Nov. 18, 1930. L. H. NICHOLSON 1,782,173

AUTOMOBILE DOOR OR WINDOW SCREEN

Filed May 7, 1928

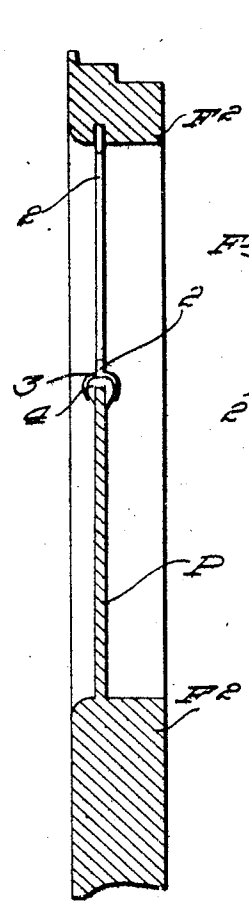


FIG. 1

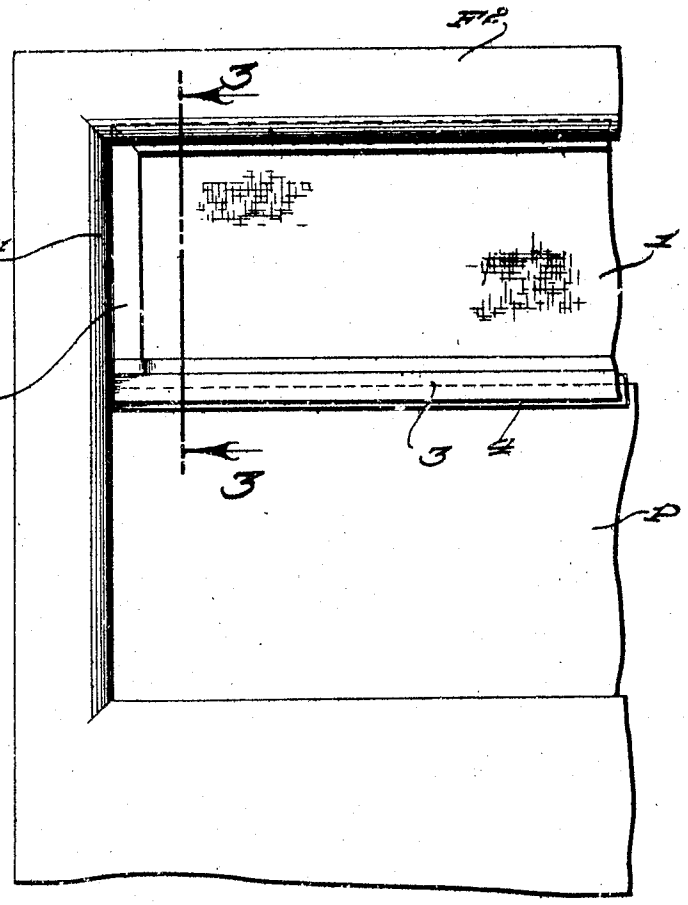


FIG. 2

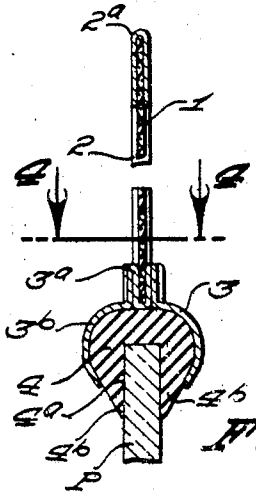


FIG. 3

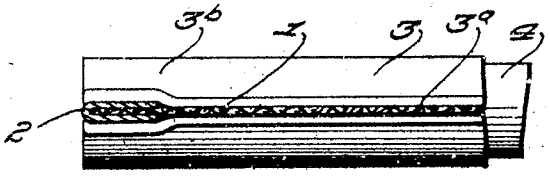


FIG. 4

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UNITED STATES PATENT OFFICE

LEONARD H. NICHOLSON, OF CHULA VISTA, CALIFORNIA

AUTOMOBILE DOOR OR WINDOW SCREEN

Application filed May 7, 1928. Serial No. 275,769.

My invention relates to automobile door or window screens and the objects of my invention are: first, to provide a device of this class which allows fresh air to enter the partially open door or window panes of a vehicle while excluding insects therefrom; second, to provide a screen which may be quickly mounted in position in the aperture between the partially closed door or window-pane and the frame thereof and which may also be readily removed therefrom; third, to provide a device of this class which will not jar loose when in position and which will not mar the glass pane on which it is mounted; fourth, to provide a device of this class which will partially exclude rain, wind and glare of the sun when positioned over the partially opened glass pane; fifth, to provide a device of this class which is economical of structure, simple in manufacture, requires little storage space and which will not readily deteriorate or get out of order.

With these and other objects in view as will appear hereinafter my invention consists of certain novel features of construction, combination and arrangement of parts and portions as will be hereinafter described in detail and particularly set forth in the appended claim, reference being had to the accompanying drawings and to the characters of reference thereon which form a part of this application, in which:

Figure 1 is an end view of my novel screen showing it mounted in position over a glass pane of a vehicle door or window, frame portions thereof being shown in outline; Fig. 2 is an elevational view of my novel screen mounted over a partially lowered window-pane; Fig. 3 is an enlarged fragmentary sectional view taken along the line 3—3 of Fig. 2; and Fig. 4 is a further sectional view taken along the line 4—4 of Fig. 3, showing the details of the structure of my novel screen.

Similar characters of reference refer to similar parts and portions throughout the several views of the drawings.

The screen 1, frame 2, channel member 3, and cushion member 4 form the principal parts and portions of my novel automobile screen.

The screen 1 is preferably made of conventional wire screen of suitable mesh for keeping out insects such as mosquitos, flies and the like. A substantially rectangular frame 2 which may be made of wood or of metal is provided for supporting the screen 1. The width of the frame 2 is made equal to the distance between the upright members F^1 of the conventional automobile door or window frame. The height of the frame may be made anything up to the distance between the horizontal frame members F^2 of the door or window in which the screen is to be mounted. In the illustration I show a screen of approximately one-half the dimension of the space between the horizontal frame member F^2.

The lower margin of the screen is provided with an inverted channel member 3 extending along the lower edge thereof. The width of the channel is considerably greater than the thickness of the glass pane P on which the screen is to be mounted so that space is provided therein for a suitable resilient member 4 having a rectangular channel or slot 4^a in the bottom thereof extending lengthwise therewith for receiving the upper margin of the glass pane P. The width of the slot 4^a is preferably made slightly less than the thickness of the glass pane and of sufficient depth to enable the cushion 4 to obtain sufficient grip on the pane to support the screen in a vertical position. The cushion is made preferably of resilient material such as rubber or felt in order to allow for the slight compression of the depending lips 4^b on insertion of the glass pane in the groove 4^a.

As previously pointed out the side margins of the screen frame 2 are substantially flush with the inner surfaces of the upright frame members F^1 of the glass pane P, thus allowing the screen to be readily mounted in position on the pane when the latter is lowered. The pane is then raised until the upper edge 2^a of the frame 2 enters the groove in the upper portion F^2 of the glass pane frame which normally receives the upper margin of the glass pane when the latter is entirely closed. Thus the screen is supported along its upper and lower margins

and is prevented from falling out of the aperture between the upper frame F^2 and the upper margin of the pane P. A slight vertical upward pressure may be exerted on the pane P in order to prevent the screen from rattling, the resulting compression of the cushion 4 taking up any vertical play of the screen.

In my preferred form illustrated in the drawings, the frame 2 is made of sheet metal strips folded double over the margins of the wire screen 1, as best shown in Fig. 3, and the lower channel portion 3 is made an integral part of the lower horizontal frame portion which consists of the contracted U-shaped channel portion 3^a adapted to receive the lower margin of the screen 1 and the bow-legged end portions 3^b forming the channel 3. It will be however readily understood that the frame 2 may be made of wood or other suitable material.

While I have described my screen as being applied to the door or window pane of an automobile it is obvious that it may also be applied to the vertically adjustable type of windshield of an automobile or other vehicle. I have thus provided a very easily mounted screen for the door and window panes of a vehicle, so that as conditions dictate, the vehicle may be quickly equipped with one or more screens. It is thereby possible to insure a satisfactory circulation of air in an enclosed vehicle while preventing entrance of insects, and also to provide a certain amount of shelter against rain, wind or glare.

While I have shown and described a certain construction, combination and arrangement of parts and portions, I do not wish to be limited to this particular construction, combination and arrangement but desire to include in the scope of my invention the construction, combination and arrangement substantially as set forth in the appended claim.

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

In a screen for placing within the opening formed by a lowered, vertically adjustable vehicle door or window pane, a screen, a unitary, rectangular frame, including upright and horizontal channel portions adapted to embrace the marginal portions of said screen, said upright portions adapted to fit snugly against the sides of said opening, the upper horizontal portions adapted to fit snugly within the slot normally receiving the upper margin of said pane when closed, the lower horizontal channel member having extended marginal portions, said portions being bent initially downwardly, then curved outwardly and downwardly, forming together a substantially U-shaped channel, a relatively soft, resilient channel member securely clamped within said U-shaped channel and forming depending lip portions for receiving and gripping the upper margin of said pane.

In testimony whereof, I have hereunto set my hand at San Diego, California, this 1st day of May, 1928.

LEONARD H. NICHOLSON.