April 12, 1932. P. V. HICKS ET AL 1,854,138

SCREEN ATTACHMENT FOR AUTOMOBILE WINDOWS

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Fig. 1.

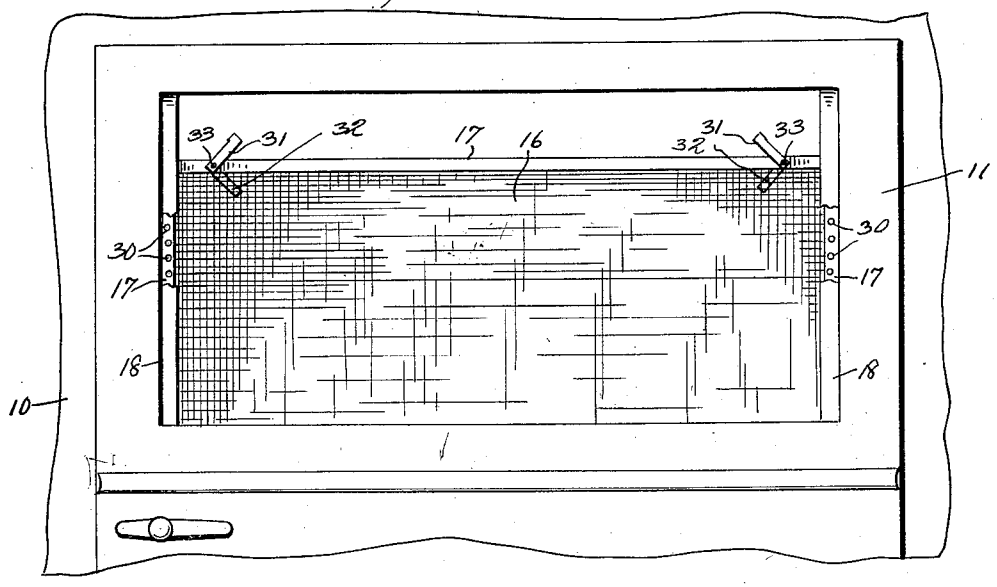
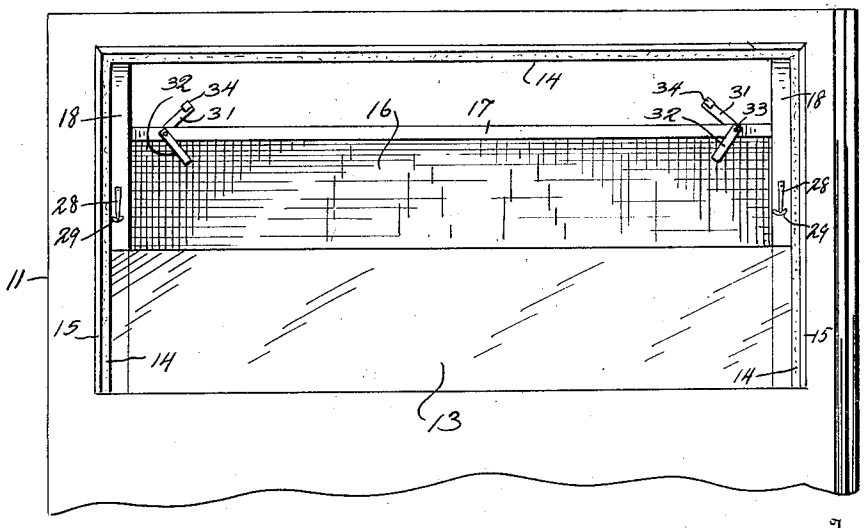


Fig. 2.



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Fig. 3.

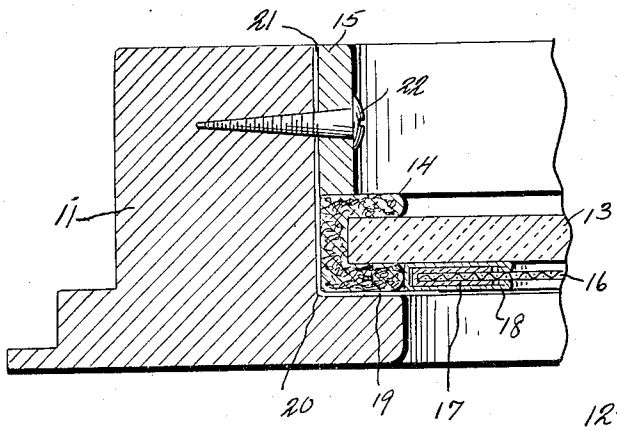


Fig. 4.

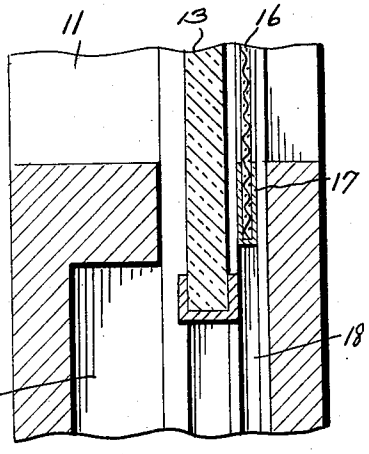


Fig. 7.

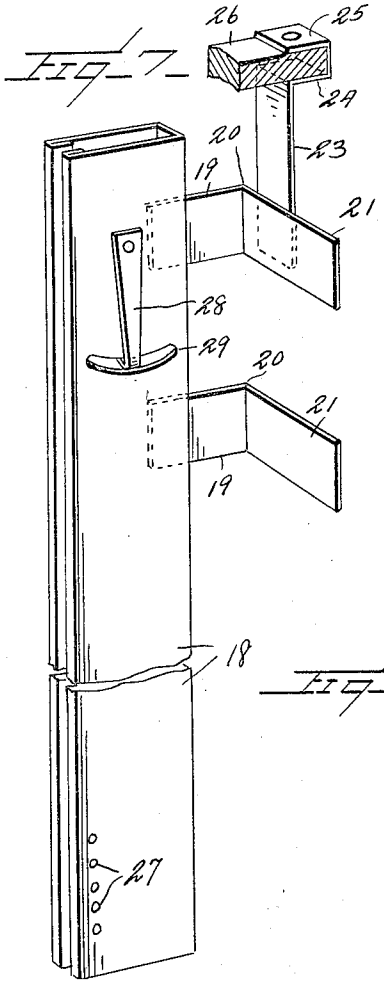


Fig. 6.

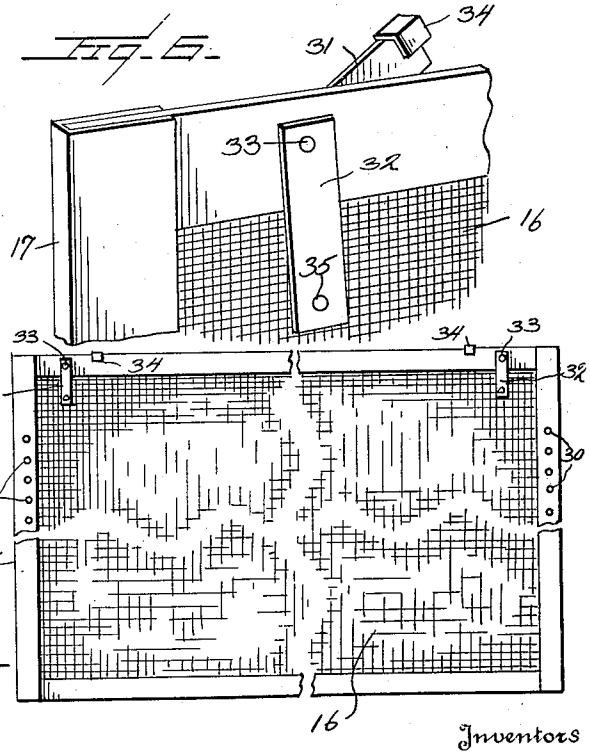


Fig. 5.

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UNITED STATES PATENT OFFICE

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SCREEN ATTACHMENT FOR AUTOMOBILE WINDOWS

Application filed June 4, 1931. Serial No. 542,122.

This invention relates to automobile windows and particularly to screening means therefor. The general object of the invention is to provide an attachment adapted to be applied to the windows and the doors of automobiles whereby a screen may be disposed exterior to the vertically sliding window, which screen is vertically shiftable independently of the window and when lowered is shifted into the space in which the window is ordinarily lowered when fully opened.

A further object is to provide means whereby the screen may be lifted and whereby it may be pulled down, this means being foldable into an inactive position over the screen when the screen is fully lowered.

Other objects will appear in the course of the following description.

Our invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a fragmentary elevation of an automobile door with its accompanying window and showing our screen attachment in place therein;

Figure 2 is an inside view of the structure shown in Figure 1;

Figure 3 is a horizontal section through the window casing and window showing our attachment in place therein;

Figure 4 is a fragmentary vertical section through the lower portion of the window casing and window and showing our attachment in place;

Figure 5 is a front elevation of the screen itself;

Figure 6 is a fragmentary perspective view of the screen at the upper end thereof;

Figure 7 is a perspective view of one of the guide channels.

Referring to these drawings, 10 designates generally the frame defining the opening for the usual automobile door, which door is designated generally 11. The door frame is formed to provide a compartment 12 within which the usual glass window 13 is adapted to be lowered so as to entirely open the window, the means whereby the glass pane may be raised or lowered having nothing to do with the present invention and, therefore, we have not illustrated any means for this purpose.

The window 13 operates within opposed channel-shaped strips 14 of felt or like material. In some makes of cars, these channel-shaped strips are held in place by metallic or wooden plates or stops 15 which are removable. So far, we have described the ordinary and common construction of an automobile door with a window therefor.

Our invention contemplates the positioning of a screen 16 exteriorly of the window and the provision of guides within which the side edges of the screen are disposed for vertical movement, these guides extending downward into the well or chamber 12 so that the screen may be lowered into this well or space 12.

The screen 16 may be made of any suitable screen fabric such as wire mesh and this fabric will be preferably reinforced at its edges by reinforcing strips or binding designated generally 17. The guides for the screen 16 are designated 18. Each of these guides is formed of a strip of metal bent to provide a channel, in other words, each guide is approximately U-shaped in cross section.

Extending laterally from each guide are metallic strips 19 which may be of any number but are shown as two in number, these strips extending laterally outward from the guide and then being angularly bent as at 20. The portions 21 extend between the felt window guide 14 and the outer wall of the casing 10 as shown in Figure 3. Where stops 15 are used, these supporting strips 21 extend beneath the stops 15 and are held in place by the pressure of the stops 15 against the outer wall of the casing, these stops 15 in front being held in place by screws or other attaching means 22. While this construction is all right for certain classes of cars, there are certain types of cars in which the felt channels for the window are not held in place by the stops 15 and to thus provide for the support of the guides 18, we form the laterally extending portion 21 of each upper strip 19 with an upwardly extending portion 23 which extends upward back of the felt strip 14 to the top of the

window frame. At the top of the window frame, it is angularly bent at 24 to extend over the top edge of the lateral portions of the window frame, this lateral extension being apertured for the passage of a nail or screw. One of these extensions may be bent to form a fold 25 to receive the lintle of the window frame, which lintle is designated 26.

In any event, the upwardly extending elements 23 extend upward beyond the felt channels 14 and are attached to the window frame by means of screws, nails or other means. To thus support the channels 18 in position, we contemplate that the members 23 shall be attached to the angular portions 21 and then if the make of car be such that these vertically extending portions 23 are not necessary, they can be cut off or bent downward out of the way.

Where this device is to be applied on certain makes of cars having the stops 15, then, of course, there is no necessity for the vertically extending portions 23.

For the purpose of limiting the downward movement of the screen within the channels 18, the lower ends of the channels are formed with the several perforations 27, in which pins or rivets may be placed to limit the downward movement of the screen. By having a number of these perforations, spaced from each other, half an inch apart, for instance, the degree to which the screen may be lowered may be adjusted to suit the depth of the space 12 and thus suit the make of automobile. For the purpose of holding the screen raised, there is mounted upon one of the channels 18, a spring projected latch 28. This is shown as being formed of a strip of resilient material riveted at its upper end to the inside face of one of the channels 18 and having its lower end angularly bent and projected through a slot 29. This slot is preferably laterally elongated so as to permit the spring latch 28 to be swung in one direction or the other slightly. The screen frame 17 on its lateral margins is formed with a plurality of perforations 30 with which the latch is adapted to engage.

Thus it will be seen that the screen may be raised or lowered to any desired extent and will be latched in place at any desired point by the latches 28. Preferably there are two of these latches 28, one disposed on each of the members 18. The latch 28 is mounted for swinging movement so that it may be engaged with any one of the openings 30 even though the screen itself be shifted slightly to one side or the other, or shifted out of line with openings 30.

For the purpose of raising and lowering the screen, we provide the swinging handles or lifts 31 and 32. The handles 32 are disposed upon the inside of the screen at the top thereof. The handles 31 are disposed upon the outside of the screen at the top thereof, these handles being connected for independent movement by both being mounted upon a rivet 33 extending through the upper bar of the screen frame. The handles 31 are provided with laterally projecting stop lugs 34 which permit the handles to be turned down parallel to the top bar of the screen frame but prevent any further depression. The handles 32 are provided with outwardly projecting lugs 35 whereby the handles may be grasped. When the screen frame is fully lowered into the well 12, the handles 32 will be turned down so as to be parallel to the upper bar of the screen frame. Then if it be desired to raise the screen, the handles are lifted and the screen is pulled up out of the well until the screen is nearly fully raised, when the handles 32 may be used for lifting the screen to its full distance. When the screen is fully raised, these handles 31 may be turned down again to the position parallel to the screen and frame so that they will not impede the full upward movement of the screen.

In lowering the screen, the handles 32 are used to pull the screen down until these handles are about to enter the well 12 and then the handles 31 are used to fully lower the screen into the well.

The extensions 23 are particularly designed to be used to hold the screen channels in place in types of automobiles having all metal doors which do not have the stops 15. For doors having these stops 15, however, these upward extensions 23 may either be cut off or bent back beneath the glass channel. Obviously in cases where these extensions 23 are too long, they can either be cut off or bent back so that they will not show and so as to fit the particular make of automobile. While we contemplate that the screen attachment, that is, the guides 18 with the screen itself shall be sold as an attachment, it will be obvious that this screen mounting may be initially built into the automobile. It is also obvious that slight changes in the details of construction might be made without departing from the spirit of the invention as defined in the appended claims.

The reason for mounting the channel-shaped screen guides on the angular strips 19 is that the guides themselves could not be inserted between the fabric guides for the window and the stops 15, but the thin metal supports 19 may be so inserted without any change in the structure of the window.

We claim:—

1. A screen attachment for automobile windows comprising oppositely disposed channel-shaped screen guides having angular strips attached to the bases of the channels and extending laterally therefrom and adapted to be disposed behind the fabric channels of an automobile window frame within said guides.

2. A screen attachment for automobile windows comprising opposite disposed channel-shaped screen guides, each guide having angular, laterally projecting strips attached to the bases of the guides and adapted to extend laterally outward into engagement with the frame of the window and then extend parallel to the face of said frame for attachment thereto, the upper angularly disposed strips of the guides having vertically extending portions.

3. A screen attachment for automobile windows comprising opposite channel-shaped screen guides, means carried by said guides whereby they may be mounted upon the window-frame of the automobile, a screen movable vertically between said guides, the screen having its lateral margins formed with a plurality of perforations and the guides having resilient latches to engage in said perforations to hold the screen in any vertically disposed position.

4. A screen for automobile windows mounted in said guides, and means whereby the screen may be raised or lowered comprising a pair of handles pivoted upon the outer face of the screen at the upper end thereof, and stops permitting said handles to be moved downward into parallel relation to the upper edge of the screen but preventing further downward movement, and a pair of coacting handles attached to the exterior face of the screen and attached at their upper ends to the upper margin of the screen, said handles constituting means for pulling the screen downward, the second named handles affording means whereby the screen may be pulled upward from the well into which it has been fully lowered.

5. A screen attachment for those automobile windows having a well for the reception of a vertically slidable window and having fabric channels attached to said window casing and extending downward into said well, the attachment comprising laterally disposed channel-shaped guides adapted to be disposed upon the exterior of the said fabric channels and to extend down into the well, each of the guides having laterally extending strips attached thereto to extend to the window casing and being angularly bent to extend beneath the fabric channels, the angularly disposed strips carrying means whereby they may be firmly engaged with the window frame.

6. A screen attachment for those automobile windows having a well for the reception of a vertically slidable window and having fabric channels attached to said window casing and extending downward into said well, the attachment comprising laterally disposed channel-shaped guides adapted to be disposed upon the exterior of the said fabric channels and to extend down into the well, each of the guides having laterally extending strips attached thereto to extend to the window casing and being angularly bent to extend beneath the fabric channels, the angularly disposed strips carrying means whereby they may be firmly engaged with the window frame, the channel-shaped guide having an aperture, and a spring attached to the face of the guide and having a prong extending into said aperture and adapted to engage a screen frame to hold the frame in any vertically adjusted position.

7. A screen attachment for those automobile window frames having a well for the reception of a vertically slidable window and having fabric channels attached to the window casing and extending down within said well, the attachment comprising laterally disposed channel-shaped guides adapted to be disposed upon the exterior of the fabric channels and to extend down into the well, each of said guides having laterally extending strips attached thereto to extend to the window casing and being angularly bent to extend beneath the fabric channels, one of said strips having attached to its angular end a vertically extending strip adapted to extend to the top of the window frame and be engaged therewith.

8. A screen attachment for automobile windows comprising oppositely disposed channel-shaped guides, and a screen vertically movable in the guides, each of said guides at its lower end being provided with a plurality of apertures disposed in vertical series adapted to receive a pin constituting a stop limiting the downward movement of the screen within the guides.

9. A screen attachment for automobile windows comprising oppositely disposed channel-shaped guides, each of said guides having an arcuate slot in its side wall, a resilient latching member attached to the side wall of the guide and having an inwardly extending prong, latching member being pivoted so that its free end may swing along said slot, and a screen coacting with the guide and having a vertical series of perforations in its ends with which said prongs on the resilient members are adapted to coact.

In testimony whereof we hereunto affix our signatures.

PHILLIP V. HICKS.
TOM N. HICKS.