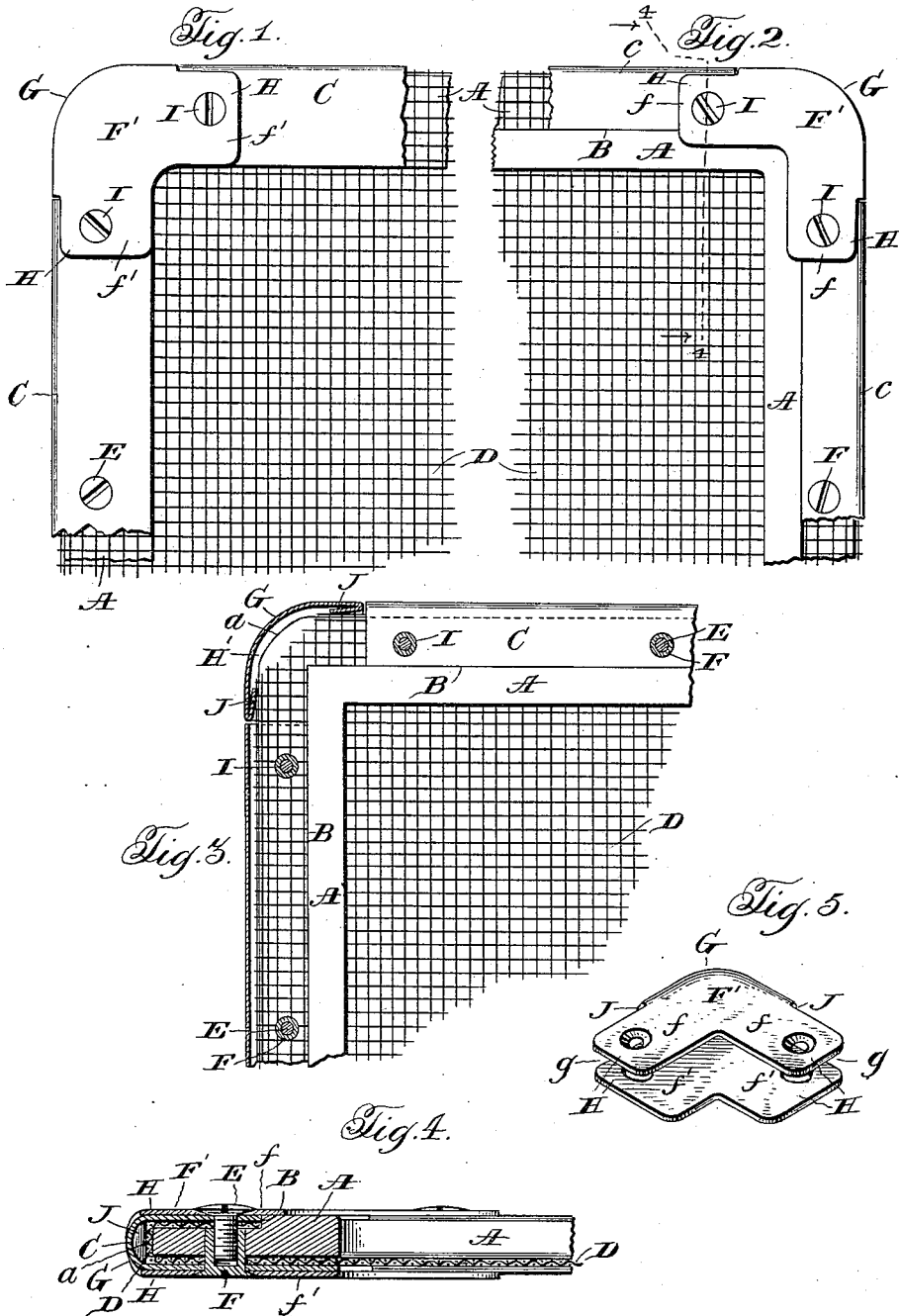


G. H. DAVIS.
SCREEN.

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UNITED STATES PATENT OFFICE.

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SCREEN.

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To all whom it may concern:

Be it known that I, GEORGE H. DAVIS, a citizen of the United States, residing at Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Screens, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in metallic fly screens and has for its primary object the provision of a screen enabling the use of the necessary frame and fastening or supporting sections, while providing for the structure as a whole a substantially continuous smooth or flush margin or edge.

I am aware that heretofore metal screens possessing the general characteristics to which my improvements appertain have been constructed in various styles, all of which require the utilization of corner pieces and which corner pieces I believe have invariably been slipped over, whereby to embrace adjoining portions of the frame and associated parts so that at least, to the thickness of the metal of which the corner pieces are formed the same projected outwardly beyond the plane of the adjacent edges of the frame construction. In use therefore, an open space is exposed between the bottom member of the screen frame and the base of the window and between the top member of the frame and the bottom rail of a sash resting thereon, and relatively sharp edges of the corner pieces presented to the base of the runways of the window impairing the expected free sliding action of the screen in said runways.

It is to overcome the disadvantages noted that my present invention has been devised, the same comprising a screen provided with a corner piece performing its usual functions, while at the same time lying within the plane of the edges of the screen frame and preferably flush with said edges.

A convenient embodiment of the invention consists of a window screen having a main body or frame usually rectangular in contour, U-shape metal retaining members embracing said frame to clamp therebetween the screen fabric, and corner pieces of angular outline, U-shape in cross section adapted to receive the corner of the frame body and having oppositely projecting flanges the connecting portion or web of which is cut

away to permit the flanges to overlie the screen fabric securing members and to permit the corner pieces to be forced inwardly over the frame a sufficient distance to bring its web or connecting edge flush with the edges of the adjacent securing members. Suitable fastening means may be employed to secure the parts permanently or removably in place.

The invention further contemplates in the embodiment thereof to which I have alluded, the bending in of the tongues constituted by cutting away the web or connecting edge of the flanges of the corner to constitute filling pieces or stops, assisting in preserving the corner in its flush relation to the margins of the other members of the screen frame.

For the sake of imparting a clear and full understanding of the invention I have illustrated in the accompanying drawing forming part hereof the preferred embodiment of the invention possessing the details above enumerated, and which latter will be apparent from the specific description hereinafter contained when read in connection with said drawings. It will be understood, however, by those skilled in the art, that the invention is capable of embodiment in still other forms and devices.

In the drawings: Figure 1 is an elevation of one corner of a screen made in keeping with the present invention. Fig. 2 is a similar view of the opposite surface of the screen. Fig. 3 is a sectional view through the corner showing the screen frame in elevation, Fig. 4 is a transverse sectional view through a pair of the flanges of the corner taken on line 4-4 of Figure 2, and Fig. 5 is a perspective view of one of the corners removed.

Referring more specifically to the drawings wherein like reference characters designate corresponding parts in the several views, A represents a rectangular continuous metallic frame constituting a permanent and rigid main body portion of the frame, the same being rabbeted on one surface, as at B for the accommodation of the shorter flange *c* of the U-shaped spring metal retaining members C, the opposite flange of which is co-extensive with the width of the body A.

D indicates the usual wire mesh or screen fabric bent over the body A into the rabbeted portion thereof and retained in place by the members C, the latter being fastened

against removal by headed screws E fitting complementary headed and threaded sockets F, the latter enabling separation of the parts for purposes of repair, etc.

5 As is clearly shown in the drawings, the end of the screen retaining members C terminate at points some distance from the corners of the body A of the frame and the frame is in turn rounded or cut away at the corner, as at *a* to facilitate the proper assembling of the corner pieces F' now to be described and enabling the provision of a rounded corner for the ultimate construction. As clearly illustrated each corner piece 10 is generally of right angle configuration conforming to the corner of the frame, U-shape in cross section, being somewhat narrow on one surface *f* to conform to the narrow flange of the retaining members C, the broader surface *f'* conforming to the opposite or correspondingly broader flange of said members as is obvious.

The connecting edge or web G of the corner is cut away, as at *g* to provide oppositely projecting separated end flanges H adapted to overlies the opposite surfaces of the adjacent ends of the retaining members C and permitting that portion of the web G which remains intact to be inserted into the 30 marginal space H' at the corner of the frame to bring the outer surface of said web flush with the adjoining margins or edges of the members C. Separable fastening devices I similar to those heretofore described for securing the retaining members C in place are passed through the flanges *g* and adjoining portions of the frame A and retaining devices C to detachably fasten the parts together.

40 To reinforce the ends of the web G against any inwardly crushing tendency and to constitute fillers assisting in maintaining the corners in proper shape and place, I turn inwardly the tongues J constituted by the cutting away of the web between the flanges, as clearly shown in Fig. 3. These turned in tongues also assist in properly assembling the corner in that they allow the corner to be pressed or clamped into position from the outside without necessitating the holding of the corner in place in flush relation to the members C, the tongues giving way only to the extent necessary, and then the apertures for the screw clamping 50 devices are bored and the clamps applied, it being understood that such boring is not contemplated until after the parts are properly assembled.

From the foregoing it will be appreciated 60 that I have provided a simple, strong construction possessing the necessary structural characteristics expected in screens of this character, while also presenting the additional advantage of the flush margin 65 throughout.

I claim:—

1. A screen of the character described comprising a body portion, the screen fabric, retaining strips overlying the body and screen fabric terminating at points 70 short of the corners of the body, and corner pieces adapted to embrace the corner of the body having separated flanged extensions adapted to be secured to the adjacent portions of the screen frame with the margin of the corner piece flush with the edges thereof. 75

2. A screen of the character described comprising a body portion, the screen fabric, retaining strips overlying the body and screen fabric terminating at points 80 short of the corners of the body, corner pieces adapted to embrace the corner of the body having separated flanged extensions adapted to be secured to the adjacent portions of the screen frame with the margin of the corner piece flush with the edges thereof, and tongues constituted by cutting away the web of the flanges projecting into the space between the web of the corner and the frame structure therewithin. 90

3. A screen of the character described comprising a body portion, the screen fabric, retaining strips overlying the body and screen fabric terminating at points short of 95 the corners of the body, and corner pieces completing the frame and secured to the retaining members in marginally flush relation thereto, web portions of the corner structure being cut away to provide securing flanges and to afford a space for the accommodation of the web of adjacent portions. 100

4. A screen of the character described comprising a body portion, the screen fabric, retaining strips overlying the body and screen fabric terminating at points short of 105 the corners of the body, and corner pieces completing the frame and secured to the retaining members in marginally flush relation thereto, web portions of the corner structure being cut away to provide securing flanges and to afford a space for the accommodation of the web of adjacent portions, and tongues constituted by the cut away portions projecting into the space between the web and the interior frame structure. 115

5. The combination with a screen frame, of a corner piece for the frame comprising a metallic member of angular contour, U-shaped in cross section provided with separated flange extensions, substantially as and for the purpose described. 120

6. The combination with a screen frame, of a corner piece for the frame comprising 125 a metallic member of angular contour, U-shaped in cross-section provided with separated flange extensions constituted by cutting away a portion of the web, the tongue portion formed thereby being bent inwardly 130

beneath the remaining web portion, substantially as described.

7. The combination with a screen frame, of a corner piece for the frame comprising
5 a metallic member U-shaped in cross section provided with separated flange sections constituted by cutting away a portion of the web, the tongue portion formed thereby being bent inwardly beneath the remaining
10 web portion, substantially as described.

8. The combination with a screen frame, of a corner piece for the frame comprising a metallic member having a side portion and a marginal portion, and a flange extension
15 constituted by cutting away a part of the marginal portion, the tongue formed thereby being bent inwardly relative to the remaining part of the marginal portion, substantially as described.

20 9. A screen of the character described,

comprising a body portion, screen fabric, retaining strips overlying the body and screen fabric terminating at points short of the corners of the body, corner pieces adapted to embrace the corners of the body having
25 separate flanged extensions adapted to be secured to the adjacent portions of the screen frame, and a member interposed between the web of the edge of said corner pieces and the frame structure therewithin to hold
30 the margin of the corner piece flush with the edges of the adjacent portions of the screen frame.

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

GEORGE H. DAVIS.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."