

D. P. MOORE.
WINDOW SCREEN.
APPLICATION FILED AUG. 3, 1911.

1,053,199.

Patented Feb. 18, 1913.

Fig. 1.

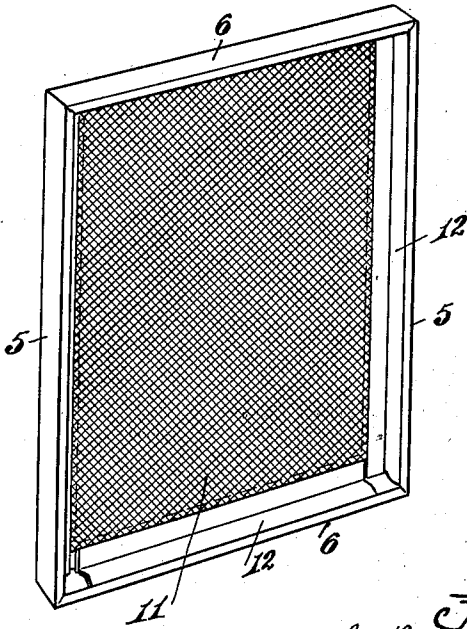


Fig. 2.

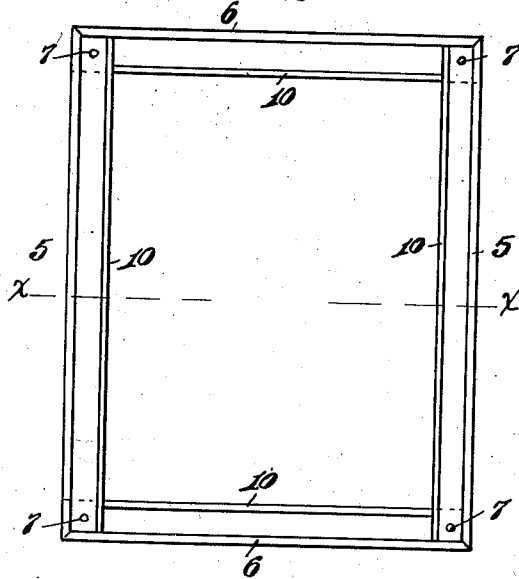


Fig. 3.

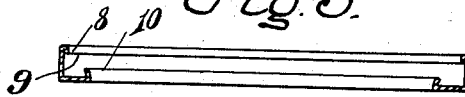


Fig. 4.

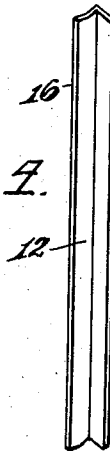
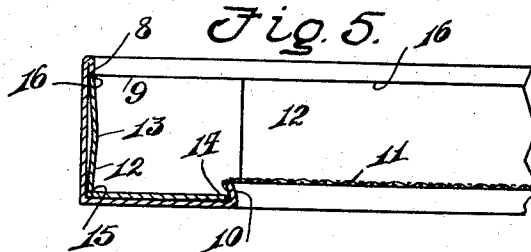


Fig. 5.



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UNITED STATES PATENT OFFICE.

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WINDOW-SCREEN.

1,053,199.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, DAVID P. MOORE, a citizen of the United States, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Window-Screens, of which the following is a specification.

My invention relates to metallic window screens, and particularly to that type in which the screen fabric may be easily and quickly renewed.

The object of the invention resides in the provision of means whereby the screen fabric will be effectively held in its frame without the use of nails or tacks, which require a considerable expenditure of time and labor for their removal before a new fabric can be applied or the old fabric removed, and to this end I provide a frame in which the screen fabric is securely held by binding members, which members in turn have a binding engagement with the frame so as to be readily and easily detachable, thus not only effecting a considerable saving of time and labor in applying the screen to the frame in the manufacture thereof, but also obviating the laborious method of renewing screens where tacks, nails and other permanent fastening means are used.

With these and other objects in view, my invention consists of certain novel features of construction hereinafter more specifically described and pointed out in the claims, it being understood that the embodiment of the invention as disclosed in the accompanying drawings is the preferred form thereof, and that certain changes may be made in the form and structure thereof without departing from or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a perspective view of a complete screen embodying my invention. Fig. 2 is a plan view of the frame. Fig. 3 is a sectional view of the frame taken on the line $x-x$ of Fig. 2. Fig. 4 is a perspective view of one of the retaining strips for securing the screen to the frame, and Fig. 5 is a fragmentary view showing in section the manner of securing the screen to the frame.

Referring now more particularly to the accompanying drawings, the frame of the screen is made up of side and end members 5 and 6, preferably of sheet metal cut into strips and bent at their longitudinal centers

so that the portions on either side of the bend will be at substantially right angles to each other, the angular form adding strength and rigidity to their structure and the frame as a whole, the strips being secured together at the corners of the frame by means of rivets 7, or being secured together in any other suitable manner, as by welding. Each of said angular strips have one of their edges folded over on itself, as at 8, to form a bead along the edge, and also to provide a shoulder 9, the purpose of which will be presently explained. The opposite edge of the strip is bent inwardly and slightly inclined toward the side portion of the strip, as at 10, and forming a flange upon which the screen fabric is placed with its marginal edges projecting beyond the same. Coöperating with the frame members for the purpose of binding the marginal edges of the screen fabric to the side of the flanges 10, are retaining strips 12, angular in form and having one portion thereof slightly curved or dished, as at 13, so that the same will yield under pressure applied to the longitudinal edge thereof.

In applying the screen fabric, the same is first cut to the proper size, so that its marginal edges will extend a short distance beyond the flanges 10. The edge of one of the retaining strips, of which there are four in number, is next placed on the marginal portion of the screen and pressure applied downwardly to force the fabric against the side of the flange and bind the screen against the same. As the width of the retaining strip from its corner 15 to its edge 14 is such as to normally snugly fit between the flange 10 and the side wall 5 of the frame, a very tight fit for the retaining strip results when the same is forced to place after the edge of the fabric is folded down over the flange, thus securely clamping the edge of the fabric to the side of the flange. The screen fabric is secured to the frame in this manner by retaining strips applied to each end and side of the frame. Owing to the fact that the angle of the flange 10 locks the edge 14 of the retaining strip thereunder so long as the corner 15 is held in contact with the corner of the frame strip, the retaining strip is securely and detachably held in locking contact with the frame by forcing the edge 16 thereof in engagement with the shoulder 8 of the frame, as plainly shown

in section in Fig. 5. This is accomplished by applying pressure to the edge of strip until it will pass under said shoulder, in doing which the plate is bent or buckled (see Fig. 5) and held in contact with the frame strip and its shoulder under tension, so that the same cannot be accidentally displaced. When in locking position the retaining strips reinforce the frame, giving the same a double construction, and permitting thin sheet metal to be used without sacrificing strength or rigidity of the frame structure. It will thus be observed that the screen fabric may be easily and quickly applied to and held secure in the frame by means of the retaining strips, and the latter being easily detachable from the frame the fabric may be quickly renewed when worn out.

20 Having thus described my invention, what is claimed is—

1. In a window screen comprising a frame L-shaped in cross-section and formed respectively with shoulders and flanges at its outer and inner edges, a screen fabric the marginal edges of which are bent down over

said flanges, and retaining strips L-shaped in cross-section adapted to engage said shoulders and flanges and bind the fabric against the latter, the outer members of said strips being flexed longitudinally so as to yield crosswise to permit their edges to be forced beneath said shoulders and held in contact therewith under tension.

2. In a window screen comprising a frame of L-shaped cross-section and formed respectively with shoulders and flanges at its outer and inner edges, a screen fabric the marginal edges of which are bent down over said flanges, and retaining strips L-shaped in cross section adapted to nest in close contact with said frame to form a double wall construction and engage said shoulders and flanges with their longitudinal edges to lock the strips in place and bind the fabric against said flanges.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID P. MOORE,

Witnesses:

FLOYD A. DEAHL,
WILLIAM R. NORRIS.