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W. H. BOTHE
CURTAIN STRETCHER

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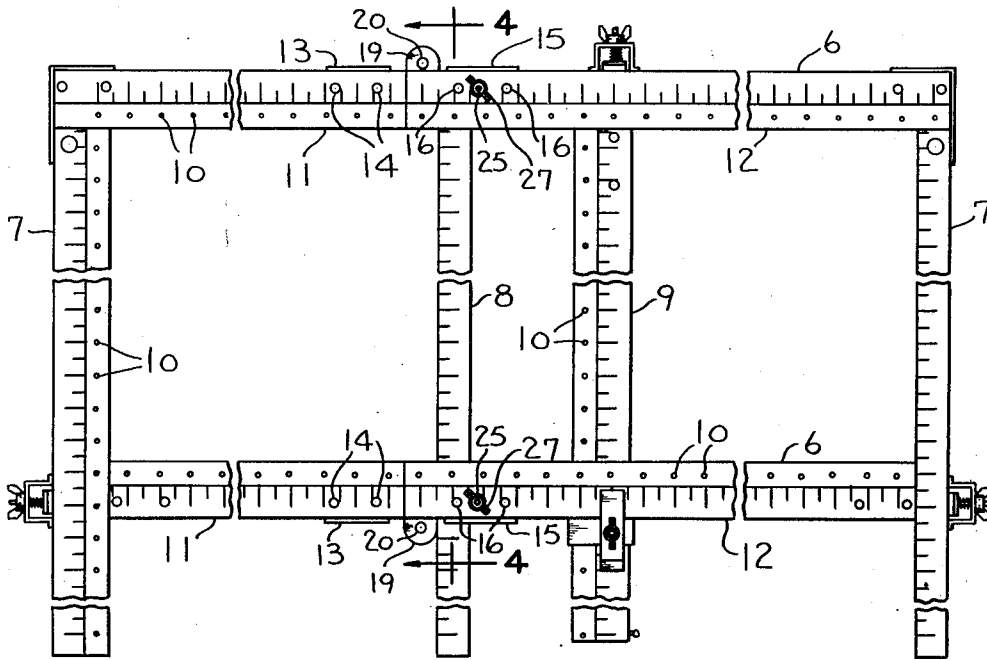


Fig. 1

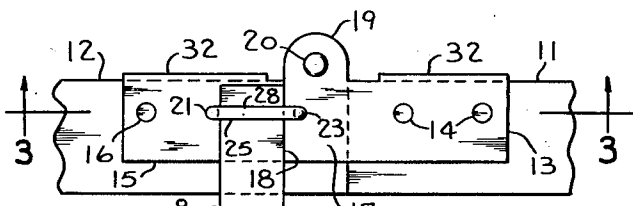


Fig. 2

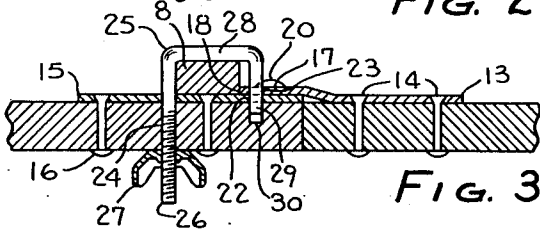


Fig. 3

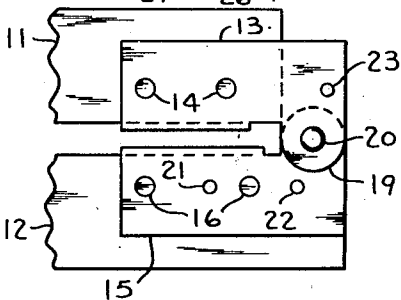


Fig. 5

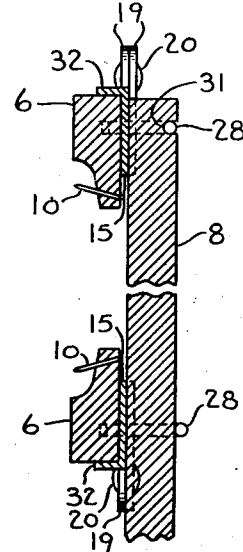


Fig. 4

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UNITED STATES PATENT OFFICE

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CURTAIN STRETCHER

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3 Claims. (Cl. 287—54)

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The invention relates to curtain stretchers and more particularly to a fitting for securing hinged bar sections of the stretcher together and also clamping a bar extending at right angles thereto to said hinged bar sections.

One object of the invention is to provide a fitting in which hinged bar sections, usually those forming the top and bottom bars of the stretcher are securely locked together without weakening the hinge and at the same time one of the vertically disposed bars, usually the center bar is firmly clamped to the top or bottom bar, the fitting being equally applicable to either the top or bottom bars.

A further object of the invention is to provide a fitting including a U-shaped clamping bolt having a shank end mounted in one of the hingedly connected bars and a free end passing through alineable openings in the hinge members of said bars to secure the bar sections in alined position, the intermediate portion of said bolt receiving the right angularly disposed bar within it and clamping said bar between it and the hinged bar.

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 a curtain stretcher, parts of which are equipped with the fitting embodying the invention;

Fig. 2 is an enlarged rear elevational view of the fitting;

Fig. 3 is a detailed horizontal vertical sectional view taken on the line 3—3 of Fig. 2;

Fig. 4 is a vertical sectional view taken on the line 4—4 of Fig. 1;

Fig. 5 is an enlarged rear elevational view of the hinged joint for the bar sections with the clamp omitted.

Curtain stretchers embody top and bottom bars 6, side or end bars 7, a vertical center bar 8, and a vertical adjustably mounted bar 9 secured together by various fittings to form a stretching frame, the top and bottom bars, one of the end bars, and the bar 9 usually being provided with pins 10 on which portions of the damp curtains or other fabric are impaled to stretch the fabric and permit of drying them in a stretched condition.

The present invention is concerned with a fitting which locks together the hinged sections 11 and 12 of either the top or bottom bars 6 and also secures to these locked bars the vertical center bar 8.

Referring to Figs. 2 to 5 of the drawings, each of the bar sections 11 has a metal hinge plate

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13 secured thereto by rivets 14 and each of the bar sections 12 has a metal hinge plate 15 secured to it by rivets 16, said plate 13 having a portion 17 overlapping the outer end portion of the plate 15 and forming a straight edge 18. Each of the plates 13 and 15 are provided with laterally disposed apertured ears 19 through which a hinge pin 20, operatively securing the bar sections 11 and 12 together passes. The plate 15 has laterally spaced holes 21 and 22 therein and the plate 13 has a hole 23 in its portion 17 adapted to aline with the hole 22 when the bar sections 11 and 12 are in alined position. The bar section 12 has a hole 24 alined with the hole 21 in the plate 15.

A U-shaped clamping bolt 25 has a threaded shank portion 26 extending through the holes 24 and 21 and is provided with a clamping nut or wing nut 27. The U-shaped portion 28 of the bolt 25 has a free end 29 forming one of its legs and adapted to extend through the alined holes 22 and 23 and into an alined hole 30 in the bar section 12 when the hinged bars are in alined position, thus locking the bars in this position.

The U-shaped portion 28 of the bolt 25 extends over the center bar 8, and on the tightening up of the nut 27 this bar is securely clamped between said bolt and either the top or bottom bar 6, said bar 8 at one side adapted to abut the straight edge portion 18 of the hinge plate 17.

Where the fitting above described is used to clamp the center bar to the relatively fixed top bar, the center bar is notched at 31 to receive the transverse part of the U-shaped portion 28 of the bolt 25 to lock said bar 8 against movement when the nut 27 is tightened up.

Where the fitting above described is used to clamp the center bar to the adjustable bottom bar 6, the U-shaped portion 28 slidably receives said bar within it and is clamped to it in any adjusted position of the bottom bar 6 relative to the end bars 7.

Each of the hinge plates 13 and 14 may have an angled edge 32 to strengthen the plate and facilitate its alinement with its bar section during assembly of the hinge to said sections.

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, the combination with a frame member thereof having bar sections connected together by a hinge having sections provided with alined openings in the alined position

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of said sections and a frame member extending at an angle to said first named frame member, of a locking member anchored in one of said sections and extending through the openings of said hinge sections when said bar sections are in alined position to positively lock the same in such position and over said angularly disposed frame member, and means for moving said locking member, while in locked position relative to said bar sections, to clamp said last named frame member between it and said first named frame member.

2. In a curtain stretcher, the combination with a frame member thereof having bar sections connected together by a hinge having sections provided with alined openings in the alined position of said sections and a frame member extending at an angle to said first named frame member, of a U-bolt having one of its legs carried by one of said bar sections of said first named frame member and extending over and in clamping engagement with said second named frame member and having its free leg extending through said openings of said hinge sections when said bar sections are in alined position to positively lock the same in such position, and means for moving said bolt, while in said openings, to clamp said second named frame member between it and said first named frame member.

3. In a curtain stretcher, the combination with a frame member thereof having bar sections connected together by a hinge having sections provided with alined openings in the alined position

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of said sections and a frame member extending at an angle to said first named frame member, of a U-bolt carried by said first named frame member and extending over and in clamping engagement with said second named frame member and having one of its legs free and extending through the alined openings in said hinge sections when said bar sections are in alined position to positively lock the same in such position, the other leg of the bolt being threaded and extending through said first named frame member, and a clamping nut mounted on the threaded end of said bolt.

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