H. DICKINSON.

STORM AND GLARE SHIELD.

APPLICATION FILED SEPT. 26, 1921.

1,421,182.

Patented June 27, 1922.

3 SHEETS—SHEET 1.

Fig. 1

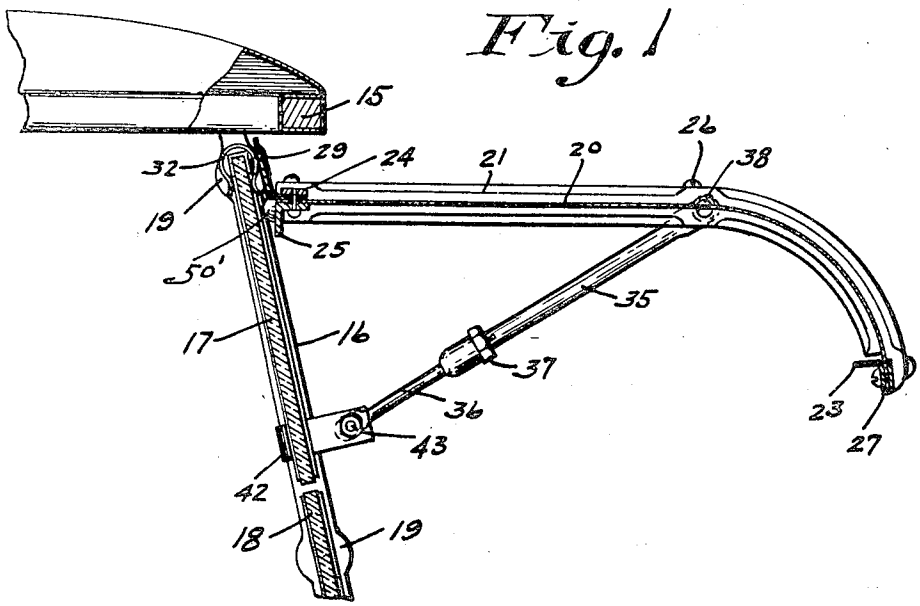
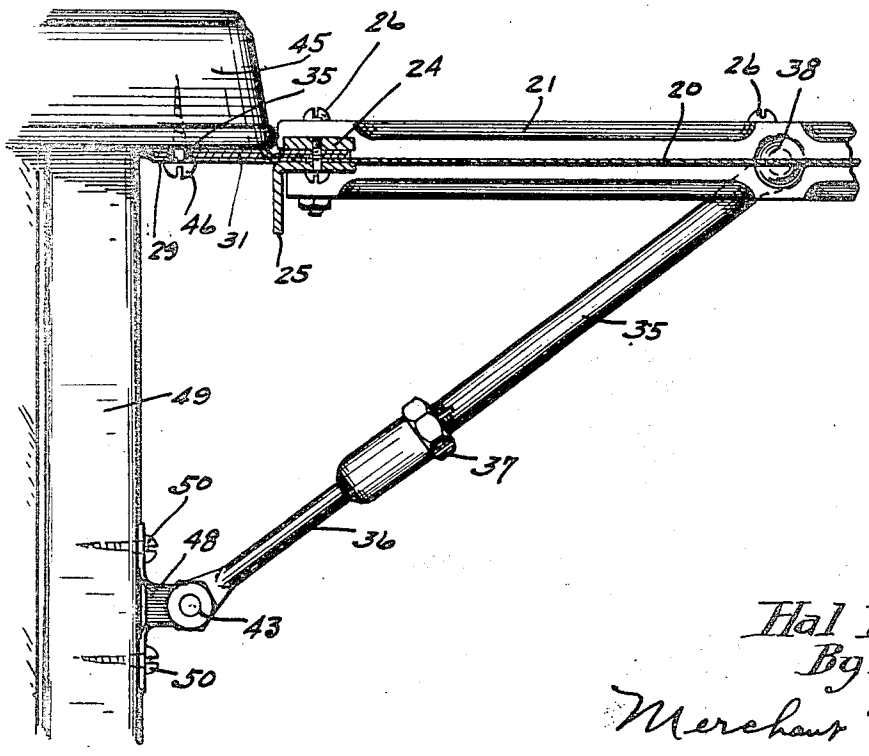


Fig. 2



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3 SHEETS—SHEET 2.

Fig. 3

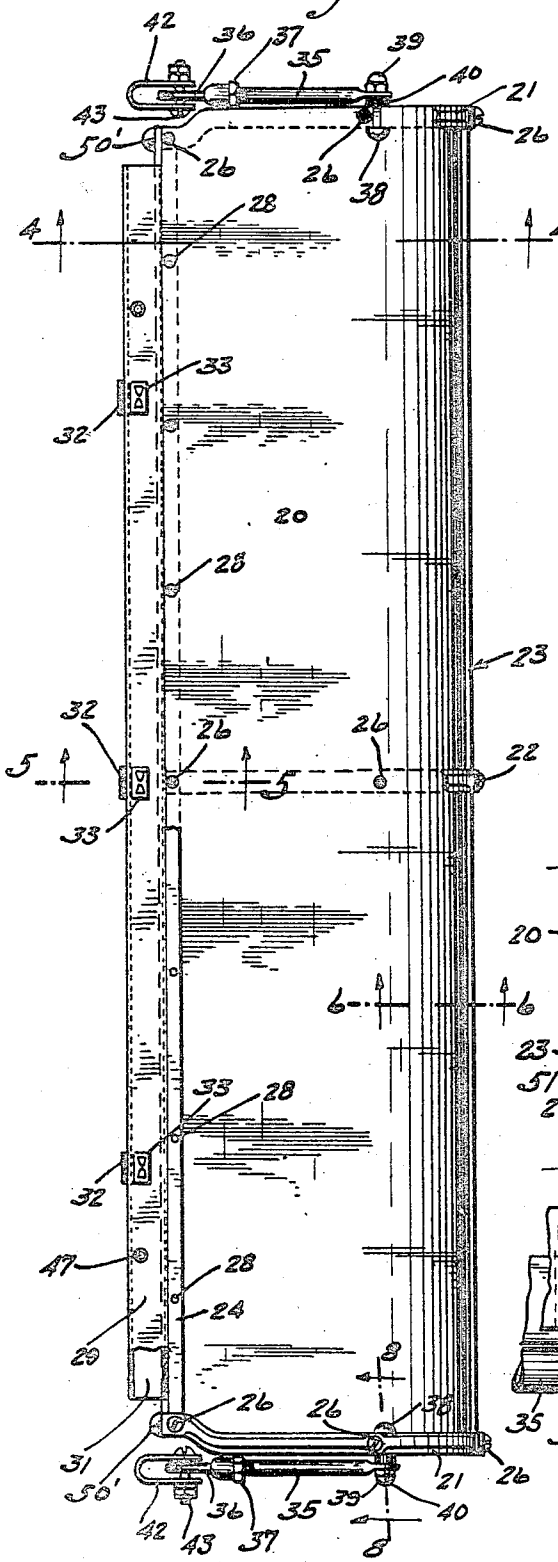


Fig. 4

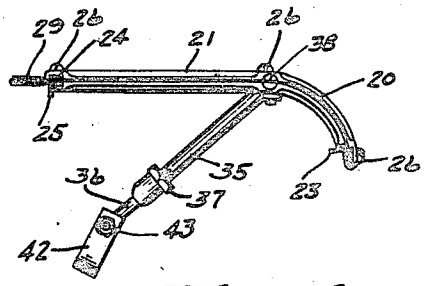


Fig. 5

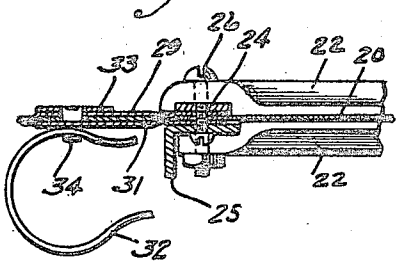


Fig. 6

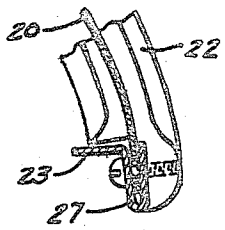


Fig. 7

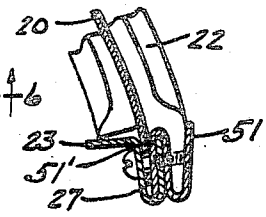


Fig. 9

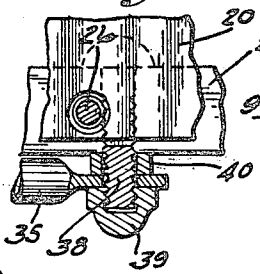
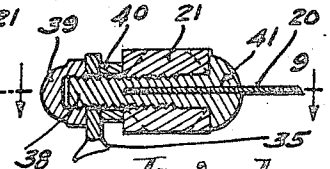


Fig. 8



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3 SHEETS—SHEET 3.

Fig. 10

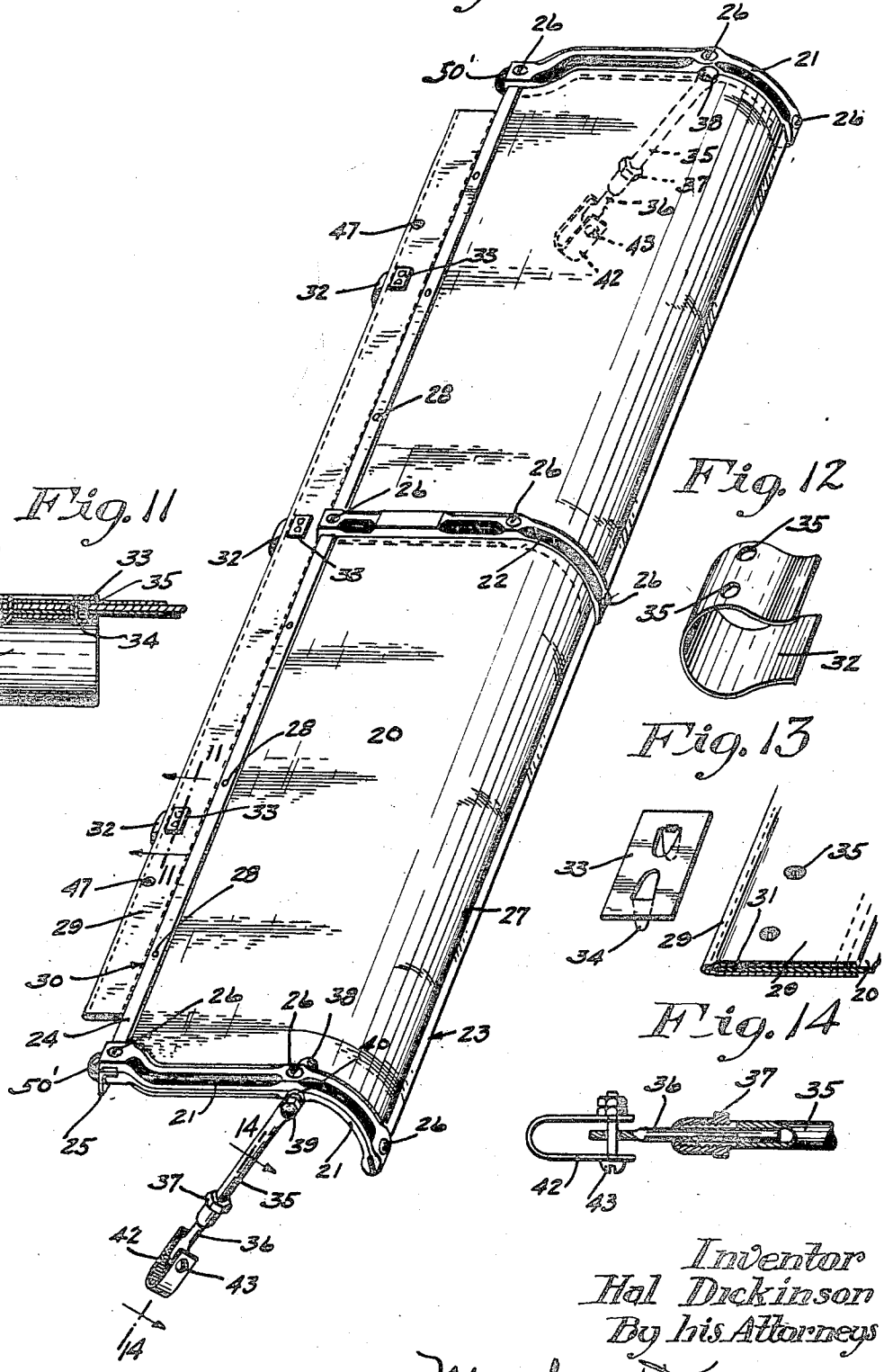


Fig. 11

Fig. 12

Fig. 13

Fig. 14

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UNITED STATES PATENT OFFICE.

HAL DICKINSON, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR TO DICKINSON AND COMPANY, INC., OF MINNEAPOLIS, MINNESOTA, A CORPORATION OF MINNESOTA.

STORM AND GLARE SHIELD.

1,421,182. Specification of Letters Patent. Patented June 27, 1922.

Application filed September 26, 1921. Serial No. 503,240.

To all whom it may concern:

Be it known that I, HAL DICKINSON, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Storm and Glare 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.

My present invention has for its object to provide an extremely simple and highly efficient storm and glare shield for motor-propelled vehicles, and to this end it consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

In the accompanying drawings, which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings:

Fig. 1 is a fragmentary view in longitudinal vertical section showing the invention attached to an automobile of the open touring type;

Fig. 2 is a view corresponding to Fig. 1, but on an enlarged scale, showing the invention attached to the body of a closed automobile;

Fig. 3 is a plan view of the invention removed from the automobile and with some parts broken away and sectioned;

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 3;

Fig. 5 is a detail view partly in elevation and partly in section taken on the line 5—5 of Fig. 3 on an enlarged scale;

Fig. 6 is a detail view in section taken on the line 6—6 of Fig. 3 on an enlarged scale;

Fig. 7 is a view corresponding to Fig. 6, but further showing a gutter attachment;

Fig. 8 is a detail view in section taken on the line 8—8 of Fig. 3 on an enlarged scale;

Fig. 9 is a detail view in section taken on the line 9—9 of Fig. 8;

Fig. 10 is a perspective view of the invention;

Fig. 11 is a transverse section taken on the line 11—11 of Fig. 10 on an enlarged scale;

Fig. 12 is a perspective view of one of the spring clips;

Fig. 13 is a perspective view of one of the spring clip securing plates and a fragmentary portion of the combined weather strip and hinge, separated the one from the other; and

Fig. 14 is a fragmentary detail view with some parts sectioned on the line 14—14 of Fig. 10.

Referring first to the invention as applied in Fig. 1, the numeral 15 indicates the top of an automobile of the open touring type and the numeral 16 indicates the wind shield supporting posts thereof. The upper and lower glass sections of the wind shield are indicated by the numerals 17 and 18, respectively, and which sections are hinged at 19 near their upper edge portions to the posts 16 for either outward or inward swinging movement.

The body 20 of the combined storm and glare shield is, as shown, of a flexible translucent material, preferably pyralin. This body 20 is firmly and securely held in a marginal metal frame comprising side and intermediate bars 21 and 22, respectively, connected at their ends by a front cross bar 23 and rear upper and lower cross bars 24 and 25.

The side bars 21 and intermediate bar 22 are identical, the one with the other, except that the rear ends of said end bars are inwardly offset to clear the posts 16. Each frame bar 21 and 22 comprises upper and lower members between which the side edge portions of the body 20 are interposed, and which members are connected at their end and intermediate portions by screws 26. Forward of the intermediate screws 26, the bars 21 and 22 are curved forwardly and downwardly for a highly important purpose, as will presently appear. The front cross frame bar 23 is in the form of an angle, one flange of which extends horizontally inward and the other flange of which extends downwardly and is folded outwardly and upwardly upon itself to form a relatively deep and narrow channel 27 in which the front edge portion of the body 20 is mounted.

The rear top cross bar 24 is, as shown, flat and the companion cross bar 25 is in the form of an angle, one flange of which extends horizontally forward. The rear edge portion of the body 20 extends between the top cross bar 24 and the horizontal flange of the bottom cross bar 25. Screws 28 connect the top cross bar 24 with the horizontal flange of the bottom cross bar 25. The front

ends of the side bars 21 and the intermediate bar 22 are recessed to receive the channel 27 of the front cross bar 23, which is rigidly secured thereto by the front screws 26. At their rear ends, the end bars 21 and intermediate bar 22 are recessed to receive the top cross bar 24 and the horizontal flange of the bottom cross bar 25, and which bars are rigidly connected by the rear screws 26. Only the intermediate screw 26 of the intermediate frame bar 22 has direct engagement with the body 20. At the other screws 26 and 28, the body 20 is cut away to afford clearance therearound. By thus positively securing the body 20 at only a single intermediate point, said body is free to expand and contract in all directions.

A combined weather strip and hinge 29 is attached to the rear edge of the body 20 by stitches 30, and the stitched edge portion of said weather strip and hinge extends between the rear cross bars 24 and 25. This combined weather strip and hinge 29 may be of leather or any other suitable flexible material of double thickness, and a flat metal stiffening strip 31 is inserted therebetween. A plurality of spring clips 32, as shown three in number, are attached to the under side of the weather strip and hinge by anchor plates 33 supported on the upper side of said weather strip and hinge and provided with pairs of barbs 34, which extend through aligned holes 35 in the weather strip and hinge 29, bar 31 and clips 32, and are upset, as shown in Fig. 11. These spring clips 32 are adapted to be sprung onto the upper edge portion of the wind shield section 17 and thereby attach the storm and glare shield to the wind shield with freedom for vertical swinging movement. The barbs 34 also hold the bar 31 against endwise movement in the weather and hinge strip 29.

To hold the storm and glare shield in different adjustment, there is provided a pair of longitudinally adjustable arms, each of which comprises a pair of telescopically connected members 35 and 36 frictionally held in different adjustments, the one with the other, by longitudinally splitting the inner end of the tubular member 35 and applying thereto a nut 37, by means of a tapered thread, and adapted to contract said member 35 frictionally onto the inner arm member 36.

The outer ends of the arm members 35 are flattened and pivoted to the side bars 21 by bolts 38 having nuts 39 between which and washers 40 said flattened ends of the arm members 35 are held. The bolts 38 are extended through horizontal openings in the side bars 21 from the inside thereof and their head end portions are longitudinally split at 41 to receive the body 20, (see Fig. 8). It will be noted that the bolts 38 are extended through the side bars 21 just forward of the intermediate screws 26 and have direct contact therewith so that said screws 26 hold the bolts 38 from turning.

The inner ends of the arm members 36 are flattened and detachably secured to the posts 16 by U-shaped clips 42. These clips 42 are pivotally connected to the arm members 36 by nut-equipped bolts 43, which, when tightened, frictionally clamp said clips onto the post 16 at any desired height.

To apply the storm and glare shield to a closed automobile, it is only necessary to remove the spring clips 32 and anchor plates 33 and secure the weather strip and hinge 29 to the under side of the top 45 of a closed automobile by screws 46 inserted through eyelets 47 in said weather strip and hinge. In place of the clips 42, brackets 48 are substituted therefor and secured to the body 49 of said automobile by screws 50.

Rubber stops 50′ are attached to the cross frame bars 24 and 25 for engagement with the wind shield to hold the storm and glare shield 29 out of engagement therewith and thereby prevent noise or rattle.

The gutter 51 shown in Fig. 7 is in the form of a channel, the inner wall of which is folded down upon itself to afford a flange 51′, which extends into the channel 27 to support said gutter from the front cross frame bar 23 in position to collect rain water from the storm and glare shield and direct the same to each side of said shield. In case the storm and glare shield is adjusted so that its body is inclined toward the automobile to which it is attached, the weather strip and hinge will act as a gutter to collect the rain water from the storm and glare shield and direct the same to each side of the automobile.

From the above description, it is evident that the improved storm and glare shield may be very quickly applied to an automobile or removed therefrom and the same may be readily adjusted from within the automobile, to which it is applied, by simply sliding the arm members 35 inward or outward on the arm members 36, on which they are telescoped. The ease with which the arm members 35 may be caused to frictionally slide on the arm members 36 may be controlled by adjusting the nuts 37. The combined weather and hinge strip 29 not only connects the storm and glare shield to the wind shield with freedom for raising and lowering movement, but it permits the upper section 17 of the wind shield to which it is attached to be swung either outward or inward without affecting the position of the storm and glare shield. The frame of the storm and glare shield securely holds the flexible translucent body 20 in its proper form and the angle cross bars 23 and 25 give said frame the required rigidity and prevent the same from warping or bending.

The storm and glare shield, while well adapted for use on all makes of automobiles, is especially adapted for automobiles having relatively low tops, which are now very popular in the new models, for the reason that the said shield may be set so as to not obstruct the driver's vision and, at the same time, its downwardly curved outer edge portion will intercept all direct blinding rays of light from either the sun or the headlights of an approaching machine, which cause drivers so much annoyance.

The above described storm and glare shield has been put into extensive commercial use and has proven highly efficient for the purpose had in view.

What I claim is:

1. A storm and glare shield having a marginal frame with a downturned outer portion, a transparent or translucent body mounted in the frame with its outer portion held turned down thereby, and means for adjusting said shield into substantially horizontal position with its outer portion extending downwardly.

2. A storm and glare shield having a marginal frame with a downturned outer portion, the transverse downturned portion of said frame having a channel, a transparent or translucent body mounted in the frame with its outer edge portion held turned down thereby and extending into said channel, and means for adjusting said shield into substantially horizontal position with its outer portion extending downwardly.

3. A storm and glare shield for vehicles having a combined flexible weather strip and hinge attached thereto, said weather strip and hinge having a stiffening bar, and means securing the stiffening bar to the weather strip and hinge and for attaching the same to a vehicle.

4. A storm and glare shield for vehicles having a combined weather strip and hinge, and clips on the weather stip and hinge for detachably securing the same to the upper edge of a pivoted wind shield section, said weather strip and hinge being adapted to permit independent adjustments of the storm and glare shield and wind shield section.

In testimony whereof I affix my signature.

HAL DICKINSON.