Aug. 27, 1929. W. E. ROSEL 1,725,937

METALLIC SCREEN FRAME

Filed Sept. 16, 1927

Fig. 1.

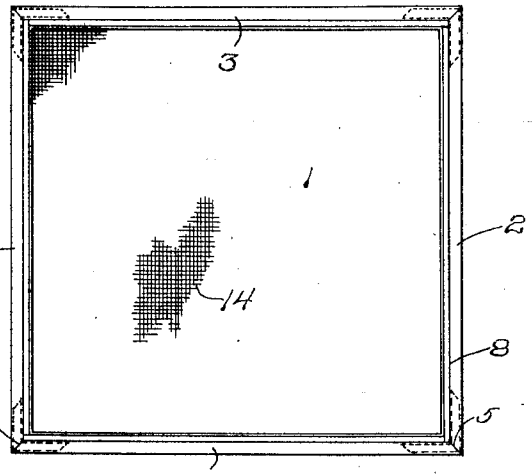


Fig. 2.

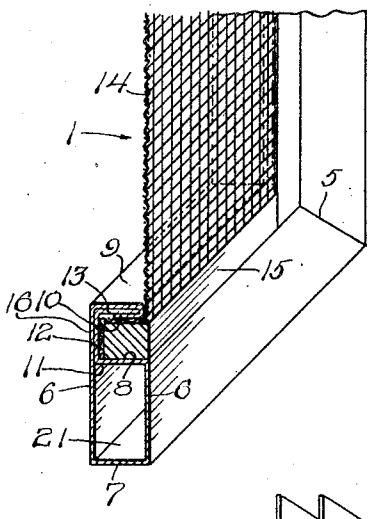
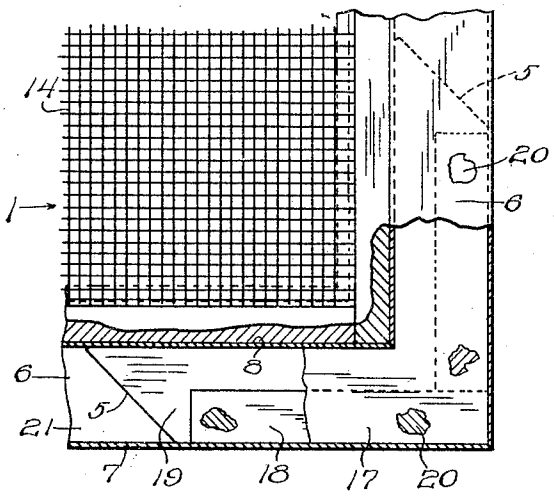


Fig. 3.



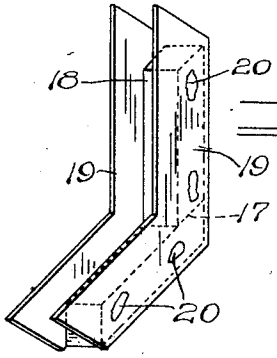


Fig. 4.

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UNITED STATES PATENT OFFICE.

WILLIAM E. ROSEL, OF COLUMBUS, OHIO, ASSIGNOR TO THE YARDLEY SCREEN AND WEATHER STRIP CO., OF COLUMBUS, OHIO, A CORPORATION OF OHIO.

METALLIC SCREEN FRAME.

Application filed September 16, 1927. Serial No. 219,871.

This invention relates to improvements in metallic screen frames, and has for its principal object the provision of a metallic frame of this character which will be strong, rigid and durable, capable of maintaining its form and shape for extended periods of time and of such construction as to overcome weaving or flexing thereof during the handling or operation of the frame.

With these and other objects in view, as will appear as the description proceeds, the invention consists in the novel features of construction, combinations of elements and arrangement of parts hereinafter to be more specifically described and pointed out in the appended claims.

In the accompanying drawing:

Figure 1 is a side elevation of a screen frame constructed in accordance with the present invention,

Figure 2 is a detail view disclosing fragmentarily in vertical cross section and in perspective the construction of my improved frame,

Figure 3 is an enlarged vertical sectional view disclosing more particularly the corner construction of the frame, and

Figure 4 is a perspective view of one of the corner members of the frame.

Referring more particularly to the drawing the numeral 1 designates my improved screen frame in its entirety. The frame in this instance comprises vertically extending side rails 2—2 and top and bottom rails 3 and 4 respectively. All of these rails are of identical construction, and a description of one will suffice for all. The meeting edges of the rails are mitered as at 5, and it is the purpose of the present invention to provide improved means for connecting and strengthening or reinforcing these corner portions of the frame so as to produce the desired degree of durability and rigidity.

Each rail is formed from sheet metal and is suitably rolled, bent or otherwise processed to produce a hollow metallic body portion including spaced side walls 6—6, and a transverse bottom or outer wall 7. The outer wall 6 is provided with a longitudinally extending groove 8, formed by bending the inner of the walls 6 to produce an inner ledge 9 which terminates in an inwardly folded portion 10. The outer of the walls 6 is also bent to provide an inwardly extending ledge 11, which terminates in an upwardly extending wall 12 arranged in engagement with the inner of the walls 6. The upper edge of the wall 12 terminates in a transversely extending wall 13, disposed in engagement with the ledge 9 and locked in such position by the inwardly folded wall 10 of the ledge 9. This produces a construction of extremely rigid form for each of said rails and also provides a convenient means for securing the screen body 14 to said rails. As shown more particularly in Figure 2 the marginal edges of the body 14 are bent inwardly to lie within the groove 8, engaging at least two of the walls of said grooves, and said marginal edges are secured by the provision of a removable clamping strip 15, which is inserted through the open side of the groove 8, and frictionally engages the walls of said groove on the marginal edges of the screen body to retain the latter firmly in connection with the screen frame. The provision of the strip construction 15, however, facilitates the removal or renewal of the screen body whenever desired. As indicated in Figure 2 the adjoining walls constituting the groove 8 are spotwelded as at 16 in order to retain the walls in their respective positions and to rigidly unite the same.

Another important feature of the invention is the provision of improved means for securely fastening the adjoining corner portions of the rails 2, 3 and 4. It is at the corners especially of a frame of this character that weakness is apt to exist and a flimsy, weak and faulty construction produced. In fact, most of the screen frames of metallic construction now in general use contain these faults, and for these reasons architects and builders have heretofore largely preferred the wooden type of frame rather than the metal construction.

I have successfully overcome these objections by providing the corner portions of the frame with internally situated corner members 17, one of which being located in each corner of the frame. These corner members are each formed to include an angularly shaped bar 18 of solid metallic construction, to which are welded angular side plates 19. These plates are cut to conform with the corner construction of the frame, being situated in the hollow spaces provided between the walls 6—6, and are suitably welded to said walls as indicated at 20. These cor-

ner members, due to the construction of the side plates 19, completely occupy the channels 21 formed in the rails between the walls 6—6 and are maintained in engagement therewith by the heavy spacing bars 18. The parts are then welded together so that a strong homogeneous construction is provided which completely eliminates flexibility in the frame, overcomes warping or bending thereof when stored, or in use and provides particularly a metal frame especially adapted for screen construction characterized by strength, rigidity and durability. The construction while efficient is extremely simple and allows for convenience, standardization and facility in manufacture.

What is claimed is:

1. In a metallic screen frame, a pair of hollow metallic angularly disposed rail sections, a corner member for uniting the adjoining portions of said rail sections, comprising a pair of spaced thin metallic plates having angularly disposed leg portions mounted within said rail sections to engage closely with the inner walls thereof, and an angularly disposed spacing bar arranged between said plates, said spacing bar being of a width substantially half of that of the leg portion of said plates.

2. In a metallic screen frame, a pair of hollow metallic angularly disposed rail sections, a corner member for uniting the adjoining portions of said rail sections, comprising a pair of spaced thin metallic plates having angularly disposed leg portions mounted within said rail sections to engage closely with the inner walls thereof, and an angularly disposed spacing bar having a width only half of that of said plates arranged between the latter, said bar being welded to said plates and positioned along the outer edges thereof and along the outer corner portion of said rails.

In testimony whereof I affix my signature.

WILLIAM E. ROSEL.