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SEPARABLE WINDOW SCREEN

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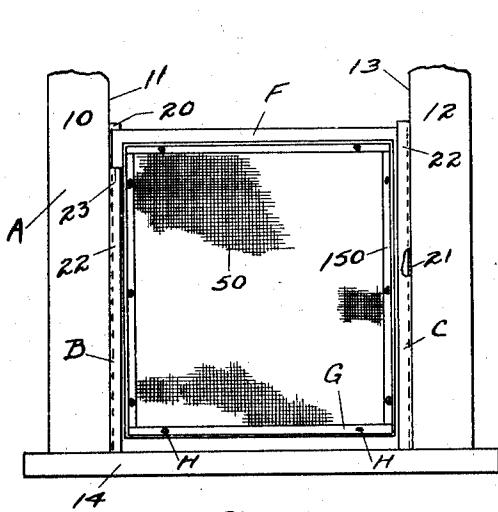


Fig. 1.

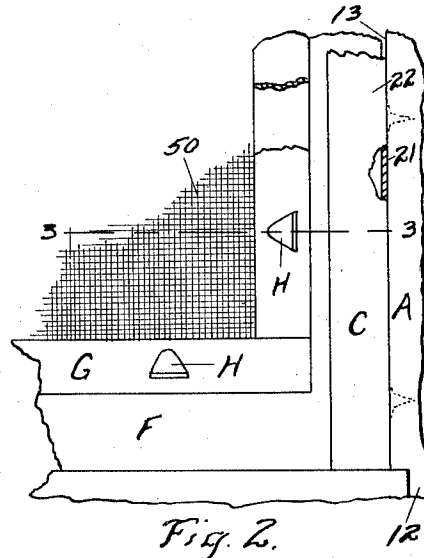
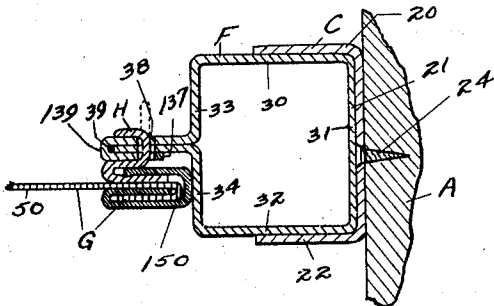


Fig. 2.



UNITED STATES PATENT OFFICE

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SEPARABLE WINDOW SCREEN

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This invention relates to what are known as window fly screens which are for the purpose of keeping out insects from a house.

My purpose is to provide a cheap, easily made metal screen but one which is strong and durable and which has few if any sharp points to cut the hands of anyone opening or closing the screen.

More particularly it is my purpose to provide such a screen wherein when the wire cloth wears out, it can be removed as a whole or as part of a removable panel, and instantly replaced by another.

In the drawings, Fig. 1 is an elevation showing the outside of a window with my preferred form of screen and preferred type of run-way in position.

Fig. 2 is an elevation substantially of full size showing part of a corner of such a screen with its run-ways in elevation.

Fig. 3 is a sectional view on the line 3—3 of Fig. 2.

Fig. 4 is a detail showing the rib and part of the frame of the removable panel very much enlarged.

Fig. 5 is a detail showing a different type of attaching clip.

Fig. 6 is a view similar to Fig. 4 on another modification.

In the drawings, A represents the outside of a window frame comprising the side members 10 and 12 and sill 14.

Oppositely disposed on the insides 11 and 13 of the side members 10 and 12 are the run-ways B and C which are attached in any usual way, as by nails 24.

Each run-way is formed of sheet metal bent to form a back or inside member 20, and a front or outside member 22 and a side member 21 through which the attaching nails are driven. Preferably the front 22 of one member B is cut away at 23 to permit the screen being readily put in position. These run-ways B and C extend about half way up the window frame.

My screen proper includes an outside frame F which is, in cross section, of substantially rectangular form, being shaped from sheet metal so as to provide a hollow body with the three sides 30, 31, 32 which fit into a run-way

and the other sides 33 and 34 being bent medially outward at 35 and 36 in the form of a short strip 35 and a long strip 36 which is bent around the raw edge 39 of the short strip and extends back at 37 almost to 34. This makes a holding rib of three thicknesses of metal and with the raw edge of 37 well in towards the body of the frame itself.

Through these three thicknesses, I form perforations 38 which are preferably of slot form, being longer than they are wide.

The other part of my screen is a removable panel indicated generally by G which is formed of screen fabric 50 crimped into a frame of sheet metal 150 which is folded around each edge such as 51 of the screen fabric, one edge 54 being inside the screen fabric and the next fold 53 being outside and terminating in the fold 52 which presents a raw edge 55, the parts being however so positioned that the raw edge 55 is inside the rounded edge 139 of the holding rib while the raw edge 137 of the long fold of the holding rib is inside the rounded edge 153 of the frame of the removable panel.

The parts are held together by means of a plurality of removable clips indicated by H, each of which is bent around at 60 so as to slip under the raw edge 55 and is thence bent back at 61 and outward at 62 where it passes through a perforation 38. 62 is then bent down as shown by the dotted lines in Fig. 4, thus removably holding the panel to the holding rib of the outside frame.

As shown in Fig. 5, I may use a frame K for the wire screen cloth 50 which is formed the same as in Fig. 4 except that instead of removable clips H, the metal is cut at 70, 70 so as to allow clips 71, 71 to be bent outward in such position that each can be passed through a perforation such as 38 thereby holding the panel in place in the outside frame.

I prefer to use clipping means made of some sort of sheet metal or other easily bent material passed through the rib perforations and connected in some way to the panel frame whereby the panel is detachably attached to the outside frame. Preferably such clips are not an integral or fixed part of the

outside frame because after a number of bendings they break and I prefer to have them detachable as shown in Figs. 4 and 6 or else part of the panel as shown in Fig. 5, as after being once bent into position and then bent back for removal they can be thrown away.

While I prefer to have various edges rounded and smooth and to have the clip passed under a raw edge of the panel it is obvious that various other constructions might be used as for instance that shown in Fig. 6.

In Fig. 6, L represents the outside frame having a holding rib made up of the bends or strips 70, 71, whose raw edges adjoin and through which are the rib perforations 72.

The panel M comprises the screen fabric 73 held by the U-shaped frame 74, 75 bent around the edges of 73 and having the perforations 76.

The removable clip P has the middle part 80 which passes through the perforations 72 and 76, and the ends 78 and 79 bent around flat and in towards the body of frame L.

I claim:

1. The combination in a window screen of an outside frame of substantially rectangular form so shaped of sheet metal as to provide a hollow body with a holding rib extending inwardly therefrom, said rib being formed of a short strip and a long strip bent around the edge of the short strip forming three thicknesses of metal and having perforations; with a removable panel comprising a screen fabric crimped into a frame of sheet metal which is folded around the edges thereof and which terminates on one side in a raw edge proximate the raw edge of the holding rib and nearer the outside frame than the bent part of the long strip; and a plurality of clips each bent at one end around and under said raw edge and each having its other end passed through a holding rib perforation from the side of the edge of the long strip of the holding rib and thence bent over against the holding rib.

2. The combination in a window screen of an outside frame of substantially rectangular form so shaped of sheet metal as to provide a hollow body with a holding rib extending inwardly therefrom, said rib having perforations; with a removable panel comprising a screen fabric crimped into a frame of sheet metal which is folded around the edges thereof and which terminates on one side in a raw edge; and a plurality of clips each bent at one end around and under said raw edge and each having its other end passed through a holding rib perforation.

3. The combination in a window screen of an outside frame of substantially rectangular form so shaped of sheet metal as to provide a hollow body with a holding rib extending inwardly therefrom, said rib having perfora-

tions; with a removable panel comprising a screen fabric crimped into a frame of sheet metal which is folded around the edges thereof; and clip means passed through the rib perforations and connected to the panel frame whereby the panel is detachably attached to the outside frame.

4. The combination in a window screen of an outside frame so shaped of sheet metal as to provide a hollow body with a holding rib extending inwardly therefrom, said rib being so formed as to have only one raw edge which is on one side and said rib having perforations; with a removable panel comprising a screen fabric crimped into a substantially rigid frame of sheet metal which is folded around the edges of the screen fabric in such manner that it has only one raw edge positioned at the side and proximate the raw edge of the outside frame; and a plurality of clips each bent at one end around and under the raw edge of the removable panel frame and each having its other end passed through a holding rib perforation and bent down outside said holding rib.

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