Oct. 8, 1940. C. G. CARLSON 2,217,004

CURTAIN STRETCHER

Filed Aug. 4, 1939

Fig. 1

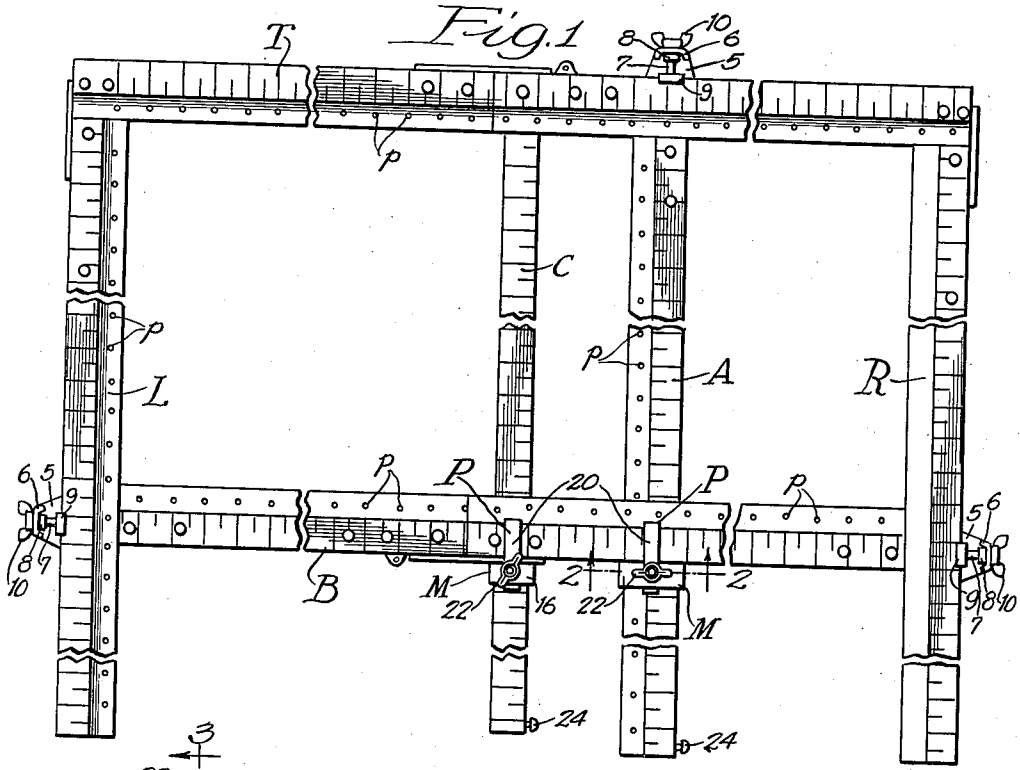


Fig. 2

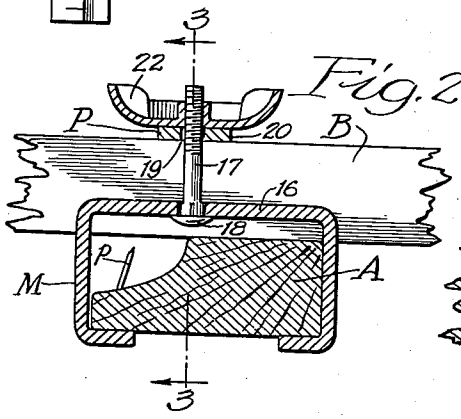


Fig. 3

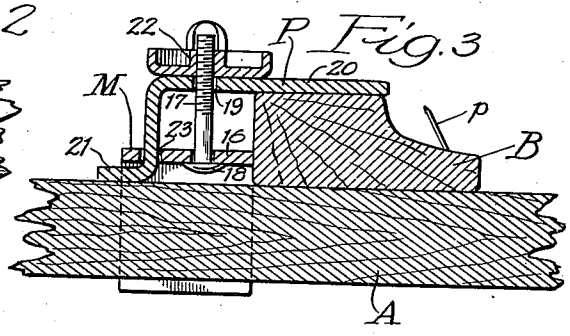
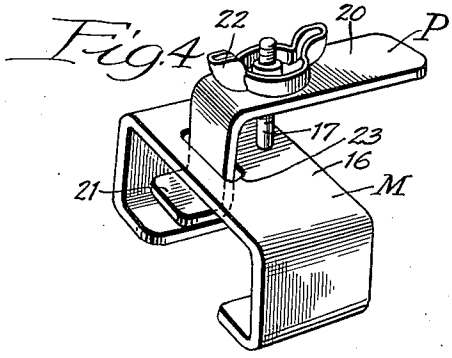


Fig. 4



Inventor:
Clarence G. Carlson,
By Banning & Banning
Attorneys.

Patented Oct. 8, 1940 2,217,004

UNITED STATES PATENT OFFICE

2,217,004

CURTAIN STRETCHER

Clarence G. Carlson, Chicago, Ill., assignor to Chicago Curtain Stretcher Company, Chicago, Ill., a corporation of Illinois

Application August 4, 1939, Serial No. 288,396

3 Claims. (Cl. 287—51)

My present invention is concerned with a stretching frame having a special utility for supporting damp curtains or other fabrics which are to be dried. More particularly, the present improvements are directed to a fitting which provides an adjustable detachable connection between two of the bars of the stretching frame—desirably the adjusting bar thereof and the bottom bar.

The fitting hereinafter described is advantageous in that it is simple, strong, inexpensive, and adjustable as to the connection between two of its frame bars whereby either may be shifted endwise or laterally with respect to the other, without requiring the presence of any slot for the slidable reception of associated parts. Such a fitting is particularly advantageous when employed to connect the adjusting bar of the frame with the bottom bar thereof, since in practice, it is often necessary to adjust one bar with respect to the other. By the means herein disclosed the application to the frame of the fitting in question, and also the operation thereof, may be accomplished with a minimum of effort.

A curtain stretching frame equipped with the adjusting fitting of this invention is illustrated in the accompanying drawing in the manner following:

Figure 1 is a side elevation of the stretching frame in its entirety;

Fig. 2 is an enlarged section in detail, taken on line 2—2 of Fig. 1;

Fig. 3 is an enlarged detail in section, taken on line 3—3 of Fig. 2; and

Fig. 4 is a view in perspective of the adjusting fitting per se.

The frame herein illustrated is adapted for the support of damp curtains or other fabrics which it is desired to dry while in a stretched condition. It comprises a horizontal top bar T joined at opposite ends to vertical left and right end bars L and R, respectively, which latter are interconnected detachably by a horizontal bottom bar B, thereby providing a rectangular structure, all as is common practice at the present time. In addition, the frame may comprise a vertical central bracing bar C detachably interconnecting the top and bottom bars, and to one side thereof a vertical adjusting bar A. The front faces of the four outside bars are desirably concavely rabbeted adjacent their inner edges where pins *p* are provided all as is common practice at the present time.

So that the frame may be extended either vertically or horizontally, to accommodate fabrics of different sizes, I provide connecting fittings for the bottom and adjusting bars which permit of their being shifted toward and from the top and end bars, respectively. In the case of opposite ends of the bottom bar and the top end of the adjusting bar, no special problem is presented, consequently the three fittings at such points which are all alike, may be of simple character. As shown in connection with the adjusting bar, each such fitting comprises a plate 5 affixed to the rear face of the bar so as to extend therebeyond and then laterally forward as at 6 to provide a head through which is an apertured opening to receive a bolt 7 which is in screw-threaded engagement with a nut 8 fixedly secured to the underside of the head. At the lower end of the nut is rotatably and inseparably affixed a clip 9 having at its forward edge a depending lip which extends slightly over the face of the adjusting bar, the clip being advanced or retracted by the bolt which at its upper end is equipped with a manual operating head 10. The clip is slidingly connected to the plate 5 by means (not shown) so that when engaged with the top bar, it will press this bar tightly against the end of the adjusting bar to which the plate is affixed. By some such fitting as this I am enabled to detachably and adjustably connect the adjusting bar to the top bar. Similar fittings which connect the bottom bar to the two end bars provide for detachable and adjustable connections at such points. In consequence, the frame may be extended vertically by shifting the bottom bar toward or from the top bar, and the adjusting bar may be shifted sidewise so as to approach or recede from the left end bar whereby to accommodate fabrics of different sizes.

A fitting embodying certain novel features of construction, as hereinafter claimed, is used to connect the bracing bar and also the adjusting bar to the bottom bar. As these fittings are substantially alike, I will now proceed to a description of but one—the fitting which connects the adjusting bar to the bottom bar.

A mounting M in the form of a substantially rectangular collar, either closed or slightly open as shown in Fig. 2, is slidingly fitted upon the adjusting bar. This collar, which is desirably bent from a metal strap, comprises a front plate 16 overlying the front face of the adjusting bar in spaced relation thereto (see Fig. 2) where I have provided an opening through which is received one end of a threaded bolt 17 whose head 18 lies against the underside of the front plate. This bolt, which is non-rotatably secured to the

mounting, extends forwardly through the aperture 19 in a clamp P having a body 20 which is rested against the forward face of the bottom bar over which it is extended transversely (see Fig. 3). This clamp is provided at its opposite end with an offset foot 21 bearing against the adjusting bar. A power device, such as a wing nut 22, in screw-threaded relation with the bolt, may be operated to advance the clamp with pressure against the front face of the bottom bar while exerting upon the mounting a pulling force which produces a grip thereof against the rear face of the adjusting bar. The clamp adjacent its foot is loosely extended through a slot 23 in the monuting so as to remain assembled therewith when pressure is released, the connection permitting relative movement between the clamp and mounting, as required, when the nut is tightened upon the bolt to frictionally hold the two bars against movement.

By the use of a fitting as just described, it is possible to secure the adjusting bar to the bottom bar without requiring any slot in either for the reception of connecting parts, while permitting sliding of the adjusting bar toward or from either of the end bars and adjustment of the bottom bar toward or from the top bar. The concave rabbet of the bottom bar is not overlapped by the clamp so that attachment to the pins of the fabric to be maintained in a stretched condition is not interfered with.

The generally similar clamp employed for connecting the center brace bar with the bottom bar permits of the latter being adjusted toward or from the top bar, all without the requirement of any slot in either bar for the functioning of the connecting fitting. If desired, a stop 24, such as a screw, may be affixed to both the brace bar and adjusting bar at a point near its lower end so as to prevent the fitting, when disconnected from the bottom bar, from sliding off of the bar to which it is slidingly connected.

I claim:

1. In a curtain stretcher wherein a plurality of bars are detachably interconnected to provide a frame with two of the bars crossing each other in contiguous engaging relation, a fitting adjustably connecting the two contiguous bars at their point of crossing, the fitting comprising a mounting through which one bar is slidably extended and formed with a slot therethrough in spaced relation to one bar face which engages the other bar, an offset clamp extended through the collar slot and formed with a foot adapted to bear against the bar face opposite the slot and with a body adapted to bear against the other bar upon a face thereof which lies farthest from the mounting, and screw means interconnecting the mounting and clamp adapted in one position of adjustment to advance the clamp body and clamp foot with pressure against the two bars with which they respectively engage while drawing the mounting, together with the bar extended therethrough, toward the other bar whereby to afford an adjustable frictional connection between the two bars at their point of intersection.

2. In a curtain stretching frame including two crossing bars in contiguous engaging relation, a fitting adjustably connecting the two contiguous bars at their point of crossing comprising a clamp bearing against a face of one bar and offset to present a portion of itself against the corresponding face of the other bar, means slidably affixed to the exterior of one bar affording a sliding mounting for the clamp, said means also engaging the clamp in a manner whereby relative movement, excepting only rotation therebetween, is permitted, and screw means extending between the clamp and mounting adapted, when tightened, to advance the clamp with pressure against both bars and each bar against the other whereby to frictionally secure the two bars against movement.

3. In a curtain stretching frame including two crossing bars in contiguous engaging relation, a fitting adjustably connecting the two contiguous bars at their point of crossing comprising a mounting extended around one bar in a manner to be movable lengthwise thereof, a clamp offset to provide two bearing portions one in engagement with a corresponding face of each of the two contiguous bars, the mounting being formed with a slot through which the clamp is slidingly but non-rotatably extended at a point intermediate of its two bearing portions, means connecting the mounting and clamp, and a power device associated with the connecting means adapted to advance the clamp toward the mounting whereby to frictionally secure the two contiguous bars against movement.

CLARENCE G. CARLSON.