No. 885,726. PATENTED APR. 28, 1908.

C. M. CONKLIN.

WINDOW SCREEN.

APPLICATION FILED JAN. 25, 1907.

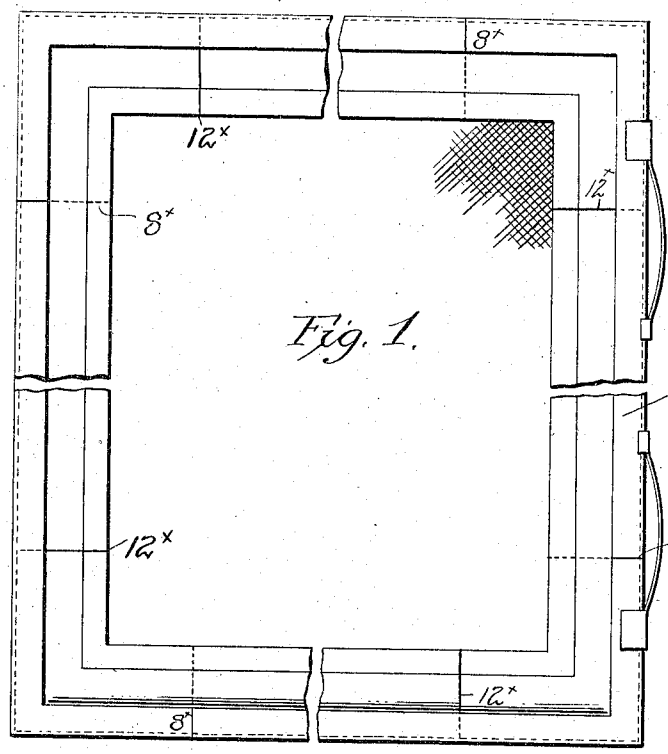


Fig. 1.

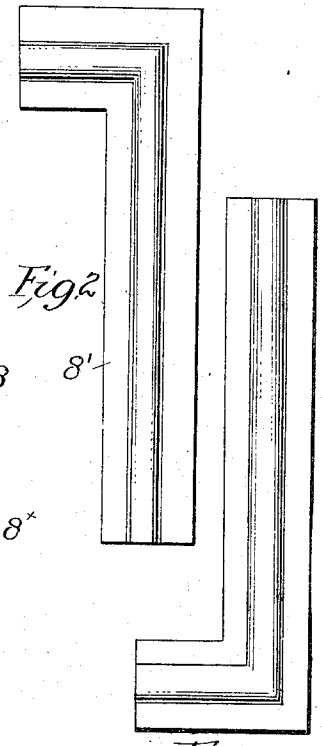


Fig. 2.

Fig. 3.

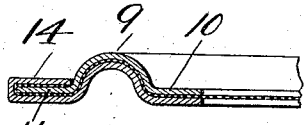


Fig. 7.

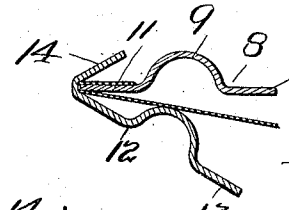


Fig. 6.

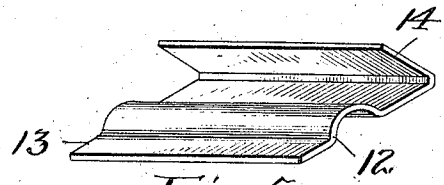


Fig. 5.

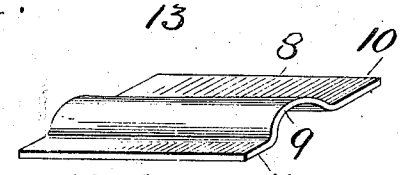


Fig. 4.

Attest
Edward N. Sarton
H. A. Farnham

Inventor
Charles M. Conklin

by Spear, Middleton, Donaldson & Spear
Attys.

UNITED STATES PATENT OFFICE.

CHARLES M. CONKLIN, OF CINCINNATI, OHIO, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE LUNKEN STEEL WINDOW CO., A CORPORATION OF OHIO.

WINDOW-SCREEN.

No. 885,726. Specification of Letters Patent. Patented April 28, 1908.

Application filed January 25, 1907. Serial No. 354,027.

To all whom it may concern:

Be it known that I, CHARLES M. CONKLIN, citizen of the United States, residing at Cincinnati, Ohio, have invented certain new and useful Improvements in Window-Screens, of which the following is a specification.

In an application for Letters Patent of the United States, of even date herewith, I disclose a window screen or fabric holding frame in which the screen cloth is stretched after the frame is made up and the screen cloth clamped therein by changing the formation of the clamping members to secure a relative separating movement of the opposite sides of the frame to thereby produce a tightening effect on the screen cloth. This change in the formation of the screen frame consists, in the invention disclosed in said application, of forming a corrugation in the metallic frame members intermediate of their width so that the margins at which the screen cloth is clamped will be drawn outwardly in respect to the center of the frame and thus stretch the screen cloth.

In my present improvement I provide the corrugation in the clamping members before they are assembled and united together and the screen cloth being introduced between them, and held by its edge between the members, they are then closed one upon the other and the screen cloth being forced into the concavity of the corrugation of one member by the convex side of the corrugation of the other member the screen cloth will be drawn upon and stretched to the desired extent, and the parts will then be locked in this relation.

Another feature of my present invention relates to the construction of the frame of sectional members, the sections of each member having short and long legs and breaking joints with the sections of the other member, the frame being completed without fastening devices or any means other than the engagement of the overlapping sections and no miter joints being present in the frame and no joints of any description at the corners.

The invention is illustrated in the accompanying drawings in which,

Figure 1 is a front view of a screen embodying my invention. Fig. 2 is a view of one of the sections of one frame member. Fig. 3 is a similar view of one of the sections of the other frame member. Fig. 4 is a perspective view of a portion of one of the frame members. Fig. 5 is a perspective view of a part of one of the other frame members. Fig. 6 is a cross sectional view of the frame members with the screen cloth in place, held by its edge and ready to be stretched and clamped simply by the act of closing the members. Fig. 7 is a view of the frame members in closed and united relation.

In these drawings 8 represents one frame member having, previous to its assembling with the screen cloth and the other frame member, a corrugation or groove 9. This groove is formed substantially centrally of the width of the member leaving the plain flanges 10, 11, on opposite sides, respectively, of said corrugation.

The coöperating frame member comprises the part 12 also centrally corrugated to fit into the corrugation of the other member and having upon one side of its corrugation a plain flange 13 while upon the other side the flange has an angular extension 14, which extension, in the particular form of my invention illustrated herein, forms an acute angle with the main part of the flange.

In assembling and uniting the parts the screen cloth is laid across the member 8 extending over the groove or concave side of the corrugation therein, and its edge is bent around the outer edge of the flange 11 and is laid along the opposite face of said flange. The member 12 is then placed in position, as shown in Fig. 6, with the angle of its flanges upon the edge of the flange 11 and then by closing the members together as shown in Fig. 7 the screen cloth will be drawn over the face of the flange 10 down into the channel of the corrugation 9, and in this action it will be first stretched and then clamped in position. During this action it will be noticed that it will be held firmly at its edge by passing around the edge of the flange 11 and by the engagement of the angular flange of the other member which bears upon the cloth at this point. The final closed relation of the parts is shown in Fig. 7, in which it will be seen that the angular flange 14 is folded or pressed down close to the face of the flange 11 with the screen cloth interposed.

By reference to Figs. 1, 2 and 3 it will be seen that the screen frame members 8 and 12 are each formed in sections. These sections, in the present embodiment of my invention I show of right angular form, each having a long and a short leg. In assembling the sec-

tions of the members the joints of one frame member are arranged so as not to register with the joints of the other frame member. In other words they are arranged to "break" joints.

The sections 8′ of the frame 8 extend between the points $8^{\times}$ while the sections of the member 12 extend between the points $12^{\times}$ Each section therefore extends with its longer leg along one side of the frame to the corner thereof and with its short leg extending from said corner part way along the adjacent side of the frame overlapping the adjacent section of the other frame member. The parts of the frame may be held together merely by the grip of the flanges of the member 12 about the flange of the member 8 or suitable fastening devices may be employed.

It will be understood that I do not wish to limit myself to the use of my invention to window screens as it may be applied to any analogous use, where a fabric is to be held in stretched condition.

I claim as my invention:—

1. An article of the class described comprising frame members adapted to be placed together by moving one pivotally in relation to the other, the said members having means for gripping the fabric first at their outer portions during said pivotal movement, and having means which when the frame members are closed one upon the other stretch the fabric, said frame members being combined with other frame members at the other side of the frame which hold the fabric while being stretched substantially as described.

2. In combination, frame members having means for gripping the fabric first between their outer portions against movement inwardly, the said members having corrugations, one fitting within the other, whereby when the members are closed one upon the other they press the fabric laterally and stretch the same, said frame members being combined with other frame members at the other side of the frame which hold the fabric while being stretched substantially as described.

3. In combination in an article of the class described, a frame member having a groove and a second member having a projection to enter said groove, said members having outer interlocking flanges gripping the fabric between said outer flanges and between the projection and groove and said members being held together by said interlocking flanges, substantially as described.

4. In combination in an article of the class described, a frame member having a corrugation with the plain flange on each side thereof and the coöperating member having a corrugation to enter that of the member first mentioned, and having a flange to lie upon the plain flange with an extension 14 to embrace the said plain flange of the first mentioned member, and the fabric extending between the members and between the interlocked flanges, substantially as described.

5. An article of the class described, comprising two members, each made up of a plurality of sections, each section having an intact portion extending around the corner, lapping upon and breaking joints with the sections of the other member, said sections constituting the entire frame substantially as described.

6. In combination in an article of the class described, the two frame members each composed of a plurality of sections, each of which has a long and a short leg and lapping upon the reversely positioned similarly constructed sections of the other frame, said sections breaking joints, extending around the corner and lapping upon and breaking joints with the section of the other frame member, substantially as described.

7. In combination in an article of the class described, the two frame members each composed of a plurality of sections, each of which has a long and a short leg and lapping upon the reversely positioned similarly constructed sections of the other frame, said sections extending around the corner and lapping upon and breaking joints with the sections of the other frame member, interlocking flanges on said members, said frame members being held together by the grip of their interlocked flanges, substantially as described.

8. In combination in a frame, the two members each composed of a plurality of sections, each section having legs integrally connected at the corners and lapping upon the legs of the section of the other member and breaking joints therewith at points away from the corners, substantially as described.

9. In combination in a frame, the two members each formed of a plurality of sections extending around the corners, said sections having long and short legs and lapping upon and breaking joints with the sections of the other member and the sections of one member being reversed in position respecting their long and short legs, relative to the sections of the other member, substantially as described.

10. In combination in a frame the two members each formed by a plurality of sections having integral portions extending around the corners and overlapping and breaking joints, the sections of one member being clamped at their outer edges with the sections of the other member, substantially as described.

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

CHARLES M. CONKLIN.

Witnesses:
ALBERT F. KLAYER,
EDWIN E. KAISER.