Sept. 9, 1930. W. J. SPIRO 1,775,539

CLOSURE FOR OPEN AUTOMOBILES

Filed July 12, 1926 5 Sheets-Sheet 1

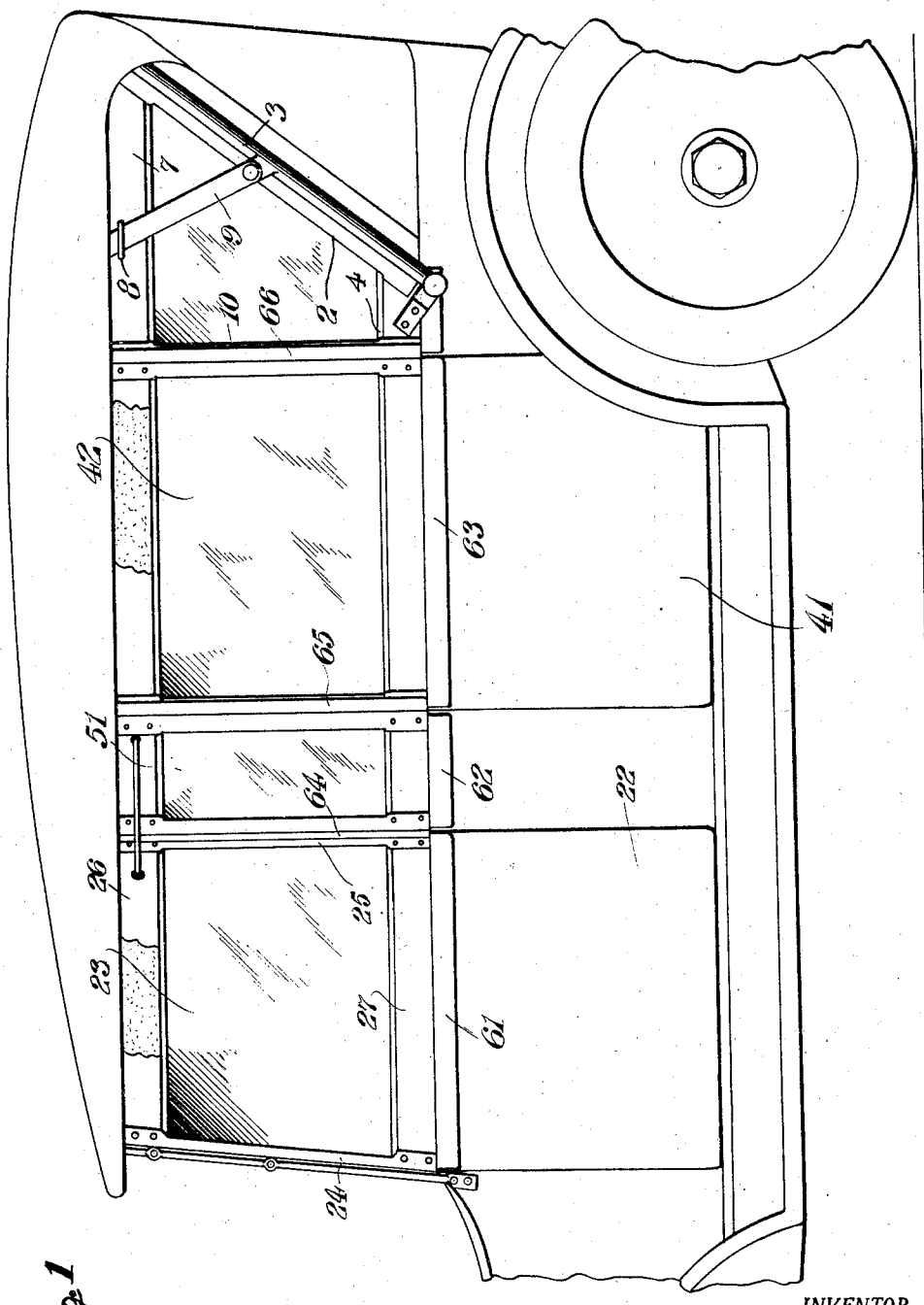


Fig. 1

INVENTOR.
Walter J. Spiro
BY
Emery, Booth, Janney & Varney
ATTORNEYS.

Sept. 9, 1930. W. J. SPIRO 1,775,539

CLOSURE FOR OPEN AUTOMOBILES

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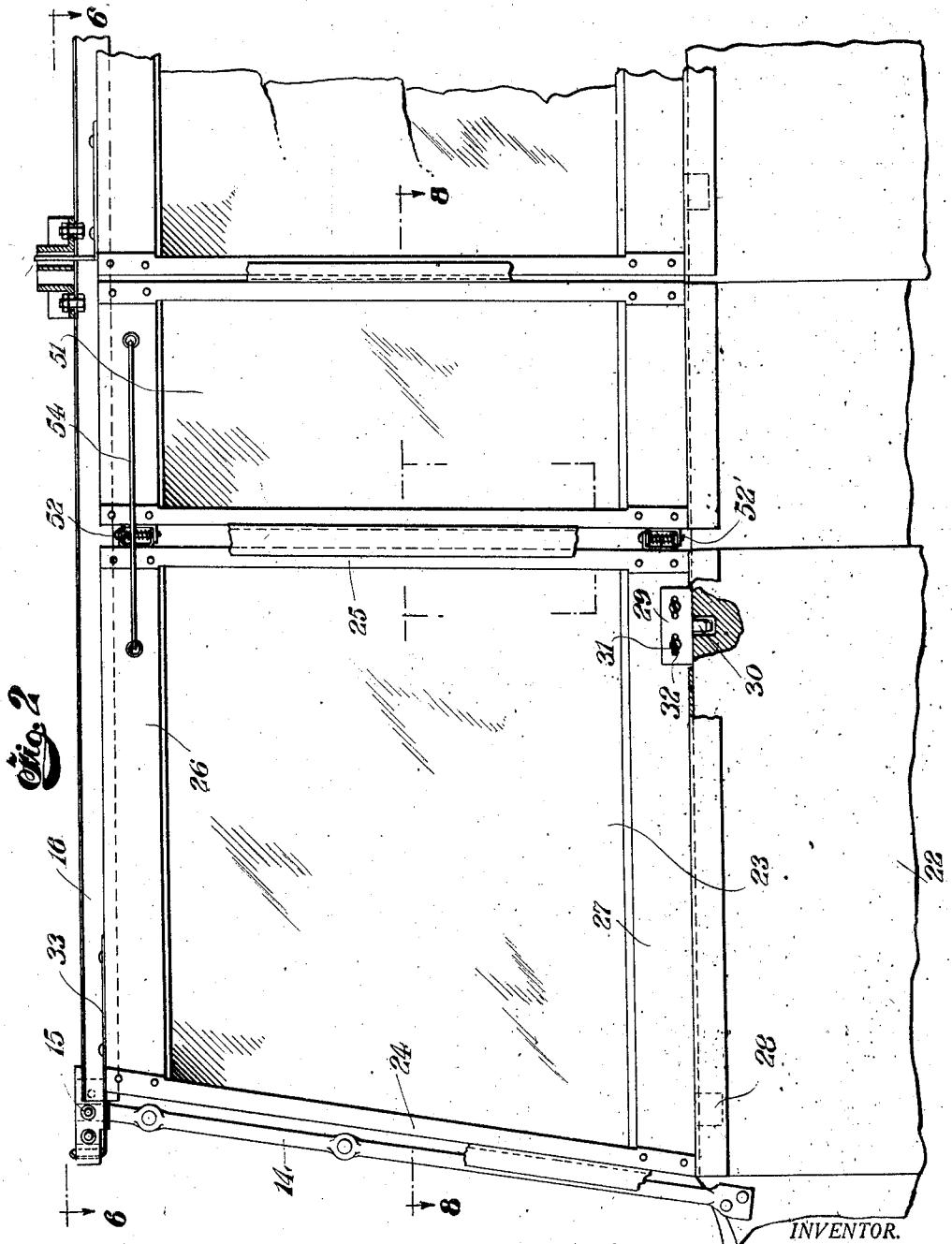


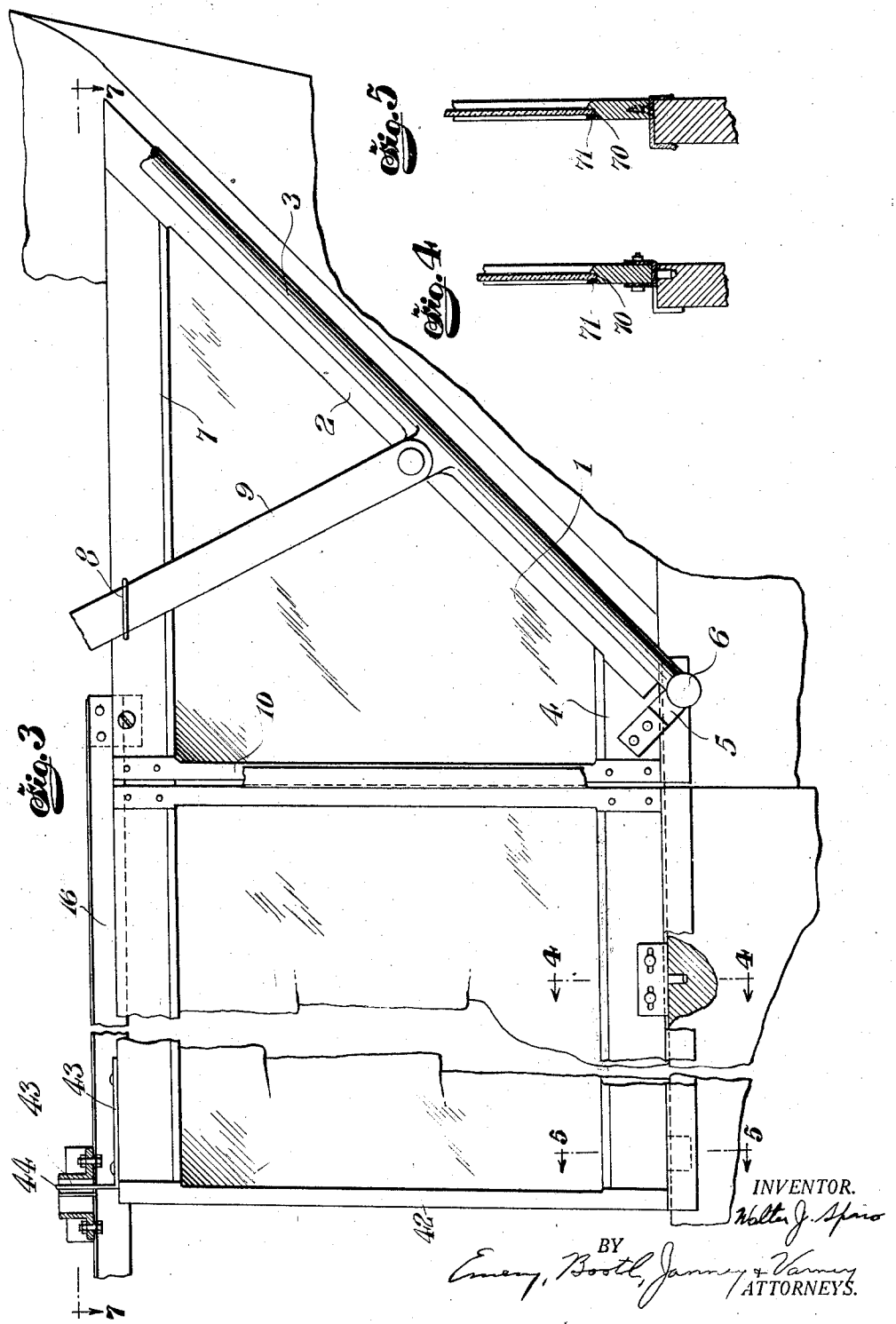
Fig. 2

INVENTOR.
Walter J. Spiro
BY
Emery, Booth, Janney & Varney
ATTORNEYS.

Sept. 9, 1930. W. J. SPIRO 1,775,539

CLOSURE FOR OPEN AUTOMOBILES

Filed July 12, 1926 5 Sheets-Sheet 3



INVENTOR.
Walter J. Spiro

BY
Emery, Booth, Janney & Varney
ATTORNEYS.

Sept. 9, 1930. W. J. SPIRO 1,775,539

CLOSURE FOR OPEN AUTOMOBILES

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Fig. 6

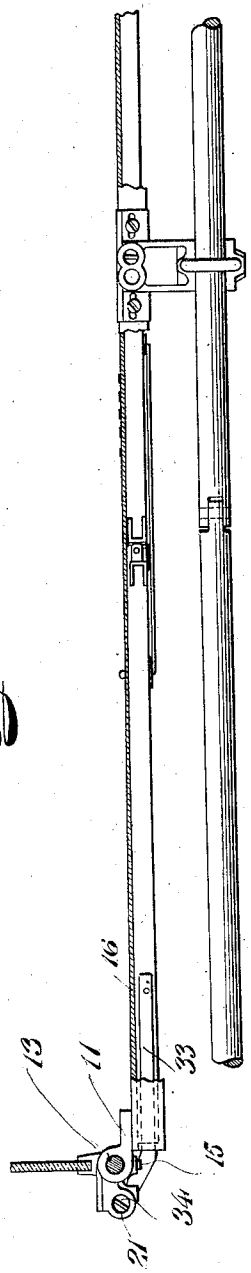


Fig. 7

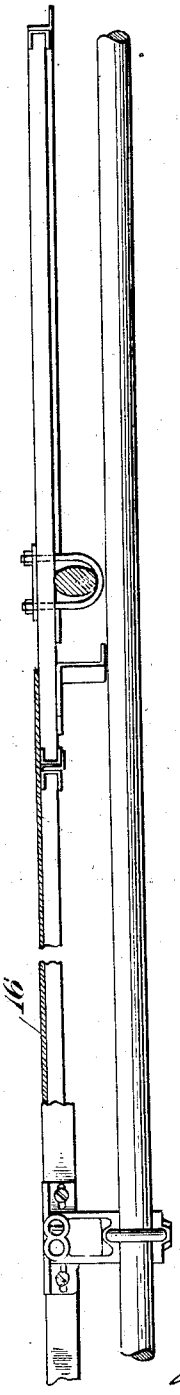
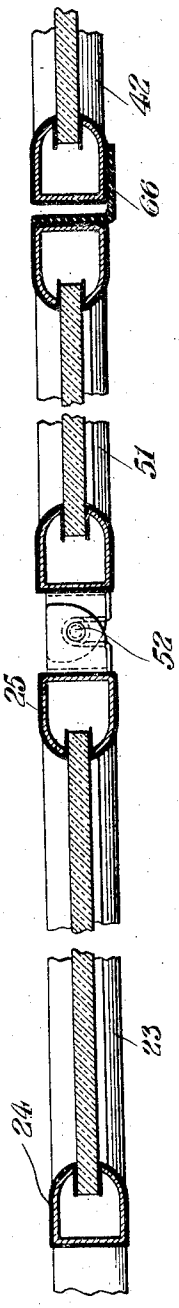


Fig. 8



INVENTOR.
Walter J. Spiro
BY
Emery, Booth, Janney & Varney
ATTORNEYS.

Sept. 9, 1930. W. J. SPIRO 1,775,539

CLOSURE FOR OPEN AUTOMOBILES

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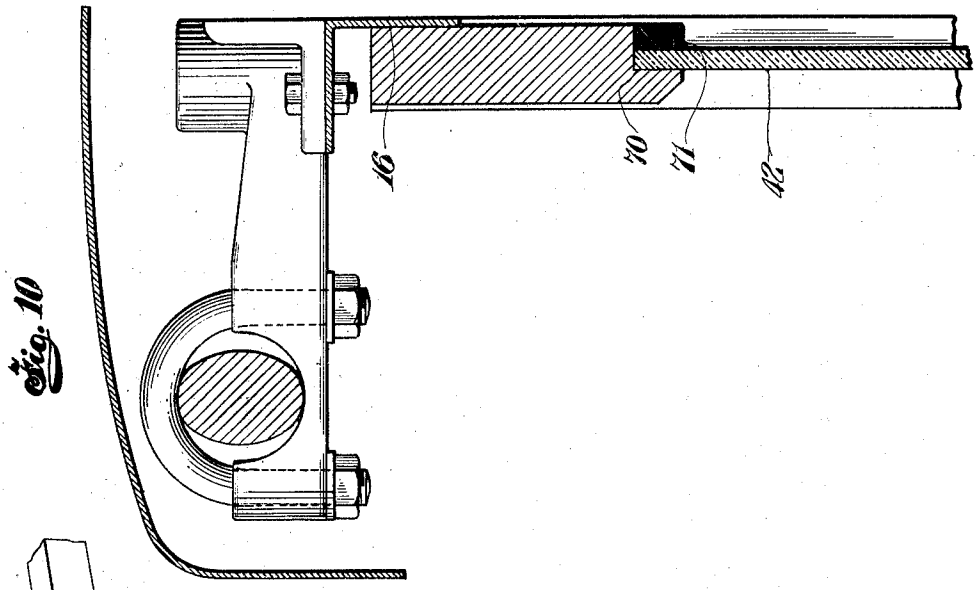


Fig. 10

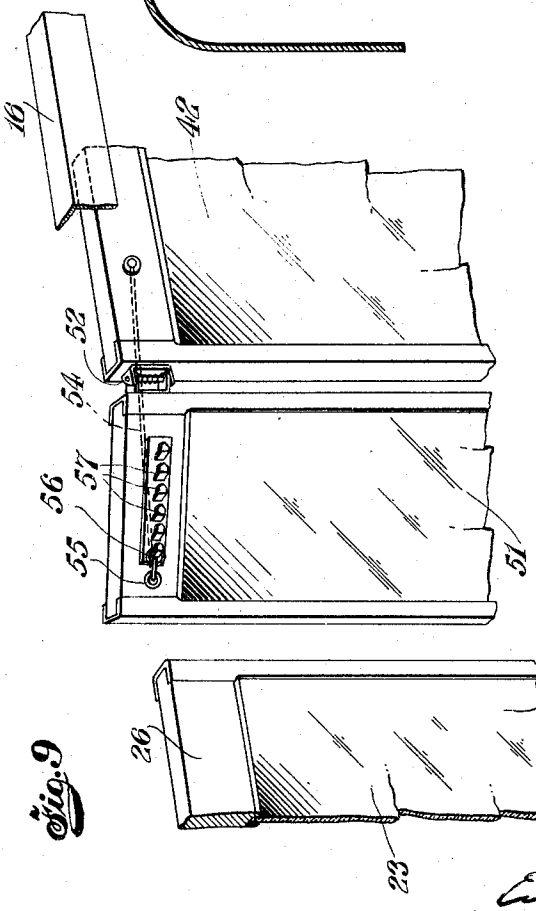


Fig. 9

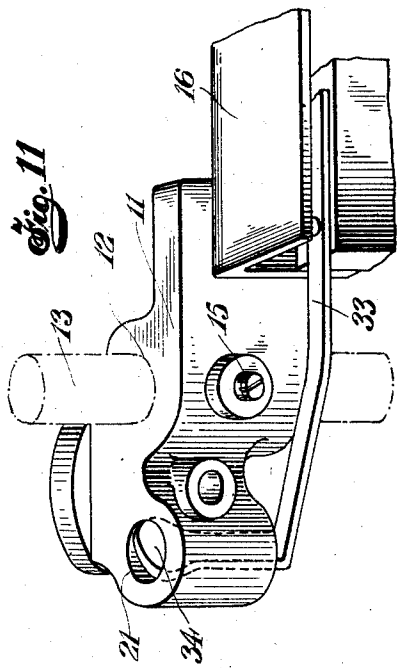


Fig. 11

INVENTOR.
Walter J. Spiro
BY
Emery, Booth, Jamieson & Varney
ATTORNEYS.

Patented Sept. 9, 1930

1,775,539

UNITED STATES PATENT OFFICE

WALTER J. SPIRO, OF WHITE PLAINS, NEW YORK

CLOSURES FOR OPEN AUTOMOBILES

Application filed July 12, 1926. Serial No. 121,785.

This invention relates to closures for open automobiles, and has as an object to provide an easily attachable and demountable set of panels which are adapted to cooperate with the usual collapsible or permanent top and wind shield to provide a complete enclosure giving substantially the comfort and protection from wind and rain provided by closed cars.

It is a further object of the invention to provide a construction which although substantial will be simple and may be manufactured at moderate cost.

Other objects and advantages of the invention will appear hereinafter.

A preferred embodiment of the invention selected for purposes of illustration is shown in the accompanying drawings, in which,

Figure 1 is a side elevation of a car with the panels attached.

Figures 2 and 3 are enlarged side elevations, certain parts being broken away to better illustrate the construction and mode of attachment to the car.

Figures 4 and 5 are sections on the lines 4—4 and 5—5 respectively of Figure 3.

Figures 6 and 7 are sections on the lines 6—6 and 7—7 of Figures 2 and 3.

Figure 8 is an enlarged section on the line 8—8 of Figure 2.

Figure 9 is a detail perspective view of the panels from the inside of the car.

Figure 10 is an enlarged sectional view on the line 10—10 of Figure 6.

Figure 11 is a detail perspective view.

Referring to the drawings, it will be observed that the enclosure provided is adapted to be used in cooperation with the ordinary collapsible or permanent top of an open automobile. At the rear of the car there is formed between the body and top a substantially triangular space in which is mounted a panel 1 also substantially triangular in shape. The said panel consists of a pane of glass or other transparent material held in a frame, one member of which, designated by 2, is adapted to lie along the inside of the usual bow 3 which supports the top. The bottom member 4 of the frame is adapted to fit over the upper edge of the body between the rear door and the bow 3, and a bracket 5 is secured to the frame having an aperture therein adapted to fit over the stud 6 which supports the bow 3, and may be retained thereon by means of a nut or pin in the usual manner. The top member 7 of the frame is provided with a shackle 8 which may be secured around the bow 9 to provide a substantially rigid support for the upper side of the panel. The front member 10 of the frame may consist of a channel bar attached in any suitable manner to the top and bottom members 7 and 4 respectively of the frame.

At the front of the car and mounted beneath the forward end of the top is a fitting 11 having a cylindrical aperture 12 therein adapted to fit over the stud 13 at the top of the usual wind shield support 14 and is adapted to be secured thereto by means of the screw 15. Fixed to the fitting 11 and supported thereby is one end of the angle iron 16 which extends longitudinally of the car, the other end being secured to the upper member 7 of the panel 1 as illustrated in Figure 3.

The fitting 11 is also provided with a vertically disposed cylindrical aperture 21 arranged on a line passing through the hinges supporting the front door 22 and forms in effect part of a hinge for the panel 23 which is secured to the door 22. The panel 23 consists of two side members 24 and 25 consisting of channel bars, preferably formed of metal having their outer edges turned inwardly to support the glass as described more particularly hereinafter. The side members 24 and 25 are secured to top and bottom members 26 and 27 preferably of wood, the bottom member having secured thereto a U-shaped metal fitting 28 adapted to fit over the upper edge of the door. At the back of the door the panel is provided with an up-turned U-shaped metal fitting 29 having a stud 30 adapted to fit into the usual apertures provided in the doors for holding curtain rods. If desired, the member 29 may be adjustably secured to the panel by means of the bolts 31 and slots 32. The top of the panel has secured thereto a flat metal strip 33 which is bent upwardly at its end to provide a tongue

34 to cooperate with the aperture 21 previously described. As will be observed, when the door 22 is swung open in the usual manner the panel 23 will swing with it, the top of the panel being supported by cooperation of the tongue 34 and the aperture 21.

The rear door 41 is provided with a panel 42 which is similar in construction to that provided for the front door. In order to support the top of the panel, a fitting 43 is mounted on the angle iron 16, said fitting having an aperture therein which is substantially aligned with the hinges of the back door. A strip 43 having its end bent upwardly to provide the tongue 44 is secured to the top of the panel 42, and said tongue cooperates with the aperture to provide a hinge supporting the panel.

The intervening section of the body between the front and back doors is protected by means of the panel 51 which is similar in construction to the panels 23 and 42. This panel is mounted on the panel 23 by means of the spring hinges 52 and 52′, the springs of which normally retain the panel in closed position with its bottom frame member overlying the upper edge of the body. Upon application of pressure from the inside, however, the panel 51 may be swung outwardly and provides a convenient opening through which the hand may be projected for signaling.

It may be desirable, however, to use the panels 51 for ventilation and, accordingly, the cord 54 is provided which may be attached to the panel 23 and which may pass loosely through the aperture 55 of the panel 51. The cord may be provided with a ring 56 which may be secured over any one of a series of lugs 57 attached to the panel 51 in order that the panel may be held open in any one of a plurality of positions of adjustment.

In order that the enclosure may not rattle when the automobile to which it is attached is driven over rough roads or streets, a strip of rubber or other suitable shock absorbing material may be laid over the doors and between the doors and other parts of the body and the panels, as for instance, the strips 61, 62 and 63. Also, in order that the cracks between adjacent panels may be protected, the strips 64, 65 and 66 may be provided, each strip extending from the top to the bottom of the panels.

As the construction of each of the panels of the enclosure is substantially the same except as regards dimensions, only one will be described in detail herein. For instance, the panel 23 comprises the two substantially vertical members 24 and 25 preferably formed of metal of channel shape having its edges bent inwardly as shown in Figure 8. The ends of the members 24 and 25 are secured by means of suitable bolts or screws to the substantially horizontal members 26 and 27 which may preferably be of wood. The outside surface of each of the metal members 24 and 25 may be covered with suitable fabric material such as imitation leather and the edges of this material may be permitted to lie within the channel members and between the pane of glass or other transparent material and the metal edge to act as a packing to prevent undesirable rattles or squeaks. The horizontal members 26 and 27 are grooved to provide ledges 70 as a seat for the glass and the glass may be conveniently held in place by strips 71 of wood, rubber, or other suitable material.

In assembling the panels it may be convenient to first form the outside frame consisting of the two horizontal and two vertical members after which the pane of glass may be inserted by sliding one edge thereof into one of the channels until the opposite edge can be received into the opposite channel. Then after centering the pane, strips 71 may be secured in place at the top and bottom to hold the glass securely in position. Whenever the panes are broken, they may be easily replaced in the same manner.

It is to be understood that the invention may be variously modified and embodied within the scope of the subjoined claim.

I claim as my invention:

In a closure device for open automobiles comprising a plurality of panels of transparent material, a ventilating device mounted between the front and rear doors of the automobile, means for hingedly attaching said ventilating device to an adjoining panel, and means for adjusting said ventilating device to any desired position, said means comprising a cord passing through apertures in the ventilating panel and in the panel to which it is hinged, a plate mounted on said ventilating panel, and a ring on said cord adapted to cooperate with any one of a plurality of lugs mounted on said plate.

In testimony whereof, I have signed my name to this specification this seventh day of July, 1926.

WALTER J. SPIRO.