Aug. 22, 1950 W. H. BOTHE 2,519,628

CURTAIN STRETCHER CORNER STRUCTURE

Filed Feb. 14, 1949

Fig. 1

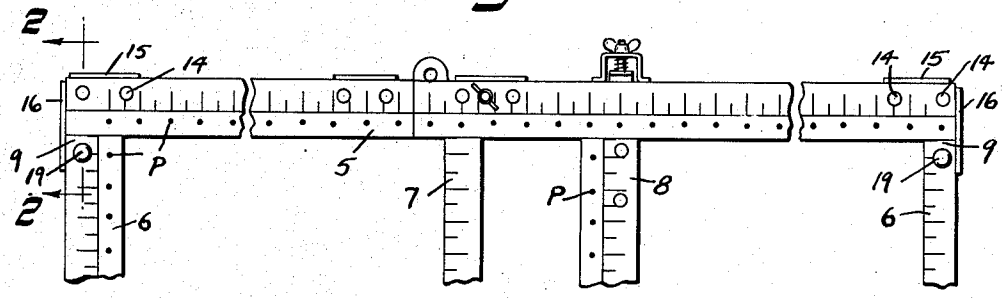



Fig. 2

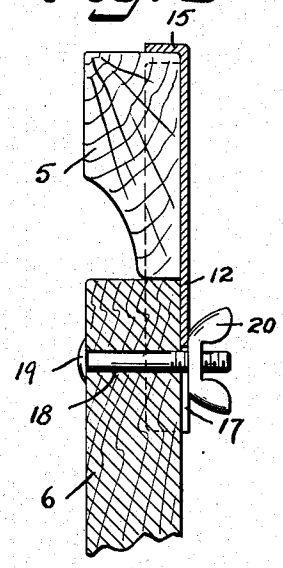



Fig. 3

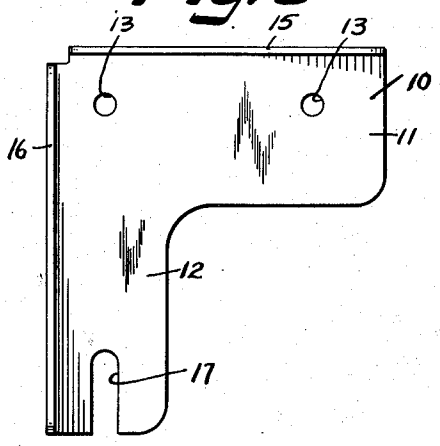
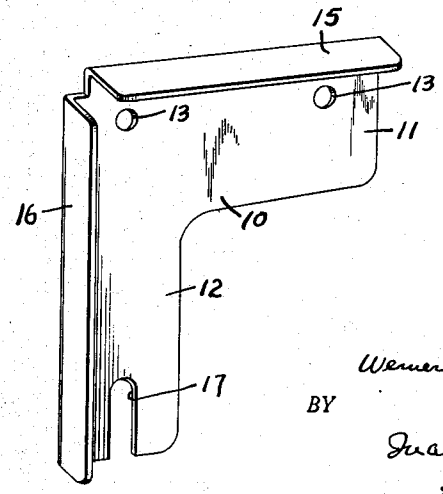



Fig. 4




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## CURTAIN STRETCHER CORNER STRUCTURE

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2 Claims. (Cl. 287—63).

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The invention relates to curtain stretchers and more particularly to corner fittings by which the upper horizontal bar of a stretcher is clamped to the side members of the stretcher frame.

One of the main functions of a curtain stretcher is to stretch the curtain to as near its original form as possible, and most curtains while varying in size are of rectangular form so that it is imperative that the stretcher frame have accurate corners and be constructed in such manner as to not only permit accurate adjustment of width and length to accommodate the wide range of sizes, but also to assure parallelism of side and end edges. In order that this result may be obtained, the corner plate embodying the present invention has been developed. According to this invention, instead of the usual flat metal corner plate, the corner plate is provided with flanges, its outer edges bent at ninety degrees to the body of the plate and at ninety degrees to each other to provide a means for retaining the upper horizontal bar of the stretcher and the abutting upper end of a side or end bar of the stretcher in accurate right angular relationship with each other, thus assuring a rectangular or square corner. Also in order to permit ready removability and assembly of these parts relative to each other, the fitting which is anchored to the top bar has a slot in its vertical leg which is slipped over a bolt on the vertically disposed end frame member and then clamped to this member by a nut on the bolt; the slot being so spaced from the flanged side of said vertical leg that it precludes any appreciable side movement of said end frame member which would have the tendency of changing the right angular relationship between said frame members.

The invention further consists in the several features hereinafter set forth and more particularly defined by claims at the conclusion hereof.

In the drawings:

Fig. 1 is a front elevational view of the upper portion of a curtain stretcher equipped with corner structure embodying the invention;

Fig. 2 is an enlarged detailed vertical sectional view taken on the line 2—2 of Fig. 1;

Fig. 3 is an enlarged front elevational view of a corner plate embodying the invention;

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

Referring to the drawings, the upper portion of a curtain stretcher has been shown including the top bar 5, side or end bars 6, vertical center bar 7, and a vertical adjusting bar 8. The bottom bar which is clamped to end bars 6 and to the

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bars 7 and 8 has not been shown but is shown in my prior U. S. Patent No. 2,448,574, of September 7, 1948, to which reference may be made for a further description of other fittings there shown. The bottom bar, top bar 5, left hand end bar 6, and the adjusting bar 8 are provided with pins P on which portions of the damp curtains or other fabrics are impaled to stretch the fabric and hold it in this condition until dried.

The present invention is directed to the corner structure by which the ends of the top bar 5 are secured in accurate right angled relationship with the abutting top end 9 of the end bars 6. For this purpose a corner plate 10, shown in detail in Figs. 2 to 4, is secured to the ends of the top bar 5 and is removably clamped to the upper end of the abutting end bar.

The corner plate 10 is formed of a sheet metal stamping having a flat body portion formed to provide a top leg 11 and a vertical or side leg 12, holes 13 being punched in the top leg to receive rivets 14 by which said plate is fixed to the back of the top bar 5. The top leg 11 has a top edge flange 15 bent at right angles to the body and at right angles to a side edge flange 16 also bent at right angles to the body, so that when the top bar 5 has its top and end arranged in abutting relation with the flanges 15 and 16 and secured by the rivets 14, the flange 16 will present a true right angled metal extension of the top bar, so that when the top of the end bar 6 abuts the lower horizontal edge of the top bar 5 and the outer side of said bar 6 abuts that portion of the flange 16 depending from the top bar, the bars 5 and 6 will be positioned in accurate right angular relationship, and in order to maintain this relationship and yet permit ready assembly and disassembly of these parts of the stretcher frame, the side leg has a slot 17 formed in the lower end thereof which extends parallel to the flange 16 and spaced therefrom the same distance as the hole 18 in the bar 6 for a clamping bolt 19 is spaced from said flange 16, so that when the top bar is positioned in abutting angular relationship with said end bar and the slotted portion of said leg 12 is slipped over said bolt, the parts may be secured together by a wing nut 20 which clamps the plate 10 between it and the back side of the upper end portion of the end bar 6, the slot 17 permitting this assembly without the necessity of removing the nut 20.

Thus when the top bar 5 is clamped at its opposite ends to the upper ends of the end bars 6, these end bars will be held in accurate right angular relationship with the top bar.

The above construction has the following advantages: the rectangular flange 15 assures positive alinement to and with the top bar to which it is attached. The plate is formed in accurate dies so that the flanges 15 and 16 are at all times at right angles to each other. The corner plates 18 are securely fastened to the top bar 5 by the rivets 14. The removable end members 6 are attached to the securely fastened end plates by the bolts 19 and wing nuts 20 and are supported by the other leg 12 of said plates in abutting relation with its flange, thus preventing shifting of the corner parts which would result in an angle of more than ninety degrees. The location of the slot 17, engaging the bolt and wing nut assembly of the removable end bar is such as to permit abutment of the end of the bar 6 with the top bar 5 at the same time preventing shifting to an angle of less than ninety degrees and the slot obviates the disassembly of the nut from the bolt.

I desire it to be understood that this invention is not to be limited to any particular form or arrangement of parts except in so far as such limitations are included in the claims.

What I claim as my invention is:

1. In a curtain stretcher having a top frame bar and side end frame bars extending at angles to each other, said end bars abutting the lower sides of said top bar at the ends thereof, a fitting for securing each of said end bars to the top bar in right angular abutting clamped relation, comprising a plate having a top leg portion anchored to the back of said top bar and a side leg portion projecting beyond the lower portion of said top bar, each of said leg portions having flanges extending at right angles to the plate and at right angles to each other, the flange on said top leg portion abutting the upper side of said top bar and the flange on the other leg portion abutting the end of said top bar and the adjacent side of said end bar, and a bolt extending through the upper end portion of said end bar and provided with a nut for clamping the depending portion of said side leg portion to said end bar.

2. The structure as defined in claim 1 wherein the lower end of the side leg portion is provided with a slot to receive said bolt and spaced the same distance from the side flange of said plate as said bolt is spaced from said flange.



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