Aug. 31, 1937. S. I. McKEE 2,091,765

CURTAIN STRETCHER

Original Filed Nov. 12, 1935 2 Sheets-Sheet 1

Fig. 1.

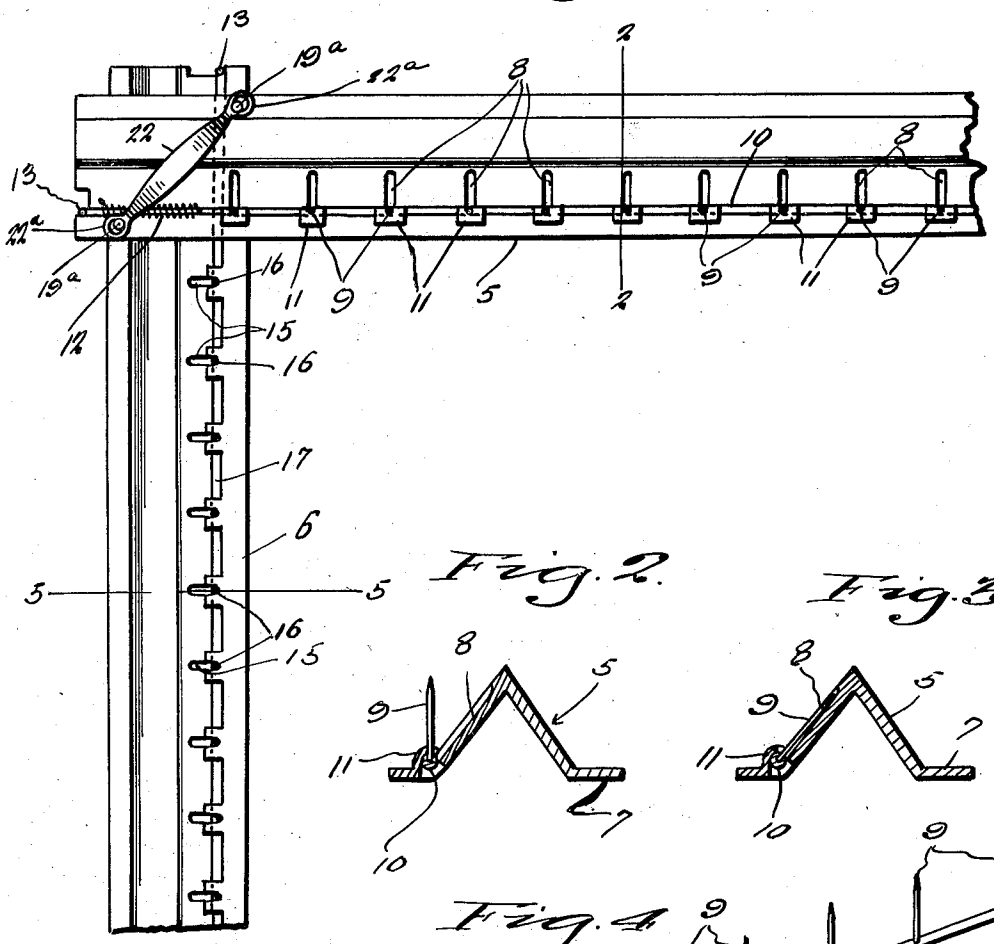
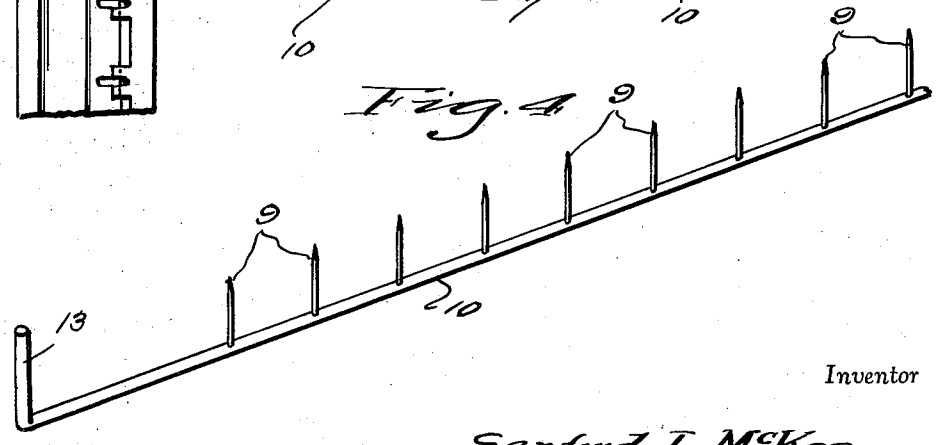


Fig. 2.

Fig. 3.

Fig. 4.



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Fig. 5.

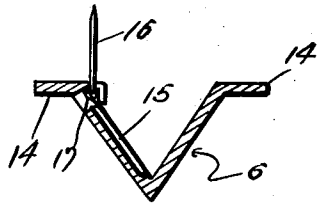


Fig. 6.

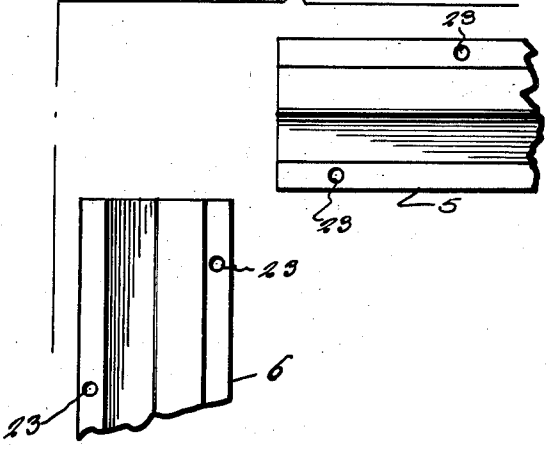


Fig. 8.

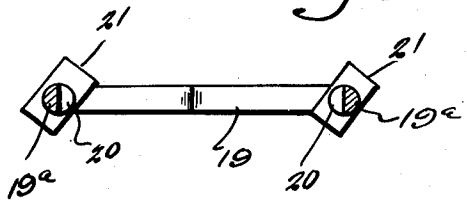


Fig. 9.

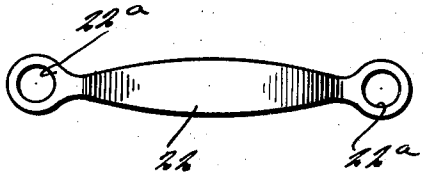
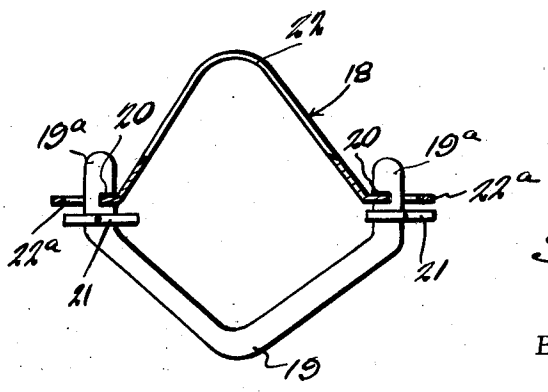


Fig. 7.



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CURTAIN STRETCHER

Sanford I. McKee, Rio Hondo, Tex.

Application November 12, 1935, Serial No. 49,380
Renewed February 10, 1937

5 Claims. (Cl. 45—24)

This invention relates broadly to curtain stretchers and more particularly to curtain stretchers of the type which consists of a plurality of sections detachably connected together at their ends to provide a frame to hold a curtain stretched and in a taut condition while drying.

Among the objects of the invention is to provide improved means for securing the sections together at their joined ends.

A further object of the invention is to provide a device for connecting the ends of the frame sections at the corners of the frame in a manner to facilitate the assembling and disassembling of the frame.

The invention together with its objects and advantages will be best understood from a study of the following description taken in connection with the accompanying drawings wherein:

Figure 1 is a fragmentary plan view of a corner portion of the frame illustrating the application of the invention.

Figures 2 and 5 are detail sectional views taken substantially on the lines 2—2 and 5—5 respectively of Figure 1.

Figure 3 is a view similar to Figure 2, and showing the impaling prongs or pin positioned within a groove provided in the frame member.

Figure 4 is a perspective view of one of the pin or prong equipped rods.

Figure 6 is a plan view of the end portions of a pair of frame members, said ends being shown separated.

Figure 7 is a detail view of the corner clamp.

Figure 8 is a plan view of one of the corner clamp members and

Figure 9 is a plan view of a complemental corner clamp member.

Referring to the drawings by reference numerals it will be apparent that the frame of the curtain stretcher embodying the features of the present invention consists of a pair of frame members 5 disposed in opposed parallel relation and a second pair of frame members 6 disposed at right angles to the members 5 and in opposed relation relative to one another.

Each of the frame members 5 is formed of metal or other suitable material and is substantially V-shaped in cross section as clearly shown in Figures 2 and 3. At the open side of the V the walls of the frame member 5 are provided with outstanding longitudinal flanges 7.

One wall of each member 5 is also provided with a longitudinal series of relatively spaced grooves or pockets 8 adapted to normally receive impaling prongs or pins 9.

The pins 9 are provided on a rod 10 and are arranged in spaced relation longitudinally of the rod.

For accommodating the rod 10 each member 5 at the junction of the wall thereof equipped with the grooves 8 and the associated flange of said wall is split at intervals and pressed outwardly all of which is indicated at 11 to provide a longitudinal bearing for the rod 10 and spaced slots through which the pins 9 work.

At one end thereof each rod 10 is provided with a spring 12 suitably connected at one end with the rod, and at its respective opposite end with a frame member 5 for normally urging the rod 10 to rotate in one direction to normally position the pins 10 within the grooves or pockets 8. At said end each rod 10 is also equipped with a suitable, and preferably integral handle 13 (see Figures 1 and 4).

Each of the frame members 6 is also formed of metal or other suitable material and is substantially V-shaped in cross section, with the walls thereof provided with outstanding flanges 14 as best shown in Figure 5.

Also as shown in Figure 5 one of the walls of each member 6 on the inner side thereof is provided with a longitudinal series of spaced grooves or pockets 15 for receiving pins 16 corresponding to the aforementioned pins 9 and arranged in spaced relation on a rod 17 corresponding with rod 10 and which of course will be equipped at one end with a suitable handle and a spring tending to normally rotate the rod for positioning the pins 16 within the grooves or pockets 15.

For accommodating the rod 17 the groove equipped side of the member 6 at the junction of said side and its associated flange 14 has a portion thereof pressed inwardly to provide a bearing for the rod 17, and said portion is suitably split at intervals to accommodate the pins 16 so that the pins may work through an arc in their movement into and out of the pockets or recesses 15 (see Figures 1 and 5).

For connecting the members 5 and 6 together there is provided for each corner of the frame a two-part clamp indicated generally by the reference numeral 18.

Each clamp 18 comprises a substantially V-shaped clamping member 19 the sides of which terminate in upstanding pins or lugs 19a provided with notches 20.

Each side of each member 19 at the junction

thereof with its associated pin 19a has secured thereto in any suitable manner a suitable collar or flange 21 spaced downwardly from the notch 20.

Each clamp 18 also includes, complemental to the clamp member 19 a resilient clamp member 22 formed of spring metal or other suitable material adapted to be pressed into a substantially V-shape.

At its respective opposite end the member 22 is provided with integral eyes 22a adapted to receive the pins or studs 19a and to engage in the notches 20 of said pins or studs for securing the complemental clamp members together with the flanges of joined members 5 and 6 clamped between the collars 21 and the ends 22a of the complemental clamp member 22.

As clearly shown in Figure 6 each frame member 5 and 6 is provided in the respective flanges thereof, and adjacent their respective ends with properly, relatively located openings 23 which register when the ends of members 5 and 6 are arranged in the overlapping position suggested in Figure 1 so as to accommodate the pins or studs 19a of a clamp member 19 whereby through the medium of a clamp 18 member 5 is joined at one end with a member 6 of the stretcher frame. As thought to be apparent to join one end of a member 5 with one end of a member 6, said end of the member 5 is placed in overlapping relation to the end of the member 6 so that the openings 23 in the flanges of the members register as clearly suggested in Figure 1. A clamp member 19 then straddles the member 6 extending diagonally thereto and the pins or studs 19a pass upwardly through the alined openings 23. Next the complemental clamp member 22 is placed in a diagonal position across the member 5 and by pressing inwardly on the respective opposite ends of said member 22 the latter is sprung into the position suggested in Figure 7 so that the ends 22a of the member may be passed downwardly over the studs 19a, when pressure is then released to permit the ends of the member 22, due to the inherent resiliency of said member to spring apart so that the edges of the eyes 22a may engage in the notches 20 of the members 19a in a manner clearly shown in Figure 7 for clamping the joined ends of the members 5 and 6 together as clearly shown in Figure 1.

With the frame members thus connected together at the corners of the frame a rigid efficient stretcher frame is provided.

With the frame thus set up the end edges of the curtain are engaged with the prongs 9 and 16 in a manner thought obvious, the bars 10 and 17 being first rotated to the positions suggested in Figures 2 and 5 respectively to facilitate the impaling of the edges of the curtain thereon. When an edge portion of the curtain has thus been impaled on a series of the pins 9 or 16 as the case may be the associated rod is released so as to move under action of its associated spring into position for placing the pins 16 or 9 as the case may be into seated engagement with the grooves or seats 15 or 8 as is apparent. In this manner the curtain at its marginal edges is secured to the respective frame members to the end that the curtain will be held in stretched and taut condition while drying.

Due to the cross sectional shape of the frame members the same, when not in use, can be nested together for storage and thus require but little storage space.

It will also be observed that when the members are not in use the pins on the rods lie within the grooves provided therefor and thus are in an out of the way position.

Having thus described the invention, what is claimed as new is:

1. In a device of the class described, a pair of frame-forming members having ends arranged in overlapping relation and provided with registering apertures, a clamp member extending across one of the frame forming members and having ends projecting through the registering apertures, and also having notches in said ends, and a resilient complemental clamping member extending across the other of the frame forming members and having apertured ends receiving the ends of the first mentioned clamping member and also engaging in the notches in said ends of the first mentioned clamping member.

2. In a device of the character described, complemental frame forming members having ends arranged in overlapping relation at the corners of the frame formed thereby, each member at each end thereof being provided with diagonally disposed apertures registering with the apertures in the adjacent end of a complemental frame member, and clamps for securing said members together at the corners of the frame, each clamp comprising a member substantially straddling a frame forming member and having ends extending through the registering apertures of two frame forming members, and a complemental clamping member straddling a second frame forming member and having ends complemental to and engaging the ends of the first clamping member for securing the clamping members together and the joined ends of the frame forming members together for the purpose and in the manner stated.

3. A clamp for a frame composed of side and end members, said clamp comprising a relatively rigid clamping member having ends adapted to extend through registering openings in two connected frame members and also having at said ends shoulders to engage one side of one of the connected frame members, and a resilient clamping member complemental to the first named clamping member, said resilient clamping member having eyes at respective opposite ends adapted to receive the ends of the first named clamping member and to spring into frictional engagement with said ends of the first named clamping member for clamping the connected frame members between the eyes of the complemental clamping member and the shoulders on the first named clamping member.

4. In a curtain stretcher of the character described, a frame comprising a pair of side members, and a pair of end members and means detachably connecting the side and end members together at the corners of the frame, each of said side and end members consisting of an elongated body substantially V-shaped in cross section and longitudinal flanges projecting outwardly from the sides of the V at the longitudinal edges of said sides; each of said side and end members respectively being also provided in one side of the V with a longitudinal row of relatively spaced grooves extending transversely of said side, a rod pivotally mounted on said one side of the V adjacent the flanged edge thereof, impaling pins arranged on said rod in relatively spaced relation longitudinally of said rod, and said pins adapted to be disposed within said grooves and to extend longitudinally of said grooves, and a spring de-

vice connected with said rod and the associated frame member for normally urging the rod to rotate in one direction for normally seating the pins within said grooves.

5. In a curtain stretcher of the character described, a frame comprising a pair of side members, a pair of end members and means detachably connecting the side and end members together at the corners of the frame, each of said side and end members consisting of an elongated body substantially V-shaped in cross section and longitudinal flanges projecting outwardly from the sides of the V at the longitudinal edges of said sides; each of said side and end members respectively being also provided in one side of the V with a longitudinal row of relatively spaced grooves extending transversely of said side, a rod pivotally mounted on said one side of the V adjacent the flanged edge thereof, impaling pins arranged on said rod in relatively spaced relation longitudinally of said rod, said pins adapted to be disposed within said grooves and to extend longitudinally of said grooves, a spring device connected with said rod and the associated frame member for normally urging the rod to rotate in one direction for normally seating the pins within said grooves, said frame members adapted to be nested one within the other, and each of the side frame members having the aforementioned grooves arranged in the outer face of said one side of said V, and each of the end frame members having its grooves provided in the inner face of said one side of the V.

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