May 15, 1934.

K. I. MILLER

1,959,137

AUTOMOBILE WINDOW SCREEN

Filed Sept. 20, 1933

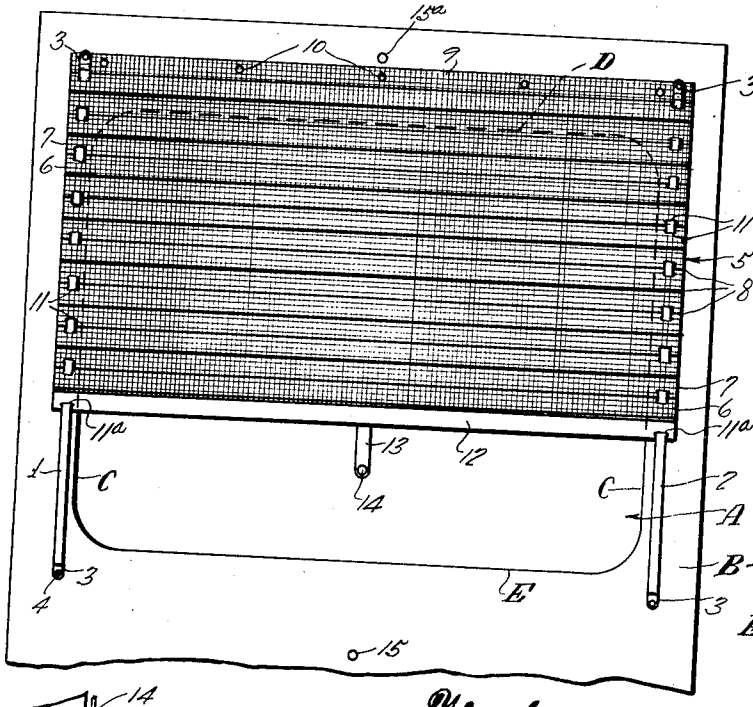


Fig. 1.

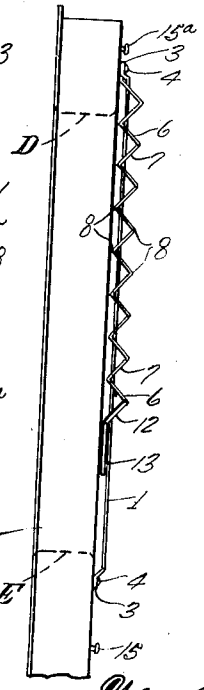


Fig. 2.

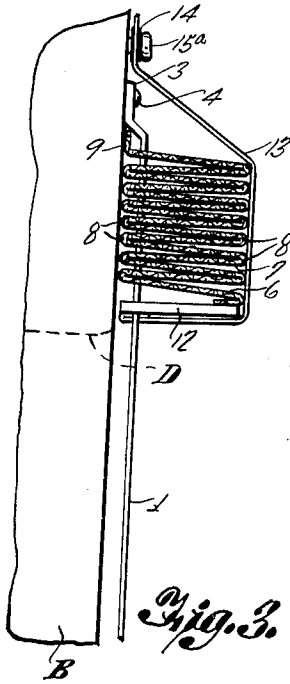


Fig. 3.

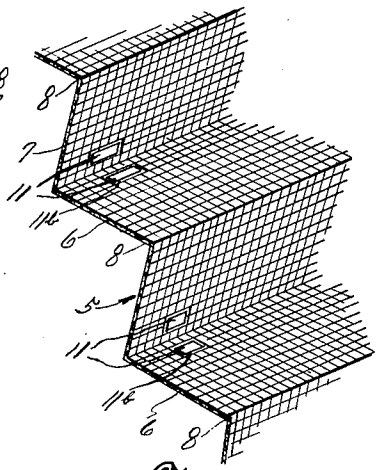


Fig. 5.

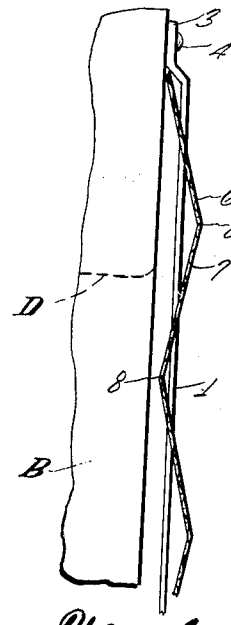


Fig. 4.

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# UNITED STATES PATENT OFFICE

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## AUTOMOBILE WINDOW SCREEN

Kinney I. Miller, Lancaster, Mo.

Application September 20, 1933, Serial No. 690,195

1 Claim. (Cl. 156—14)

This invention relates to automobile window screens, and the main object is to provide a structure or assembly wherein an accordion pleated or collapsible screen is mounted over the window so as to be readily collapsed into a compact and out-of-the-way form when not in use and then extended out flat over the window when in use.

Another object is to provide a screen of this kind which may be supported and mounted on the door in such manner that no supporting bars or other elements extend across the window opening to obstruct the view.

Another object is to provide a screen structure of simple and durable form, comprising an accordion pleated screen secured to the door along one edge parallel to the folds in the screen and having openings near the apices of each fold to slidably receive supporting strips or bars which are mounted alongside the window at right angles to the screen folds, whereby said folds are slidably supported by the strips and the screen may be collapsed toward its fastened edge or extended out over the window opening by pulling on its free edge.

With these and other objects in view, the invention resides in the novel details and assembly hereinafter fully set forth and claimed, reference being had to the accompanying drawing, wherein

Figure 1 is an inside elevation of an automobile door and window as provided with my screen, the screen being shown as partially extended over the window opening.

Figure 2 is an edge view of the structure shown in Figure 1.

Figure 3 is an enlarged fragmentary edge view of the screen as collapsed and not in use.

Figure 4 is a similar view of the screen in its fully extended position as in use.

Figure 5 is a fragmentary perspective view of one margin of the screen alone.

Referring now with more particularity to the drawing, the refernce character A designates the usual window opening in an automobile door B, in which opening the window glass (not shown) is slidably mounted in usual manner. In accordance with my invention, a pair of supporting strips, bars or rods 1 and 2 are mounted vertically alongside and spaced outwardly from the ends C of the window, the said strips having offset mounting feet 3 at their ends apertured to pass mounting screws or rivets 4 by which the strips are mounted, these offset ends spacing or throwing the strips outward from the face of the door B as shown.

A square or piece of screen wire 5 of suitable mesh and material is provided and is of such shape and size as to more than cover the window opening while flat, and this screen is then folded or pleated in the manner of an accordion bellows forming a plurality of parallel reversed folds or webs 6 and 7 joined by the oppositely turned creases or apices 8. This screen is fastened to the upper side of the door above the window edge D along one margin 9 parallel to the folds 6 and 7 by means of screws or rivets 10, and the folds 6 and 7 are provided adjacent their ends with openings 11 near the alternate apices 8 to receive the supporting strips 1 and 2 which are slidably extended therethrough. These openings 11 are formed only adjacent the inner apices or those next to the door, and sufficient space across or over the apices is left between the openings so that the screen is held on the strips as shown. A flat reinforcing or draw strip 12 is secured to the lower free margin of the screen and forms the lowermost fold or web thereof, being also slidably mounted on the strips 1 and 2 by openings 11*a* near its ends and lower edge. The openings 11 may be reinforced to prevent distortion or tearing of the screen by eyelets 11*b* (Figure 5) or by running a little solder around the openings.

So constructed and arranged, the screen may be readily collapsed upon itself toward the top of the window until it assumes a very compact form and the upper fastened edge 9 being located a sufficient distance above the upper margin D of the window opening A, the screen completely clears the opening when not in use. Then when its use is desired, the screen is pulled downward by its free edge until the folds 6 and 7 flatten out or substantially so, and the screen being of proper size the reinforcing strip and lower edge of the screen extend below the lower margin E of the opening, completely closing the window against ingress of insects and the like. During these operations the folds of the screens slide up and down or collapse and expand on the supporting strips 1 and 2 for which purpose the openings 11 and 11*a* are made sufficiently large to give the necessary play. Obviously, the screen may be arranged to collapse toward or expand from either end or the underside of the window by proper arrangement of the supporting strips and the fastened margin of the screen.

A flexible fastening tab or tag 13 is secured medially to the reinforcing strip 12 and carries at its free end a snap fastener socket element 14 or button hole adapted to engage a complementary fastener stud 15 mounted below the window opening A on the door B, whereby the screen may be

secured in its extended position. Another stud 15*a* is mounted above the window opening and the socket on the tab 13 may likewise be engaged with this stud to hold the screen in its collapsed position as shown.

While I have herein set forth a certain preferred embodiment of my invention, it is understood that I may vary from the same in minor details as necessary to best provide a practical device for the purposes intended, not departing from the spirit of the invention and within the scope of the appended claim.

I claim:

In combination with a window and frame, a pair of off-set supporting strips on the frame at opposite margins of the window, a pleated screen of reversely turned and connected webs with openings at the ends of the webs for slidably engaging the supporting strips, one marginal web of the screen being secured to the frame intermediate of the supporting strips, a rigid draw strip secured to the opposite free marginal web of the screen, the same having end openings for slidably engaging the said supporting strips, a flexible draw-tab on the draw strip, a socket member on the tab, and studs oppositely positioned on the frame for engaging the said socket member of the tab for holding the screen either extended or collapsed.

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