D. D. PINKHAM.

WINDOW AND DOOR SCREEN.

APPLICATION FILED DEC. 9, 1907.

903,500. Patented Nov. 10, 1908.

Fig. 1.

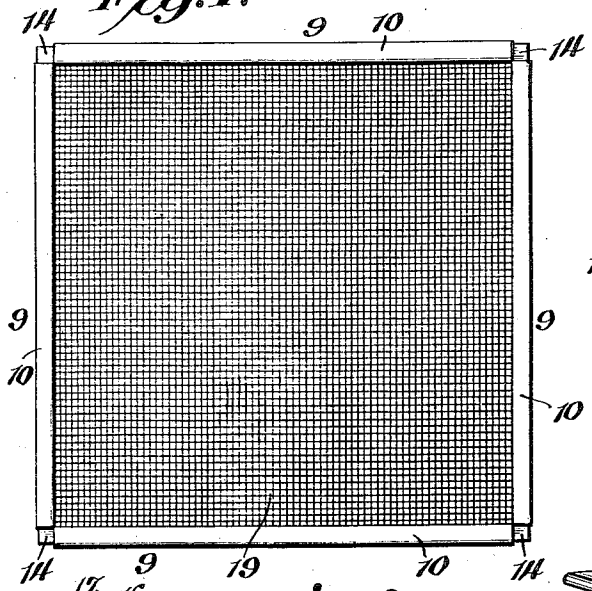


Fig. 6.

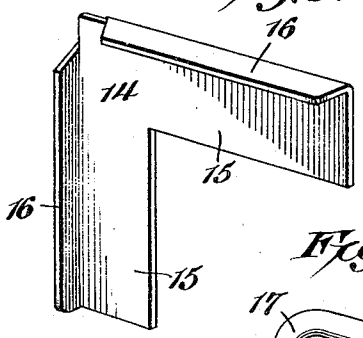


Fig. 7.

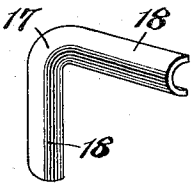


Fig. 8.

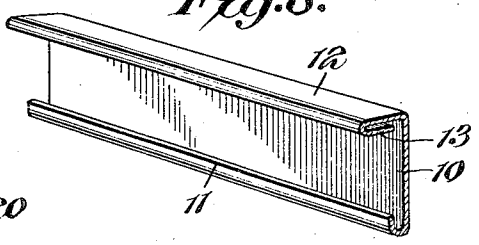


Fig. 2.

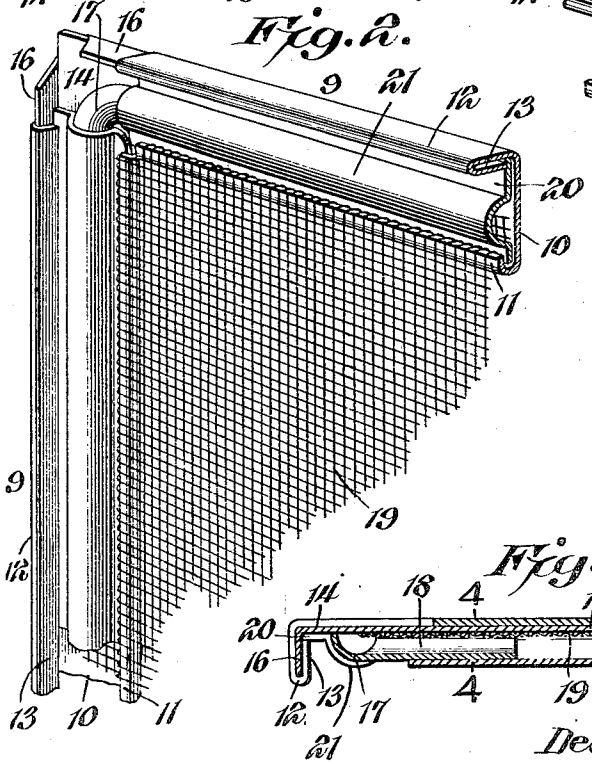


Fig. 5.

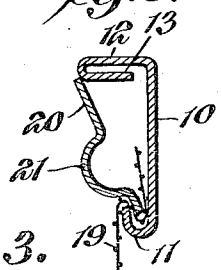


Fig. 4.

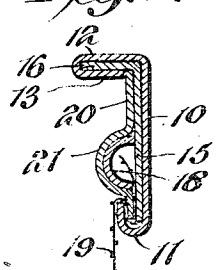
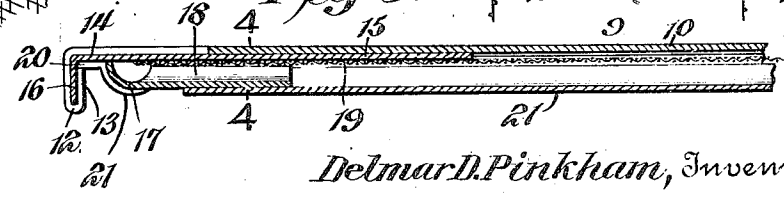


Fig. 3.



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Witnesses

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UNITED STATES PATENT OFFICE.

DELMAR D. PINKHAM, OF LONGVIEW, TEXAS.

WINDOW AND DOOR SCREEN.

No. 903,500. Specification of Letters Patent. Patented Nov. 10, 1908.

Application filed December 9, 1907. Serial No. 405,739.

To all whom it may concern:

Be it known that I, DELMAR D. PINKHAM, a citizen of the United States, residing at Longview, in the county of Gregg and State of Texas, have invented a new and useful Window and Door Screen, of which the following is a specification.

The present invention relates to window and door screens, and while particularly intended as an improvement on the structure disclosed in a patent No. 831,636, granted to me on November 13, 1906, there are features herein set forth not necessarily restricted in their use to that structure.

The principal object of the present invention is to provide a knockdown screen, which can readily be put together by the user, is strong, rigid and durable, and will permit the detachment and replacement of the netting so that new material may be more readily substituted for that which has become worn out or broken.

The preferred embodiment of the invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a rear elevation of a screen constructed in accordance with the present invention. Fig. 2 is a detail perspective view of a corner of the screen. Fig. 3 is a longitudinal sectional view through a portion of one of the rails. Fig. 4 is a cross sectional view on the line 4—4 of Fig. 3. Fig. 5 is a cross sectional view but illustrating the manner in which the netting holding strip is removed and replaced. Fig. 6 is a detail perspective view of the corner piece. Fig. 7 is a similar view of the corner reinforcement. Fig. 8 is a detail perspective view of a portion of one of the side rails.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

In the present case, a window screen is disclosed, rectangular in form and consisting of angularly disposed side rails, each designated as a whole by the reference numeral 9. Each side rail is preferably formed of a strip of sheet metal and comprises a body portion 10 having along its inner margin an overhanging outwardly turned keeper or flange 11 that extends over one face of the body. A right angularly disposed flange 12 is located longitudinally along the opposite or outer margin of the body 10, and is doubled, as shown, thus producing a keeper 13 that overhangs the same face of the body over which the keeper 11 extends. The free edge of the flange 12 or keeper is inturned towards the body, but is spaced therefrom, as clearly shown in Fig. 5.

The adjacent ends of the various side rails are connected by corner pieces 14. Each corner piece consists of angularly disposed leaves 15 having outstanding flanges 16 along their outer edges. These leaves are located against the bodies of the side rails, their inner edges being located beneath the keepers 11 and their outer flanges 16 being inclosed by the flanges 12 and keepers 13. Corner reinforcements in the form of bowed or ribbed strips 17 have angularly disposed end portions or arms 18. These corner reinforcements are placed upon the corner pieces, the end portions 18 being disposed longitudinally of the leaves 15.

Wire netting, designated 19, is cut to a size so that its margins will extend over the keepers 11 of the side rails, and is bent about said keepers as illustrated in Figs. 4 and 5. Netting retaining strips 20 are provided that are longitudinally beaded or channeled, as shown at 21. The inner edges of these strips are engaged beneath the keepers 11 and clamped against the netting. The outer edges are engaged beneath the free edges of the outer keepers 13. The ends of these strips 20 are located over the ends of the corner pieces, and of the reinforcements 17, the end portions of said reinforcements engaging in the channels 21 and being thus held in position by the strips.

The structure has a number of advantages. In the first place, it may be shipped in knockdown condition and assembled by the user or retail salesman. This will be evident when it is considered that the ends or leaves 15 of the corner pieces can be readily fitted into the ends of the side rails, the corner reinforcements being placed against said corner pieces, the netting located, and finally the various parts clamped together by the holding strips 20. In introducing these holding strips, the edges are placed in the keepers 11, and the outer edges are forced downwardly until they are engaged beneath the free edges of the keepers 13. To detach

said strips, it is only necessary to force them inwardly into the keepers 11 until their outer edges are free of the keepers 13, whereupon they can be swung outwardly, and then disengaged from said keepers 11.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. A screen frame including a side rail, said rail being formed of a metal strip comprising a body having an outturned keeper along its inner margin overlapping one side of said body, and an angularly disposed doubled flange along its outer margin, the doubled flange being also in the form of a keeper and having its free edge inturned and spaced from the body of the bar, and a netting holding strip having an inner edge that engages beneath the outturned keeper of the body, and an outer edge that engages beneath the said free edge of the doubled flange.

2. A screen frame including angularly disposed side rails, each rail comprising a body having flanges outstanding from the same side of the body and turned toward the same, a corner piece comprising angularly disposed leaves, each engaged between the body and the overturned flanges of one of the rails, and a netting holding strip associated with each rail and having its edges interlocked with the said overturned flanges thereof, said flanges constituting means for holding the strip in place.

3. A screen frame including angularly disposed side rails, netting holding strips interlocked with the side rails and having longitudinally disposed channels in their inner sides, a corner piece comprising angularly disposed leaves interposed between the rails and the strips, and corner reinforcements located against the corner pieces and having angularly disposed terminal portions fitting in the channels of the strips.

4. A screen frame including angularly disposed side rails, each rail comprising a body having flanges outstanding from the same side of the body and turned toward the same, a corner reinforcement having angularly disposed end portions, and a netting holding strip associated with each rail and having its edges interlocked with the overturned flanges thereof, the end portions of said strips extending over the end portions of the corner reinforcement, said netting holding strips being held in place on the rails by their interlocking engagements with the flanges.

5. A screen frame including angularly disposed side rails, each side rail being formed of a metal strip and comprising a body having an outturned keeper along its inner margin, and an angularly disposed doubled flange along its outer margin, the doubled flange being also in the form of a keeper and having its free edge spaced from the body of the bar, a corner piece comprising angularly disposed leaves, each leaf being engaged between the body and the keepers of one of the side rails, a corner reinforcement located against the corner piece and having angularly disposed end portions, and a netting holding strip associated with each side rail and having an inner edge that engages beneath the outturned keeper of the body, and an outer edge that engages beneath the said free edge of the outer doubled flange, the ends of said strips covering the ends of the corner piece and the end portions of the corner reinforcement.

6. A screen frame made up of independent side rails, each rail comprising a body having outstanding flanges with keepers formed thereon, corner pieces connecting the side rails at each corner of the frame, said corner pieces being provided with outstanding flanges which interlock with certain of the keepers of the side rails, reinforcements provided upon the corner pieces, and a netting holding strip associated with each side rail and engaging with the keepers thereof to hold the netting in place, said netting holding strips each having channels provided therein to engage and fit over the corner reinforcements.

7. A screen frame made up of independent side rails, each comprising a body having flanges formed thereon and constituting keepers, corner pieces connecting the side rails at each corner of the frame and having an interfitting engagement with the rails, corner reinforcements placed upon the corner pieces, and a netting holding strip mounted on each side rail and engaging with the corner reinforcements to retain the same on the corner pieces.

8. A screen frame including angularly disposed side rails, each side rail being formed of a metal strip and comprising a body having an outturned keeper along its inner margin, and an angularly disposed doubled flange along its outer margin, the doubled flange being also in the form of a keeper and having its free edge spaced from the body of the bar, a corner piece comprising angularly disposed leaves, each leaf being engaged between the body and the keepers of one of the side rails, and a netting

holding strip associated with each side rail and having an inner edge that engages beneath the outturned keeper of the body, and an outer edge that engages beneath the said free edge of the outer doubled flange, the ends of said strips covering the ends of the corner piece.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

DELMAR D. PINKHAM.

Witnesses:

E. A. MORGAN,

J. R. RAINEY.