C. G. CARLSON.

CURTAIN STRETCHER.

APPLICATION FILED MAR. 11, 1912.

1,039,095. **Patented Sept. 24, 1912.**

FIG. 1.

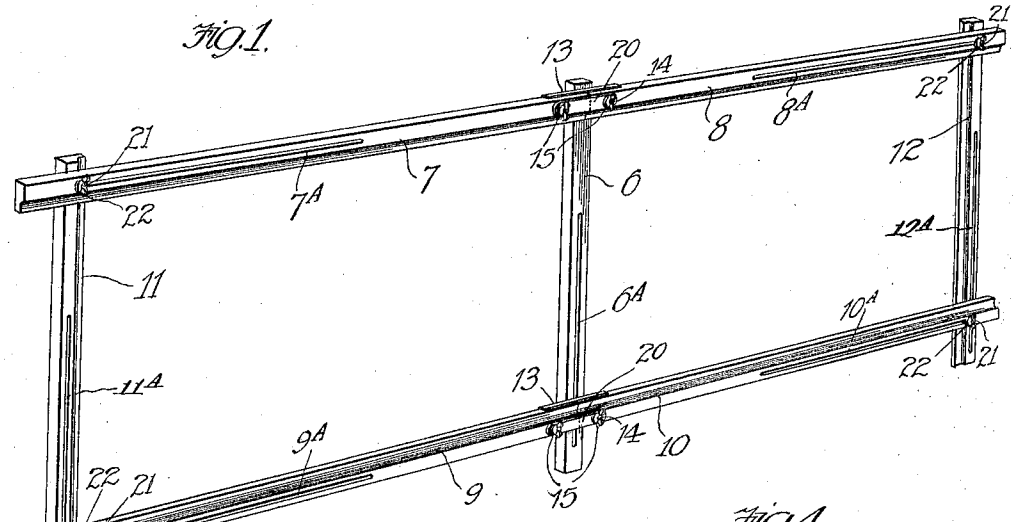


FIG. 3.
(A---A)

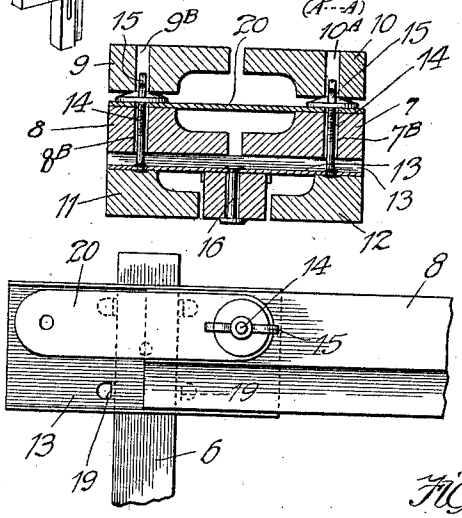


FIG. 4.
(B---B)

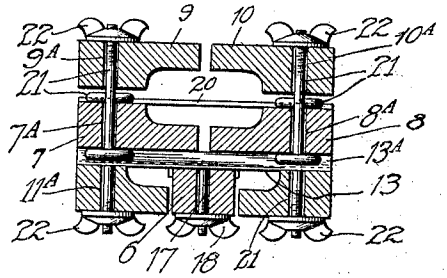


FIG. 5.

FIG. 6.

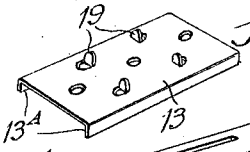
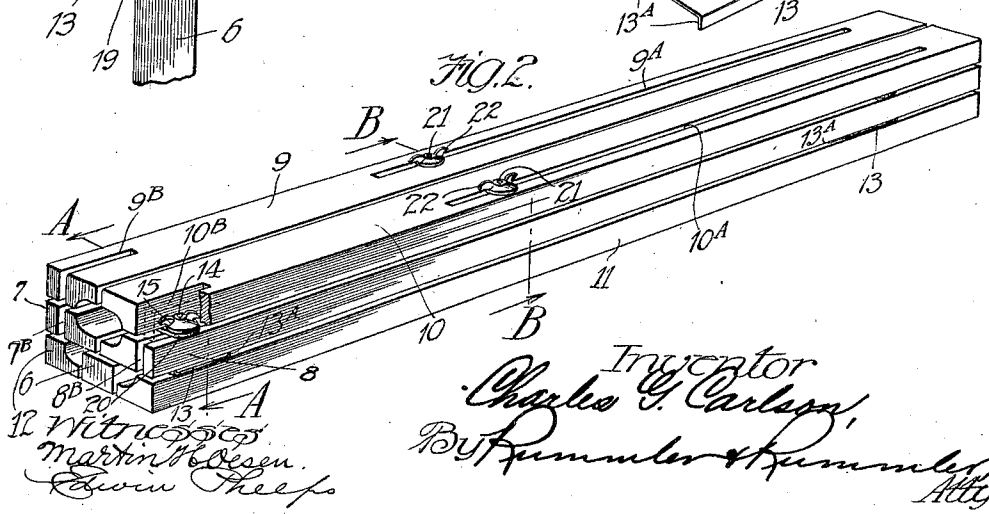


FIG. 2.



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CURTAIN-STRETCHER.

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To all whom it may concern:

Be it known that I, CHARLES G. CARLSON, a citizen of the United States of America, and resident of Chicago, county of Cook, Illinois, have invented certain new and useful Improvements in Curtain-Stretchers, of which the following is a specification.

The main objects of this invention are to provide a generally improved construction of curtain stretchers, or the like, of the kind comprising a plurality of separable sections, adapted to be assembled in the form of a rectangle; to provide improved means for respectively securing said sections in compact folded form for transportation and storage, or in an extended form for use; to provide an improved construction of the joint between the center brace and the sections which constitute the side rails; and to provide improved means for insuring the rigidity of said joint.

An illustrative embodiment of this invention is shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a curtain stretcher constructed according to this invention, and shown in its extended position ready for use. Fig. 2 is a perspective view of the curtain stretcher in its folded form. Fig. 3 is an enlarged transverse sectional view taken on the line A—A of Fig. 2. Fig. 4 is a similar view taken on the line B—B of Fig. 2. Fig. 5 is an enlarged fragmentary detail of the joint between the center brace and one of the side rail sections. Fig. 6 is a detail in perspective of the plate which constitutes a part of the joint.

In the construction shown in the drawings, the curtain stretcher comprises a center brace section 6, two side rails, each comprising sections 7 and 8, and 9 and 10 respectively, and the end sections 11 and 12. All of the sections are of the usual length and are provided with the usual longitudinally disposed slots, closed at their ends, and extending throughout a considerable portion of the length of the sections. These slots will hereinafter be designated by the letter "A" together with the reference numeral of the section in which the slot is formed, as, for instance, 7^A, 8^A, etc. The sections are adapted to be assembled in extended form as shown in Fig. 1, or in folded form as shown in Fig. 2.

The side rail sections 7 and 8, and 9 and 10 are connected to the center brace 6 with their ends abutting by means of a pair of channel shaped members or plates 13 mounted on the center brace 6 and carrying the bolts 14 at opposite sides of the center brace, which bolts are provided with the winged nuts 15. One of the plates 13 is rigidly secured at one end of the brace 6 by means of a pin 16, (Fig. 3,) and the other plate 13 is held to the center brace 6 by means of a bolt 17 and winged nut 18, the bolt 17 passing through the slot 6^A whereby the latter plate is adjustable toward and away from the former. Each of the plates 13 has lugs or shoulders 19 punched therefrom, and upset so as to engage or embrace opposite edges of the center brace 6, whereby the plate is positively maintained in substantially right angular relation to the brace. The outwardly disposed flanges 13^A on the plates 13 are spaced apart a distance substantially equal to the width of the side rail sections so as to embrace the edges thereof and insure rigid connection of the side rail sections to the plates when the winged nuts 15 are firmly screwed down against the rail sections.

The side rail sections 7, 8, 9 and 10 are provided with slots extending inwardly from one end thereof, and which will hereinafter be designated by the letter "B" together with the reference numeral of the sections in which they are formed, as, for instance 7^B, 8^B, etc. The slots B are of sufficient length to permit the bolts 14 to be received therein and allow the ends of the respective sections to abut. The bars or links 20 are arranged to be placed upon the bolts 14 so as to span the joint formed by the abutting ends of the side rail sections as shown in Fig. 1, or to extend transversely across the adjacent ends of the sections when in their folded position as shown in Figs. 2 and 3. Bolts 21 and winged nuts 22 are used for connecting the end sections 11 and 12 to the respective side rail sections, as shown in Fig. 1, or for securing the sections in their folded form as shown in Figs. 2, 3 and 4.

The operation of the device is as follows: When it is desired to arrange the frame in position for use, the sections are separated one from another and the plates 13 relatively adjusted on the center brace 6, as the conditions may require. The winged nuts 15 are run out on their respective bolts 14 to a distance that will permit the side rail sections 7, 8, 9 and 10 to have their ends

placed upon the plates 13 between the flanges 13A with the bolts 14 received in their respective slots B. The winged nuts 15 are then screwed down firmly against the bars 20 whereupon the side rails are rigidly secured to the center brace in substantially right angular relation. The bolts 21 and winged nuts 22 are then used for securing the end sections 11 and 12 adjacent to the respective ends of the side rails in the usual manner. The device is then ready for use for stretching a curtain in the usual manner.

When it is desired to fold the stretcher for storage or transportation, the sections are again disconnected, and all of the winged nuts removed from their respective bolts, except the nuts 15 on the bolts on the fixed plate 13, which nuts may be run up a short distance on the respective bolts. One pair of the side rail sections, as for instance, sections 7 and 8, are placed upon the plates 13 at the opposite sides from the center brace section 6, but in parallel relation therewith, the slots 7B and 8B receiving the respective bolts 14 from which the nuts 15 have not been removed, and the slots 7A and 8A receiving the bolts 14 on the other plate 13. The bar 20 and the winged nuts 15 are then placed upon the bolts 14 of the latter plate, and all of the winged nuts firmly screwed down, the nuts being left in a position parallel with the sections so far assembled. The bolts 21 are then inserted into the slots 7A and 8A, two in each slot but in respectively opposite directions, as indicated in Fig. 4. The second pair of side rail sections 9 and 10 and the end sections 11 and 12 are respectively secured to opposite sides of the sections 7 and 8 in parallel relation therewith. When so arranged the winged nuts 15 are respectively received into the slots 9A, 10A, 9B and 10B, of the side rail sections 9 and 10, and one of the bolts 21 protrudes through each of the slots 9A and 10A, whereupon the winged nuts 22 may be screwed thereon for securing the sections 9 and 10 to the sections 7 and 8. The end sections 11 and 12 rest upon the plates 13 and lie substantially in the same plane as the center brace 6. The bolts 21 protrude through the slots 11A and 12A so that the nuts 22 may be placed thereon for securing the sections 11 and 12 in place. The device is then in compact folded form as shown in Fig. 2, and may be stored away in a comparatively small space until further use thereof is desired.

It will be seen that the end section 12 may be fastened directly to the side rail sections 7 and 9 by the bolts 21 to reduce the length of the stretcher to one-half for the purpose of stretching sash curtains. In such case the sections 6, 8 and 10 with their connecting plates 13 and 20 are set aside. The ability to do this, together with the adjustment of the opposite bars toward and away from each other by means of the bolts in the slots A enables the frame to be adjusted to fit curtains of any size smaller than the maximum size for which the device is made.

Although but one specific embodiment of this invention has been herein shown and described, it will be understood that numerous details of the construction may be altered or omitted without departing from the spirit of the invention as defined by the following claims.

I claim:—

1. In a curtain stretcher, the combination of a center brace section; side rails, each comprising a pair of sections; end sections adapted to be secured to said side rails; transversely disposed plates rigidly mounted on said center brace section; bolts carried by said plates at opposite sides of said center brace section; each of said side rail sections having a slot extending inwardly from one end thereof and adapted to receive one of said bolts said slots being of a length sufficient to allow the ends of said side rail sections to abut; and winged nuts on said bolts adapted to secure said side rail sections to said plates when said bolts are in said slots.

2. In a curtain stretcher, the combination of a center brace section; side rails, each comprising a pair of sections; end sections adapted to be secured to said side rails; transversely disposed plates mounted on said center brace section by means of a bolt centrally located with respect to the intersecting portions of said brace and plate; and lugs upset from said plate at opposite sides of said bolt, and adapted to engage the edges of said center brace section for holding said plate in positive right angular relation to said center brace section; bolts carried by said plate at opposite sides of said center brace section, each of said side rail sections having a slot extending inwardly from one end thereof, and adapted to receive one of said bolts; and winged nuts on said bolts adapted to secure said side rail sections to said plates when said bolts are in said slots.

3. In a curtain stretcher, the combination of a center brace section; side rails, each comprising a pair of sections; end sections adapted to be secured to said side rails, all of said sections being provided with slots, closed at their ends and extending along a considerable portion of the length of said sections; transversely disposed plates mounted on said center brace section; bolts carried by said plates at opposite sides of said center brace section; each of said side rail sections having a slot extending inwardly from one end thereof and adapted to receive one of said bolts; winged nuts on said bolts adapted to secure said side rail sections to said plates when said bolts are in

said slots for holding said side rails substantially at right angles to said center brace section; one pair of said side rail sections being adapted to be secured to said plates by means of the bolts carried thereby in substantially parallel relation with said center brace section, and the other pair of said side rail sections and said end sections being adapted to be secured to respectively opposite sides of said first pair of side rail sections in substantially parallel relation therewith.

4. In a curtain stretcher, the combination of a center brace section; side rails, each comprising a pair of sections; end sections adapted to be secured to said side rails; all of said sections being provided with slots, closed at their ends and extending along a considerable portion of the length of said sections; transversely disposed plates mounted on said center brace sections; bolts carried by said plates at opposite sides of said center brace section; each of said side rail sections having a slot extending inwardly from one end thereof and adapted to receive one of said bolts; winged nuts on said bolts adapted to secure said side rail sections to said plates when said bolts are in said slots for holding said side rails substantially at right angles to said center brace sections; bolts and winged nuts adapted to connect said end sections at their intersections with said side rail sections; one pair of said side rail sections being adapted to be secured to said plates by means of the bolts carried thereby in substantially parallel relation with said center brace section, and the other pair of said side rail sections and said end sections being adapted to be secured to respectively opposite sides of said first pair of side rail sections in substantially parallel relation therewith, said bolts and winged nuts being adapted to be used for connecting said other pair of side rail sections and end sections to said first pair of side rail sections, substantially as set forth.

Signed at Chicago this 9th day of March, 1912.

CHARLES G. CARLSON.

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."