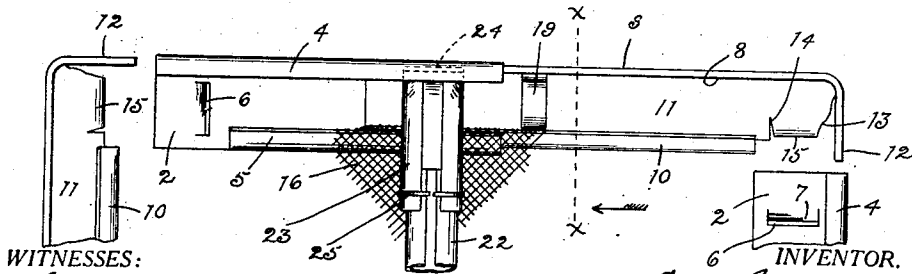
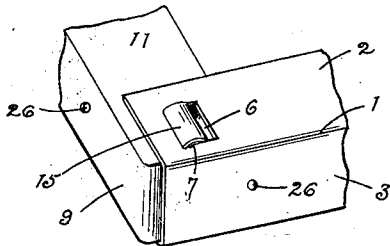
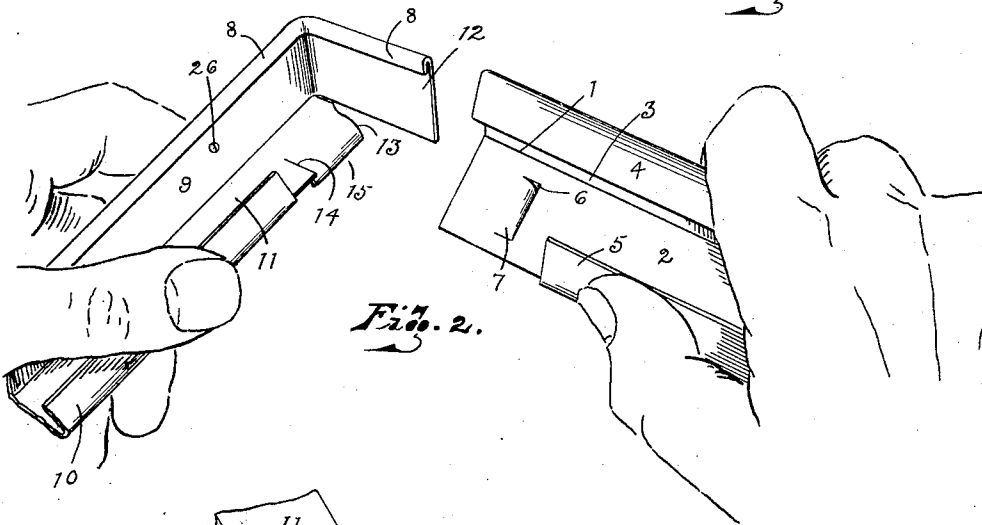
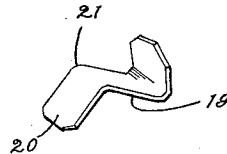
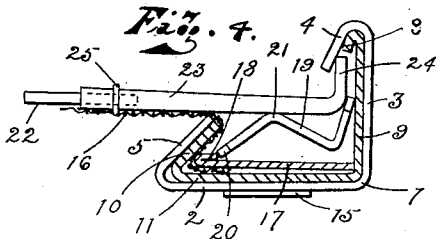


S. G. ANDERSON.
WINDOW SCREEN FRAME.
APPLICATION FILED APR. 15, 1916.

1,220,163.

Patented Mar. 27, 1917.



WITNESSES:
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Fig. 1.

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SWAN G. ANDERSON, OF VIRGINIA, MINNESOTA.

WINDOW-SCREEN FRAME.

Specification of Letters Patent. Patented Mar. 27, 1917.

1,220,163.

Application filed April 15, 1916. Serial No. 91,453.

To all whom it may concern:

Be it known that I, SWAN G. ANDERSON, a citizen of the United States, residing at Virginia, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Window-Screen Frames, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to frames for windows and especially to such upon which wire screen is stretched and placed within window openings to act as a barrier to flies, mosquitos and the like.

The principal object in view is to provide a frame of this character composed wholly of metal made of a plurality of unassembled interlocking and telescoping parts that may be obtained in such knock-down form and subsequently assembled by the purchaser in such a manner as to perfectly fit his individual requirements.

Another object is to provide such a frame wherein the only tool necessary in assembling same is a hammer.

Other objects and advantages will appear in the further description of the device.

In the accompanying drawings forming part of this application and in which like reference characters represent like parts:

Figure 1 is a plan view of the interlocking parts of the frame.

Fig. 2 is an illustration of the method of assembling a corner of the frame.

Fig. 3 is an under side perspective view of one of the corners of the frame after being assembled and clenched.

Fig. 4 is a cross section taken on the line $x-x$, Fig. 1 looking toward the center cross bar, and

Fig. 5 is a perspective view of one of the fastening clips.

In Fig. 1 one complete side of the frame is illustrated and having adjacent the ends thereof, the fractional ends of each cooperating side, it being understood that the construction of the four sides are identical.

Each side of the frame is composed of a female member formed of a flat piece of sheet metal bent longitudinally at right angles as at 1 forming a horizontal floor portion 2 and vertical wall portion 3. The extreme upper edge of the wall 3 is bent inwardly and downwardly forming a longitudinal flange 4 at an angle to the wall 3.

The free edge of the floor 2 is also turned

inward forming a flange 5 similar to the flange 4 though whose angle to the base 2 is greater than that of the flange 4 to the wall 3.

The end of the female member which is designed to receive one end of the male member forming the adjacent side of the frame is provided with an opening 6 across the floor thereof, formed by cutting three sides of the depending tongue 7 therefrom and spaced a distance from the end, and the flange 5 terminates a distance from the extreme end just equal to the width of the floor of the male member.

The male member which snugly telescopes within the female member and completes one side of the frame, is formed in cross section identical with the female member, except being just sufficiently smaller to properly fit therein and that the upper flange 8 thereof may not necessarily be as extensive but preferably at least sufficient to form a smooth non-cutting edge to the wall, 9 of such member.

The flange 10 upon the floor 11 of the male member terminates a distance from the free end of the member just equal to the width of the cooperating end of the adjacent side of the frame and the extreme end 12 of the wall 9 extends considerably beyond the end of the floor 11 and is bent at right angles inwardly to fit in under the flange 4 of the cooperating end of the adjacent side of the frame.

The extreme outer end of the floor 11 of the male member is cut away somewhat as at 13, cut again as at 14 and inward a distance from the end just equal to the length of the opening 6 in the female member, and bent downward, forming the depending curved tongue 15 which snugly fits within the opening 6 and upon the correspondingly shaped tongue 7 when the corner of the frame is made complete by the assembling of the cooperating members.

It is evident that from the fact that the tongue 15 extends below a plane with the lower face of the bottom 11 the male member will have to be tipped up somewhat at an angle to the female member when first being engaged therewith to admit of the end 12 being surmounted by the flange 4 of the female member.

Then as the vertical walls of the two members are thus entered, the tongue 15 of the entering member may be snapped into

place within the opening 6 in the receiving member by bringing the two members into alinement.

The attitude of the engaging members for such assembling is clearly depicted in Fig. 2 of the drawings. After the corners are thus engaged they are permanently fixed by turning the frame upside down upon a suitable block directly under the tongue and slot connection and with a hammer the two engaging tongues 7 and 15 are clenched down backward against the outer face of the bottom 2 of the female member.

There being four telescopic sides to the frame, as described, it is evident that such a frame may be adjusted within certain limits to fit any sized opening preparatory to the wire screen being applied thereto.

After the corners of the frame are assembled and made fast as above described, it may be adjusted to the size desired and fixed in such position by pinching at places with hammer or otherwise, the flanges 4 against the upper edge 8 of the male members of the sides.

Then the wire screen 16 is cut of a size to freely fit within the side walls of the frame and rest upon the edge of the flanges 5 and 10 now completely surrounding the inner wall of the frame.

To bind the screen to the flanges, flat metal strips 17 are placed upon the edges thereof and forced downward within the side walls of the frame members and held therein by transverse clips 19, any number of which, to suit circumstances, may be employed.

One edge 18 of the strips 17 is preferably in the form of a flange by being slightly turned at an angle to the body portion thereof, and against which the end 20 of the clips 19 are designed to impinge when the clips are forced downward into place. By this means the flanged edge of the strips is held snugly against the screen under the flanges of the frame, a firmer joint resulting than if the strips were not flanged.

The strips 17 may be composed of one or more pieces for each side of the frame as desired and may be readily cut to suit individual requirements.

The clips 19 are bent somewhat Z-shaped in order to freely fit within the side walls of the frame and after being placed in position upon the strip, are forced down flat upon the strips by a blow with a hammer upon the hump 21 thereof and made to otherwise fit tightly in place by the use of the hammer.

In a frame of this character, sufficiently large to require additional strengthening, I provide a telescopic cross bar comprising

the male and female semi-tubular members 22 and 23 respectively, the ends 24 of which are pinched tightly together and bent at right angles to the body of the bar. When in place within the frame, the ends 24 are sprung in under the flange 4 of opposite sides of the frame and the flange forced tightly thereagainst with a hammer.

While the body portion bears against the screen upon the edge of the flange 5 of the frame, the members comprising the bar may be fixed against longitudinal movement by being forced together with a hammer and the screen fastened thereto by a suitable piece of wire 25, where desired.

Thus I have provided a form of screen frame that can be made of a plurality of relatively small and inexpensive pieces of metal which may be placed upon the market unassembled or in knock-down form and which, when obtained by the user, may readily be assembled and made to exactly fit his requirements.

A number of holes 26 may be made in the outwardly projecting wall of the frame and through which nails or screws may be employed to securely fasten the frame when desired.

Having thus described my invention what I claim and desire to secure by Letters Patent, is:

1. A screen frame of the character described, comprising four sides, each composed of two telescoping members of right angle form in cross section, inwardly turned flanges upon both edges of the telescoping members, the innermost flange being for the reception of a suitable wire screen, strips for placing within the sides and holding the screen against the flange and clips for holding the strips securely in place.

2. A screen frame of the character described comprising side members of angular shaped pieces of thin metal having inwardly turned flanges formed upon the opposite edges thereof, the innermost flange being for the reception of a suitable screen, means for holding the screen tightly within the frame and a telescopic cross bar having the opposite ends thereof turned at right angles to the body portion and designed to hook in behind the outermost flange upon two opposite sides of the frame and assist in supporting the screen within the frame. In testimony whereof I hereunto affix my signature in the presence of two witnesses.

SWAN G. ANDERSON.

Witnesses:

W. H. DENHAM,
S. GEO. STEVENS.