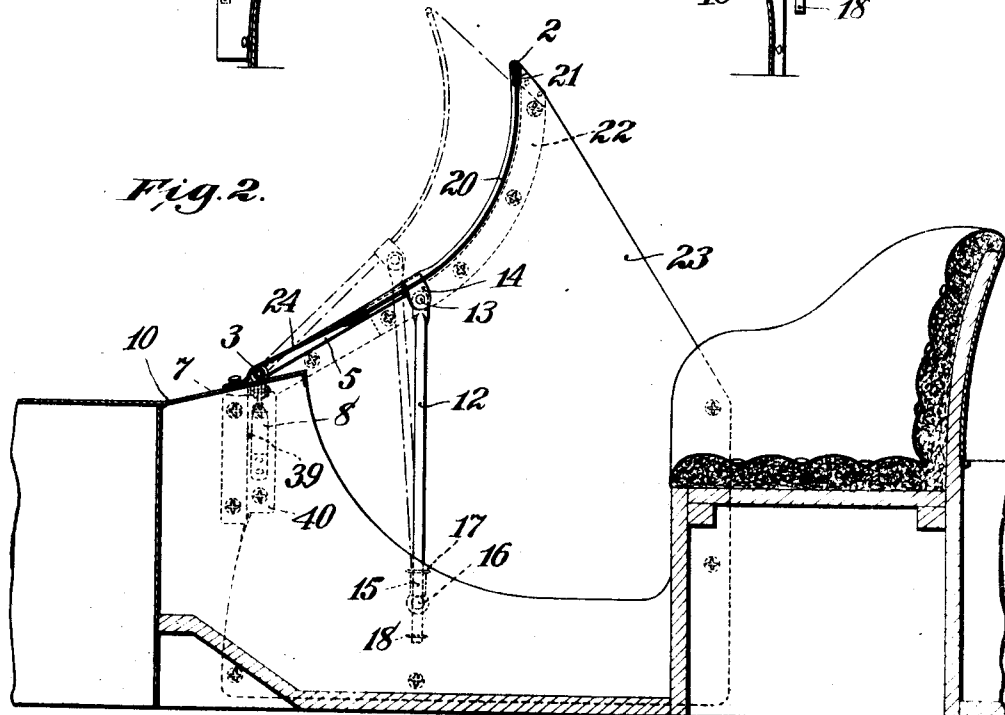
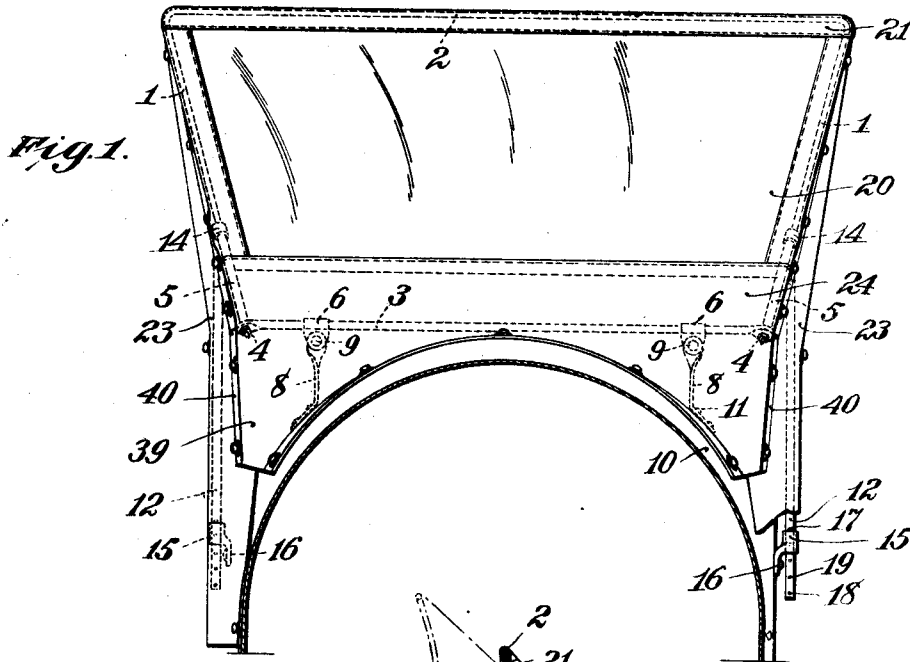


H. H. WHITE.
WIND SHIELD.
APPLICATION FILED DEC. 24, 1910.

1,059,017.

Patented Apr. 15, 1913

3 SHEETS—SHEET 1



Witnesses:

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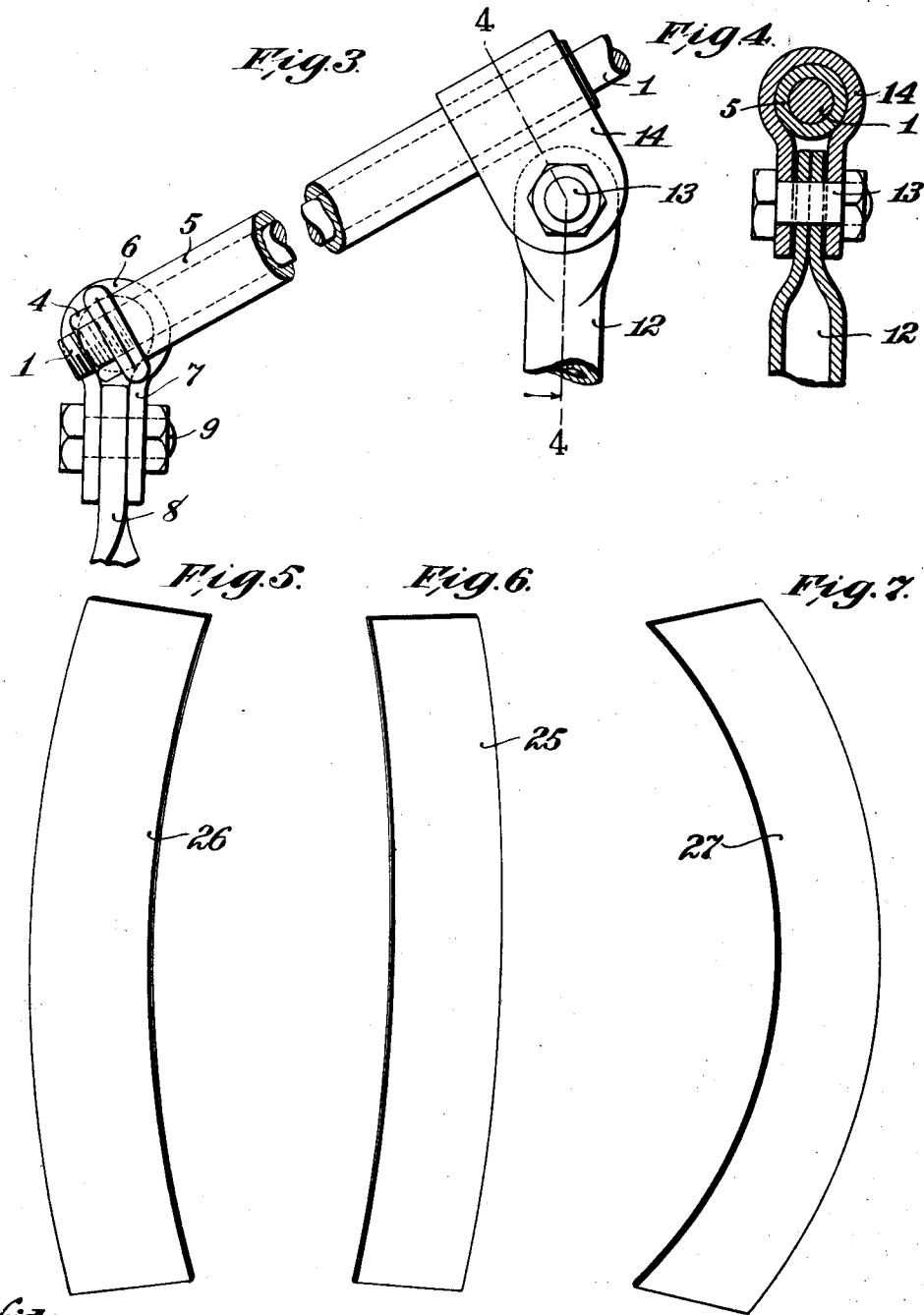
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3 SHEETS-SHEET 2.



Witnesses:

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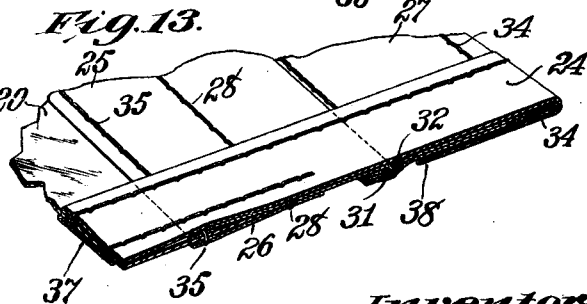
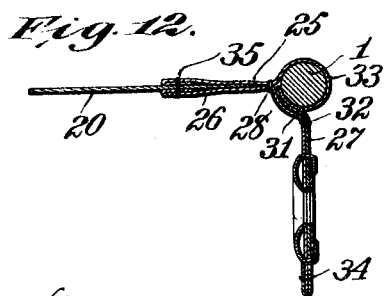
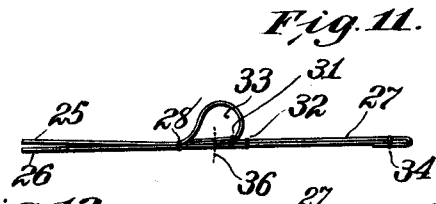
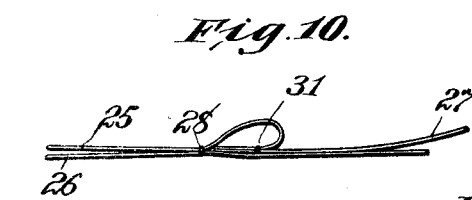
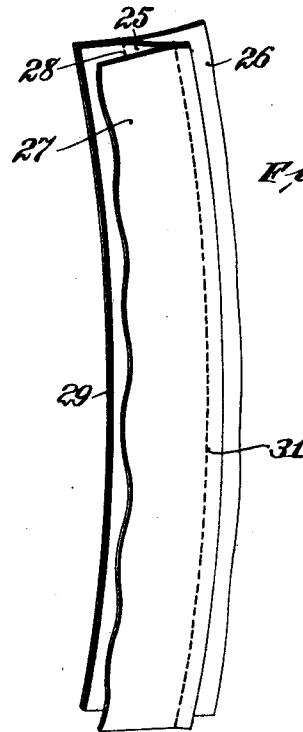
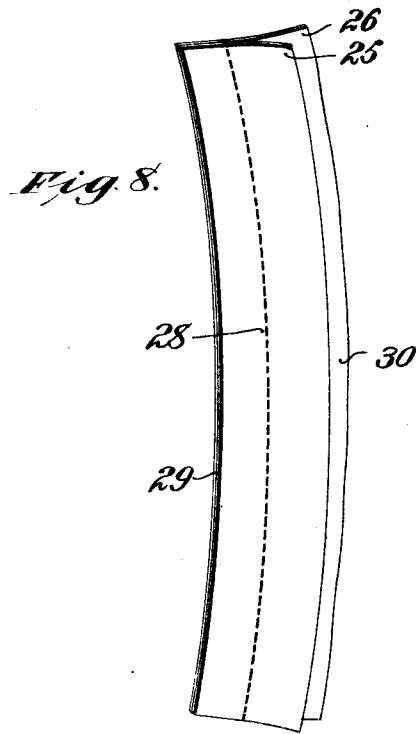
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Patented Apr. 15, 1913.

3 SHEETS-SHEET 3.

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UNITED STATES PATENT OFFICE.

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WIND-SHIELD.

1,059,017.

Specification of Letters Patent.

Patented Apr. 15, 1913.

Application filed December 24, 1910. Serial No. 599,135.

To all whom it may concern:

Be it known that I, HERBERT H. WHITE, a citizen of the United States, residing at Brookline, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Wind-Shields; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to wind shields adapted for use on automobiles, and more particularly to that type of wind shields which are provided with a rearwardly inclined deflecting surface arranged to direct the air striking against it up over the head of the driver, while allowing an unobstructed view of the road over the upper edge of the shield.

The object of the invention is to provide a novel and improved construction which will enable the shield to be more conveniently and economically manufactured, and to be readily applied to the various makes of cars.

To this end the invention consists in the features of construction and combination of parts hereinafter described and set forth in the claims, the advantages of which will be apparent to those skilled in the art.

The various features of the invention will be readily understood from the accompanying drawings and the following detailed description of the wind shield shown therein.

In the drawings Figure 1 is a front elevation of a wind shield embodying the invention in its preferred form; Fig. 2 is a vertical sectional view through the center of the shield; Fig. 3 is a detail side elevation showing the devices for supporting the shield; Fig. 4 is a sectional view on line 4-4, Fig. 3; Figs. 5, 6 and 7 are detail views showing the strips or pieces utilized in forming the rod inclosing tube or casing and side welt along the edges of the shield; Figs. 8 to 11 are views indicating the manner of forming the tubular side edges and welts; Fig. 12 is a detail showing a section through one side of the shield; and Fig. 13 is a detail showing the manner of uniting certain parts of the shield cover.

As shown in the drawings, the wind shield comprises a flexible cover stretched over a supporting frame which is arranged

in a rearwardly inclined position over the space in front of the automobile seat, so that the cover presents an upwardly sloping surface for directing the air and any dust or moisture carried thereby up over the heads of the occupants of the seat. The supporting frame comprises a pair of side rods 1 connected at their upper ends by an upper cross-rod 2 and at their lower ends by a lower cross-rod 3. The side and upper rods may be conveniently formed by bending a single rod into a substantially U-shape, as indicated in Fig. 1. As shown, the lower cross-rod 3 is formed from tubing the ends of which are flattened and pierced to receive the lower ends of the side rods 1. The lower ends of the side rods are threaded, and the rod 3 is held in position on the side rods by nuts 4. Tubular sleeves 5 may be driven on to the lower ends of the side rods 1 to form shoulders against which the cross-rod 3 is clamped by the nuts. It is preferred to use brass tubing for the sleeves 5, so that they also serve to give a brass finish to the lower ends of the rods. The cross-rod 3 is supported in sleeves or clips 6 which are provided with depending arms 7 and are secured to the upper ends of supporting brackets 8 by bolts 9. The brackets 8 are preferably in the form of sheet metal bars the lower ends of which may be bent to fit the hood or dash 10 of the car to which the shield is to be attached, and may be secured thereto by bolts 11.

In securing the shield to a car having a curved dash such as shown in the drawings, the upper ends of the bars 8 are bent through an angle of 90° so that they will extend parallel to the cross-rod 3. In securing the shield to a car having a straight vertical dash, the supporting bars 8 may be secured to the dash, and in this case the bars will not be provided with the right angle bend. The shield is supported in an inclined position by means of rods 12 the upper ends of which are pivotally connected by bolts 13 to sleeves or clips 14 surrounding the rods near the upper ends of the tubular sleeves 5. The rods 12 pass downward through brackets 15 which are secured to the sides of the car body by bolts 16. The lower ends of the rods are provided with pins 17 arranged to rest upon the brackets 15 when the shield is in position for use. When the shield is properly adjusted on some styles of cars it

renders access to the seat back of the shield inconvenient. In such case the shield may be swung up into the dotted line position in Fig. 2 in getting into or out of the car, and may be then swung back into proper position with the pins 17 in engagement with the bracket 15. To limit the forward swinging movement of the shield the rods 12 may be provided with pins 18 arranged below the brackets 15. In order that the position of the shield may be readily adjusted and determined, the rods 12 may be provided with a series of holes 19 for receiving the pins 17 and 18.

The cover of the shield is made in part from a flexible material such as pantasote, and in part from transparent sheet celluloid. As shown, the upper part of the cover consists mainly of a transparent sheet 20 of celluloid, so that the person sitting back of the shield may have a view of the front part of the car through the sheet. The upper edge of the sheet is secured between the edges of a transverse strip 21 of pantasote, which is folded over the upper cross-bar 2 to form a tubular upper edge for the cover inclosing the rod. The side edges of the celluloid sheet are secured between strips of pantasote which are stitched together to form tubular casings surrounding the side rods 1 and to form side welts 22 to which the side curtains 23 may be detachably secured. The lower part of the shield consists of a sheet 24 of pantasote secured to the lower edge of the celluloid sheet and to the side strips and arranged to extend down over the lower cross-rod 3 and to be secured to the dash of the car, as indicated in Figs. 1 and 2.

In order that the welts 22 may be properly arranged for the attachment of the side curtains thereto, they should be so formed and connected with the front of the shield that they will lie in a plane substantially at right angles to the curved front surface of the shield when the side curtains are attached to them.

One important feature of the invention relates to the construction of the tubular casing for the side rods and of the welt so that the welt will be properly located without requiring skill and careful manipulation in making the shield cover. In accordance with this feature of the invention the side edges of the cover along the upper curved portion of the rods 1 are formed from three strips of material having substantially the shapes shown in Figs. 5, 6 and 7. These strips consist of a front piece 25 which preferably is slightly curved, as indicated in Fig. 6, a back piece 26 which has a curvature somewhat greater than the curvature of the front piece but less than the curvature of the side rods 1, and a welt piece 27 which has a curvature approximately the same as the curvature of the side rods. In forming the

tubular casing and welt along the edge of the shield, the front and back pieces are united as indicated in Fig. 8 by a line of stitching 28 which extends substantially parallel to the edges of the two pieces. This forms two plies 29 of fabric within the line of stitching between which the side edge of the celluloid may be subsequently secured. Since the curvature of the two pieces is different there will be a certain amount of fullness in the rear part 30 of the back piece, as indicated in Fig. 8. The inner edge of the welt piece is then stitched to the outer edge of the front piece by a line of stitching 31, as indicated in Fig. 9. The united edges of the welt and front piece are then folded in, as indicated in Fig. 10, and the welt piece is secured to the back piece by a line of stitching 32 to form a tubular casing 33 for receiving the side rod 1. For convenience in uniting the parts the stitching 31 may be made at such a distance from the edges of the front and welt pieces that these edges may act as a guide for engaging the seam formed by the stitching 28 and determining the extent to which the front piece should be looped in forming the tubular casing 33, as indicated in Figs. 10 and 11, although this arrangement of the stitching 31 is not essential.

In order to give the welt a finished edge the outer edge of the welt piece may be folded over the outer edge of the back piece and secured by a line of stitching 34, as indicated in Fig. 11. After the side pieces have been thus formed they may be secured to the edges of the celluloid by stitching 35, as indicated in Fig. 12. When the rod is inserted in the tubular casing 33, with the welt substantially in the plane of the side rod, the fullness in the welt strip and in the outer edge of the welt piece will be smoothed out, and the welt will lie smoothly substantially in the plane of the side rod, and substantially at right angles to the curved front face of the shield.

In manufacturing the form of frame and cover shown in the drawings, the side pieces for the upper part of the cover are formed in the manner above described, and are secured along the side edges of the celluloid sheet. The lower end of the tubular casing 33 is cut along the line 36 for a short distance to accommodate the clips 14 when the cover is drawn on to the frame. The lower ends of the side pieces are then flattened out and the lower sheet 24 of the cover is secured across the lower edge of the celluloid and across the lower end of the side pieces, the lower edge of the celluloid being held between the upper edge of the sheet 24 and a back strip 37, as indicated in Fig. 13. The outer edges of the sheet 24 are folded over the outer edges of the welt and back pieces and secured at 38 to form a continuation of

the welt along the substantially straight lower part of the side rods and down the vertical part 39 of the cover. The ends of the side rods 1 are then inserted in the upper ends of the tubular casings 33, and the cover is drawn up over the rods. The upper cross-strip 21 is then folded over the upper cross-rod 2 and stitched to the upper edge of the celluloid and to the side pieces and upper ends of the welts. The sleeves 14 are then slid on to the rods and passed up into the cut portions of the tubular casings 33, as indicated in Fig. 2. The lower cross-rod 3 is then secured in position, and the shield is ready to be applied to a car. In applying the shield to a car the lower end of the sheet 24 is shaped to fit the hood of the car, and is provided with a series of gromets for engaging buttons secured to the dash. The side edges of the cover are also shaped to provide the vertical edges or welts 40. The welts are provided with gromets for engaging buttons on the edges of the side curtains, and the side curtains are provided with gromets for engaging buttons on the sides of the seat and car body.

While it is preferred to employ the specific construction and arrangement of parts shown and described, it will be understood that this construction and arrangement is not essential except so far as specified in the claims.

Having explained the nature and object of the invention, and specifically described one construction of shield in which it may be embodied, what I claim is:—

1. A wind shield for automobiles comprising a pair of rearwardly inclined side supporting rods upwardly curved at their rear ends and a cover provided at each edge with a front piece, a curved back piece united to the front piece by stitching substantially parallel to the edges of the pieces, a welt piece of substantially the same curvature as the side rods having its inner edge united to the outer edge of the front piece and united with the back piece to form a tubular casing for the side rod whereby an edge welt is formed which will lie substantially at right angles to the curved front surface of the cover, substantially as described.

2. A wind shield for automobiles comprising a pair of rearwardly inclined side supporting rods upwardly curved at their rear ends, a cover provided at each edge with a front piece, a back piece of a curvature less than the curvature of the side rods united to the back piece by stitching parallel to the inner edges of the pieces, a welt piece of substantially the same curvature as the side rods having its inner edge stitched to the outer edge of the front piece and also stitched to the back piece with the front piece looped to form a tubular casing for the side rod whereby an edge welt is formed

which will lie substantially at right angles to the curved front surface of the cover, substantially as described.

3. A wind shield for automobiles comprising a pair of rearwardly inclined side supporting rods upwardly curved at their rear ends and a cover provided at each edge with a curved front piece, a back piece of greater curvature, stitching uniting the pieces along a line parallel to their inner edges, a welt piece of a curvature greater than the back piece and substantially the same as the side rods, stitching uniting the inner edge of the welt piece to the outer edge of the front piece, stitching uniting the inner edge of the welt piece to the back piece with the front piece looped to form a tubular casing for the side rod, and stitching uniting the outer edges of the welt and back pieces whereby an edge welt is formed which will lie in a plane substantially at right angles to the curved front of the cover, substantially as described.

4. A wind shield for automobiles comprising a pair of rearwardly inclined supporting rods upwardly curved at their rear ends, a cover provided at each edge with a curved front piece 25, a back piece 26 of a curvature greater than the front piece, stitching 28 connecting the front and back pieces a sheet of celluloid having its side edges secured between the front and back pieces within the line of stitching, a welt piece 27 of a curvature greater than the back piece and substantially the same as the side rods, a line of stitching 31 uniting the inner edge of the welt piece and outer edge of the front piece, a line of stitching 32 uniting the welt piece and back piece with the front piece looped to form a tubular casing 33 for the side rod whereby an edge welt is formed along each side of the cover which will lie substantially at right angles to the curved front surface of the cover, substantially as described.

5. A wind shield for automobiles comprising a pair of rearwardly inclined side supporting rods, upper and lower cross-rods connecting the ends of the side rods, sleeves surrounding the lower rod, brackets to which the sleeves are secured, sleeves secured to the side rods, supporting rods pivoted to said sleeves, brackets through which the lower ends of the rods pass, and stops on the rods arranged below and above the brackets for allowing the frame to be swung forward and backward and determining its movement, and a cover supported by the frame, substantially as described.

6. A wind shield for automobiles comprising a rod bent into substantially U-shape to form a pair of side rods and an upper transverse rod connecting the side rods, a lower transverse rod pierced at its ends to receive the lower ends of the side

rods, devices for securing the lower rods on the ends of the side rods, devices for supporting the lower rod, supporting rods connected to the side rods and arranged to support the side rods in a rearwardly inclined position, a cover provided with tubular side and top edges surrounding the side and top cross-rods and having its lower end extending over the lower cross-rod and secured to the hood of the car, substantially as described.

7. A wind shield for automobiles comprising a rod bent into substantially U-shape to form a pair of side rods and a transverse rod connecting the upper ends of the side rods, tubular sleeves on the lower ends of the side rods through which the ends of the side rods project, a transverse rod the ends

of which are pierced to receive the projecting ends of the side rods, nuts for securing the transverse rod against the ends of the tubular sleeves, means for securing the lower transverse rod to the dash of the car, rods connected to the side rods and arranged to support the side rods in a rearwardly inclined position, and a cover provided with tubular casings along its side and upper edges inclosing the side and upper cross-rod and extending over the lower cross-rod, and means for securing the lower edge of the cover to the car, substantially as described.

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Witnesses:

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