April 4, 1939. A. BUTLER 2,153,454

SCREEN FRAME CONSTRUCTION

Filed Nov. 8, 1938

Fig. 1.

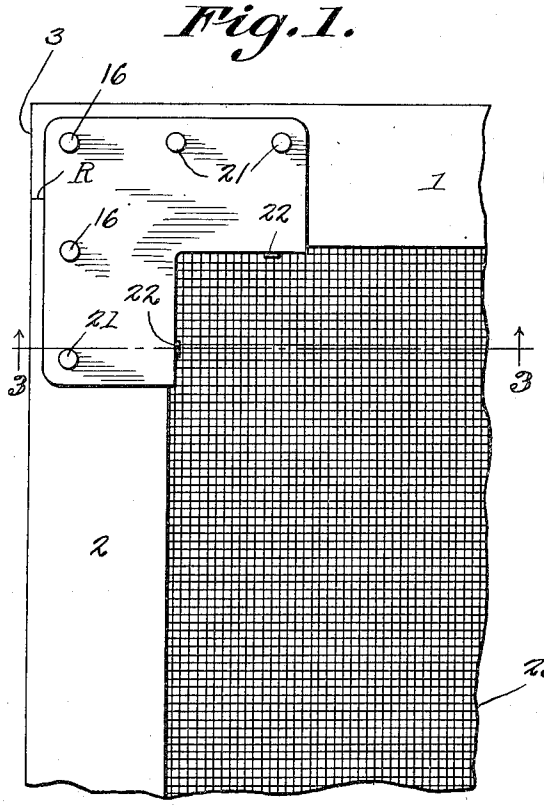


Fig. 2.

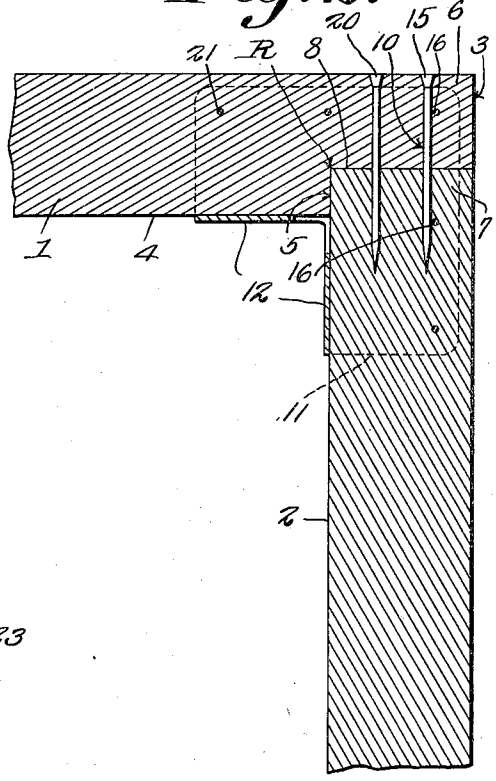


Fig. 3.

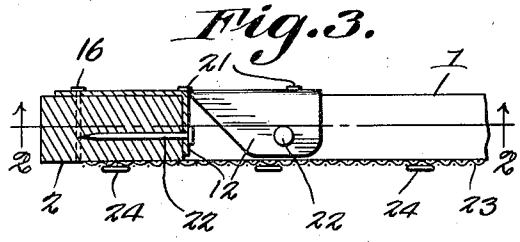
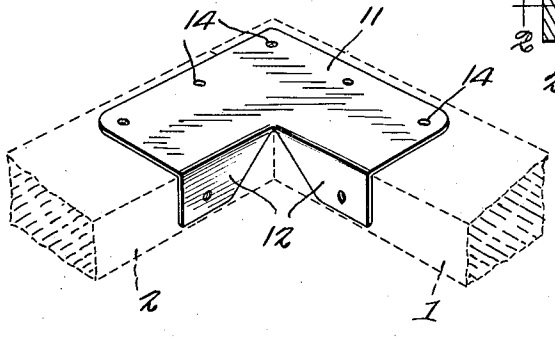


Fig. 4.



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SCREEN FRAME CONSTRUCTION

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Application November 8, 1938, Serial No. 239,552

1 Claim. (Cl. 156—14)

Referring to Figure 1 of the drawing, in the art of making window screens, it is a known custom to dispose first and second frame members at right angles, the end of the second frame member being received in a recess in the first frame member, long nails being driven through the first frame member into the end of the second frame member, a plate being overlapped on the outer surface of the frame members and nailed to the frame members, the plate having rectangular flanges engaging the inner edges of the frame members and nailed thereto.

Notwithstanding the simplicity of the construction referred to, it has not been entirely satisfactory, because the screen frame, seldom an absolutely rigid structure, tends to twist and wrack, the result being that the long nails tend to draw, and the nails that attach the plate to the outer surface of the frame members tending to draw also.

It has been found by experiment that if but one of the long nails can be held in place, and that if two of the nails, each engaging one of the frame members and retaining the plate on the outer surface of the frame members, can be held in place, neither the nails specified, nor any of the other nails will tend to draw, the integrity of the joint at the corner of the frame being perpetuated.

The invention aims to provide a combination, including frame members, plate and nails or other securing elements, so constructed that the operator cannot put the frame together without securing, between one of the long nails and the two nails referred to, such an interengaged cooperation that none of the specified nails will tend to draw.

It is within the province of the disclosure to imrove generally and to enhance the utility of devices of that type to which the present invention appertains.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawing:

Fig. 1 shows in elevation, a screen frame cornered construction made in accordance with the invention;

Fig. 2 is a vertical longitudinal section of the structure depicted in Fig. 1;

Fig. 3 is a section on the line 3—3 of Fig. 1, the line 2—2 in Fig. 3 indicating the cutting plane on which Fig. 2 is taken;

Fig. 4 is a perspective view of the corner plate.

The screen frame forming the subject matter of this application comprises a first frame member 1 and a second frame member 2, generally made of wood, and arranged at right angles to each other. The first frame member 1 is provided at one end 3, and on its inner edge 4, with a rectangular recess R, the recess R forming a transverse shoulder 5 and a longitudinal tongue 6 in the first member 1. The terminal portion 7 of the second member 2 abuts against the inner edge 8 of the tongue 6 and against the shoulder 5, the tongue 6 being provided with a transverse bore 10.

An L-shaped plate 11 generally made of metal, overlaps the first and second frame members 1 and 2, and is provided on its inner edges with rectangular, projecting flanges 12, engaging the inner edges of the first and second frame members, the flanges 12 being separated, at their inner edges by a notch shown in Fig. 4.

The plate 11 has holes 14, located on opposite sides of the inner edge 8 of the tongue 6. A first securing element 15, preferably a long nail, is mounted in the bore 10 and enters the terminal portion 7 of the second frame member 1. Second securing elements 16, which may be short nails, are mounted in the holes 14 of the plate 11 and enter the first and second members, on opposite sides of the inner edge 8 of the tongue 6 of the first frame member 1.

The flanges 12, the holes 14 and the bore 10 serve so to position the first securing element 15 and the second securing elements 16 that when the second securing elements are in place, the second securing elements, respectively, will have holding contact with the first securing element 15, within the first and second frame members 1 and 2. The securing element 15 may be duplicated if desired, as shown at 20, and the securing elements 16 may be duplicated as shown at 21, securing elements 22 being employed for attaching the flanges 12 to the inner edges of the frame members.

The screening 23 is fastened to the frame by securing devices 24, such as tacks, and the screening, in the finished article, is housed at its edge beneath the usual finishing strip, not shown in the drawing.

The general construction of the article is such

that it will consummate the objects and have the advantages set forth in the opening portion of this specification.

An unusually strong construction is provided. The plate 11 will not interfere with the nailing of the screening on the frame. When the frame is finished, it may be painted and will make a neat job. The construction is such that it can be placed on the market at a reasonable price.

Having thus described the invention, what is claimed is:

A screen frame comprising first and second members arranged at right angles to each other, the first member being provided at one end, and on its inner edge, with a rectangular recess, the recess forming a transverse shoulder and a longitudinal tongue in the first member, the terminal portion of the second member abutting against the inner edge of the tongue and against the inner edge of the shoulder, the tongue being provided with a transverse bore, a plate overlapping the first and second members and provided on its inner edges with projecting flanges engaging the inner edges of the first and second members, the plate having holes located on opposite sides of the inner edge of the tongue, a first securing element mounted in the bore and entering the terminal portion of the second member, and second securing elements mounted in the holes of the plate and entering the first and second members, the flanges, the holes and the bore being so located relatively to each other as to position the first securing element and the second securing elements in such manner that when the second securing elements are in place, the second securing elements, respectively, will have holding contact with the first securing element, within the first and second frame members.

ALFRED BUTLER.